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SITE ASSESSMENT REPORT ADDENDUM FOR TRUCK FILL STAND JP-5 RE-EVALUATION,
SAMPLING, PLUME DELINEATION AND MONITORING REVISION 1 NAS KEY WEST FL
10/1/2012
CH2M HILL

Revision 1

Site Assessment Report Addendum Truck Fill Stand: JP-5, Re-Evaluation, Sampling, Plume Delineation and Monitoring

Naval Air Station Key West
Boca Chica Key, Florida



Prepared for

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Naval Facilities Engineering Command
Southeast

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Prepared by

CH2MHILL®



PROFESSIONAL CERTIFICATION

This Site Assessment Report Addendum for the Truck Fill Stand located at the Naval Air Station Key West, Boca Chica Key, Florida, was prepared under the direction of a Florida-licensed professional geologist in accordance with Florida Rules and Regulations, as authorized by Chapters 492 or 471, Florida Statutes. The undersigned certifies that, to the best of his knowledge and belief, the technical data provided herein are complete and accurate, and comply with all requirements for such assessments.



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Registration No. PG2577, Expires July 31, 2014

DATE 10/15/12

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Executive Summary

Under a contract with the Naval Facilities Engineering Command Southeast (NAVFAC SE), CH2M HILL conducted additional site assessment activities at the Truck Fill Stand (TFS) site located at the Naval Air Station (NAS) Key West, Boca Chica Key, Florida. This Site Assessment Report Addendum (SARA) summarizes the work and results of the assessment performed between April 9 and May 21, 2012. The work included monitoring well installation, groundwater sampling, surface water and sediment sampling, aquifer slug testing, and a tidal influence evaluation.

Samples collected during the assessment indicate the geology beneath the TFS from ground surface to approximately 12 feet below ground surface (bgs) consists of white, soft to medium hardness weathered limestone. Groundwater elevations ranged from 0.41 foot above mean sea level (msl) to 3.19 feet above msl during the site assessment and the direction of groundwater flow was generally to the south-southeast in April 2012 and was radial in May 2012. The horizontal gradient ranged from 0.005 foot/foot (ft/ft) to 0.007 ft/ft with an average estimated to be 0.006 ft/ft. Light non-aqueous phase liquid (LNAPL) was not detected in groundwater.

Aquifer slug tests indicate the hydraulic conductivity of the partially penetrating monitoring wells ranged from 2.3×10^{-3} to 4.4×10^{-3} centimeters per second (cm/sec) or 6.5 to 12.5 feet per day (ft/day) and the hydraulic conductivity geometric mean value for the partially penetrating monitoring wells was 8.99 ft/day. The horizontal groundwater seepage velocity was estimated to be 0.36 ft/day or 131.3 feet per year (ft/year).

The results of the tidal influence study indicated that groundwater levels fluctuated between 0.004 foot and 1.23 feet. Based on the comparison of the groundwater fluctuations and tidal changes, the data show that there is a direct influence of tidal change on the groundwater elevations at the site. The greatest influence observed during the study period was in monitoring well TFS-MW-8D.

Groundwater samples were collected from five monitoring wells (TFS-MW-03, TFS-MW-06, TFS-MW-15, TFS-MW-16, and TFS-MW-17) and were analyzed for Appendix IX volatile organic compounds (VOCs), Appendix IX semivolatile organic compounds (SVOCs), and total recoverable petroleum hydrocarbons (TRPH). In addition, three select wells were sampled for geochemical parameters to include alkalinity; nitrate, nitrite, and sulfate; sulfide; and total organic carbon (TOC). Test results were as follows:

- The VOCs benzene, ethylbenzene, and toluene were detected in one monitoring well; however, the concentrations were below their respective Groundwater Cleanup Target Levels (GCTLs).
- Carbon disulfide was detected in one monitoring well at a concentration significantly below its respective GCTL.
- Twelve SVOCs were detected in three wells. However, benzo(a)anthracene was the only SVOC to exceed its respective GCTL of 0.05 micrograms per liter ($\mu\text{g/L}$) in one location (monitoring well TFS-MW-15) at a concentration of 0.18 $\mu\text{g/L}$.
- TRPH was detected four of the five monitoring wells sampled at concentrations ranging from 320J $\mu\text{g/L}$ to 22,400J $\mu\text{g/L}$; however, the GCTL of 5,000 $\mu\text{g/L}$ was only exceeded at monitoring well TFS-MW-15.
- Overall, the geochemical parameters alkalinity; nitrate, nitrite, and sulfate; sulfide; and TOC indicate the groundwater is under anaerobic and reducing conditions and that biological activity is degrading the petroleum hydrocarbon contamination at the site.

Surface water samples were collected at four locations (TFS-SW-01, TFS-SW-02, TFS-SW-03, and TFS-SW-04) and were analyzed for Appendix IX VOCs, Appendix IX SVOCs, and TRPH. Test results were as follows:

- Three VOCs, bromoform, chloroform, dibromochloromethane, and toluene, were detected in surface water. However, no VOCs exceed its respective marine Surface Water Cleanup Level (SWCTL).

- Eleven SVOCs in the form of polynuclear aromatic hydrocarbons (PAHs) were detected in surface water samples at three locations (TFS-SW-02, TFS-SW-03, and TFS-SW-04); all SVOCs were below their respective marine SWCTLs.
- The marine SWCTL criterion for PAHs, 0.031 µg/L, applies to the total concentration of the PAH compounds acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,i,h)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene. As a result, the sum of these PAH compounds exceed the marine SWCTL criterion of 0.031 µg/L at three locations (TFS-SW-02, TFS-SW-03, and TFS-SW-04). Total PAH concentrations ranged from 0.09 µg/L to 1.231 µg/L.
- TRPH was detected in each surface water sample, ranging from 860J µg/L to 2,100 µg/L; however, TRPH did not exceed its marine SWCTL of 5,000 µg/L at any location.

Sediment samples were collected at four locations (TFS-SD-01, TFS-SD-02, TFS-SD-03, and TFS-SD-04) and were analyzed for Appendix IX VOCs, Appendix IX SVOCs, and TRPH.

- Acetone was the only VOC detected in the sediment samples at concentration ranging from 0.011J milligrams per kilogram (mg/kg) to 0.0282 mg/kg; however, no ecological screening criterion is available from U.S. Environmental protection Agency (EPA) or other sources for acetone.
- Eighteen SVOCs in the form of PAHs were detected in sediment samples. The SVOCs were detected in each sediment sample location and were below the EPA Region 4 ecological screening values and additional screening criteria, where available, except for five PAH compounds: 2-methylnaphthalene, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, and fluoranthene:
 - 2-methylnaphthalene exceeded its Cleanup Target Level (CTL) of 0.02023 mg/kg at two locations at concentrations of 0.04J mg/kg and 0.067 mg/kg.
 - Benzo(a)anthracene exceeded its CTL of 0.0748 mg/kg at one location at a concentration of 0.12 mg/kg.
 - Benzo(a)pyrene exceeded its CTL of 0.0888 mg/kg at two locations at concentrations of 0.2 mg/kg and 0.1 mg/kg.
 - Dibenzo(a,h)anthracene exceeded its CTL of 0.00622 mg/kg at each location at concentrations ranging from 0.0067J mg/kg to 0.04 mg/kg.
 - Fluoranthene exceeded its CTL of 0.113 mg/kg at one location at a concentration of 0.15 mg/kg.
- TRPH was detected in each sediment sample ranging from 91.1 mg/kg to 144 mg/kg; however, no ecological screening criterion for TRPH is available from EPA or other sources.

Additional groundwater monitoring is recommended at the site to further evaluate the petroleum contaminant trends over time. Quarterly groundwater monitoring for Appendix IX VOCs, Appendix IX SVOCs, and TRPH should continue for up to 1 year. Additional recommendations will be made upon further assessment of contaminant distribution, concentrations, and trends.

Collection of water quality samples for the analysis of chloride, manganese, salinity, sulfate, and total dissolved solids (TDS) is recommended to determine if the groundwater is non-potable and should be considered poor quality. Five monitoring well samples (TFS-MW-04, -8D, -15, -16, and -17), one surface water sample (TFS-SW-03), and a seawater sample should be collected.

No additional monitoring of surface water or sediment is recommended at this time; however, CH2M HILL does recommend the NAVFAC SE consider conducting an ecological risk assessment to evaluate the potential risk to ecological receptors in the wetland area to the west of the TFS. Upon completion of an ecological risk assessment, recommendations for no further action (NFA), additional monitoring, or corrective actions can be determined.

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A Monitoring Well Boring Logs, Well Construction Diagrams, and Permits
 B Well Purge and Sample Logs
 C Survey Data
 D Soil and Water IDW Non-Hazardous Waste Manifest
 E Aquifer Test Data
 F Tidal Influence Graphs
 G Data Validation Summaries and Laboratory Data (Provided on CD)

Acronyms and Abbreviations

°C	degrees Celsius
µg/L	microgram per liter
AFVR	aggressive fluid vapor recovery
AST	aboveground storage tank
BBL	Blasland, Bouck, & Lee, Inc.
BCTF	Boca Chica Tank Farm
bgs	below ground surface
BTOC	below top of casing
cm/sec	centimeters per second
CO ₂	carbon dioxide
CTL	Cleanup Target Level
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
Fe ²⁺	ferrous iron
Fe ³⁺	ferric iron
FL PRO	Florida Petroleum Residual Organic
ft/day	feet per day
ft/ft	foot per foot
ft/year	feet per year
GCTL	Groundwater Cleanup Target Level
ID	inner diameter
IDW	investigation-derived waste
IRA	Interim Remedial Action
JP-5	jet propulsion fuel no. 5
LNAPL	light non-aqueous phase liquid
mg/L	milligrams per liter
MNA	monitored natural attenuation
msl	mean sea level
mS/cm	milliSiemens per centimeter
mV	millivolts
NA	not applicable

NAD 83	North American Datum of 1983
NAS	Naval Air Station
NAVD 29	North American Vertical Datum of 1929
NAVFAC SE	Naval Facilities Engineering Command Southeast
NFA	no further action
NM	not measured
NTU	nephelometric turbidity unit
OES	Omega Environmental Services, Inc.
ORP	oxidation-reduction potential
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
POL	petroleum, oils, and lubricants
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
SAR	Site Assessment Report
SARA	Site Assessment Report Addendum
SSAR	Supplemental Site Assessment Report
SQAG	Sediment Quality Assessment Guidelines
SVOC	semi-volatile organic compound
SWCTL	Surface Water Cleanup Target Level
TCLP	Toxicity Compound Leaching Procedure
TDS	total dissolved solids
TFS	Truck Fill Stand
TOC	total organic carbon
TPH	total petroleum hydrocarbon
TRPH	total recoverable petroleum hydrocarbon
TtNUS	Tetra Tech NUS, Inc.
UST	underground storage tank
V	velocity
VOC	volatile organic compound

SECTION 1.0

Introduction

CH2M HILL, Inc. has been contracted by Naval Facilities Engineering Command Southeast (NAVFAC SE), to conduct additional site assessment activities and prepare a Site Assessment Report Addendum (SARA) under Multimedia Contract No. N62470-10-D-3009, Contract Task Order JM08. The purpose of this report is to document the field activities, results, conclusions, and recommendations of the additional site assessment fieldwork. Site assessment field activities included monitoring well installation, groundwater sampling, surface water and sediment sampling, aquifer testing, and a tidal influence evaluation at the Truck Fill Stand (TFS) site, Naval Air Station (NAS) Key West, Boca Chica Key, Florida.

This SARA is organized into the following sections:

- Section 1.0, Introduction
- Section 2.0, Field Activities
- Section 3.0, Investigation Findings
- Section 4.0, Conclusions and Recommendations
- Section 5.0, References

Tables and figures are presented in each section to support the discussions. Appendixes A through G provide supporting information including boring logs, well construction details, sampling logs, waste manifests, groundwater hydraulic data, data validation, and laboratory reports.

1.1 Site Description

NAS Key West is located in southern Monroe County, Florida, approximately 150 miles southwest of Miami. The TFS at NAS Key West is located on Boca Chica Key, Florida (Figure 1-1). The TFS is an active facility used to fill tanker trucks for refueling aircraft. Fuel from the Boca Chica Tank Farm (BCTF) located approximately 4,000 feet southwest of the TFS, is pumped to the southwest portion of the TFS through twin 6-inch-diameter steel underground pipelines. Fuel is pumped and transferred at the fueling area to tanker trucks. Trucks routinely leave and return to the site for fueling missions and related airfield operations. The TFS is also referred to as Building A-902 in reference to the former operations building that stood on the southeast side of this facility (Tetra Tech NUS, Inc. [TtNUS], 2011).

The TFS, including former Building A-902, dates back to the 1940s and was part of the original NAS Key West infrastructure. Building A-902 was the original Administration Building for NAS Key West. The layout of the site has changed since it was first used as a fueling point in 1945. Documented environmental management activities began in the mid-1970s with the reporting of tank removals, implementation of numbering systems, and tank replacements. No other documented uses of the site exist (TtNUS, 2011).

Land surface at the TFS is generally flat and is mostly paved with asphalt and concrete. The site is not paved at the northern and western areas. Wetland areas are located immediately east and northeast of the site (TtNUS, 2011).

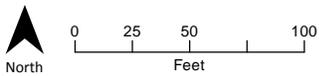


FIGURE 1-1
Site Location Map
NAS Key West
Boca Chica Key, Florida

1.2 Site History

Several spills and cleanup actions have been documented at the TFS. A 1,000-gallon underground storage tank (UST) designated Tank A-935 (also known as Tank A-902B), used for storing oily wastewater from the jet fuel filter system, was removed from the site in 1995. One 250-gallon aboveground storage tank (AST), Tank A-935-R, used for the same purpose, remains on site (Blasland, Bouck, & Lee, Inc. [BBL], 2001). The UST closure report for Tank A-935 indicated that the tank was in excellent condition; however, Light non-aqueous phase liquid (LNAPL) was observed floating on groundwater during the tank excavation (Omega Environmental Services, Inc. [OES], 1995).

In April 1999, NAVFAC SE submitted a Site Assessment Report (SAR) for Building A-902 to the Florida Department of Environmental Protection (FDEP) (TtNUS, 1999). The SAR indicated that site soil and groundwater had been contaminated by petroleum hydrocarbons, presumably from past tanker truck spills. The SAR included recommendations for Interim Remedial Action (IRA) followed by a supplemental assessment. FDEP approved the SAR on May 10, 1999.

In late January 2000, less than 25 gallons of fuel were inadvertently released into a catch basin that was under repair, resulting in the contamination of soil. The Navy excavated the contaminated soil and screened soil samples using an organic vapor analyzer (OVA) to confirm that all affected soil had been removed. In late February/early March 2000, approximately 100 gallons of fuel were released in the same area. However, the catch basin had been repaired and all fuel was reportedly contained within the catch basin and later pumped out (BBL, 2001).

In March 2000, workers constructing the new Petroleum, Oils, and Lubricants (POL) Laboratory building adjacent to the TFS discovered discolored soil with a strong petroleum odor in trenches excavated for the building footers. Based on these findings, the Navy retained BBL to perform an investigation of the area. Two monitoring wells (TFS-MW-09 and TFS-MW-10) were installed on the north and south sides of the building and sampled for petroleum hydrocarbons. Benzene was detected in groundwater samples from both wells at concentrations that exceeded the Groundwater Cleanup Target Level (GCTL) of 1 microgram per liter ($\mu\text{g/L}$), as specified in Florida Administrative Code (F.A.C.) Chapter 62-777, Table I. BBL concluded that the plume was not adequately defined in the area of the new POL Laboratory building and additional assessment was necessary. In addition, on March 29, 2000 approximately 1.9 inches of LNAPL were measured in monitoring well TFS-MW-01 (BBL, 2001).

On April 27, 2000, approximately 3,200 gallons of jet propulsion fuel no. 5 (JP-5) were released at the TFS when a valve was left open for 3 hours. Upon discovery, LNAPL recovery commenced and soil excavation began on April 28, 2000. In some areas, excavation was limited by cement foundations. The entire footprint of the spill was excavated and stockpiled. Stockpiled soil was later removed from the site and disposed. During the excavation work, dark brown oil was visible near the water table (BBL, 2001).

Because these releases potentially affected the findings of the 1999 SAR, the Navy contracted BBL to conduct a supplemental site assessment to define the extent of petroleum hydrocarbon contamination. The Supplemental Site Assessment Report (SSAR) concluded that dissolved petroleum hydrocarbons above the GCTLs were present in groundwater in the vicinity of the new POL Laboratory building, the TFS, and AST A-935-R. Concentrations of petroleum hydrocarbons in sediments and surface water in the adjacent wetland also exceeded Sediment Quality Assessment Guidelines (SQAGs) and marine Surface Water Cleanup Target Levels (SWCTLs). LNAPL was also detected in several monitoring wells. The SSAR concluded that remedial measures should be initiated (BBL, 2001).

Subsequently, a treatability study was planned for the TFS site, to include aggressive fluid vapor recovery (AFVR). TtNUS was tasked with performing the treatability study, and in May 2003 collected groundwater samples to establish baseline conditions at the TFS. The baseline data were compared with the 1999 SAR and test data showed that volatile organic compound (VOC) and polynuclear aromatic hydrocarbon (PAH) concentrations had decreased in the area west of the TFS, but remained above the GCTLs. In addition, gauging data showed LNAPL thickness had decreased from about 1 foot in monitoring well TFS-

MW-04 (October 2000) to a sheen in May 2003. Due to the decrease in LNAPL thickness, TtNUS determined that an AFVR was no longer an appropriate remedy for monitoring well TFS-MW-04. Instead, TtNUS recommended that quarterly monitoring be implemented to evaluate the extent to which natural attenuation was occurring (TtNUS, 2003). Monitored natural attenuation (MNA) sampling was conducted from May 2003 to June 2009. The results of the MNA sampling indicated that MNA was occurring, but concentrations of benzene, naphthalene, and total petroleum hydrocarbons (TPH) remained above the GCTLs in monitoring well TFS-MW-04, located in the southwest portion of the TFS.

Between June 2009 and March 2010, TtNUS performed an extensive site investigation in the TFS area. The sites investigated included: (1) the perimeter of the POL building where LNAPL was observed in the building footing excavations; (2) the northern area adjacent to the POL Laboratory associated with the reported location of a former AST; (3) the area south of the POL Laboratory; (4) the area south of the current truck fill stand fueling and tanker parking area/containment area extending to the edge of the taxiway; and (5) the area west of the pumping area where fuel lines have been known to leak, including the current MNA area and west beyond the edge of the taxiway. Surface water samples were also collected from the wetlands southwest of the POL Laboratory building during the site investigation (Navy, 2011).

Conclusions of the 2009/2010 Site Investigation in the JP-5 spill area were to: (1) reevaluate this area since a distinct source area was not detected; and (2) collect sediment and additional surface water samples from the wetlands west of the site, as contamination has migrated to the wetlands (Navy, 2011).

Field Activities

This section describes the field activities conducted during CH2M HILL's assessment conducted at TFS. Activities followed the guidelines presented in the *Final Site Assessment Work Plan for the Truck Fill Stand* (CH2M HILL, 2012).

2.1 Field Activity Summary

Fieldwork was conducted between April 9 and May 21, 2012 in accordance with the *Final Site Assessment Work Plan for the Truck Fill Stand* (CH2M HILL, 2012). The work consisted of the following activities:

- **Monitoring Well Installation**—Advanced three well borings and installed three shallow groundwater monitoring wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17)
- **Well Plugging and Abandonment**—Plugged and abandoned one existing monitoring well (TFS-MW-07) and piezometer (TFS-P-1)
- **Sediment and Surface Water Sampling Event**—Collected sediment and surface water samples from four locations (TFS-SW/SD-01, TFS-SW/SD-02, TFS-SW/SD-03, and TFS-SW/SD-04)
- **Aquifer Testing**—Performed slug tests on four monitoring wells (TFS-MW-12, TFS-MW-15, TFS-MW-16, and TFS-MW-17) to evaluate the hydraulic conductivity of the shallow groundwater
- **Tidal Influence Evaluation**—Installed pressure transducers in five monitoring wells (TFS-MW-01, TFS-MW-06, TFS-MW-8D, TFS-MW-11, and TFS-MW-17) to measure tidal influence on groundwater fluctuations
- **Groundwater Sampling Event**—Collected groundwater samples from the three new monitoring wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17) and two existing monitoring wells (TFS-MW-03 and TFS-MW-06)
- **Civil Survey**—Surveyed the three new monitoring wells and four sediment and surface water sample locations

Figure 2-1 shows the locations of the monitoring wells and the sediment and surface water sample locations. A field activity summary is provided in Table 2-1.

TABLE 2-1
Field Activity Summary
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Date	Specific Activity	Comments
April 9, 2012	Performed underground utility location and clearance	Marked and cleared three proposed well locations for underground utility conflicts
April 9, 2012	Installed pressure transducers	Installed pressure transducers in wells TFS-MW-01, TFS-MW-06, TFS-MW-8D, and TFS-MW-11
April 10 – 12, 2012	Monitoring well installation and development	Installed and developed monitoring wells TFS-MW-15, TFS-MW-16, and TFS-MW-17
April 11 – 12, 2012	Well plugging and abandonment	Plugged and abandoned existing monitoring well TFS-MW-07 and piezometer TFS-P-01

TABLE 2-1
 Field Activity Summary
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

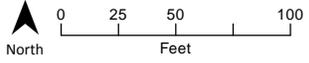
Date	Specific Activity	Comments
April 12, 2012	Sediment and surface water sampling	Collected sediment and surface water samples from four locations: TFS-SD-01/TFS-SW-01, TFS-SD-02/TFS-SW-02, TFS-SD-03/TFS-SW-03, and TFS-SD-04/TFS-SW-04
April 13, 2012	Aquifer testing	Performed slug out aquifer tests on four monitoring wells (TFS-MW-12, TFS-MW-15, TFS-MW-16, and TFS-MW-17)
April 13, 2012	Installed pressure transducer	Installed pressure transducer in well TFS-MW-17
April 18, 2012	Retrieved pressure transducers	Retrieved and downloaded tidal influence data from the pressure transducers installed in wells TFS-MW-01, TFS-MW-06, TFS-MW-8D, TFS-MW-11, and TFS-MW-17
April 19, 2012	Performed civil survey	Surveyed three new monitoring wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17) and four sediment and surface water sample locations (TFS-SD-01/TFS-SW-01, TFS-SD-02/TFS-SW-02, TFS-SD-03/TFS-SW-03, and TFS-SD-04/TFS-SW-04)
April 19-20, 2012	Collected groundwater samples	Purged and sampled five monitoring wells (TFS-MW-03, TFS-MW-06, TFS-MW-15, TFS-MW-16, and TFS-MW-17)
May 21, 2012	Collected sitewide water level measurements	Measured groundwater levels in 16 monitoring wells.
July 5, 2012	Disposed of investigation-derived waste (IDW)	Removed, transported, and disposed of soil and liquid IDW

The following sections present a summary of the site-specific activities conducted at the truck fill stand.

2.2 Well Installation

Three shallow groundwater monitoring wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17) were installed using hollow-stem auger drilling methods (Figure 2-1). Zebra Environmental Drilling Company, Inc. of Tampa, Florida, performed the work. Well TFS-MW-15 was installed to the northwest between wells TFS-MW-11 and TFS-MW-07. Wells TFS-MW-16 and TFS-MW-17 were installed to replace two ineffective shallow groundwater monitoring wells TFS-MW-07 and TFS-P-1, respectively. Well depths ranged from 11.00 to 12.15 feet below ground surface (bgs) and were constructed so the well screens straddled the water table to detect LNAPL, if present.

The monitoring wells were constructed using a variable amount of 2-inch inner-diameter (ID) Schedule 40 polyvinyl chloride (PVC) riser, and a 10-foot lengths of 2-inch-ID PVC machine-slotted (slot size of 0.010 inch) well screen. In each well, 20/30 filter sand was brought to the top of the well screen, followed by 6 to 12 inches of fine sand. The remaining annular space was filled with Portland cement grout. The wells were finished as flush-mount completions with 8-inch-diameter well vaults set in 2-foot-square concrete pads.



- LEGEND**
- Monitoring Well Location
 - Abandoned Monitoring Well Location
 - Surface Water/Sediment Sample Location

FIGURE 2-1
Monitoring Well and Surface
Water/Sediment Sample Locations
NAS Key West
Boca Chica Key, Florida

Following installation, the wells were developed using the surge-and-pump method. The process consisted of surging the entire screened interval with a surge block, and then pumping out the suspended sediment. Table 2-2 provides a summary of the monitoring well construction details for monitoring wells TFS-MW-15, TFS-MW-16, and TFS-MW-17. The monitoring well permits, well boring logs, and well completion diagrams are included in Appendix A.

TABLE 2-2
Well Construction Summary and Water Level Data
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Location (Well ID)	Ground Elevation (ft msl)	Top of Casing Elevation (ft msl)	Well Diameter (inches)	Total Well Depth (ft BTOC)	Screen Interval (ft bgs)	Sand Pack Interval (ft bgs)	Fine Sand Seal Interval (ft bgs)	Grout Interval (ft bgs)	April 20, 2012 Depth to Groundwater (ft BTOC)	April 20, 2012 Groundwater Elevation (ft msl)
TFS-MW-15	2.4	2.28	2	11.00	1.0-11.0	1.0-11.0	0.5-1.0	0-0.5	1.13	1.15
TFS-MW-16	3.5	3.20	2	12.15	2.15-12.1	2.15-12.1	1.0-2.1	0-1.0	2.08	1.12
TFS-MW-17	2.5	2.26	2	11.75	1.75-11.7	1.75-11.7	1.0-1.75	0-1.0	1.80	0.46

Notes:
ft bgs = feet below ground surface
ft BTOC = feet below top of casing
ft msl = feet mean sea level
NA = not applicable

2.3 Monitoring Well Plugging and Abandonment

Two ineffective wells, TFS-MW-07 and TFS-P-1 (see Figure 2-1), were plugged and abandoned at the TFS site. Each well was abandoned by the tremie grout method. At each well a tremie pipe was lowered to the bottom of the well and the pressurized cement-bentonite grout was forced into the bottom of the well as the pipe was slowly retracted. The grout was brought to within 2 feet of ground surface. After 4 hours each, the wells were visually inspected and additional grout was added to account for settling. Lastly, the well pads at each location were removed. At the well TFS-MW-07 location, a 2-foot-by-2-foot square concrete patch was poured following pad removal because the well was located in asphalt. At the well TFS-P-01 location, the well was located in a gravel area, and following pad removal, gravel was placed to match the surrounding area. Well plugging and abandonment permits are presented in Appendix A.

2.4 Sediment and Surface Water Sampling

Four sediment and four surface water samples (TFS-SD/SW-01 through TFS-SD/SW-04) were collected from the wetland area located to the west of the TFS (Figure 2-1). The sediment and surface water samples were analyzed for Appendix IX VOCs (U.S. Environmental Protection Agency [EPA] Method 8260B), Appendix IX semivolatile organic compounds (SVOCs) (EPA Method 8270D/8270SIM), and total recoverable petroleum hydrocarbon (TRPH) (Florida Petroleum Residual Organic [FL PRO]).

Each sediment sample was collected using a stainless-steel spoon. Samples collected for VOC analysis were transferred directly to the sample container using the stainless-steel spoon. The samples collected for SVOC analysis were transferred to a stainless-steel bowl, and were homogenized using the stainless-steel spoon before placing into the sample container.

The surface water samples were collected by slowly immersing a clean sample bottle into the water body to fill the sample bottle. The sample bottle was immersed slowly to avoid turbulence and aeration during filling.

2.5 Aquifer Testing and Tidal Fluctuation Study

Slug tests were performed on four monitoring wells (TFS-MW-12, TFS-MW-15, TFS-MW-16, and TFS-MW-17) (see Figure 2-1 for well locations). Slug testing was performed to estimate the hydraulic conductivity of the formation surrounding the screened interval of the well. Slug out, or falling head, tests were performed using the following method:

- The water level was measured in the well.
- A transducer, connected to a data logger, was lowered to approximately 1 foot above the bottom of the well.
- A disposable bailer (slug) of known volume was submerged in the well just below the water table, and the water level was allowed to equilibrate.
- As the slug (water-filled bailer) was rapidly removed from the well, the test was initiated on the data logger. Water levels were measured by the transducer and recorded by the data logger.
- The test was allowed to continue until the water level returned to within 10 percent of the original static water level.

In addition to aquifer testing, pressure transducers were placed into five monitoring wells (TFS-MW-01, TFS-MW-06, TFS-MW-08D, TFS-MW-11, and TFS-MW-17) (refer to Figure 2-1 for well locations) to measure the influence changes in the tide have on groundwater levels within the water table aquifer. Each pressure transducer was programmed to record changes in water level at 15-minute intervals over a period of 5 to 9 days.

2.6 Groundwater Level Measurements and Sampling

Static water levels were measured in 8 monitoring wells on April 20, 2012 and in 16 wells on May 21, 2012 (Table 2-3). Water levels were measured using an interface probe and measurements were made from a survey mark located on the top of the well casing.

On April 19 and 20, 2012, groundwater samples were collected from monitoring wells TFS-MW-03, TFS-MW-06, TFS-MW-15, TFS-MW-16, and TFS-MW-17. Prior to sampling, the wells were purged using a peristaltic pump fitted with new disposable polyethylene tubing. The temporary monitoring wells were sampled following the EPA guidance entitled *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA, 1996). The intake tubing was placed approximately 2 feet below the top of the water column in each well. Pump discharge was monitored for pH, temperature, turbidity, specific conductance, oxidation-reduction potential (ORP), and dissolved oxygen (DO). Groundwater samples were collected after the water levels in the wells had stabilized, a minimum of one well volume per well had been purged, and field parameters were stable. Well purging forms are provided in Appendix B. Groundwater samples were analyzed for Appendix IX VOCs (EPA Method 8260B), Appendix IX SVOCs (EPA Method 8270D/8270SIM), and TRPH (FL PRO). Monitoring wells TFS-MW-03, TFS-MW-06, and TFS-MW-17 were sampled for geochemical parameters alkalinity (SM2320B); nitrate, nitrite, and sulfate (EPA Method 300.1); sulfide (SM4500-SF); and total organic carbon (TOC) (SM5310B).

TABLE 2-3
 Water Level Elevation Data
 Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Monitoring Well ID	Total Well Depth (ft BTOC)	Screen Interval (ft bgs)	Ground Elevation (ft msl)	Top of Casing Elevation (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft msl)
					4/20/2012	4/20/2012	5/21/2012	5/21/2012
TFS-MW-01	11.99	NA	NA	4.44	2.98	1.46	1.64	2.80
TFS-MW-02	11.97	NA	NA	3.09	NM	NM	0.35	2.74
TFS-MW-03	11.50	NA	NA	4.17	2.90	1.27	1.63	2.54
TFS-MW-04	11.97	NA	NA	2.63	NM	NM	0.05	2.58
TFS-MW-05	11.95	NA	NA	4.55	NM	NM	1.55	3.00
TFS-MW-06	11.94	NA	NA	4.21	2.46	1.75	1.02	3.19
TFS-MW-8D	35.00	NA	NA	4.12	2.52	1.60	1.71	2.41
TFS-MW-09	12.00	NA	NA	3.05	NM	NM	0.53	2.52
TFS-MW-10	NA	NA	NA	2.73	NM	NM	0.25	2.48
TFS-MW-11	11.31	NA	NA	2.62	1.25	1.37	0.05	2.57
TFS-MW-12	11.28	NA	NA	3.80	NM	NM	0.97	2.83
TFS-MW-13	11.00	NA	NA	2.58	NM	NM	0.10	2.48
TFS-MW-14	11.00	NA	NA	2.49	NM	NM	-0.05	2.54
TFS-MW-15	11.00	1.00-11.00	2.4	2.28	1.13	1.15	0.01	2.27
TFS-MW-16	12.15	2.15-12.15	3.5	3.20	2.08	1.12	1.01	2.19
TFS-MW-17	11.75	1.75-11.75	2.5	2.26	1.80	0.46	0.18	2.08

Notes:

ft bgs = feet below ground surface

ft BTOC = feet below top of casing

ft msl = feet mean sea level

NA = not available

NM = not measured

Construction details and survey information for wells TFS-MW-01 through TFS-MW-14 taken from the *Site Assessment for Truck Fill Stand* Report (TtNUS, 2011).

2.7 Civil Surveying

State of Florida-registered surveyor Betsy Lindsay, Inc. of Stuart, Florida, surveyed the three newly installed monitoring wells and the four sediment/ surface water sample locations. The horizontal and vertical locations of the sampling locations and wells were tied to an existing benchmark. Horizontal coordinate values of surveyed points are in U.S. Survey Feet, North American Datum of 1983 (NAD 83) current adjustment. Elevations of surveyed points were referenced to mean sea level (msl), North American Vertical Datum of 1929 (NAVD 29). Both the measuring points (at the top of casing) and the ground surface at the temporary monitoring wells were surveyed. Ground surface and measuring point elevations were surveyed to the nearest 0.1 foot and 0.01 foot, respectively; and horizontal locations were surveyed to the nearest 0.01 foot. The survey data are presented in Appendix C.

2.8 Investigation-Derived Waste

IDW (soil cuttings decontamination water, well development water, and well purge water) was containerized in labeled 55-gallon drums and stored at the TFS. Samples were collected from the soil and water IDW for waste characterization and profiling for subsequent transportation and disposal. Soil IDW samples were analyzed for Toxicity Compound Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP pesticides, TCLP herbicides, TCLP metals, polychlorinated biphenyls (PCBs), TRPH, ignitability, and corrosivity. Water IDW samples were analyzed for TCLP VOCs, TCLP SVOCs, TCLP pesticides, TCLP herbicides, TCLP metals, PCBs, TRPH, ignitability, and corrosivity. On July 5, 2012, IDW were transported to World Petroleum located in Davie, Florida. Copies of the non-hazardous waste manifests for the soil and water IDW are provided in Appendix D.

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Investigation Findings

This section presents the findings from the site assessment.

3.1 Geology

Examination of soil cuttings from the monitoring well borings indicated the lithology from ground surface to approximately 12 feet bgs consists of white, soft to medium hardness weathered limestone.

3.2 Hydrogeology

3.2.1 Groundwater

Static groundwater measurements were collected from select wells during April 2012, and site-wide groundwater level measurements were collected during May 2012 (refer to Table 2-3). During April 2012, groundwater was encountered at depths ranging from 1.13 feet bgs at well TFS-MW-15 to 2.98 feet bgs at well TFS-MW-01. During May 2012, groundwater was observed that ranged from flowing at the ground surface at well TFS-MW-14 to a depth of 1.71 feet at well TFS-MW-8D. Water table elevations beneath the site ranged from 0.46 foot to 1.75 feet msl in April 2012 and from 2.08 to 3.19 feet msl in May 2012. The groundwater elevations measured on April 20 and May 21, 2012 were used to develop potentiometric surface maps of the water-table aquifer. These maps from April and May 2012 are presented in Figures 3-1 and 3-2, respectively. The potentiometric surface for April 2012 (Figure 3-1) indicates that the direction of groundwater flow across the site is generally to the south-southeast, while the potentiometric surface for May 2012 (Figure 3-2) indicates that the direction of groundwater flow across the site is radial from a groundwater high located at well TFS-MW-06. The radial flow is probably attributable to the fact that well TFS-MW-06 is located in an unpaved grassy area and receives more recharge. The average horizontal gradient of across the site in April 2012 was estimated to be 0.005 foot per foot (ft/ft) and the average horizontal gradient of across the site in May 2012 was estimated to be 0.007 ft/ft.

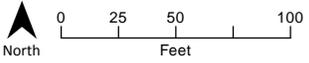
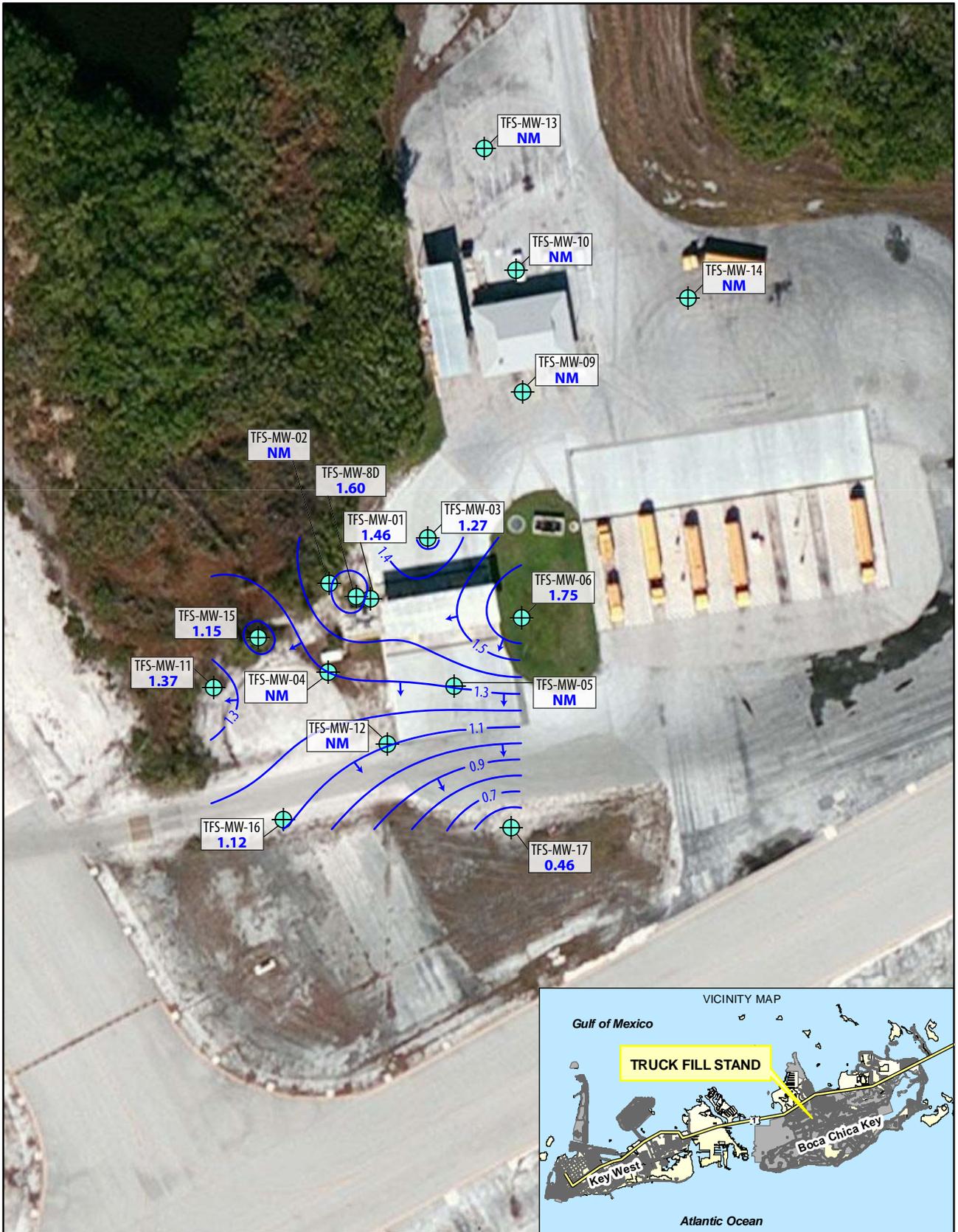
Vertical gradient calculations for April and May 2012 are summarized in Table 3-1. Vertical gradients were calculated for April and May 2012 using well cluster TFS-MW-01/TFS-MW-8D. During April 2012, an upward hydraulic gradient of 0.006 ft/ft was measured. In May 2012, a downward hydraulic gradient of -0.017 ft/ft was measured at the TFS-MW-01/TFS-MW-8D well cluster. The change between the April 2012 upward gradient and the May 2012 downward gradient is likely due to the increase in the groundwater elevations measured in May 2012 following a heavy rainfall event.

TABLE 3-1
Calculated Vertical Hydraulic Gradients
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Date	Well Cluster	Vertical Gradient (ft/ft)	Gradient Direction
4/20/2012	TFS-MW-01/TFS-MW-8D	0.006	Up
5/21/2012	TFS-MW-01/TFS-MW-8D	-0.017	Down

3.2.2 Aquifer Testing

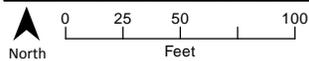
Aquifer slug tests were performed at monitoring wells TFS-MW-12, TFS-MW-15, TFS-MW-16, and TFS-MW-17. Hydraulic conductivity values were calculated using the Bouwer and Rice Method (Bouwer and Rice, 1976). The estimated hydraulic conductivity of the partially penetrating monitoring wells ranged from 2.3×10^{-3} to 4.4×10^{-3} centimeters per second (cm/sec) or 6.5 to 12.5 foot per day (ft/day) and the hydraulic conductivity geometric mean value for the partially penetrating monitoring wells was calculated to be 8.99 ft/day. Aquifer slug test results and calculations are provided in Appendix E.



- LEGEND**
- Monitoring Well Location
 - Groundwater Flow Direction
 - NM** Not Measured

- NOTES**
1. Groundwater elevations were measured on April 20, 2012
 2. All elevations in feet
 3. Deep well TFS-MW-8D was not used to create this potentiometric surface map
 4. Contour interval = 0.01 ft

FIGURE 3-1
Potentiometric Surface Map (April 2012)
 NAS Key West
 Boca Chica Key, Florida



LEGEND

- Monitoring Well Location
- Groundwater Flow Direction

NOTES

1. Groundwater elevations were measured on May 21, 2012
2. All elevations in feet
3. Deep well TFS-MW-8D was not used to create this potentiometric surface map
4. Contour interval = 0.3 ft

FIGURE 3-2
Potentiometric Surface Map (May 2012)
 NAS Key West
 Boca Chica Key, Florida

The rate of groundwater moving beneath the site was estimated by the average seepage velocity. The following equation was used to calculate the average seepage velocity:

$$V_x = \frac{K i}{n_e}$$

where:

V_x = average seepage velocity in ft/day

K = hydraulic conductivity (geometric mean hydraulic conductivity of 8.99 ft/day)

i = hydraulic gradient (average horizontal gradient of across the site between April and May 2012 of 0.006 ft/ft)

n_e = effective porosity (assumed to be 0.15 for weather limestone)

The horizontal seepage velocity (V) across the site is estimated to be 0.36 ft/day or 131.3 ft/year ($V=[8.99 \text{ ft/day}][0.006 \text{ ft/ft}]/0.15$).

3.2.3 Tidal Influence Study

Pressure transducers were installed in monitoring wells TFS-MW-01, TFS-MW-06, TFS-MW-08D, TFS-MW-11, and TFS-MW-17 to measure the influence the tides have on groundwater levels within the water table aquifer. Between, April 9 and 18, 2012, fluctuations in water levels were recorded at 15-minutes intervals.

During the study period, the changes in groundwater levels ranged from as little as 0.004 foot in II TFS-MW-01 to as much as 1.227 feet in well TFS-MW-8D. The groundwater level fluctuations recorded from each well were graphed and compared to daily tidal changes that occurred during the study. Daily tidal changes were obtained from the National Oceanic and Atmospheric Administration Tidal Stations and Ranges Web page for Boca Chica Channel Bridge monitoring station and the Boca Chica Key Long Point monitoring station. Daily tidal changes for low tides ranged from -0.37 foot to 0.33 foot while tidal changes for high tides ranged from 0.63 foot to 1.50 feet, as compared to mean sea level.

Based on the comparison of the groundwater fluctuations and tidal changes, there is a direct influence of tidal change on the groundwater elevations at the site. The greatest influence observed during the study period was in well TFS-MW-8D, where groundwater levels fluctuated 1.142 feet in the well while the least influence was observed in well TFS-MW-06, where groundwater levels fluctuated 0.197 foot in the well. Tidal study graphs are presented in Appendix F.

3.3 Field Parameters

Water quality parameters (temperature, specific conductivity, ORP, DO, pH, and ferrous iron [Fe^{2+}]) were measured during purging the monitoring wells. The measured water quality parameters convey the groundwater conditions and provide information necessary to evaluate natural attenuation. Table 3-2 presents the water quality parameter results. Results are discussed below as they relate to the suitability of an aquifer as an environment for hydrocarbon degradation to occur.

TABLE 3-2
Field Parameters
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Location		TFS-MW-03	TFS-MW-06	TFS-MW-15	TFS-MW-16	TFS-MW-17
Field Parameter	Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012
Temperature (°C)		29.05	26.45	27.66	29.00	28.14
Specific Conductance (mS/cm)		0.868	0.827	2.110	3.390	3.500
Dissolved Oxygen (mg/L)		0.00	0.00	0.00	5.09	0.00

TABLE 3-2
Field Parameters
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Location		TFS-MW-03	TFS-MW-06	TFS-MW-15	TFS-MW-16	TFS-MW-17
Field Parameter	Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012
Oxidation-Reduction Potential (mV)		109.0	-260.0	-350.0	-187.0	-364.0
pH		7.19	6.80	6.44	7.03	6.77
Turbidity (NTU)		16.0	9.1	45.1	67.9	18.9
Ferrous Iron (mg/L)		0.0	0.0	0.0	0.0	0.0

Notes:

°C - degrees Celsius

mS/cm - millisiemens per centimeter

mg/L - milligrams per liter

mV – millivolts

NTU - nephelometric turbidity unit

3.3.1 Temperature

Groundwater temperature directly affects the solubility of oxygen and other geochemical species. The solubility of DO is temperature dependent, being more soluble in cold water than in warm water. Groundwater temperature also affects the metabolic activity of bacteria. The optimum temperature range for microbial activity is between 8 to 30 degrees Celsius (°C) and rates of hydrocarbon biodegradation roughly double for every 10°C increase in temperature over the temperature range between 5 and 25°C. Groundwater temperatures below 5°C tend to inhibit biodegradation and slow rates of biodegradation are generally observed.

During the April 2012 groundwater monitoring event, temperatures varied from 26.5 to 29.1°C and averaged 28.1°C in the monitoring wells. These groundwater temperatures are within the upper range for optimal microbial activity and are extremely favorable for biodegradation of hydrocarbons to occur. Temperature changes in the monitoring wells varied by 2.6°C. The variation of temperatures in the shallow monitoring wells indicates the shallow groundwater reacts readily to ambient temperature changes as the day warms between morning and afternoon.

3.3.2 Specific Conductance

Specific conductance measurements indicate whether groundwater extracted from wells is representative of the same water-bearing zone at a site. Specific conductance measurements ranged from 0.827 to 3.500 milliSiemens per centimeter (mS/cm). The specific conductance measurements from the two existing wells, TFS-MW-03 and TFS-MW-06, were similar during the April 2012 monitoring event as well as much lower than the specific conductance measurements from the three new wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17). This is likely due to the recent disturbance of the shallow aquifer in the vicinity of the new wells during well installation. Additional monitoring will be required to evaluate further changes in specific conductance.

3.3.3 Dissolved Oxygen

DO is a measure of oxygen dissolved in a solution. DO is often depleted in groundwater contaminated with hydrocarbons as a result of in-situ biodegradation of hydrocarbons. As oxygen is consumed, carbon dioxide (CO₂) is produced in the biodegradation process. DO concentrations less than 0.5 milligrams per liter (mg/L) typically are indicative of an environment supportive of anaerobic reactions. DO concentrations greater than 2 mg/L reflect well-aerated groundwater.

During the April 2012 monitoring event, DO was measured in one well (TFS-MW-16) at 5.09 mg/L, while it was not detected (0.00 mg/L) in the remaining four wells that were sampled. Overall, the DO concentrations are indicative of anaerobic conditions at the site.

3.3.4 Oxidation-Reduction Potential

ORP is a measure of electron activity and an indicator of the relative tendency of a solution to accept or transfer electrons. As electron acceptors are utilized, the redox potential of the groundwater decreases. Negative or relatively low redox values can be used to identify areas under anaerobic conditions. The ORP in groundwater samples from four of the five monitoring wells were negative values, indicating a reducing groundwater environment. ORP ranged from -364.0 millivolts (mV) at TFS-MW-17 to 109.0 mV at well TFS-MW-03. The range in ORP values suggests that some areas of the aquifer are more anaerobic than others.

3.3.5 pH

The pH of groundwater has an effect on the presence and activity of microbial populations in groundwater and the optimum pH range for microbial activity is between 6 and 8 standard units. pH ranged from 6.44 to 7.19 units during the April 2012 monitoring event, indicating the pH of groundwater at the site is within the optimal range for microbial activity to occur.

3.3.6 Ferrous Iron

Fe^{2+} concentrations may also be used as an indicator of anaerobic degradation of hydrocarbons. During the biodegradation process, ferric iron (Fe^{3+}) is used as an electron receptor, and Fe^{3+} is reduced to Fe^{2+} . Therefore, Fe^{2+} typically increases in groundwater as petroleum hydrocarbons are consumed as a result of biological activity.

Fe^{2+} measurements during the April 2012 monitoring event indicated Fe^{2+} was not present in groundwater. Based on data reported in the site assessment report (TtNUS, 2011), the amount of Fe^{3+} available for reduction is small. In samples collected during the 2009/2010 site investigation, Fe^{3+} was measured at concentrations ranging from 0.034 mg/L to 0.323 mg/L (TtNUS, 2011).

3.4 Sample Results

The laboratory results were reviewed and validated to assess the accuracy, precision, and completeness based upon procedures described in guidance documents such as the EPA's *National Functional Guidelines for Organic Data Review* (EPA, 2008). Both lab quality assurance/quality control (QA/QC) summary forms and data reports were reviewed. Based on the validation process, the analytical results are usable as qualified in the decision-making process. CH2M HILL's data validation reports and laboratory analytical reports (groundwater, surface water, and sediment) are provided in Appendix G on CD.

Following the data validation process, the GCTLs and marine SWCTLs, as listed in F.A.C. Chapter 62-777, were used to compare groundwater and surface water analytical results. Sediment analytical data were compared to EPA Region 4 ecological screening values and additional criteria were used, where available, in circumstances when EPA ecological screening values were not available.

Table 3-3 summarizes the analytical results for compounds detected in the groundwater samples, Table 3-4 summarizes the analytical results for compounds detected in the surface water samples, and Table 3-5 summarizes the analytical results for compounds detected in the sediment samples. Sample results are discussed below.

TABLE 3-3
Groundwater Analytical Data Summary
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Analyte	Units	Groundwater Sample Data						Groundwater Cleanup Target Levels ¹	
		Location	TFS-MW-06			TFS-MW-15	TFS-MW-16		TFS-MW-17
		Sample ID	TFS-MW-06	TFS-MW-FD1	TFS-MW-15	TFS-MW-16	TFS-MW-17		
		Sample Depth (ft)	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0		
Sample Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/20/2012			
4,6-Dinitro-2-methylphenol	µg/L	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	NA	
4-Aminobiphenyl	µg/L	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 UJ	NA	
4-Bromophenyl-phenylether	µg/L	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	NA	
4-Chloro-3-methylphenol	µg/L	5.5 U	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	63	
4-Chloroaniline	µg/L	6.1 U	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	28	
4-Chlorophenyl-phenylether	µg/L	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	NA	
4-Methylphenol	µg/L	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	3.5	
4-Nitroaniline	µg/L	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	1.7	
4-Nitrophenol	µg/L	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	56	
4-Nitroquinoline-1-oxide	µg/L	7.6 UR	7.6 UR	7.6 UR	7.6 UR	7.6 UR	7.6 UR	NA	
5-Nitro-o-toluidine	µg/L	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	1.1	
7,12-Dimethylbenz(a)anthracene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	NA	
a,a-Dimethylphenethylamine	µg/L	32.6 UJ	32.6 UJ	32.6 UJ	32.6 UJ	32.6 UJ	32.6 UJ	NA	
Acetophenone	µg/L	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	700	
Aniline	µg/L	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	6.1	
Aramite	µg/L	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	1.4	
Benzyl alcohol	µg/L	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	2100	
Bis(2-chloroethoxy)methane	µg/L	7.1 U	7.1 U	7.1 U	7.1 UJ	7.1 U	7.1 U	NA	
Bis(2-chloroethyl)ether	µg/L	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	0.03	
Bis(2-ethylhexyl)phthalate	µg/L	9 U	9 U	9 U	9 U	9 U	9 U	6	
Butylbenzylphthalate	µg/L	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	140	
Chlorobenzilate	µg/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.1	
Diallate (Avadex)	µg/L	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.6	
Dibenzofuran	µg/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	28	
Diethylphthalate	µg/L	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5600	
Dimethylphthalate	µg/L	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	70000	
Di-n-butylphthalate	µg/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	700	
Di-n-octylphthalate	µg/L	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	140	
Dinoseb	µg/L	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	8.2 U	7	
Ethyl methanesulfonate	µg/L	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	NA	
Hexachlorobenzene	µg/L	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	1	
Hexachlorobutadiene	µg/L	5.1 U	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	0.4	
Hexachlorocyclopentadiene	µg/L	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	50	
Hexachloroethane	µg/L	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	2.5	
Hexachloropropene	µg/L	4.1 UR	4.1 UR	4.1 UR	4.1 UR	4.1 UR	4.1 UR	NA	
Isodrin	µg/L	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 UJ	NA	
Isophorone	µg/L	7.8 U	7.8 U	7.8 U	7.8 UJ	7.8 U	7.8 U	37	
Isosafrole	µg/L	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	NA	
Kepone	µg/L	32.6 U	32.6 U	32.6 U	32.6 U	32.6 U	32.6 UR	0.004	
Methylmethanesulfonate	µg/L	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	NA	
Nitrobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	3.5	
N-Nitrosodibutylamine	µg/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	0.006	
N-Nitrosodiethylamine	µg/L	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	0.0002	
N-Nitrosodimethylamine	µg/L	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	0.0007	
N-Nitroso-di-n-propylamine	µg/L	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	0.005	
N-Nitrosodiphenylamine	µg/L	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	7.1	
N-Nitrosomethylethylamine	µg/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	0.002	
N-Nitrosomorpholine	µg/L	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	NA	
N-Nitrosopiperidine	µg/L	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	NA	
N-Nitrosopyrrolidine	µg/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	0.02	
Methapyriline	µg/L	4.5 UR	4.5 UR	4.5 UR	4.5 UR	4.5 UR	4.5 UR	NA	
o-Toluidine	µg/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	0.1	
p-Dimethylaminoazobenzene	µg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	NA	
Pentachlorobenzene	µg/L	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	5.6	
Pentachloroethane	µg/L	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	NA	
Pentachloronitrobenzene(PCNB)	µg/L	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	0.1	
Pentachlorophenol	µg/L	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	1	
Phenacetin	µg/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	
Phenol	µg/L	3.5 U	3.5 U	3.5 U	3.5 UJ	3.5 U	3.5 U	10	
p-Phenylenediamine	µg/L	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	1300	
Pronamide	µg/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	53	
Pyridine	µg/L	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	7	
Safrole	µg/L	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	NA	
Appendix IX Polycyclic Aromatic Hydrocarbons (SW8270D-SIM)									
1-Methylnaphthalene	µg/L	0.041 U	0.041 U	0.041 U	2.8	0.041 U	0.026 J	28	
2-Methylnaphthalene	µg/L	0.041 U	0.041 U	0.041 U	2	0.041 U	0.022 J	28	
Acenaphthene	µg/L	0.041 U	0.17	0.18	2.4	0.041 U	1.2	20	
Acenaphthylene	µg/L	0.041 U	0.041 U	0.041 U	0.1	0.041 U	0.023 J	210	
Anthracene	µg/L	0.041 U	0.036 J	0.04 J	0.78	0.041 U	0.041 U	2100	
Benzo(a)anthracene	µg/L	0.041 U	0.041 U	0.041 U	0.18	0.041 U	0.041 U	0.05	
Benzo(a)pyrene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.2	
Benzo(b)fluoranthene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.05	
Benzo(g,h,i)perylene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	210	
Benzo(k)fluoranthene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.5	
Chrysene	µg/L	0.041 U	0.041 U	0.041 U	0.094	0.041 U	0.041 U	4.8	
Dibenzo(a,h)anthracene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.005	
Fluoranthene	µg/L	0.041 U	0.08	0.084	2.3	0.041 U	0.045 J	280	
Fluorene	µg/L	0.041 U	0.021 J	0.041 U	3.4	0.041 U	0.043 J	280	
Indeno(1,2,3-cd)pyrene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.05	
Naphthalene	µg/L	0.041 U	0.041 U	0.024 J	2.9	0.041 U	0.055	14	
Phenanthrene	µg/L	0.041 U	0.023 J	0.025 J	3.5	0.041 U	0.041 U	210	
Pyrene	µg/L	0.041 U	0.042 J	0.044 J	1.3	0.041 U	0.041 U	210	
Total Recoverable Petroleum Hydrocarbons (FL-PRO)									
TRPH	µg/L	510 U	920	900	22400 J	320 J	1700	5000	

Notes:

NA Not analyzed/Not applicable

J The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ The analyte was below the reported sample quantitation limit. However, the reported value is approximate.

UR The reported value of analyte was rejected due to failed laboratory QC. See data validation report in Appendix G.

mg/L Milligrams per Liter

µg/L Micrograms per Liter

Bold indicates the analyte was detected

Bold and shaded values indicate the analyte exceeded the GCTL

¹ GCTL's are from Table 1 of the *Final Technical Report: Development of Cleanup Target Levels (CTLs)*
For Chapter 63-777, F.A.C., Center for Environmental & Human Toxicology. February 2005.

TABLE 3-4

Surface Water Analytical Data Summary
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Analyte	Units	Surfacewater Sample Data					Marine Surface Water Cleanup Target Levels ¹	
		Location	TFS-SW-02			TFS-SW-03		TFS-SW-04
		Sample ID	TFS-SW-02	TFS-SW-FD	TFS-SW-03	TFS-SW-04		
		Sample Depth (ft)	0 - 0	0 - 0	0 - 0	0 - 0		
Sample Date	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/12/2012			
Appendix IX Volatile Organic Compounds (SW8260B)								
1,1,1,2-Tetrachloroethane	µg/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	NA	
1,1,1-Trichloroethane	µg/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	270	
1,1,2,2-Tetrachloroethane	µg/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	10.8	
1,1,2-Trichloroethane	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	16	
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U	NA	
1,1-Dichloroethene	µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	3.2	
1,2,3-Trichloropropane	µg/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.2	
1,2-Dibromo-3-chloropropane	µg/L	2 U	2 U	2 U	2 U	2 U	NA	
1,2-Dibromoethane	µg/L	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	13	
1,2-Dichloroethane	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	37	
1,2-Dichloropropane	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	14	
1,4-Dichloro-2-butene	µg/L	4 U	4 U	4 U	4 U	4 U	NA	
1,4-Dioxane	µg/L	20 UR	20 UR	20 UR	20 UR	20 UR	120	
2-Butanone	µg/L	4 U	4 U	4 U	4 U	4 U	120000	
2-Hexanone	µg/L	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	NA	
4-Methyl-2-pentanone	µg/L	2 U	2 U	2 U	2 U	2 U	23000	
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	1700	
Acetonitrile	µg/L	20 U	20 U	20 U	20 U	20 U	20000	
Acrolein	µg/L	8 U	8 U	8 U	8 U	8 U	0.4	
Acrylonitrile	µg/L	4 U	4 U	4 U	4 U	4 U	0.2	
Allyl chloride	µg/L	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	NA	
Benzene	µg/L	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	71.28	
Bromodichloromethane	µg/L	0.3 U	0.3 U	0.19 J	0.3 U	0.3 U	22	
Bromofom	µg/L	0.31 J	2.2	1.6	0.34 J	0.38 U	360	
Bromomethane	µg/L	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	35	
Carbon disulfide	µg/L	1 U	1 U	1 U	1 U	1 U	110	
Carbon tetrachloride	µg/L	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	4.42	
Chlorobenzene	µg/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	17	
Chloroethane	µg/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	NA	
Chloroform	µg/L	0.32 U	0.24 J	0.19 J	0.32 U	0.32 U	470.8	
Chloromethane	µg/L	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	470.8	
Chloroprene	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	NA	
cis-1,3-Dichloropropene	µg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	NA	
Dibromochloromethane	µg/L	0.26 U	0.25 J	0.26 J	0.26 U	0.26 U	34	
Dibromomethane	µg/L	0.8 U	0.8 U	0.78 J	0.8 U	0.8 U	79	
Dichlorodifluoromethane	µg/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NA	
Ethyl methacrylate	µg/L	1 U	1 U	1 U	1 U	1 U	NA	
Ethylbenzene	µg/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	610	
Isobutyl alcohol	µg/L	40 UR	40 UR	40 UR	40 UR	40 UR	47000	
Methacrylonitrile	µg/L	2 U	2 U	2 U	2 U	2 U	NA	
Methyl iodide	µg/L	1.5 U	1.5 U	1.5 U	1.5 UJ	1.5 U	NA	
Methyl methacrylate	µg/L	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	6500	
Methylene chloride	µg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1580	
Propionitrile	µg/L	20 U	20 U	20 U	20 U	20 U	NA	
Styrene	µg/L	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	460	
Tetrachloroethene	µg/L	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	8.85	
Toluene	µg/L	0.28 U	0.28 U	0.28 U	0.28 U	1.1	480	
trans-1,2-Dichloroethene	µg/L	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	11000	
trans-1,3-Dichloropropene	µg/L	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	NA	
Trichloroethene	µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	80.7	
Trichlorofluoromethane	µg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	NA	
Vinyl acetate	µg/L	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	700	
Vinyl chloride	µg/L	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	2.4	
Xylene (total)	µg/L	1 U	1 U	1 U	1 U	1 U	370	
Appendix IX Semivolatile Organic Compounds (SW8270D)								
0,0,0-Triethylphosphorothioate	µg/L	5.9 U	5.9 U	5.9 UJ	5.9 U	5.9 U	NA	
1,2,4,5-Tetrachlorobenzene	µg/L	4.5 U	4.5 U	4.5 UJ	4.5 U	4.5 U	1.6	
1,2,4-Trichlorobenzene	µg/L	5.3 U	5.3 U	5.3 UJ	5.3 U	5.3 U	23	
1,2-Dichlorobenzene	µg/L	5.3 UJ	5.3 U	5.3 UJ	5.3 U	5.3 U	99	
1,3,5-Trinitrobenzene	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	19	
1,3-Dichlorobenzene	µg/L	5.5 UJ	5.5 U	5.5 UJ	5.5 U	5.5 U	85	
1,3-Dinitrobenzene	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	72	
1,4-Dichlorobenzene	µg/L	5.5 UJ	5.5 U	5.5 UJ	5.5 U	5.5 U	3	
1,4-Naphthoquinone	µg/L	6.3 UR	6.3 UR	6.3 UR	6.3 UR	6.3 UR	NA	
1-Naphthylamine	µg/L	3.7 U	3.7 U	3.7 UJ	3.7 U	3.7 U	NA	
2,2'-Oxybis(1-chloropropane)	µg/L	6.7 U	6.7 U	6.7 UJ	6.7 U	6.7 U	NA	
2,3,4,6-Tetrachlorophenol	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	4.5	
2,4,5-Trichlorophenol	µg/L	6.9 UJ	6.9 U	6.9 UJ	6.9 U	6.9 U	23	
2,4,6-Trichlorophenol	µg/L	1.7 UJ	1.7 U	1.7 UJ	1.7 U	1.7 U	6.5	
2,4-Dichlorophenol	µg/L	6.3 U	6.3 U	6.3 UJ	6.3 U	6.3 U	13	
2,4-Dimethylphenol	µg/L	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	160	
2,4-Dinitrophenol	µg/L	11.4 U	11.4 U	11.4 UJ	11.4 U	11.4 U	3	
2,4-Dinitrotoluene	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	9.1	
2,6-Dichlorophenol	µg/L	7.1 U	7.1 U	7.1 UJ	7.1 U	7.1 U	73	
2,6-Dinitrotoluene	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	0.7	
2-Acetylaminofluorene	µg/L	2.2 U	2.2 U	2.2 UJ	2.2 U	2.2 U	NA	
2-Chloronaphthalene	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	1600	
2-Chlorophenol	µg/L	5.9 UJ	5.9 U	5.9 UJ	5.9 U	5.9 U	130	
2-Methylphenol	µg/L	5.3 UJ	5.3 U	5.3 UJ	5.3 U	5.3 U	250	
2-Naphthylamine	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	NA	
2-Nitroaniline	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	NA	
2-Nitrophenol	µg/L	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U	NA	
2-Picoline	µg/L	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 U	NA	
3,3'-Dichlorobenzidine	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	0.03	
3-Methylcholanthrene	µg/L	4.5 U	4.5 U	4.5 UJ	4.5 U	4.5 U	NA	
3-Nitroaniline	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	NA	
4,6-Dinitro-2-methylphenol	µg/L	8.2 UJ	8.2 U	8.2 UJ	8.2 U	8.2 U	NA	
4-Aminobiphenyl	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	NA	
4-Bromophenyl-phenylether	µg/L	4.7 UJ	4.7 U	4.7 UJ	4.7 U	4.7 U	NA	
4-Chloro-3-methylphenol	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	100	
4-Chloroaniline	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	2.5	
4-Chlorophenyl-phenylether	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	NA	
4-Methylphenol	µg/L	12.4 UJ	12.4 U	12.4 UJ	12.4 U	12.4 U	70	

TABLE 3-4

Surface Water Analytical Data Summary
Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Analyte	Units	Surfacewater Sample Data					Marine Surface Water Cleanup Target Levels ¹	
		Location	TFS-SW-02			TFS-SW-03		TFS-SW-04
		Sample ID	TFS-SW-01	TFS-SW-FD	TFS-SW-03	TFS-SW-04		
		Sample Depth (ft)	0 - 0	0 - 0	0 - 0	0 - 0		
Sample Date	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/12/2012			
4-Nitroaniline	µg/L	3.1 U	3.1 U	3.1 UJ	3.1 U	3.1 U	1200	
4-Nitrophenol	µg/L	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 U	55	
4-Nitroquinoline-1-oxide	µg/L	7.6 UR	7.6 UR	7.6 UR	7.6 UR	7.6 UR	NA	
5-Nitro-o-toluidine	µg/L	5.3 U	5.3 U	5.3 UJ	5.3 U	5.3 U	NA	
7,12-Dimethylbenz(a)anthracene	µg/L	2 U	2 U	2 UJ	2 U	2 U	NA	
a,a-Dimethylphenethylamine	µg/L	32.6 UJ	32.6 UJ	32.6 UJ	32.6 UJ	32.6 UJ	NA	
Acetophenone	µg/L	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 U	7800	
Aniline	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	4	
Aramite	µg/L	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 U	3	
Benzyl alcohol	µg/L	6.3 UJ	6.3 U	6.3 UJ	6.3 U	6.3 U	500	
Bis(2-chloroethoxy)methane	µg/L	7.1 U	7.1 U	7.1 UJ	7.1 U	7.1 U	NA	
Bis(2-chloroethyl)ether	µg/L	6.1 UJ	6.1 U	6.1 UJ	6.1 U	6.1 U	0.5	
Bis(2-ethylhexyl)phthalate	µg/L	9 U	9 U	9 UJ	9 U	9 U	2.2	
Butylbenzylphthalate	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	26	
Chlorobenzilate	µg/L	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U	0.02	
Diallate (Avadex)	µg/L	1.7 U	1.7 U	1.7 UJ	1.7 U	1.7 U	NA	
Dibenzofuran	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	67	
Diethylphthalate	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	380	
Dimethylphthalate	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	1400	
Di-n-butylphthalate	µg/L	1.8 UJ	1.8 U	1.8 UJ	1.8 U	1.8 U	NA	
Di-n-octylphthalate	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	NA	
Dinoseb	µg/L	8.2 U	8.2 U	8.2 UJ	8.2 U	8.2 U	5.9	
Ethyl methanesulfonate	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	NA	
Hexachlorobenzene	µg/L	0.84 UJ	0.84 U	0.84 UJ	0.84 U	0.84 U	0.0003	
Hexachlorobutadiene	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	49.7	
Hexachlorocyclopentadiene	µg/L	1.7 U	1.7 U	1.7 UJ	1.7 U	1.7 U	3	
Hexachloroethane	µg/L	5.3 UJ	5.3 U	5.3 UJ	5.3 U	5.3 U	3.3	
Hexachloropropene	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	NA	
Isodrin	µg/L	5.3 U	5.3 U	5.3 UJ	5.3 U	5.3 U	NA	
Isophorone	µg/L	7.8 U	7.8 U	7.8 UJ	7.8 U	7.8 U	650	
Isosafrole	µg/L	5.3 U	5.3 U	5.3 UJ	5.3 U	5.3 U	NA	
Kepone	µg/L	32.6 U	32.6 U	32.6 UJ	32.6 U	32.6 U	NA	
Methapyriline	µg/L	4.5 UR	4.5 UR	4.5 UR	4.5 UR	4.5 UR	NA	
Methylmethanesulfonate	µg/L	3.9 U	3.9 U	3.9 UJ	3.9 U	3.9 U	NA	
Nitrobenzene	µg/L	2 U	2 U	2 UJ	2 U	2 U	90	
N-Nitrosodibutylamine	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	0.04	
N-Nitrosodiethylamine	µg/L	6.3 U	6.3 U	6.3 UJ	6.3 U	6.3 U	0.008	
N-Nitrosodimethylamine	µg/L	4.5 U	4.5 U	4.5 UJ	4.5 U	4.5 U	3	
N-Nitroso-di-n-propylamine	µg/L	6.1 UJ	6.1 U	6.1 UJ	6.1 U	6.1 U	0.5	
N-Nitrosodiphenylamine	µg/L	6.9 UJ	6.9 U	6.9 UJ	6.9 U	6.9 U	3	
N-Nitrosomethylethylamine	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	0.06	
N-Nitrosomorpholine	µg/L	6.1 U	6.1 U	6.1 UJ	6.1 U	6.1 U	NA	
N-Nitrosopiperidine	µg/L	5.7 U	5.7 U	5.7 UJ	5.7 U	5.7 U	NA	
N-Nitrosopyrrolidine	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	NA	
o-Toluidine	µg/L	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	26	
p-Dimethylaminoazobenzene	µg/L	1.3 U	1.3 U	1.3 UJ	1.3 U	1.3 U	NA	
Pentachlorobenzene	µg/L	4.5 U	4.5 U	4.5 UJ	4.5 U	4.5 U	1.7	
Pentachloroethane	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	NA	
Pentachloronitrobenzene(PCNB)	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	0.02	
Pentachlorophenol	µg/L	2.8 UJ	2.8 U	2.8 UJ	2.8 U	2.8 U	7.9	
Phenacetin	µg/L	1.8 U	1.8 U	1.8 UJ	1.8 U	1.8 U	NA	
Phenol	µg/L	3.5 U	3.5 U	3.5 UJ	3.5 U	3.5 U	6.5	
p-Phenylenediamine	µg/L	4.1 U	4.1 U	4.1 UJ	4.1 U	4.1 U	NA	
Pronamide	µg/L	1.6 U	1.6 U	1.6 UJ	1.6 U	1.6 U	NA	
Pyridine	µg/L	4.3 U	4.3 U	4.3 UJ	4.3 U	4.3 U	1300	
Safrole	µg/L	5.1 U	5.1 U	5.1 UJ	5.1 U	5.1 U	NA	
Appendix IX Polycyclic Aromatic Hydrocarbons (SW8270D-SIM)								
1-Methylnaphthalene	µg/L	0.041 U	0.041 U	0.024 J	0.041 U	0.041 U	95	
2-Methylnaphthalene	µg/L	0.041 U	0.041 U	0.059	0.041 U	0.041 U	30	
Acenaphthene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	3	
Acenaphthylene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	*	
Anthracene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.3	
Benzo(a)anthracene	µg/L	0.041 U	0.041 U	0.028 J	0.056	0.1	*	
Benzo(a)pyrene	µg/L	0.041 U	0.025 J	0.04 J	0.1	0.2	*	
Benzo(b)fluoranthene	µg/L	0.041 U	0.042 J	0.067	0.18 J	0.3	*	
Benzo(g,h,i)perylene	µg/L	0.041 U	0.025 J	0.036 J	0.086	0.17	*	
Benzo(k)fluoranthene	µg/L	0.041 U	0.041 U	0.022 J	0.052 J	0.092	*	
Chrysene	µg/L	0.041 U	0.041 U	0.028 J	0.07 J	0.12	*	
Dibenzo(a,h)anthracene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.037 J	*	
Fluoranthene	µg/L	0.041 U	0.027 J	0.04 J	0.1	0.21	0.3	
Fluorene	µg/L	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	30	
Indeno(1,2,3-cd)pyrene	µg/L	0.041 U	0.041 U	0.031 J	0.074	0.14	*	
Naphthalene	µg/L	0.041 U	0.041 U	0.038 J	0.041 U	0.041 U	26	
Phenanthrene	µg/L	0.041 U	0.041 U	0.022 J	0.036 J	0.072	*	
Pyrene	µg/L	0.041 U	0.021 J	0.031 J	0.079	0.15	0.3	
Total PAH Concentration*	µg/L	ND	0.092	0.654	1.231	0.274	0.031	
Total Recoverable Petroleum Hydrocarbons (FL-PRO)								
TRPH	µg/L	2100	1100 J	980 J	1200 J	860 J	5000	

Notes:

NA Not analyzed

ND Not detected

J The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ The analyte was below the reported sample quantitation limit. However, the reported value is approximate.

UR The reported value of analyte was rejected due to failed laboratory QC. See data validation report in Appendix G.

µg/L Micrograms per Liter

Bold indicates the analyte was detected**Bold and shaded values indicate the analyte exceeded the CTL**¹ Target Levels are the Marine Surface Water Criteria, from Table 1 of the *Final Technical Report: Development of Cleanup Target Levels (CTLs)*

For Chapter 63-777, F.A.C., Center for Environmental & Human Toxicology. February 2005.

* There are no surface water standards for these individual polycyclic aromatic hydrocarbons. Per Chapter 62-302, F.A.C., the surface water criterion for Polycyclic Aromatic Hydrocarbons (PAHs) shall apply to the total concentration of Acenaphthylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, and Phenanthrene.

TABLE 3-5

Sediment Analytical Data Summary

Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Analyte	Units	Sediment Sample Data					Sediment Criteria ¹ (Marine/Estuarine)	
		Location	TFS-SD-01		TFS-SD-02	TFS-SD-03		TFS-SD-04
		Sample ID	TFS-SD-01	TFS-SD-FD	TFS-SD-02	TFS-SD-03		TFS-SD-04
		Sample Depth (ft)	0 - 0	0 - 0	0 - 0	0 - 0		0 - 0
		Sample Date	4/12/2012	4/12/2012	4/12/2012	4/12/2012		4/12/2012
Appendix IX Volatile Organic Compounds (SW8260B)								
1,1,1,2-Tetrachloroethane	mg/kg	0.00182 U	0.00144 U	0.00272 UJ	0.00159 U	0.00187 UJ	NA	
1,1,1-Trichloroethane	mg/kg	0.00246 U	0.00194 U	0.00368 UJ	0.00214 U	0.00253 U	NA	
1,1,2,2-Tetrachloroethane	mg/kg	0.00145 UJ	0.00115 U	0.00217 UJ	0.00126 U	0.00149 U	NA	
1,1,2-Trichloroethane	mg/kg	0.00202 U	0.0016 U	0.00302 UJ	0.00176 U	0.00208 U	NA	
1,1-Dichloroethane	mg/kg	0.000836 U	0.000662 U	0.00125 UJ	0.000729 U	0.000861 U	NA	
1,1-Dichloroethene	mg/kg	0.000836 U	0.000662 U	0.00125 UJ	0.000729 U	0.000861 U	NA	
1,2,3-Trichloropropane	mg/kg	0.00295 UJ	0.00233 U	0.00442 UJ	0.00257 U	0.00304 U	NA	
1,2-Dibromo-3-chloropropane	mg/kg	0.00688 UJ	0.00545 U	0.0103 UJ	0.006 U	0.00709 U	NA	
1,2-Dibromoethane	mg/kg	0.00202 U	0.0016 U	0.00302 UJ	0.00176 U	0.00208 U	NA	
1,2-Dichloroethane	mg/kg	0.00246 U	0.00194 U	0.00368 UJ	0.00214 U	0.00253 U	NA	
1,2-Dichloropropane	mg/kg	0.00155 U	0.00122 U	0.00232 UJ	0.00135 U	0.0016 U	NA	
1,4-Dichloro-2-butene	mg/kg	0.00984 U	0.00778 U	0.0147 UJ	0.00857 U	0.0101 U	NA	
1,4-Dioxane	mg/kg	0.24 UR	0.19 UR	0.37 UR	0.21 UR	0.25 UR	NA	
2-Butanone	mg/kg	0.00344 U	0.00272 U	0.00515 UJ	0.003 U	0.00355 U	NA	
2-Hexanone	mg/kg	0.0032 U	0.00253 U	0.00479 UJ	0.00279 U	0.00329 U	NA	
4-Methyl-2-pentanone	mg/kg	0.00393 UJ	0.00311 U	0.00589 UJ	0.00343 U	0.00405 U	NA	
Acetone	mg/kg	0.011 J	0.0109	0.0179 J	0.0282	0.018	NA	
Acetonitrile	mg/kg	0.0138 U	0.0109 U	0.0206 UJ	0.012 U	0.0142 U	NA	
Acrolein	mg/kg	0.00738 U	0.00584 U	0.011 UJ	0.00643 U	0.0076 UJ	NA	
Acrylonitrile	mg/kg	0.00467 U	0.0037 U	0.007 UJ	0.00407 U	0.00481 U	NA	
Allyl chloride	mg/kg	0.00133 U	0.00105 U	0.00199 UJ	0.00116 U	0.00137 U	NA	
Benzene	mg/kg	0.00123 U	0.000973 U	0.00184 UJ	0.00107 U	0.00127 U	NA	
Bromodichloromethane	mg/kg	0.000787 U	0.000622 U	0.00118 UJ	0.000686 U	0.000811 U	NA	
Bromofrom	mg/kg	0.00113 U	0.000895 U	0.00169 UJ	0.000986 U	0.00116 U	NA	
Bromomethane	mg/kg	0.00295 U	0.00233 U	0.00442 UJ	0.00257 U	0.00304 U	NA	
Carbon disulfide	mg/kg	0.00369 U	0.00292 U	0.00552 UJ	0.00322 U	0.0038 U	NA	
Carbon tetrachloride	mg/kg	0.00148 U	0.00117 U	0.00221 UJ	0.00129 U	0.00152 U	NA	
Chlorobenzene	mg/kg	0.000861 U	0.000681 U	0.00129 UJ	0.00075 U	0.000887 UJ	NA	
Chloroethane	mg/kg	0.00182 U	0.00144 U	0.00272 UJ	0.00159 U	0.00187 U	NA	
Chloroform	mg/kg	0.00133 U	0.00105 U	0.00199 UJ	0.00116 U	0.00137 U	NA	
Chloromethane	mg/kg	0.000934 U	0.000739 U	0.0014 UJ	0.000814 U	0.000963 U	NA	
Chloroprene	mg/kg	0.000984 U	0.000778 U	0.00147 UJ	0.000857 U	0.00101 U	NA	
cis-1,3-Dichloropropene	mg/kg	0.00103 U	0.000817 U	0.00155 UJ	0.0009 U	0.00106 U	NA	
Dibromochloromethane	mg/kg	0.00113 U	0.000895 U	0.00169 UJ	0.000986 U	0.00116 U	NA	
Dibromomethane	mg/kg	0.00162 U	0.00128 U	0.00243 UJ	0.00141 U	0.00167 U	NA	
Dichlorodifluoromethane	mg/kg	0.00148 U	0.00117 U	0.00221 UJ	0.00129 U	0.00152 U	NA	
Ethyl methacrylate	mg/kg	0.00492 U	0.00389 U	0.00736 UJ	0.00429 U	0.00507 UJ	NA	
Ethylbenzene	mg/kg	0.0017 U	0.00134 U	0.00254 UJ	0.00148 U	0.00175 U	0.004 ²	
Isobutyl alcohol	mg/kg	0.0393 UR	0.0311 UR	0.0589 UR	0.0343 UR	0.0405 UR	NA	
Methacrylonitrile	mg/kg	0.014 U	0.0111 U	0.021 UJ	0.0122 U	0.0144 U	NA	
Methyl iodide	mg/kg	0.00369 U	0.00292 U	0.00552 UJ	0.00322 U	0.0038 U	NA	
Methyl methacrylate	mg/kg	0.0017 U	0.00134 U	0.00254 UJ	0.00148 U	0.00175 U	NA	
Methylene chloride	mg/kg	0.00295 U	0.00233 U	0.00442 UJ	0.00257 U	0.00304 U	NA	
Propionitrile	mg/kg	0.0492 U	0.0389 U	0.0736 UJ	0.0429 U	0.0507 U	NA	
Styrene	mg/kg	0.000688 U	0.000545 U	0.00103 UJ	0.0006 U	0.000709 UJ	NA	
Tetrachloroethene	mg/kg	0.00229 U	0.00181 U	0.00342 UJ	0.00199 U	0.00236 U	0.057 ²	
Toluene	mg/kg	0.000713 U	0.000564 U	0.00107 UJ	0.000622 U	0.000735 U	NA	
trans-1,2-Dichloroethene	mg/kg	0.000959 U	0.000759 U	0.00144 UJ	0.000836 U	0.000988 U	NA	
trans-1,3-Dichloropropene	mg/kg	0.00246 U	0.00194 U	0.00368 UJ	0.00214 U	0.00253 U	NA	
Trichloroethene	mg/kg	0.00108 U	0.000856 U	0.00162 UJ	0.000943 U	0.00111 U	0.041 ²	
Trichlorofluoromethane	mg/kg	0.00108 U	0.000856 U	0.00162 UJ	0.000943 U	0.00111 U	NA	
Vinyl acetate	mg/kg	0.00369 U	0.00292 U	0.00552 UJ	0.00322 U	0.0038 UJ	NA	
Vinyl chloride	mg/kg	0.00148 U	0.00117 U	0.00221 UJ	0.00129 U	0.00152 U	NA	
Xylene (total)	mg/kg	0.00167 U	0.00132 U	0.0025 UJ	0.00146 U	0.00172 UJ	0.004 ²	
Appendix IX Semivolatile Organic Compounds (SW8270D)								
0,0,0-Triethylphosphorothioate	mg/kg	0.15 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
1,2,4,5-Tetrachlorobenzene	mg/kg	0.14 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
1,2,4-Trichlorobenzene	mg/kg	0.18 U	0.14 U	0.2 U	0.16 U	0.17 U	0.0048 ²	
1,2-Dichlorobenzene	mg/kg	0.18 U	0.14 U	0.2 U	0.15 U	0.16 U	0.013 ²	
1,3,5-Trinitrobenzene	mg/kg	0.62 UJ	0.5 UJ	0.71 UJ	0.54 UJ	0.58 UJ	NA	
1,3-Dichlorobenzene	mg/kg	0.19 U	0.15 U	0.22 U	0.16 U	0.18 U	NA	
1,3-Dinitrobenzene	mg/kg	0.15 U	0.12 U	0.18 U	0.14 UJ	0.14 UJ	NA	
1,4-Dichlorobenzene	mg/kg	0.19 U	0.16 U	0.22 U	0.17 U	0.18 U	0.11 ²	
1,4-Naphthoquinone	mg/kg	0.13 UR	0.11 UR	0.15 UR	0.12 UR	0.12 UR	NA	
1-Naphthylamine	mg/kg	0.2 UJ	0.17 UJ	0.24 UJ	0.18 UJ	0.19 UJ	NA	
2,2'-Oxybis(1-chloropropane)	mg/kg	0.68 U	0.55 U	0.78 U	0.6 U	0.64 U	NA	
2,3,4,6-Tetrachlorophenol	mg/kg	0.22 U	0.18 U	0.25 U	0.19 UJ	0.2 UJ	NA	
2,4,5-Trichlorophenol	mg/kg	0.23 U	0.18 U	0.26 U	0.2 U	0.22 U	0.003 ²	
2,4,6-Trichlorophenol	mg/kg	0.21 U	0.17 U	0.24 U	0.18 U	0.2 U	0.006 ²	
2,4-Dichlorophenol	mg/kg	0.23 U	0.19 U	0.26 U	0.2 U	0.22 U	NA	
2,4-Dimethylphenol	mg/kg	0.18 U	0.14 U	0.2 U	0.15 U	0.16 U	0.029 ⁵	
2,4-Dinitrophenol	mg/kg	0.68 U	0.55 U	0.78 U	0.6 UJ	0.64 UJ	NA	
2,4-Dinitrotoluene	mg/kg	0.15 U	0.12 U	0.17 U	0.13 U	0.14 U	NA	
2,6-Dichlorophenol	mg/kg	0.21 U	0.17 U	0.24 U	0.18 UJ	0.19 UJ	NA	
2,6-Dinitrotoluene	mg/kg	0.15 U	0.12 U	0.18 U	0.14 U	0.14 U	0.549 ⁴	
2-Acetylaminofluorene	mg/kg	0.19 U	0.15 U	0.22 U	0.16 UJ	0.18 UJ	NA	
2-Chloronaphthalene	mg/kg	0.2 U	0.17 U	0.24 U	0.18 U	0.19 U	NA	
2-Chlorophenol	mg/kg	0.21 U	0.17 U	0.24 U	0.19 U	0.2 U	NA	
2-Methylphenol	mg/kg	0.3 U	0.24 U	0.34 U	0.26 U	0.28 U	0.063 ⁵	
2-Naphthylamine	mg/kg	0.82 U	0.67 U	0.94 U	0.72 UJ	0.77 UJ	NA	
2-Nitroaniline	mg/kg	0.18 U	0.14 UJ	0.2 UJ	0.15 UJ	0.16 UJ	NA	
2-Nitrophenol	mg/kg	0.22 U	0.18 U	0.25 U	0.2 U	0.21 U	NA	
2-Picoline	mg/kg	0.15 UJ	0.12 UJ	0.18 UJ	0.14 UJ	0.14 UJ	NA	
3,3'-Dichlorobenzidine	mg/kg	0.18 U	0.15 U	0.21 U	0.16 U	0.17 U	NA	
3-Methylcholanthrene	mg/kg	0.12 U	0.098 U	0.14 U	0.1 UJ	0.11 UJ	NA	
3-Nitroaniline	mg/kg	0.25 U	0.2 UJ	0.28 UJ	0.22 UJ	0.23 UJ	NA	
4,6-Dinitro-2-methylphenol	mg/kg	0.82 U	0.67 U	0.94 U	0.72 UJ	0.77 UJ	NA	
4-Aminobiphenyl	mg/kg	0.82 U	0.67 U	0.94 U	0.72 UJ	0.78 UJ	NA	
4-Bromophenyl-phenylether	mg/kg	0.15 U	0.12 U	0.17 U	0.13 U	0.14 U	NA	
4-Chloro-3-methylphenol	mg/kg	0.17 U	0.14 U	0.2 U	0.15 U	0.16 U	NA	
4-Chloroaniline	mg/kg	0.19 U	0.16 U	0.22 U	0.17 U	0.18 U	NA	
4-Chlorophenyl-phenylether	mg/kg	0.16 U	0.13 U	0.18 U	0.14 U	0.15 U	NA	
4-Methylphenol	mg/kg	0.18 U	0.15 U	0.21 U	0.16 U	0.17 U	0.67 ⁵	
4-Nitroaniline	mg/kg	0.27 U	0.22 UJ	0.31 UJ	0.24 UJ	0.26 UJ	NA	

TABLE 3-5

Sediment Analytical Data Summary

Truck Fill Stand, NAS Key West, Boca Chica Key, Florida

Analyte	Units	Sediment Sample Data					Sediment Criteria ¹ (Marine/Estuarine)	
		Location	TFS-SD-01		TFS-SD-02	TFS-SD-03		TFS-SD-04
		Sample ID	TFS-SD-01	TFS-SD-FD	TFS-SD-02	TFS-SD-03		TFS-SD-04
		Sample Depth (ft)	0 - 0	0 - 0	0 - 0	0 - 0		0 - 0
		Sample Date	4/12/2012	4/12/2012	4/12/2012	4/12/2012		4/12/2012
4-Nitrophenol	mg/kg	0.16 U	0.13 UJ	0.19 UJ	0.14 UJ	0.15 UJ	NA	
4-Nitroquinoline-1-oxide	mg/kg	0.31 UR	0.25 UR	0.35 UR	0.27 UR	0.29 UR	NA	
5-Nitro-o-toluidine	mg/kg	0.14 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
7,12-Dimethylbenz(a)anthracene	mg/kg	0.11 U	0.088 U	0.12 U	0.095 UJ	0.1 UJ	NA	
a,a-Dimethylphenethylamine	mg/kg	1.4 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.3 UJ	NA	
Acetophenone	mg/kg	0.31 U	0.25 U	0.35 U	0.27 UJ	0.29 UJ	NA	
Aniline	mg/kg	0.24 U	0.19 U	0.27 U	0.21 U	0.22 U	NA	
Aramite	mg/kg	0.62 U	0.5 U	0.71 U	0.54 UJ	0.58 UJ	NA	
Benzyl alcohol	mg/kg	0.28 U	0.23 U	0.32 U	0.25 U	0.27 U	0.057 ⁵	
Bis(2-chloroethoxy)methane	mg/kg	0.18 U	0.14 U	0.2 U	0.15 U	0.16 U	NA	
Bis(2-chloroethyl)ether	mg/kg	0.21 U	0.17 U	0.24 U	0.18 U	0.19 U	NA	
Bis(2-ethylhexyl)phthalate	mg/kg	0.26 U	0.21 U	0.29 U	0.22 U	0.24 U	0.182 ³	
Butylbenzylphthalate	mg/kg	0.19 U	0.16 U	0.22 U	0.17 U	0.18 U	0.061 ²	
Chlorobenzilate	mg/kg	0.086 U	0.07 U	0.099 U	0.076 UJ	0.081 UJ	NA	
Diallate (Avadex)	mg/kg	0.23 U	0.18 U	0.26 U	0.2 UJ	0.22 UJ	NA	
Dibenzofuran	mg/kg	0.17 U	0.14 U	0.19 U	0.15 U	0.16 U	0.11 ²	
Diethylphthalate	mg/kg	0.16 U	0.13 U	0.18 U	0.14 U	0.15 U	0.006 ²	
Dimethylphthalate	mg/kg	0.18 U	0.15 U	0.21 U	0.16 U	0.17 U	0.006 ²	
Di-n-butylphthalate	mg/kg	0.14 U	0.11 U	0.16 U	0.12 UJ	0.13 UJ	0.058 ²	
Di-n-octylphthalate	mg/kg	0.18 U	0.14 U	0.2 U	0.16 U	0.17 U	0.061 ²	
Dinoseb	mg/kg	0.41 UJ	0.33 UJ	0.47 UJ	0.36 UJ	0.39 UJ	NA	
Ethyl methanesulfonate	mg/kg	0.14 U	0.12 U	0.16 U	0.12 UJ	0.13 UJ	NA	
Hexachlorobenzene	mg/kg	0.16 U	0.13 U	0.19 U	0.14 U	0.15 U	0.006 ²	
Hexachlorobutadiene	mg/kg	0.18 U	0.14 U	0.2 U	0.16 U	0.17 U	0.0013 ²	
Hexachlorocyclopentadiene	mg/kg	0.12 U	0.1 U	0.14 U	0.11 UJ	0.12 UJ	NA	
Hexachloroethane	mg/kg	0.15 U	0.12 U	0.18 U	0.14 U	0.14 U	0.073 ²	
Hexachloropropene	mg/kg	0.14 UJ	0.11 UJ	0.16 UJ	0.12 UJ	0.13 UJ	NA	
Isodrin	mg/kg	0.15 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
Isophorone	mg/kg	0.18 U	0.15 U	0.21 U	0.16 U	0.17 U	NA	
Isosafrole	mg/kg	0.18 U	0.14 U	0.2 U	0.15 UJ	0.16 UJ	NA	
Kepone	mg/kg	0.16 UJ	0.13 UJ	0.18 UJ	0.14 UJ	0.15 UJ	NA	
Methapyriline	mg/kg	0.2 UR	0.16 UR	0.23 UR	0.18 UR	0.19 UR	NA	
Methylmethanesulfonate	mg/kg	0.18 UJ	0.14 UJ	0.2 UJ	0.15 UJ	0.16 UJ	NA	
Nitrobenzene	mg/kg	0.18 U	0.15 U	0.21 U	0.16 U	0.17 U	0.021 ²	
N-Nitrosodibutylamine	mg/kg	0.18 U	0.14 U	0.2 U	0.15 UJ	0.16 UJ	NA	
N-Nitrosodiethylamine	mg/kg	0.16 UJ	0.13 UJ	0.19 UJ	0.14 UJ	0.15 UJ	NA	
N-Nitrosodimethylamine	mg/kg	0.22 U	0.18 U	0.25 U	0.19 U	0.21 U	NA	
N-Nitroso-di-n-propylamine	mg/kg	0.19 U	0.15 U	0.22 U	0.16 U	0.18 U	NA	
N-Nitrosodiphenylamine	mg/kg	0.19 U	0.16 U	0.22 U	0.17 U	0.18 U	0.028 ²	
N-Nitrosomethylethylamine	mg/kg	0.17 UJ	0.14 UJ	0.19 UJ	0.15 UJ	0.16 UJ	NA	
N-Nitrosomorpholine	mg/kg	0.2 U	0.16 U	0.23 U	0.17 UJ	0.19 UJ	NA	
N-Nitrosopiperidine	mg/kg	0.13 U	0.11 U	0.15 U	0.12 UJ	0.12 UJ	NA	
N-Nitrosopyrrolidine	mg/kg	0.15 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
o-Toluidine	mg/kg	0.22 UJ	0.18 UJ	0.25 UJ	0.19 UJ	0.2 UJ	NA	
p-Dimethylaminoazobenzene	mg/kg	0.14 U	0.12 U	0.17 U	0.13 UJ	0.14 UJ	NA	
Pentachlorobenzene	mg/kg	0.15 U	0.12 U	0.18 U	0.14 UJ	0.14 UJ	NA	
Pentachloroethane	mg/kg	0.14 U	0.12 U	0.17 U	0.13 U	0.14 U	NA	
Pentachloronitrobenzene(PCNB)	mg/kg	0.14 U	0.12 U	0.16 U	0.12 UJ	0.13 UJ	NA	
Pentachlorophenol	mg/kg	0.41 U	0.33 U	0.47 U	0.36 U	0.39 U	0.36 ⁵	
Phenacetin	mg/kg	0.18 U	0.14 U	0.2 U	0.16 UJ	0.17 UJ	NA	
Phenol	mg/kg	0.2 U	0.16 U	0.23 U	0.18 U	0.19 U	0.42 ⁵	
p-Phenylenediamine	mg/kg	0.18 U	0.14 U	0.2 U	0.16 UJ	0.17 UJ	NA	
Pronamide	mg/kg	0.11 U	0.093 U	0.13 U	0.1 UJ	0.11 UJ	NA	
Pyridine	mg/kg	0.82 U	0.67 U	0.94 U	0.72 U	0.77 U	NA	
Safrole	mg/kg	0.2 U	0.17 U	0.24 U	0.18 UJ	0.19 UJ	NA	
Appendix IX Polycyclic Aromatic Hydrocarbons (SW8270D-SIM)								
1-Methylnaphthalene	mg/kg	0.0041 U	0.0034 U	0.015 J	0.0035 UJ	0.022	NA	
2-Methylnaphthalene	mg/kg	0.0041 U	0.0034 U	0.04 J	0.0021 J	0.067	0.02023 ³	
Acenaphthene	mg/kg	0.0022 J	0.004 J	0.0048 UJ	0.0024 J	0.0039 U	0.00671 ³	
Acenaphthylene	mg/kg	0.0046 J	0.0037 J	0.0048 UJ	0.0022 J	0.0028 J	0.00587 ³	
Anthracene	mg/kg	0.0097	0.0092	0.0048 UJ	0.0052 J	0.0054	0.0469 ³	
Benzo(a)anthracene	mg/kg	0.12	0.14	0.024 J	0.029 J	0.061	0.0748 ³	
Benzo(a)pyrene	mg/kg	0.2	0.18	0.041 J	0.051 J	0.1	0.0888 ³	
Benzo(b)fluoranthene	mg/kg	0.32	0.26	0.063 J	0.066 J	0.16	0.655 ³	
Benzo(g,h,i)perylene	mg/kg	0.13	0.098	0.026 J	0.037 J	0.1	0.655 ³	
Benzo(k)fluoranthene	mg/kg	0.074	0.071	0.018 J	0.021 J	0.04	0.655 ³	
Chrysene	mg/kg	0.1	0.096	0.024 J	0.028 J	0.063	0.108 ³	
Dibenzo(a,h)anthracene	mg/kg	0.04	0.031	0.0067 J	0.01 J	0.02	0.00622 ³	
Fluoranthene	mg/kg	0.15	0.14	0.036 J	0.04 J	0.11	0.113 ³	
Fluorene	mg/kg	0.0024 J	0.0031 J	0.0048 UJ	0.0024 J	0.0039 U	0.0212 ³	
Indeno(1,2,3-cd)pyrene	mg/kg	0.13	0.094	0.024 J	0.03 J	0.082	0.655 ³	
Naphthalene	mg/kg	0.0043 U	0.0042 U	0.022 J	0.0037 UJ	0.03	0.0346 ³	
Phenanthrene	mg/kg	0.037	0.041	0.0074 J	0.013 J	0.031	0.0867 ³	
Pyrene	mg/kg	0.11	0.11	0.027 J	0.032 J	0.074	0.153 ³	
Total Recoverable Petroleum Hydrocarbons (FL-PRO)								
TRPH	mg/kg	144 J	95.7	103	144	91.1	NA	

Notes:

NA Not analyzed

J The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ The analyte was below the reported sample quantitation limit. However, the reported value is approximate.

UR The reported value of analyte was rejected due to failed laboratory QC. See data validation report in Appendix G.

mg/kg Milligrams per Kilogram

Bold indicates the analyte was detected**Bold and shaded values indicate the analyte exceeded the GCTL**¹ Sediment criteria is the EPA Region 4 sediment ecological screening values. If no value was given, additional sources were used.

References:

² Buchman, M.F. 2008. NOAA screening quick reference tables. NOAA OR&R Report 08-1, Seattle, WA, Office of Response and Restoration Division, National Oceanic and Atmospheric Administration. 34 pp.³ MacDonald, 1994. Approach to the Assessment of Sediment Quality in Florida Coastal Waters. Florida Department of Environmental Protection.⁴ Nipper, M., R.S. Carr, J.M. Biedenbach, R.L. Hooten, and K. Miller. 2002. Toxicological and chemical assessment of ordnance compounds in marine sediments and porewaters. Marine Pollution Bulletin. 44:789-806.⁵ Washington State Department of Ecology. 1995. Sediment management standards. Chapter 173-204 WAC. December.

3.4.1 Groundwater

Groundwater samples were collected from two existing monitoring wells (TFS-MW-03 and TFS-MW-06) and three new monitoring wells (TFS-MW-15, TFS-MW-16, and TFS-MW-17) on April 19 and 20, 2012. The groundwater samples were collected and analyzed for Appendix IX VOCs, Appendix IX SVOCs, and TRPH. In addition, three wells (TFS-MW-03, TFS-MW-06, and TFS-MW-17) were sampled for geochemical parameters (alkalinity, nitrate, nitrite, sulfate, sulfide, and TOC) to evaluate whether aquifer conditions are favorable for natural attenuation. Figure 3-3 presents the compounds detected in the groundwater samples.

3.4.1.1 VOCs

The VOCs benzene, ethylbenzene, and toluene were detected in monitoring well TFS-MW-15; however, the concentrations were below their respective GCTLs. Carbon disulfide was detected in monitoring well TFS-MW-17 but at a concentration significantly below its respective GCTL. No VOCs were detected in wells TFS-MW-03, TFS-MW-06, or TFS-MW-16.

3.4.1.2 SVOCs

Twelve SVOCs in the form of PAHs were detected in groundwater samples. The SVOCs were detected in three wells, TFS-MW-06, TFS-MW-15, and TFS-MW-17. Benzo(a)anthracene was the only SVOC that exceeded its respective GCTL (0.05 µg/L). Benzo(a)anthracene was detected at a concentration of 0.18 µg/L in monitoring well TFS-MW-15. No SVOCs were detected in wells TFS-MW-03 or TFS-MW-16.

3.4.1.3 TRPH

TRPH was detected four of the five monitoring wells sampled in April 2012. TRPH concentrations ranged from 320J µg/L (well TFS-MW-16) to 22,400J µg/L (well TFS-MW-15); however, the GCTL of 5,000 µg/L was only exceeded in monitoring well TFS-MW-15. TRPH was not detected in well TFS-MW-03.

3.4.1.4 Geochemistry

Alkalinity

Groundwater containing petroleum hydrocarbons being degraded aerobically generally exhibits an increase in total alkalinity. This is because CO₂ is produced during the aerobic respiration process. The dissolution of CO₂ increases the alkalinity of groundwater.

Alkalinity for the April 2012 monitoring event indicated alkalinity concentrations ranging from 175 mg/L to 550 mg/L. The data indicate the highest concentration of alkalinity is at well TFS-MW-17. Although this well location is furthest from the areas of greatest contamination, it is likely that the elevated concentrations at this location is due to the recent disturbance of the shallow aquifer in the vicinity of the new well during well installation that required boring through limestone (calcium carbonate).

Nitrates/Nitrite

After DO has been depleted, biodegradation of hydrocarbons may continue anaerobically using nitrate/nitrite as electron acceptors (denitrification). Nitrate/nitrite concentrations will be lower in the wells containing hydrocarbons if biodegradation is occurring.

Nitrate/nitrite data for the April 2012 monitoring event indicates nitrate was detected in one well, TFS-MW-03, at a concentration of 0.13 mg/L and nitrite was detected in well TFS-MW-17 at a concentration of 0.16 mg/L. The low concentrations of nitrate and nitrite at the site suggest that denitrification has occurred through anaerobic biodegradation processes.



LEGEND

Monitoring Well Location

GCTL Groundwater Cleanup Target Level

J Estimated

TRPH Total Recoverable Petroleum Hydrocarbons

TOC Total Organic Carbon

Conc. Concentration

NOTES

1. Concentrations reported in micrograms per liter (µg/L)
2. Concentrations in **bold** indicate a GCTL exceedance
3. Sample date: April 19-20, 2012

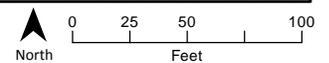


FIGURE 3-3
Compounds Detected in Groundwater
 NAS Key West
 Boca Chica Key, Florida

Sulfate/Sulfide

After DO, total nitrogen, and Fe^{3+} have been depleted in the aquifer, sulfate will be used as an electron acceptor for anaerobic biodegradation. This process is termed sulfate reduction and results in the production of sulfide.

Samples for sulfate/sulfide were collected during the April 2012 monitoring event and the lowest sulfate/ sulfide concentrations are located in well TFS-MW-03, which exhibited the highest hydrocarbon concentrations. The sulfate and sulfide concentrations at well TFS-MW-03 are 36.8 mg/L and 0.6J mg/L, respectively, resulting in a ratio of sulfate/sulfide of approximately 61:1. By comparison, sulfate and sulfide concentrations at well TFS-MW 06 are 27.1 mg/L and 3.61 mg/L, respectively, while the sulfate and sulfide concentrations at well TFS-MW 17 are 170 mg/L and 22 mg/L, respectively. The resulting in ratios of sulfate/sulfide at wells TFS-MW-06 and TFS-MW-17 are approximately the same, at 8:1. Therefore, this represents a lower amount of sulfate to reduce in relation to the amount of sulfide present, indicating some sulfate reduction is occurring at the site where hydrocarbon concentrations are elevated.

3.4.2 Surface Water

Four surface water samples (TFS-SW-01, TFS-SW-02, TFS-SW-03, and TFS-SW-04) were collected from the tidally influenced wetland area located to the west of the TFS. The surface water samples were collected and analyzed for Appendix IX VOCs, Appendix IX SVOCs, and TRPH. Figure 3-4 presents the compounds detected in the surface water samples.

3.4.2.1 VOCs

Four VOCs, bromoform, chloroform, dibromochloromethane, and toluene, were detected in surface water samples. However, no VOC exceeded its respective marine SWCTL.

3.4.2.2 SVOCs

Eleven SVOCs (PAHs) were detected in surface water samples. The SVOCs were detected at locations TFS-SW-02, TFS-SW-03, and TFS-SW-04. All SVOCs were below their respective marine SWCTLs; however, there are no individual marine SWCTLs for SVOCs acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,i,h)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h,)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene. Therefore, in accordance with F.A.C. Chapter 62-302, the marine SWCTL criterion of 0.031 $\mu\text{g/L}$ for PAHs applies to the total concentration of these 10 SVOCs. As a result, the sum of these PAH compounds exceeded the marine SWCTL criterion of 0.031 $\mu\text{g/L}$ at locations TFS-SW-02, TFS-SW-03, and TFS-SW-04. Total PAH concentrations at these locations ranged 0.09 $\mu\text{g/L}$ to 1.231 $\mu\text{g/L}$.

3.4.2.3 TRPH

TRPH was detected in each surface water sample. TRPH ranged from 860J $\mu\text{g/L}$ at location TFS-SW-04 to 2,100 $\mu\text{g/L}$ at TFS-SW-01; however, TRPH did not exceed its marine SWCTL of 5,000 $\mu\text{g/L}$ at any location.

3.4.3 Sediment

Four sediment samples (TFS-SD-01, TFS-SD-02, TFS-SD-03, and TFS-SD-04) were collected on April 12, 2012 from the tidally influenced wetland area located to the west of the TFS. The sediment samples were collected and analyzed for Appendix IX VOCs, Appendix IX SVOCs, and TRPH. Figure 3-5 presents the compounds detected in the sediment samples.

3.4.3.1 VOCs

Acetone was the only VOC detected in the sediment samples. Acetone was detected at concentrations ranging from 0.011J milligrams per kilogram (mg/kg) to 0.0282 mg/kg; however, no ecological screening criterion for acetone is available from EPA or other sources. Acetone is a common laboratory contaminant, and is unrelated to petroleum contamination of the site.

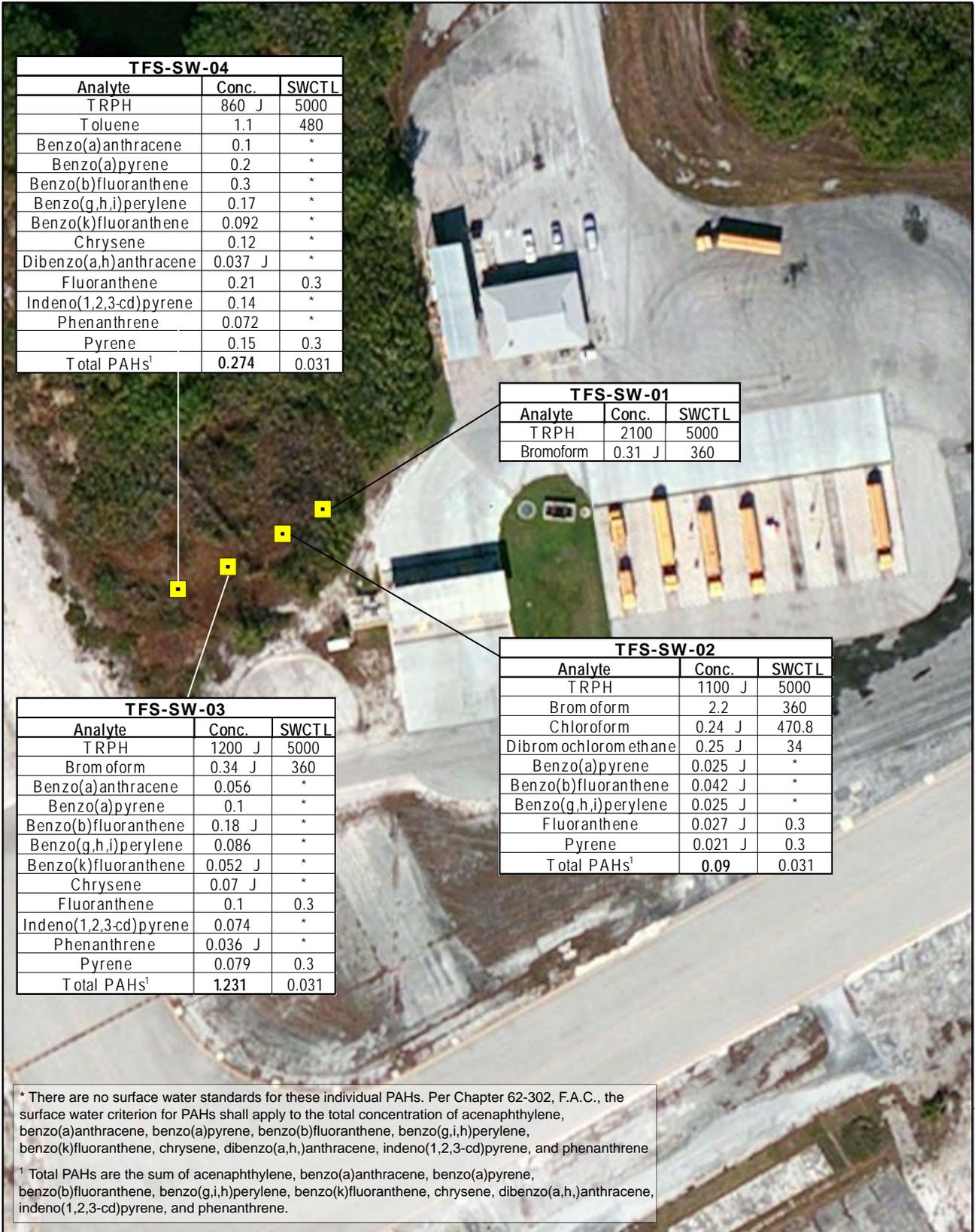
3.4.3.2 SVOCs

Eighteen SVOCs (PAHs) were detected in sediment samples. The SVOCs were detected at each sediment sample location. All SVOCs were below the EPA Region 4 ecological screening values or additional screening criteria, when available, except for five PAH compounds: 2-methylnaphthalene, benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, and fluoranthene. The detections were as follows:

- 2-methylnaphthalene exceeded the Cleanup Target Level (CTL) of 0.02023 mg/kg at locations TFS-SD-02 and TFS-SD-04 at concentrations of 0.04J mg/kg and 0.067 mg/kg, respectively.
- Benzo(a)anthracene exceeded the CTL of 0.0748 mg/kg at location TFS-SD-01 at a concentration of 0.12 mg/kg.
- Benzo(a)pyrene exceeded the CTL of 0.0888 mg/kg at locations TFS-SD-01 and TFS-SD-04, at concentrations of 0.2 mg/kg and 0.1 mg/kg, respectively.
- Dibenzo(a,h)anthracene exceeded the CTL of 0.00622 mg/kg at locations TFS-SD-01, TFS-SD-02, TFS-SD-03, and TFS-SD-04, at concentrations of 0.04 mg/kg, 0.0067J mg/kg, 0.01J mg/kg, and 0.02 mg/kg, respectively.
- Fluoranthene exceeded the CTL of 0.113 mg/kg at location TFS-SD-01 at a concentration of 0.15 mg/kg.

3.4.3.3 TRPH

TRPH was detected in each sediment sample. TRPH ranged from 91.1 mg/kg at location TFS-SD-04 to 144 mg/kg at location TFS-SD-03; however, no ecological screening criterion for TRPH is available from EPA or other sources.



TFS-SW-04		
Analyte	Conc.	SWCTL
TRPH	860 J	5000
Toluene	1.1	480
Benzo(a)anthracene	0.1	*
Benzo(a)pyrene	0.2	*
Benzo(b)fluoranthene	0.3	*
Benzo(g,h,i)perylene	0.17	*
Benzo(k)fluoranthene	0.092	*
Chrysene	0.12	*
Dibenzo(a,h)anthracene	0.037 J	*
Fluoranthene	0.21	0.3
Indeno(1,2,3-cd)pyrene	0.14	*
Phenanthrene	0.072	*
Pyrene	0.15	0.3
Total PAHs ¹	0.274	0.031

TFS-SW-01		
Analyte	Conc.	SWCTL
TRPH	2100	5000
Bromoform	0.31 J	360

TFS-SW-02		
Analyte	Conc.	SWCTL
TRPH	1100 J	5000
Bromoform	2.2	360
Chloroform	0.24 J	470.8
Dibromochloromethane	0.25 J	34
Benzo(a)pyrene	0.025 J	*
Benzo(b)fluoranthene	0.042 J	*
Benzo(g,h,i)perylene	0.025 J	*
Fluoranthene	0.027 J	0.3
Pyrene	0.021 J	0.3
Total PAHs ¹	0.09	0.031

TFS-SW-03		
Analyte	Conc.	SWCTL
TRPH	1200 J	5000
Bromoform	0.34 J	360
Benzo(a)anthracene	0.056	*
Benzo(a)pyrene	0.1	*
Benzo(b)fluoranthene	0.18 J	*
Benzo(g,h,i)perylene	0.086	*
Benzo(k)fluoranthene	0.052 J	*
Chrysene	0.07 J	*
Fluoranthene	0.1	0.3
Indeno(1,2,3-cd)pyrene	0.074	*
Phenanthrene	0.036 J	*
Pyrene	0.079	0.3
Total PAHs ¹	1.231	0.031

* There are no surface water standards for these individual PAHs. Per Chapter 62-302, F.A.C., the surface water criterion for PAHs shall apply to the total concentration of acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene

¹ Total PAHs are the sum of acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene.

LEGEND

■ Surface Water Sample Location

SWCTL Surface Water Cleanup Target Level

J Estimated

TRPH Total Recoverable Petroleum Hydrocarbons

TOC Total Organic Carbon

Conc. Concentration

PAHs Polynuclear Aromatic Hydrocarbons

NOTES

- Concentrations reported in micrograms per liter (µg/L)
- Concentrations in **bold** indicate a SWCTL exceedance
- Sample date: April 12, 2012

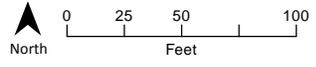
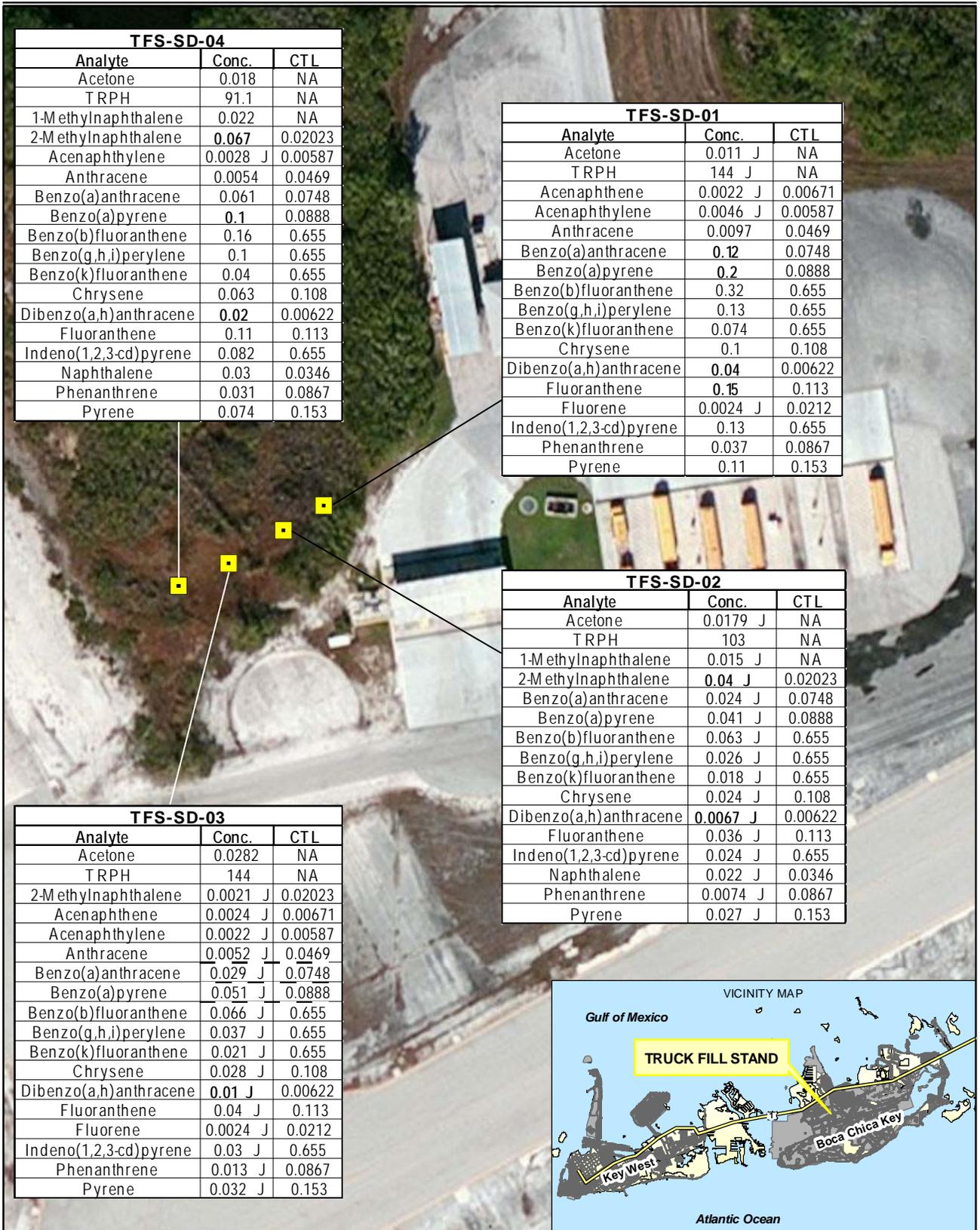


FIGURE 3-4
Compounds Detected in Surface Water
 NAS Key West
 Boca Chica Key, Florida





LEGEND

■ Sediment Sample Location

CTL Cleanup Target Level

J Estimated

TRPH Total Recoverable Petroleum Hydrocarbons

TOC Total Organic Carbon

Conc. Concentration

NOTES

1. Concentrations reported in milligrams per kilogram (mg/kg)
2. Concentrations in **bold** indicate a CTL exceedance
3. Sample date: April 12, 2012

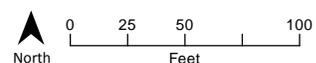


FIGURE 3-5
Compounds Detected in Sediment
 NAS Key West
 Boca Chica Key, Florida

Conclusions and Recommendations

This report provides groundwater, surface water, and sediment contaminant data at the TFS site, NAS Key West, Boca Chica Key, Florida. The data were used to determine the need for further investigation or to request site closure. The conclusions and recommendations for the site are presented below.

4.1 Conclusions

4.1.1 Geology/Hydrogeology

- The lithology from ground surface to approximately 12 feet bgs consists of white, soft to hard weathered limestone.

4.1.2 Hydrogeology

- LNAPL was not detected in groundwater.
- During April 2012, groundwater occurred at depths ranging from 1.13 feet bgs at well TFS-MW-15 to 2.98 feet bgs at well TFS-MW-01. During May 2012, groundwater was observed to range from flowing at the ground surface at well TFS-MW-14 to a depth of 1.71 feet at well TFS-MW-8D.
- Water table elevations beneath the site ranged from 0.46 foot to 1.75 feet msl in April 2012 and from 2.08 to 3.19 feet msl in May 2012. In April 2012, the direction of groundwater flow beneath the site was generally to the south-southeast. In May 2012, the direction of groundwater flow across the site was radial from a groundwater high located at well TFS-MW-06. The radial flow is probably attributable to the fact that well TFS-MW-06 is located in an unpaved grassy area and receives more recharge.
- The average horizontal gradient across the site in April 2012 was estimated to be 0.005 ft/ft and the average horizontal gradient across the site in May 2012 was estimated to be 0.007 ft/ft.
- Vertical gradients were calculated for April and May 2012 using well cluster TFS-MW-01/TFS-MW-8D. An upward hydraulic gradient of 0.006 ft/ft was measured in April 2012, and a downward hydraulic gradient of -0.017 ft/ft was measured in May 2012.
- The hydraulic conductivity of the partially penetrating monitoring wells ranged from 2.3×10^{-3} to 4.4×10^{-3} cm/sec or 6.5 to 12.5 ft/day and the hydraulic conductivity geometric mean value was 8.99 ft/day.
- The seepage velocity of the water table aquifer was calculated to be 0.36 ft/day, or 131.3 ft/year.
- Groundwater level fluctuations ranged from 0.004 foot to 1.227 feet during the study period. Based on the comparison of the groundwater fluctuations and tidal changes, there is a direct influence of tidal change on the groundwater elevations at the site.

4.1.3 Groundwater

- Geochemical and physical data collected as part of the investigation indicate that conditions are favorable for the biodegradation of hydrocarbons to occur.
- VOCs benzene, ethylbenzene, and toluene were detected in monitoring well TFS-MW-15; however, the concentrations were below their respective GCTLs.
- Carbon disulfide was detected in monitoring well TFS-MW-17, but at a concentration significantly below its GCTL.
- No VOCs were detected in wells TFS-MW-03, TFS-MW-06, or TFS-MW-16.

- Twelve SVOCs (PAHs) were detected in three wells. Benzo(a)anthracene was the only SVOC detected at a concentration of 0.18 µg/L (well TFS-MW-15), which is above the GCTL of 0.05 µg/L. SVOCs were not detected in wells TFS-MW-03 or TFS-MW-16.
- TRPH was detected four of the five monitoring wells sampled; concentrations ranged from 320J µg/L (well TFS-MW-16) to 22,400J µg/L (well TFS-MW-15); however, the GCTL of 5,000 µg/L was only exceeded at well TFS-MW-15.
- TRPH was not detected in well TFS-MW-03.

4.1.4 Surface Water

- Four VOCs, bromoform, chloroform, dibromochloromethane, and toluene, were detected in surface water samples. However, all VOCs were below their respective marine SWCTLs.
- Eleven SVOCs (PAHs) were detected in surface water samples. The SVOCs were detected at locations TFS-SW-02, TFS-SW-03, and TFS-SW-04; however, the SVOCs were below their respective marine SWCTLs.
- The marine SWCTL criterion for PAHs, 0.031 µg/L, applies to the total concentration of the PAH compounds acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,i,h)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h,)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene. As a result, the sum of these PAH compounds exceeded the marine SWCTL criterion of 0.031 µg/L at locations TFS-SW-02, TFS-SW-03, and TFS-SW-04. Total PAH concentrations ranged from 0.09 µg/L to 1.231 µg/L.
- No SVOCs were detected at TFS-SW-01.
- TRPH was detected in each surface water sample. TRPH ranged from 860J µg/L at location TFS-SW-04 to 2,100 µg/L at location TFS-SW-01; however, TRPH did not exceed its marine SWCTL of 5,000 µg/L at any location.

4.1.5 Sediment

- Acetone was the only VOC detected in the sediment samples. Acetone was detected at concentrations ranging from 0.011J mg/kg to 0.0282 mg/kg; however, no ecological screening criterion for acetone is available from EPA or other sources. The presence of acetone is believed to be a result of laboratory contamination.
- Eighteen SVOCs (PAHs) were detected in the sediment samples. The SVOCs were detected in each sediment sample location and were below the EPA Region 4 ecological screening values and additional screening criteria, with the exception of the following five PAH compounds:
 - 2-methylnaphthalene exceeded its CTL of 0.02023 mg/kg at two locations, TFS-SD-02 and TFS-SD-04, at concentrations of 0.04J mg/kg and 0.067 mg/kg, respectively.
 - Benzo(a)anthracene exceeded its CTL of 0.0748 mg/kg at location TFS-SD-01 at a concentration of 0.12 mg/kg.
 - Benzo(a)pyrene exceeded its CTL of 0.0888 mg/kg at two locations, TFS-SD-01 and TFS-SD-04, at concentrations of 0.2 mg/kg and 0.1 mg/kg, respectively.
 - Dibenz(a,h)anthracene exceeded its CTL of 0.00622 mg/kg at each location, TFS-SD-01, TFS-SD-02, TFS-SD-03, and TFS-SD-04, at concentrations of 0.04 mg/kg, 0.0067J mg/kg, 0.01J mg/kg, and 0.02 mg/kg, respectively.
 - Fluoranthene exceeded its CTL of 0.113 mg/kg at location TFS-SD-01 at a concentration of 0.15 mg/kg.
- TRPH was detected in each sediment sample. TRPH concentrations ranged from 91.1 mg/kg at TFS-SD-04 to 144 mg/kg at TFS-SD-03; however, no ecological screening criterion is available from EPA or other sources for TRPH.

4.2 Recommendations

4.2.1 Groundwater

Additional groundwater monitoring is recommended at the site to further evaluate the petroleum contaminant trends over time. Monitoring wells TFS-MW-01, -04, -05, -8D, 11, -12, -15, -16, and -17 should be monitored quarterly for up to 1 year for Appendix IX VOCs, Appendix IX SVOCs, and TRPH. Additional recommendations will be made upon further assessment of contaminant distribution, concentrations, and trends.

Collection of water quality samples for the analysis of chloride, manganese, salinity, sulfate, and total dissolved solids (TDS) is recommended to determine if the groundwater is non-potable and should be considered poor quality. Five monitoring well samples (TFS-MW-04, -8D, -15, -16, and -17), one surface water sample (TFS-SW-03), and a seawater sample should be collected.

4.2.2 Surface Water

No additional monitoring of surface water is recommended at this time; however, CH2M HILL does recommend the NAVFAC SE consider conducting an ecological risk assessment to evaluate the potential risk to ecological receptors in the wetland area to the west of the TFS. Upon completion of an ecological risk assessment, recommendations for no further action (NFA), additional monitoring, or corrective actions can be determined.

4.2.3 Sediment

No additional monitoring of sediment is recommended at this time; however, CH2M HILL does recommend the NAVFAC SE consider conducting an ecological risk assessment to evaluate the potential risk to ecological receptors in the wetland area to the west of the TFS. Upon completion of an ecological risk assessment, recommendations for NFA, additional monitoring, or corrective actions can be determined.

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SECTION 5.0

References

- Blasland, Bouck, & Lee, Inc. (BBL). 2001. *Supplemental Site Assessment Report, Building A-902, Truck Fill Stand, NAS Key West, Florida*. February.
- Bouwer, H., and R.C. Rice. 1976. "A slug test for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells." *Water Resources Research*. Vol. 12, No. 3.
- Department of the Navy (Navy). 2011. Statement of Work 1143478, Truck Fill Stand – JP-5, Re-Evaluation, Sampling, Plume Delineation & Monitoring, NAS Key West, Florida. February.
- Florida Department of Environmental Protection (FDEP). 2005a. Standard Operating Procedures PCS-006 Design, Installation, and Placement of Monitoring Wells. May.
- Florida Department of Environmental Protection (FDEP). 2005b. Standard Operating Procedures PCS-005 Groundwater Sampling Standard Operating Procedures, Variances and Clarification for Bureau of Petroleum Storage Systems Sites. May.
- Florida Department of Environmental Protection (FDEP). 2008. DEP-SOP-001/01. FS 2200 Groundwater Sampling. December.
- Omega Environmental Services, Inc. (OES). 1995. *UST Closure Report, Tank A-902B, NAS Key West, Florida*. October.
- Tetra Tech NUS, Inc. (TtNUS). 1999. *Site Assessment Report for Building A-902, Truck Fill Stand, NAS Key West, Florida*. April.
- Tetra Tech NUS, Inc. (TtNUS). 2003. *Groundwater Monitoring Report for Building A-902, Truck Fill Stand, NAS Key West, Florida*. August.
- Tetra Tech NUS, Inc. (TtNUS). 2011. *Site Assessment for Truck Fill Stand, Naval Air Station, Key West, Florida*. January.
- U.S. Environmental Protection Agency (EPA), 1996. Ground Water Issue. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. April.

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Appendix A
Monitoring Well Boring Logs, Well Construction
Diagrams, and Permits



PROJECT NUMBER 426847	BORING NUMBER TFS-MW-15	SHEET 1 OF 1
SOIL BORING LOG		

PROJECT : NASKW Truck Fill Stand LOCATION : Boca Chica Key, FL
 ELEVATION : 1.0 foot MSL NORTHING : 89416.08
 DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger EASTING : 424877.12
 WATER LEVELS : 2 ft bgs START : 4/10/2012 END : 4/10/2012 LOGGER : Adrian Teal/ATL

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. FID (ppm):
	RECOVERY (IN)	#/TYPE			
0-3.5 ft				WEATHERED LIMESTONE, white, soft-med hardness	Hand augered interval Hand Auger refusal at 3.5 ft
3.5-12 ft				WEATHERED LIMESTONE, white, soft-med hardness	Weathered limestone readily crumbles with moderate pressure
Total Depth = 12 feet					

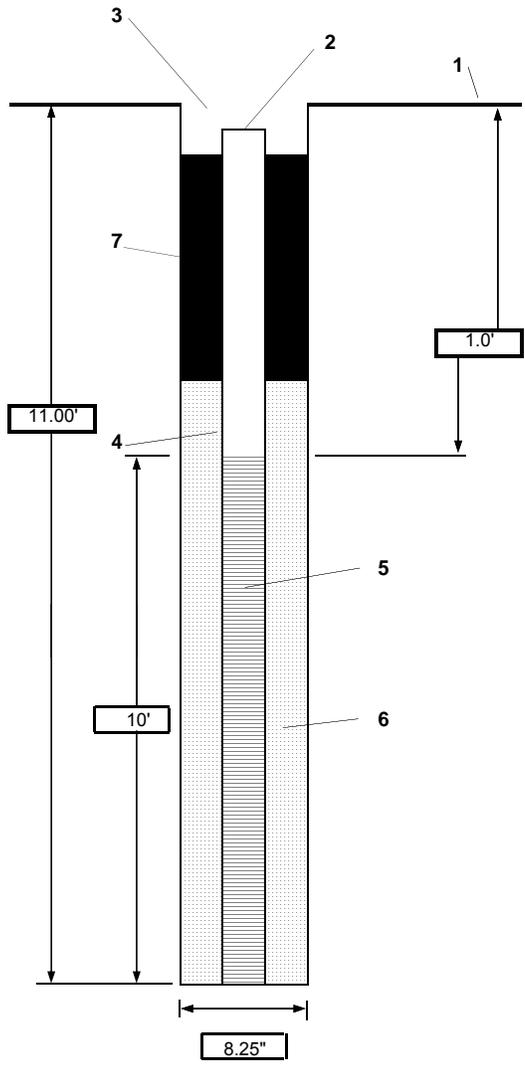
LEGEND
 FID Flame Ionization Detector
 T Time
 SPT Split Spoon Sample



PROJECT NUMBER 426847	WELL NUMBER TFS-MW-15	SHEET 1 OF 1
---------------------------------	---------------------------------	--------------

TEMPORARY WELL COMPLETION DIAGRAM

PROJECT : NASKW Truck Fill Stand	LOCATION : Boca Chica Key, FL	NORTHING : 89416.08
DRILLING CONTRACTOR : Zebra Environmental Drilling Company, Inc		EASTING : 424877.12
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger using Geoprobe 6610DT rig		
WATER LEVELS : 1.13 ft BTOC (4/20/2012)	START : 4/10/2012	END : 4/11/2012
		LOGGER : Adrian Teal/ATL



1- Ground elevation at well	2.4 feet MSL
2- Top of casing elevation	2.28 feet MSL
3- Wellhead protection cover type a) drain tube? b) concrete pad dimensions	8" dia steel manhole cover not installed 2ft x 2ft x 4inch
4- Dia./type of well casing	2" Schedule 40 PVC
5- Type/slot size of screen	0.010" Machine Slot, 2" Schedule 40 PVC
6- Type screen filter	20/30 grade environmental sand
7- Type of seal a) Thickness	fine sand 12 inches
Development method	monsoon pump
Development time	approx. 47 minutes
Estimated purge volume	approx. 36 gallons
Total Depth	12.15 ft

Note: Diagram not to scale.



SOIL BORING LOG

PROJECT : NASKW Truck Fill Stand	LOCATION : Boca Chica Key, FL
ELEVATION : 2.1 feet MSL	NORTHING : 89308.00
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger	EASTING : 424892.38
WATER LEVELS : 2 ft bgs	START : 4/10/2012 END : 4/10/2012 LOGGER : Adrian Teal/ATL

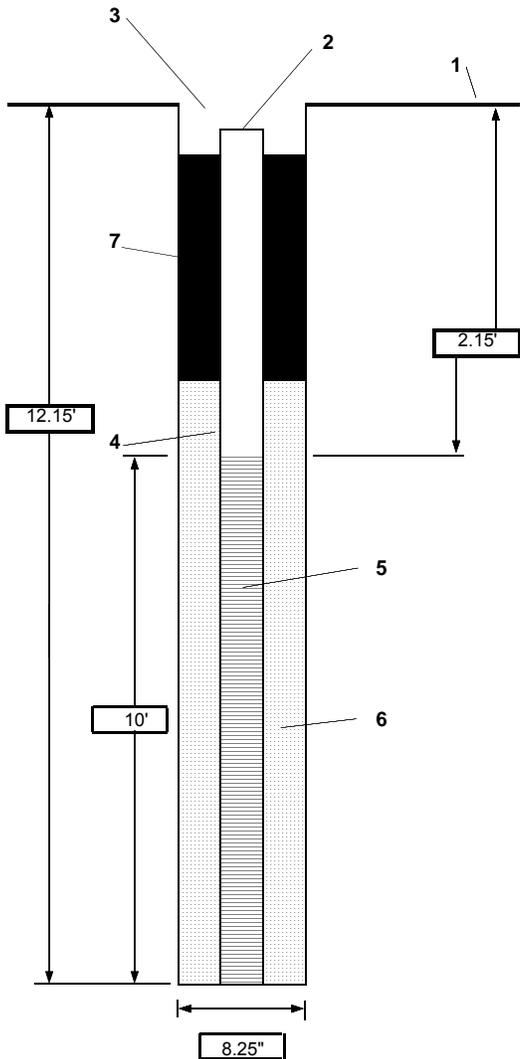
DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	COMMENTS	
	RECOVERY (IN)	#/TYPE				6"-6"-6" (N)
0-4 ft			6"-6"-6" (N)	WEATHERD LIMESTONE, white, soft-med hardness	Hand augered interval	
4-12 ft				WEATHERD LIMESTONE, white, soft-med hardness	Weathered limestone readily crumbles with moderate pressure	
Total Depth = 12 feet						



PROJECT NUMBER 426847	WELL NUMBER TFS-MW-16	SHEET 1 OF 1
---------------------------------	---------------------------------	--------------

TEMPORARY WELL COMPLETION DIAGRAM

PROJECT : NASKW Truck Fill Stand	LOCATION : Boca Chica Key, FL	NORTHING : 89308.00
DRILLING CONTRACTOR : Zebra Environmental Drilling Company, Inc		EASTING : 424892.38
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger using Geoprobe 6610DT rig		
WATER LEVELS : 2.05 ft BTOC (4/20/2012)	START : 4/10/2012	END : 4/11/2012
		LOGGER : Adrian Teal/ATL



1- Ground elevation at well	3.5 feet MSL
2- Top of casing elevation	3.20 feet MSL
3- Wellhead protection cover type a) drain tube? b) concrete pad dimensions	8" dia steel manhole cover not installed 2ft x 2ft x 4inch
4- Dia./type of well casing	2" Schedule 40 PVC
5- Type/slot size of screen	0.010" Machine Slot, 2" Schedule 40 PVC
6- Type screen filter	20/30 grade environmental sand
7- Type of seal a) Thickness	fine sand 12 inches
Development method	monsoon pump
Development time	approx. 112 minutes
Estimated purge volume	approx. 75 gallons
Total Depth	12.15 ft

Note: Diagram not to scale.



SOIL BORING LOG

PROJECT : NASKW Truck Fill Stand	LOCATION : Boca Chica Key, FL
ELEVATION : 1.2 feet MSL	NORTHING : 89303.05
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger	EASTING : 425027.15
WATER LEVELS : 2 ft bgs	START : 4/10/2012 END : 4/10/2012 LOGGER : Adrian Teal/ATL

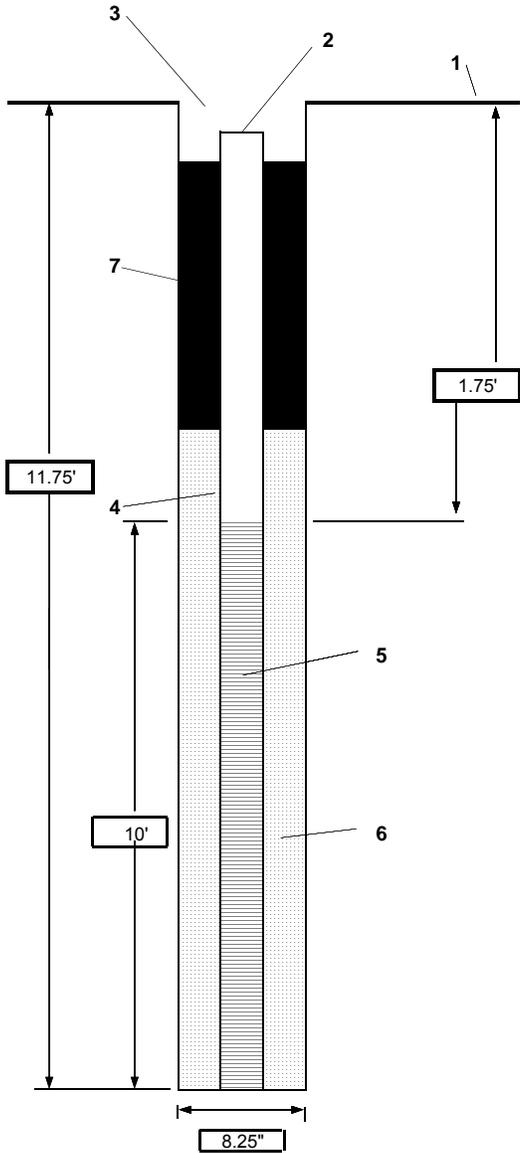
DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	COMMENTS
	RECOVERY (IN)	#/TYPE			
0-4 ft				WEATHERD LIMESTONE, white, soft-med hardness	Hand augered interval
4-12 ft				WEATHERD LIMESTONE, white, soft-med hardness	Weathered limestone readily crumbles with moderate pressure
Total Depth = 12 feet					



PROJECT NUMBER 426847	WELL NUMBER TFS-MW-17	SHEET 1 OF 1
---------------------------------	---------------------------------	--------------

TEMPORARY WELL COMPLETION DIAGRAM

PROJECT : NASKW Truck Fill Stand	LOCATION : Boca Chica Key, FL	NORTHING : 89303.05
DRILLING CONTRACTOR : Zebra Environmental Drilling Company, Inc		EASTING : 425027.15
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger using Geoprobe 6610DT rig		
WATER LEVELS : 1.80 ft BTOC (4/20/2012)	START : 4/10/2012	END : 4/12/2012
		LOGGER : Adrian Teal/ATL



1- Ground elevation at well	2.5 feet MSL
2- Top of casing elevation	2.26 feet MSL
3- Wellhead protection cover type	8" dia steel manhole cover
a) drain tube?	not installed
b) concrete pad dimensions	2ft x 2ft x 4inch
4- Dia./type of well casing	2" Schedule 40 PVC
5- Type/slot size of screen	0.010" Machine Slot, 2" Schedule 40 PVC
6- Type screen filter	20/30 grade envirnmental sand
7- Type of seal	fine sand
a) Thickness	12 inches
Development method	monsoon pump
Development time	approx. 52 minutes
Estimated purge volume	approx. 87 gallons
Total Depth	11.75 ft

Note: Diagram not to scale.



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters: 4301 Gantt Club Road, West Palm Beach, Florida 33406 (561) 686-8800 www.sfwmd.gov

CON 24-06

April 5, 2012

PERMITTEE

U.S.A. ATTN: BEVERLY WASHINGTON, NAVFAC
SOUTH
BLDG. 903 YORKTOWN AVE,
JACKSONVILLE, FL 32212

CONTRACTOR

EARLY, MICHAEL
1020 SOUTH 82ND STREET,
TAMPA, FL 33619
LICENSE NO:9404

WATER WELL ABANDONMENT PERMIT #SF040412A
EXPIRATION DATE:October 05, 2012

PROJECT: TRUCK FILL STAND BOCA CHICA NAS TFS P-1 ABANDONMENT
TYPE OF USE: MONITOR
COUNTY: MONROE SEC: 29 TWP: 67 RGE: 26

WELL ABANDONMENT SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER	4"	
CASING DEPTH:	25.00'	
SCREENED INTERVAL:	25.00'	35.00'
OPEN HOLE INTERVAL		
TOTAL DEPTH OF WELL:	35.00'	
GROUT REQUIREMENT		
Inner casing shall be grouted bottom to top.		

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District.
If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Ann Marie Superchi, Well Permitting
Water Use Division
South Florida Water Management District

Attachment: Additional Conditions of Permit

c:



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters: 1301 Gunt Club Road, West Palm Beach, Florida 33406 (561) 686-8800 www.sfwmd.gov

CON 24-06

April 5, 2012

PERMITTEE

U.S.A. ATTN: BEVERLY WASHINGTON, NAVFAC
SOUTH
BLDG. 903 YORKTOWN AVE.
JACKSONVILLE, FL 32212

CONTRACTOR

EARLY, MICHAEL
1020 SOUTH 82ND STREET,
TAMPA, FL 33619
LICENSE NO:9404

WATER WELL ABANDONMENT PERMIT #SF040412B

EXPIRATION DATE: October 05, 2012

PROJECT: TRUCK FILL STAND BOCA CHICA NAS TFS MW-07 ABANDONMENT

TYPE OF USE: MONITOR

COUNTY: MONROE SEC: 29 TWP: 67 RGE: 26

WELL ABANDONMENT SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER	4"	
CASING DEPTH:	25.00'	
SCREENED INTERVAL:	25.00'	35.00'
OPEN HOLE INTERVAL		
TOTAL DEPTH OF WELL:	35.00'	
GROUT REQUIREMENT		

Inner casing shall be grouted bottom to top.

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District. If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Ann Marie Superchi, Well Permitting
Water Use Division
South Florida Water Management District

Attachment: Additional Conditions of Permit

cc:



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters: 3301 Golf Club Road, West Palm Beach, Florida 33406 (561) 886-8800 www.sfwmd.gov

CON 24-06

April 5, 2012

PERMITTEE

U.S.A. ATTN: BEVERLY WASHINGTON, NAVFAC
SOUTH
BLDG. 903 YORKTOWN AVE.
JACKSONVILLE, FL 32212

CONTRACTOR

EARLY, MICHAEL
1020 SOUTH 82ND STREET.
TAMPA, FL 33619
LICENSE NO:9404

WATER WELL CONSTRUCTION PERMIT #SF040412C
EXPIRATION DATE:October 05, 2012

PROJECT: TRUCK FILL STAND BOCA CHICA NAS TFS MW-08D CONSTRUCTION
TYPE OF USE: MONITOR
COUNTY: MONROE SEC: 29 TWP: 67 RGE: 26

WELL CONSTRUCTION SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER	2"	
CASING DEPTH:	5.00'	
SCREENED INTERVAL:	5.00'	15.00'
OPEN HOLE INTERVAL		
TOTAL DEPTH OF WELL:	15.00'	
GROUT REQUIREMENT		

Inner casing shall be grouted bottom to top.

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District.
If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Ann Marie Superchi, Well Permitting
Water Use Division
South Florida Water Management District

Attachment: Additional Conditions of Permit

C:



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters, 3301 Conchob Road, West Palm Beach, Florida 33406 (561) 686-8800 www.sfwmd.gov

CON 24-06

April 5, 2012

PERMITTEE

U.S.A. ATTN: BEVERLY WASHINGTON, NAVFAC
SOUTH
BLDG. 903 YORKTOWN AVE.
JACKSONVILLE, FL 32212

CONTRACTOR

EARLY, MICHAEL
1020 SOUTH 82ND STREET.
TAMPA, FL 33619
LICENSE NO:9404

WATER WELL CONSTRUCTION PERMIT #SF040412D
EXPIRATION DATE:October 05, 2012

PROJECT: TRUCK FILL STAND BOCA CHICA NAS TFS MW-13 CONSTRUCTION
TYPE OF USE: MONITOR
COUNTY: MONROE SEC: 29 TWP: 67 RGE: 26

WELL CONSTRUCTION SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER	2"	
CASING DEPTH:	5.00'	
SCREENED INTERVAL:	5.00'	15.00'
OPEN HOLE INTERVAL		
TOTAL DEPTH OF WELL:	15.00'	
GROUT REQUIREMENT		
Inner casing shall be grouted bottom to top.		

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District.
If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Ann Marie Superchi, Well Permitting
Water Use Division
South Florida Water Management District

Attachment: Additional Conditions of Permit

c:



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Headquarters: 3301 Gun Club Road, West Palm Beach, Florida 33406 (561) 686-8800 www.sfwmd.gov

CON 24-06

April 5, 2012

PERMITTEE

U.S.A. ATTN: BEVERLY WASHINGTON, NAVFAC
SOUTH
BLDG. 903 YORKTOWN AVE.
JACKSONVILLE, FL 32212

CONTRACTOR

EARLY, MICHAEL
1020 SOUTH 82ND STREET.
TAMPA, FL 33619
LICENSE NO:9404

WATER WELL CONSTRUCTION PERMIT #SF040412E
EXPIRATION DATE: October 05, 2012

PROJECT: TRUCK FILL STAND BOCA CHICA NAS TFS MW-14 CONSTRUCTION
TYPE OF USE: MONITOR
COUNTY: MONROE SEC: 29 TWP: 67 RGE: 26

WELL CONSTRUCTION SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER	2"	
CASING DEPTH:	5.00'	
SCREENED INTERVAL:	5.00'	15.00'
OPEN HOLE INTERVAL		
TOTAL DEPTH OF WELL:	15.00'	
GROUT REQUIREMENT		

Inner casing shall be grouted bottom to top.

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District.
If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Ann Marie Superchi, Well Permitting
Water Use Division
South Florida Water Management District

Attachment: Additional Conditions of Permit

cc:



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Fax: 518-355-2236

Niagara Falls, NY
Phone: 716-297-6567
Fax: 716-297-7902

Uxbridge, Massachusetts
Phone: 508-581-9880
Fax: 508-581-9881

Atlantic Highlands, New Jersey
Phone: 732-291-8276
Fax: 732-291-8277

Tampa, Florida
Phone: 813-626-1717
Fax: 813-626-1718

Raleigh, North Carolina
Phone: 919-424-6122

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FAX TRANSMITTAL COVER SHEET

TO: Ann Marie Superchi DATE: 4/18/2012
COMPANY: SFWMD FAX #: 561-682-6896
FROM: Mike Early # OF PAGES (including cover): 6

RE: Well Completion Report Permit #SF040412A-E

Good afternoon Ann Marie

I hope all is well with you.

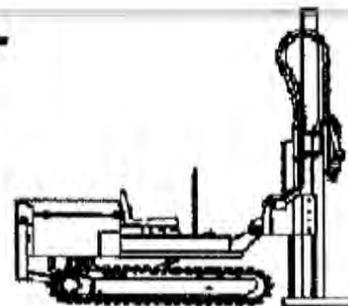
Attached are the completion reports for Well Abandonments SF040412A & FS040412B

Attached are the completion reports for Well Installations; SF0404412C, SF0404412D, SF0404412E

Mike Early

813.626.1717

**Think Stripes...
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SF 040412 A.B.

STATE OF FLORIDA WELL COMPLETION REPORT



- Southwest
- Northwest
- St. Johns River
- South Florida
- Suwannee River
- DEP
- Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

ABANDON (2) 2" x 12' MW

Date Stamp

Official Use Only

1.*Permit Number SF040412 CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2.*Number of permitted wells constructed, repaired, or abandoned 2 *Number of permitted wells not constructed, repaired, or abandoned 2

3.*Owner's Name USA ATTN: B. WASHINGTON 4.*Completion Date 4/13/12 5. Florida Unique ID _____

6. TRACK 711 STAND BOCA CHICA, NAS KEY WEST.
*Well Location - Address, Road Name or Number, City, ZIP

7.*County MONROE *Section _____ Land Grant _____ *Township 67 *Range 26

8. Latitude 24.574597 Longitude -81.67601

9. Data Obtained From: GPS _____ Map _____ Survey _____ Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10.*Type of Work: _____ Construction _____ Repair _____ Modification Abandonment

11.*Specify Intended Use(s) of Well(s):

<input type="checkbox"/> Domestic	<input type="checkbox"/> Landscape Irrigation	<input type="checkbox"/> Agricultural Irrigation	<input type="checkbox"/> Site Investigation
<input type="checkbox"/> Bottled Water Supply	<input type="checkbox"/> Recreation Area Irrigation	<input type="checkbox"/> Livestock	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Public Water Supply (Limited Use/DOH)	<input type="checkbox"/> Nursery Irrigation	<input type="checkbox"/> Commercial/Industrial	<input type="checkbox"/> Test
<input type="checkbox"/> Public Water Supply (Community or Non-Community/DEP)	<input type="checkbox"/> Golf Course Irrigation	<input type="checkbox"/> Earth-Coupled Geothermal	<input type="checkbox"/> HVAC Supply
<input type="checkbox"/> Class I Injection		<input type="checkbox"/> HVAC Return	

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage

Remediation: _____ Recovery _____ Air Sparge _____ Other (Describe) _____

Other (Describe) OUT OF SERVICE

12.*Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic _____ Horizontal Drilling _____ Hydraulic Point (Direct Push) _____ Other ABANDON

13.*Measured Static Water Level 2 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14.*Measuring Point (Describe) AT TOP of CASING which is 1 ft. Above _____ Below Land Surface *Flowing: _____ Yes _____ No

15.*Casing Material: _____ Black Steel _____ Galvanized PVC _____ Stainless Steel _____ Not Cased _____ Other _____

16.*Total Well Depth 12 ft. Cased Depth 2 ft. *Open Hole: From 0 To 12 ft. *Screen: From 2 To 12 ft. Slot Size NA

17.*Abandonment: _____ Other (Explain) OUT OF SERVICE

From <u>0</u> ft. To <u>12</u> ft. No. of Bags <u>2</u>	Seal Material (Check One): <input checked="" type="checkbox"/> Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

18.*Surface Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

19.*Primary Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

20.*Liner Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

21.*Telescope Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

22. Pump Type (If Known): _____ Centrifugal _____ Jet _____ Submersible _____ Turbine

Horsepower _____ Pump Capacity (GPM) _____

Pump Depth _____ ft. Intake Depth _____ ft.

23. Chemical Analysis (When Required):

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm

____ Laboratory Test _____ Field Test Kit

24. Water Well Contractor:
*Contractor Name MICHAEL EARLY *License Number 9404 E-mail Address MIKE@ZEBRAENX.COM

*Contractor's Signature _____ *Driller's Name (Print or Type) WALTER MOORE

(I certify that the information provided in this report is accurate and true.)

SFO40412 C, D, E.

STATE OF FLORIDA WELL COMPLETION REPORT



- Southwest
- Northwest
- St. Johns River
- South Florida
- Suwannee River
- DEP
- Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

INSTALL (3) 2" x 12'

Date Stamp

Official Use Only

1. *Permit Number SFO40412 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2. *Number of permitted wells constructed, repaired, or abandoned 3 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name USA ATTN: BEVERLY W. 4. *Completion Date 4/13/12 5. Florida Unique ID _____

6. TROCK FALL STAND BOCA CHICA, NAS KEY WEST
*Well Location - Address, Road Name or Number, City, ZIP

7. *County MONROE *Section 29 Land Grant _____ *Township 67 *Range 26

8. Latitude 24.579597 Longitude -81.69601

9. Data Obtained From: GPS _____ Map _____ Survey _____ Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10. *Type of Work: Construction _____ Repair _____ Modification _____ Abandonment

11. *Specify Intended Use(s) of Well(s):

<input type="checkbox"/> Domestic	<input type="checkbox"/> Landscape Irrigation	<input type="checkbox"/> Agricultural Irrigation	<input type="checkbox"/> Site Investigation
<input type="checkbox"/> Bottled Water Supply	<input type="checkbox"/> Recreation Area Irrigation	<input type="checkbox"/> Livestock	<input checked="" type="checkbox"/> Monitoring
<input type="checkbox"/> Public Water Supply (Limited Use/DOH)	<input type="checkbox"/> Nursery Irrigation	<input type="checkbox"/> Commercial/Industrial	<input type="checkbox"/> Test
<input type="checkbox"/> Public Water Supply (Community or Non-Community/DEP)	<input type="checkbox"/> Golf Course Irrigation	<input type="checkbox"/> Earth-Coupled Geothermal	<input type="checkbox"/> HVAC Supply
<input type="checkbox"/> Class I Injection		<input type="checkbox"/> HVAC Return	

Class V Injection: Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage _____

Remediation: Recovery _____ Air Sparge _____ Other (Describe) _____

Other (Describe) _____

12. *Drill Method: Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic _____
Horizontal Drilling _____ Hydraulic Point (Direct Push) _____ Other _____

13. *Measured Static Water Level 2 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) TOP OF CASING Which is 1 ft. Above _____ Below Land Surface *Flowing: _____ Yes No

15. *Casing Material: _____ Black Steel _____ Galvanized PVC _____ Stainless Steel _____ Not Cased _____ Other _____

16. *Total Well Depth 12 ft. Cased Depth 2 ft. *Open Hole: From 0 To 12 ft. *Screen: From 2 To 12 ft. Slot Size 10

17. *Abandonment: _____ Other (Explain) _____

From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

18. *Surface Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

19. *Primary Casing Diameter and Depth:

Dia <u>2</u> in. From <u>0</u> ft. To <u>2</u> ft. No. of Bags <u>1</u>	Seal Material (Check One): <input checked="" type="checkbox"/> Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

20. *Liner Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

21. *Telescope Casing Diameter and Depth:

Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

22. Pump Type (If Known): _____ Centrifugal _____ Jet _____ Submersible _____ Turbine _____
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ ft. Intake Depth _____ ft.

23. Chemical Analysis (When Required):
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
Laboratory Test _____ Field Test Kit _____

24. Water Well Contractor:
*Contractor Name MICHAEL EARLY *License Number 9404 E-mail Address MIKE@ZEDRAENY.COM

*Contractor's Signature [Signature] *Driller's Name (Print or Type) WALTER MOIRE
(I certify that the information provided on this report is accurate and true.)

Appendix B
Well Purge and Sample Logs

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>NASKW Bee-Chica TFS</u>	SITE LOCATION: <u>Key West, FL</u>
WELL NO: <u>TFS-MW-17</u>	SAMPLE ID: <u>TFS-mw-17</u>
DATE: <u>4-20-12</u>	

PURGING DATA

WELL DIAMETER (inches): <u>2</u>	TUBING DIAMETER (inches): <u>1/8</u>	WELL SCREEN INTERVAL DEPTH: <u>2</u> feet to <u>12</u> feet	STATIC DEPTH TO WATER (feet): <u>1.00</u>	PURGE PUMP TYPE OR BAILER: <u>peristaltic</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (<u>11.75</u> feet - <u>1.00</u> feet) X <u>0.16</u> gallons/foot = <u>1.75</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <u>0.2000</u> gallons/foot X <u>10.75</u> feet + <u>0.25</u> gallons = <u>0.26</u> gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>4'</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>4'</u>	PURGING INITIATED AT: <u>1030</u>	PURGING ENDED AT: <u>1105</u>	TOTAL VOLUME PURGED (gallons): <u>3.25</u>

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)	ORP (mV)	ODOR (describe)
1037	0.5	0.5	0.1	1.15	6.82	27.73	3.25	0.00	13.9	-311	sw/br
1042	0.5	1.0	0.1	1.17	6.80	27.82	3.30	0.00	19.4	-321	"
1047	0.5	1.5	0.1	1.17	6.77	28.05	3.52	0.00	20.8	-355	"
1052	0.5	2.0	0.1	1.17	6.77	28.14	3.51	0.00	19.3	-362	"
1057	0.5	2.5	0.1	1.17	6.77	28.13	3.51	0.00	18.7	-363	"
1102	0.5	3.0	0.1	1.17	6.77	28.14	3.50	0.00	18.9	-364	"

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" = 0.0025; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Nick Manne / CH2MHILL</u>		SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>		SAMPLING INITIATED AT: <u>1105</u>	SAMPLING ENDED AT: <u>1250</u>
PUMP OR TUBING DEPTH IN WELL (feet): <u>4'</u>		TUBING MATERIAL CODE: <u>PP or PE</u>		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: <u>N/A</u> μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>		DUPLICATE: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <u>MS/MSD</u>			

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			
VOC	3	CG	40ml	HCl	120ml			straw	300
SUCRIM	4	AG	1L	None	4L			APP	300
TRPH	2	AG	1L	H2SO4	2L			APP	300
3/3/MS/MSD/ALK	1	PP	500ml	Zinc Acetate/MSD	500ml			APP	300
SO4	1	PP	250ml	None	250ml			APP	300
TOC	3	CG	40ml	HCl	120ml			straw	300

REMARKS: Collected MS/MSD = TFS-MW-17-MS and TFS-MW-17-MSD @ 1110 Fe = 0.0

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 = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = 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)

Collected Equipment Rinsate: TFS-MW-17-RS @ 1025 Revision Date: February 12, 2009

Appendix C
Survey Data

**CH2M HILL
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA
SURVEY DATA**

**BETSY LINDSAY, INC.
April 18, 2012**

LOCATION	NORTHING	EASTING	ELEVATION NGVD29	
			GROUND	TOC
TFS-MW-15	89416.08	424877.12	2.4	2.28
TFS-MW-16	89308.00	424892.38	3.5	3.20
TFS-MW-17	89303.05	425027.15	2.5	2.26
TFS-SD/SW-01	89484.10	424910.66	1.2	
TFS-SD/SW-02	89469.57	424887.65	1.1	
TFS-SD/SW-03	89450.90	424856.00	1.1	
TFS-SD/SW-04	89437.36	424827.12	1.2	

Notes:

Coordinates are US Survey Feet, NAD83/2007.
Elevations are presented in NAVD88 and NGVD29.
TOC - top of casing
NGVD29 - National Geodetic Vertical Datum 1929

Appendix D

Soil and Water IDW Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

1 Generator ID Number

FL6170022952

2 Page 1 of

1

3 Emergency Response Phone

800-852-8878

4 Waste Tracking Number

0001

5 Generator's Name and Mailing Address

Commanding Officer, Naval Air Station, Code PR 74
PO Box 9007 Attn: Vincent Sucremeli
Key West, FL 33040

Generator's Site Address (if different than mailing address)

Truck Fill Station NASKW
Key West, FL 33040

Generator's Phone

305-293-2583

6 Transporter 1 Company Name

SWS Environmental Services

U.S. EPA ID Number

FLD-099-077-257

7 Transporter 2 Company Name

U.S. EPA ID Number

8 Designated Facility Name and Site Address

World Petroleum
3650 SW 47th Avenue
Davie, FL 33314

U.S. EPA ID Number

FLD-980-709-075

Facility's Phone

954-327-0724

9 Waste Shipping Name and Description

10 Containers

No

Type

11 Total Quantity

12 Unit Wt./Vol

1 Non Hazardous Soil

003

DM

1600

P

2 Non Hazardous Liquids

025
086 y

DM

275

G

13 Special Handling Instructions and Additional Information

SWS # FL4-208-1066

Truck # 4507 DPEP # 2526

14 GENERATOR S/OFFEROR S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified packaged marked and labeled/placarded and are in all respects in proper condition for transport according to applicable international and national governmental regulations

Generator's/Officer's Printed/Typed Name

Signature

Month Day Year

VINCENT SUCEMELI

[Signature]

07 03 12

15 International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit

Transporter Signature (for exports only)

Date leaving U.S.

16 Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Allen Potts

[Signature]

07 03 12

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17 Discrepancy

17a Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number

U.S. EPA ID Number

17b Alternate Facility (or Generator)

Facility's Phone

17c Signature of Alternate Facility (or Generator)

Month Day Year

18 Designated Facility Owner or Operator Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

David Reynolds

[Signature]

17 3 12

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

Appendix E
Aquifer Test Data

Aquifer Test Results Data Reduction

Truck Fill Stand

Naval Air Station Key West

Boca Chica Key, Florida

Hydraulic Conductivity (feet/day)		
Minimum	Maximum	Geo. Mean
6.47	12.48	8.99

Well ID	Test Type	Fully or Partially Penetrating Well ⁽¹⁾	Well Screen Diameter(ft)	Borehole Diameter (ft.)	Depth to Top of Screen (ft BTOC)	Depth to Bottom of Screen (ft BTOC)	Measured Total Depth ⁽²⁾ (ft)	Calculated Saturated Screen Length ⁽³⁾ (ft)	Is Water Level in the Well Screen?	Hydraulic Conductivity ^(4,5) (cm/sec)	Hydraulic Conductivity (ft/day)
TFS-MW-12	Out	Partially	0.17	0.6875	1.28	11.28	11.28	9	Yes	2.28E-03	6.47
TFS-MW-15	Out	Partially	0.17	0.6875	1.00	11.00	11.00	9	Yes	2.64E-03	7.49
TFS-MW-16	Out	Partially	0.17	0.6875	2.15	12.15	12.15	9	Yes	4.40E-03	12.48
TFS-MW-17	Out	Partially	0.17	0.6875	1.75	11.75	11.75	9	Yes	3.54E-03	10.04

(1) Fully penetrating means the entire saturated aquifer is screened.

(2) Total well depth = length of casing + length of screen + sump.

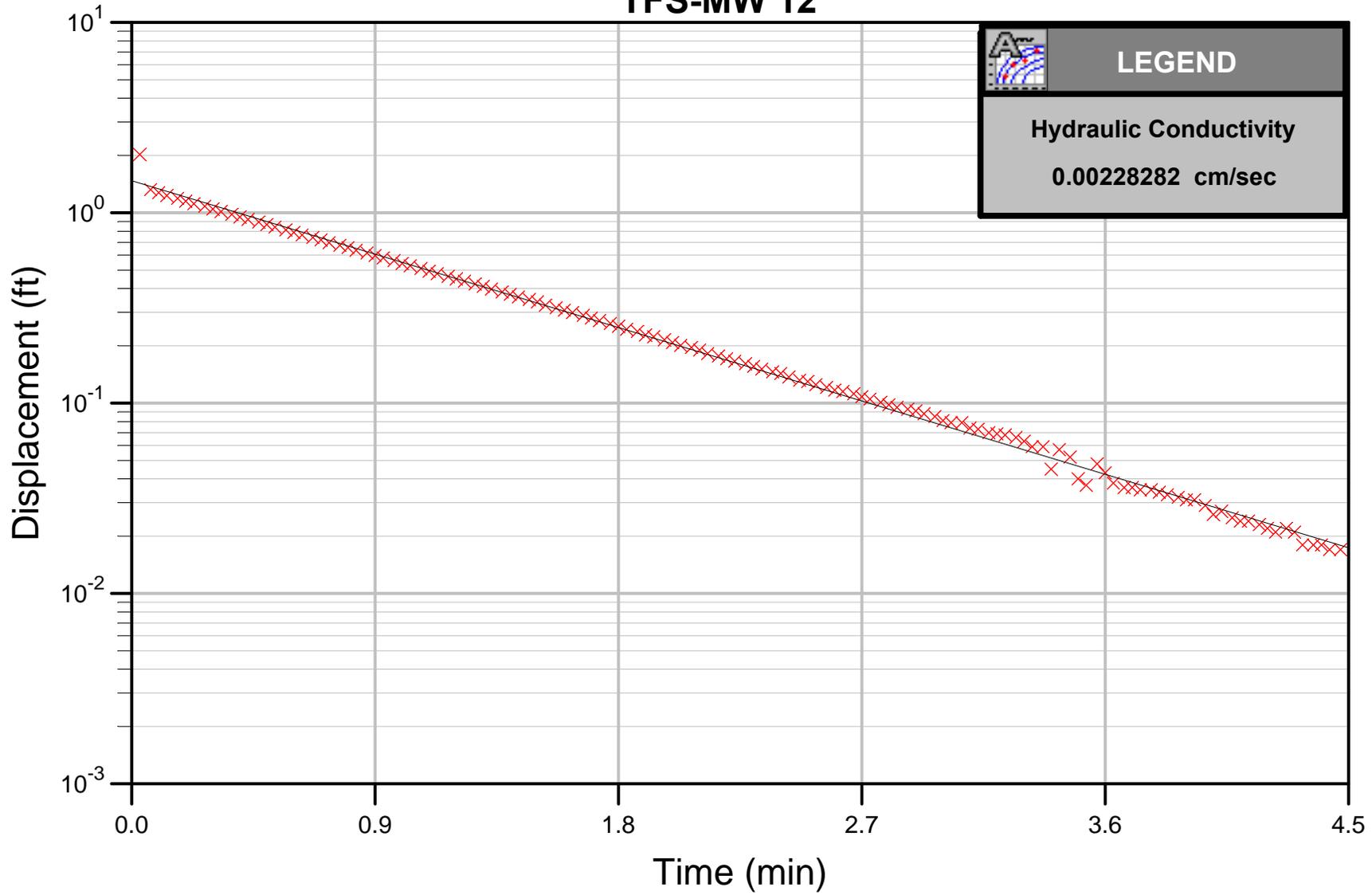
(3) Software uses Aquifer Thickness = saturated screen length.

(4) Pressure heads were measured using a Level Troll 700, manufactured by In-Situ Inc.

(5) Aquiferwin32 software (developed by Environmental Simulations, Inc. Version 3) and the Bouwer & Rice, 1976 method were used.

Bouwer & Rice

TFS-MW 12



AQUIFERWIN32 ANALYSIS SUMMARY FILE

Selected Analysis: Bower & Rice, 1976 (Unconfined Aquifer)

Slug test for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells

SITE INFORMATION

Site Designator: Boca Chica TFS
Job Number: 426847
Client:
Site Name: Boca Chica
Additional Info:

AQUIFER TEST INFORMATION

Test Designator: TFS-MW-12
Job Number: 426847
Date: June 1, 2012
Area Name: Boca Chica TFS
Additional Info:

ANALYSIS INFORMATION

Analysis Designator: MW12
Job Number: 426847
Date: June 1, 2012
Analyst Name: Michael Karafa
Additional Info:

ANALYSIS SUMMARY

Simple Analysis - No Wells Defined

Number of Points = 134 Manual Match

ANALYSIS PARAMETERS

Casing Inner Diameter Fixed Value	= 0.166667 ft
Screen Inner Diameter Fixed Value	= 0.166667 ft
Diameter of Drilled Hole Fixed Value	= 0.6875 ft
Screen Length Fixed Value	= 9 ft
Depth to Screen Top Fixed Value	= 0 ft
Initial Displacement Fixed Value	= 2.026 ft
Hydraulic Conductivity Calculated Value	= 0.00228282 cm/sec
Aquifer Thickness Fixed Value	= 50 ft
Gravel Pack Porosity	

Fixed Value = 0.3
 Calculation Type
 Selected Value = Isotropic
 Correction Type
 Selected Value = Recovery within Screen
 Kz/Kr
 Fixed Value = 1
 Effective Casing Inner Diameter
 Calculated Value = 0.401549 ft
 Effective Screen Inner Diameter
 Calculated Value = 0.6875 ft
 A
 Calculated Value = 2.3201
 B
 Calculated Value = 0.359122
 C
 Calculated Value = 1.90434
 Linear Regression Slope
 Fixed Value = -0.985447 ft/min
 Linear Regression Intercept
 Fixed Value = 1.47565 ft

ANALYSIS STATISTICS

Regression Line
 Slope: -0.985447 ft/min
 Intercept: 1.475651 ft
 Residual Mean = -0.123298
 Residual Standard Dev. = 0.148138
 Residual Sum of Squares = 4.977709
 Absolute Residual Mean = 0.124179
 Minimum Residual = -0.566955
 Maximum Residual = 0.059019

DATA DETAIL

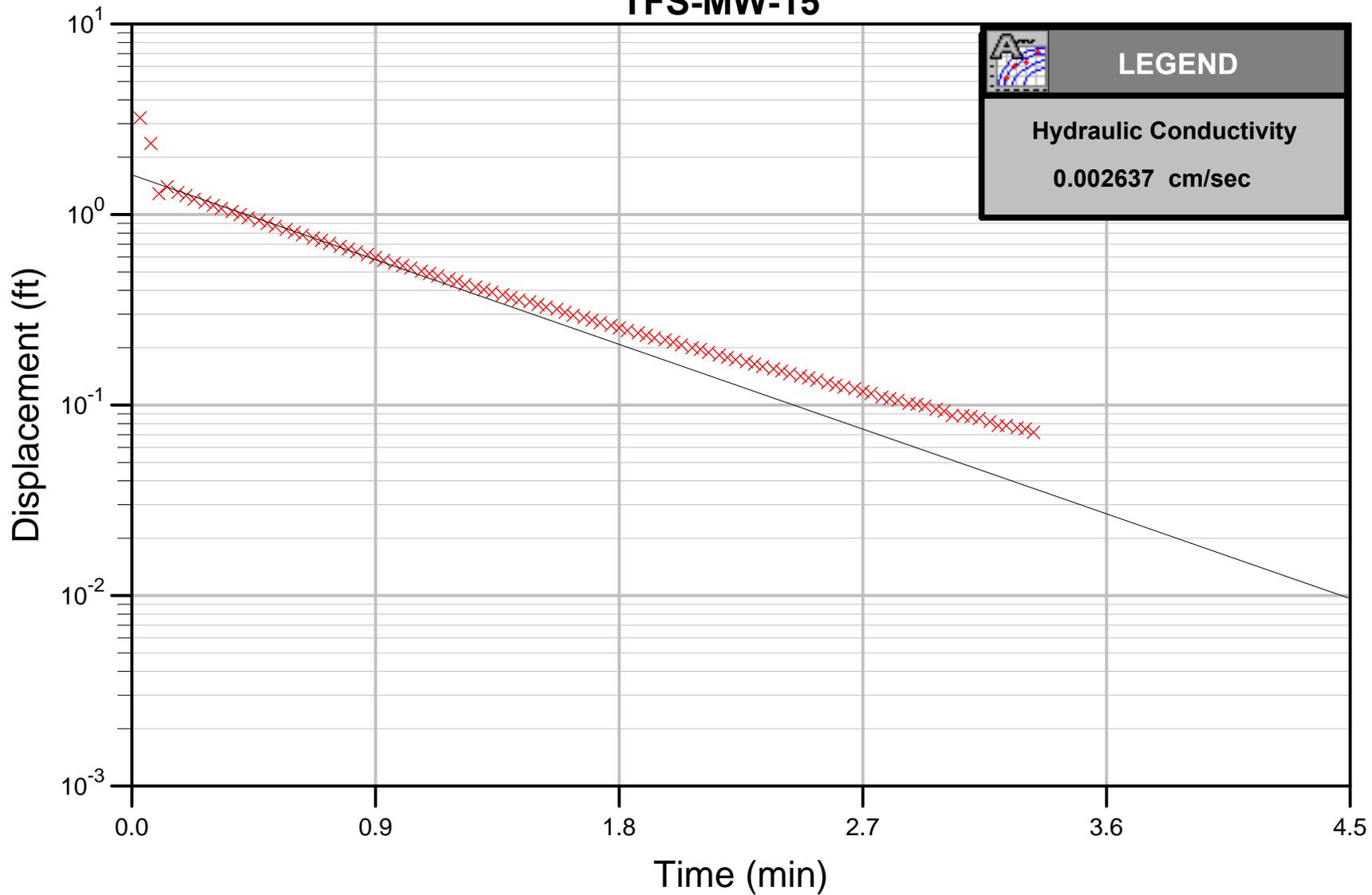
Index	Time (min)	Obs. Displacement (ft)	Calc. Displacement (ft)	Residual
0	3.000000e-002	2.026000e+000	1.966981e+000	5.901880e-002
1	7.000000e-002	1.324000e+000	1.890955e+000	-5.669552e-001
2	1.000000e-001	1.275000e+000	1.835870e+000	-5.608703e-001
3	1.300000e-001	1.231000e+000	1.782390e+000	-5.513901e-001
4	1.700000e-001	1.190000e+000	1.713499e+000	-5.234988e-001
5	2.000000e-001	1.151000e+000	1.663583e+000	-5.125834e-001
6	2.300000e-001	1.116000e+000	1.615122e+000	-4.991220e-001
7	2.700000e-001	1.082000e+000	1.552696e+000	-4.706957e-001
8	3.000000e-001	1.047000e+000	1.507465e+000	-4.604646e-001
9	3.300000e-001	1.014000e+000	1.463551e+000	-4.495511e-001
10	3.700000e-001	9.810000e-001	1.406983e+000	-4.259832e-001
11	4.000000e-001	9.500000e-001	1.365997e+000	-4.159968e-001
12	4.300000e-001	9.230000e-001	1.326204e+000	-4.032044e-001
13	4.700000e-001	8.940000e-001	1.274945e+000	-3.809451e-001
14	5.000000e-001	8.670000e-001	1.237805e+000	-3.708051e-001
15	5.300000e-001	8.410000e-001	1.201747e+000	-3.607469e-001
16	5.700000e-001	8.140000e-001	1.155298e+000	-3.412981e-001
17	6.000000e-001	7.890000e-001	1.121643e+000	-3.326434e-001
18	6.300000e-001	7.650000e-001	1.088969e+000	-3.239692e-001

19	6.700000e-001	7.420000e-001	1.046879e+000	-3.048793e-001
20	7.000000e-001	7.210000e-001	1.016383e+000	-2.953830e-001
21	7.300000e-001	6.970000e-001	9.867750e-001	-2.897750e-001
22	7.700000e-001	6.750000e-001	9.486351e-001	-2.736351e-001
23	8.000000e-001	6.560000e-001	9.210007e-001	-2.650007e-001
24	8.300000e-001	6.350000e-001	8.941713e-001	-2.591713e-001
25	8.700000e-001	6.150000e-001	8.596105e-001	-2.446105e-001
26	9.000000e-001	5.970000e-001	8.345695e-001	-2.375695e-001
27	9.300000e-001	5.790000e-001	8.102579e-001	-2.312579e-001
28	9.700000e-001	5.610000e-001	7.789405e-001	-2.179405e-001
29	1.000000e+000	5.420000e-001	7.562494e-001	-2.142494e-001
30	1.030000e+000	5.270000e-001	7.342194e-001	-2.072194e-001
31	1.070000e+000	5.100000e-001	7.058410e-001	-1.958410e-001
32	1.100000e+000	4.930000e-001	6.852793e-001	-1.922793e-001
33	1.130000e+000	4.790000e-001	6.653167e-001	-1.863167e-001
34	1.170000e+000	4.630000e-001	6.396014e-001	-1.766014e-001
35	1.200000e+000	4.490000e-001	6.209694e-001	-1.719694e-001
36	1.230000e+000	4.370000e-001	6.028801e-001	-1.658801e-001
37	1.270000e+000	4.230000e-001	5.795781e-001	-1.565781e-001
38	1.300000e+000	4.110000e-001	5.626946e-001	-1.516946e-001
39	1.330000e+000	3.970000e-001	5.463029e-001	-1.493029e-001
40	1.370000e+000	3.840000e-001	5.251877e-001	-1.411877e-001
41	1.400000e+000	3.730000e-001	5.098886e-001	-1.368886e-001
42	1.430000e+000	3.610000e-001	4.950352e-001	-1.340352e-001
43	1.470000e+000	3.500000e-001	4.759015e-001	-1.259015e-001
44	1.500000e+000	3.400000e-001	4.620382e-001	-1.220382e-001
45	1.530000e+000	3.270000e-001	4.485787e-001	-1.215787e-001
46	1.570000e+000	3.170000e-001	4.312406e-001	-1.142406e-001
47	1.600000e+000	3.080000e-001	4.186783e-001	-1.106783e-001
48	1.630000e+000	2.990000e-001	4.064819e-001	-1.074819e-001
49	1.670000e+000	2.890000e-001	3.907709e-001	-1.017709e-001
50	1.700000e+000	2.800000e-001	3.793875e-001	-9.938748e-002
51	1.730000e+000	2.710000e-001	3.683357e-001	-9.733566e-002
52	1.770000e+000	2.620000e-001	3.540991e-001	-9.209907e-002
53	1.800000e+000	2.530000e-001	3.437839e-001	-9.078392e-002
54	1.830000e+000	2.440000e-001	3.337693e-001	-8.976926e-002
55	1.870000e+000	2.380000e-001	3.208687e-001	-8.286870e-002
56	1.900000e+000	2.280000e-001	3.115216e-001	-8.352157e-002
57	1.930000e+000	2.230000e-001	3.024467e-001	-7.944673e-002
58	1.970000e+000	2.150000e-001	2.907568e-001	-7.575682e-002
59	2.000000e+000	2.080000e-001	2.822869e-001	-7.428687e-002
60	2.030000e+000	2.010000e-001	2.740637e-001	-7.306366e-002
61	2.070000e+000	1.960000e-001	2.634708e-001	-6.747079e-002
62	2.100000e+000	1.900000e-001	2.557957e-001	-6.579570e-002
63	2.130000e+000	1.820000e-001	2.483442e-001	-6.634420e-002
64	2.170000e+000	1.770000e-001	2.387454e-001	-6.174542e-002
65	2.200000e+000	1.710000e-001	2.317906e-001	-6.079059e-002
66	2.230000e+000	1.660000e-001	2.250384e-001	-5.903837e-002
67	2.270000e+000	1.610000e-001	2.163404e-001	-5.534039e-002
68	2.300000e+000	1.560000e-001	2.100382e-001	-5.403824e-002
69	2.330000e+000	1.510000e-001	2.039197e-001	-5.291968e-002
70	2.370000e+000	1.460000e-001	1.960380e-001	-5.003796e-002
71	2.400000e+000	1.430000e-001	1.903272e-001	-4.732723e-002
72	2.430000e+000	1.370000e-001	1.847829e-001	-4.778287e-002
73	2.470000e+000	1.320000e-001	1.776408e-001	-4.564080e-002
74	2.500000e+000	1.300000e-001	1.724660e-001	-4.246600e-002
75	2.530000e+000	1.250000e-001	1.674419e-001	-4.244195e-002
76	2.570000e+000	1.210000e-001	1.609701e-001	-3.997013e-002
77	2.600000e+000	1.170000e-001	1.562810e-001	-3.928096e-002
78	2.630000e+000	1.150000e-001	1.517284e-001	-3.672838e-002
79	2.670000e+000	1.120000e-001	1.458639e-001	-3.386391e-002
80	2.700000e+000	1.080000e-001	1.416148e-001	-3.361479e-002
81	2.730000e+000	1.050000e-001	1.374895e-001	-3.248945e-002
82	2.770000e+000	1.010000e-001	1.321753e-001	-3.117533e-002
83	2.800000e+000	9.800000e-002	1.283250e-001	-3.032497e-002
84	2.830000e+000	9.500000e-002	1.245868e-001	-2.958678e-002
85	2.870000e+000	9.300000e-002	1.197714e-001	-2.677136e-002
86	2.900000e+000	9.100000e-002	1.162823e-001	-2.528234e-002
87	2.930000e+000	8.800000e-002	1.128949e-001	-2.489495e-002
88	2.970000e+000	8.500000e-002	1.085314e-001	-2.353143e-002
89	3.000000e+000	8.100000e-002	1.053698e-001	-2.436984e-002

90	3.030000e+000	7.900000e-002	1.023003e-001	-2.330034e-002
91	3.070000e+000	7.900000e-002	9.834632e-002	-1.934632e-002
92	3.100000e+000	7.400000e-002	9.548142e-002	-2.148142e-002
93	3.130000e+000	7.300000e-002	9.269998e-002	-1.969998e-002
94	3.170000e+000	7.000000e-002	8.911702e-002	-1.911702e-002
95	3.200000e+000	6.900000e-002	8.652098e-002	-1.752098e-002
96	3.230000e+000	6.800000e-002	8.400056e-002	-1.600056e-002
97	3.270000e+000	6.600000e-002	8.075385e-002	-1.475385e-002
98	3.300000e+000	6.300000e-002	7.840143e-002	-1.540143e-002
99	3.330000e+000	5.900000e-002	7.611754e-002	-1.711754e-002
100	3.370000e+000	5.900000e-002	7.317551e-002	-1.417551e-002
101	3.400000e+000	4.500000e-002	7.104386e-002	-2.604386e-002
102	3.430000e+000	5.700000e-002	6.897430e-002	-1.197430e-002
103	3.470000e+000	5.200000e-002	6.630837e-002	-1.430837e-002
104	3.500000e+000	4.000000e-002	6.437676e-002	-2.437676e-002
105	3.530000e+000	3.700000e-002	6.250142e-002	-2.550142e-002
106	3.570000e+000	4.800000e-002	6.008567e-002	-1.208567e-002
107	3.600000e+000	4.300000e-002	5.833533e-002	-1.533533e-002
108	3.630000e+000	3.800000e-002	5.663598e-002	-1.863598e-002
109	3.670000e+000	3.600000e-002	5.444694e-002	-1.844694e-002
110	3.700000e+000	3.600000e-002	5.286086e-002	-1.686086e-002
111	3.730000e+000	3.500000e-002	5.132099e-002	-1.632099e-002
112	3.770000e+000	3.500000e-002	4.933737e-002	-1.433737e-002
113	3.800000e+000	3.400000e-002	4.790014e-002	-1.390014e-002
114	3.830000e+000	3.300000e-002	4.650478e-002	-1.350478e-002
115	3.870000e+000	3.200000e-002	4.470732e-002	-1.270732e-002
116	3.900000e+000	3.100000e-002	4.340496e-002	-1.240496e-002
117	3.930000e+000	3.100000e-002	4.214054e-002	-1.114054e-002
118	3.970000e+000	2.900000e-002	4.051176e-002	-1.151176e-002
119	4.000000e+000	2.600000e-002	3.933163e-002	-1.333163e-002
120	4.030000e+000	2.700000e-002	3.818587e-002	-1.118587e-002
121	4.070000e+000	2.500000e-002	3.670994e-002	-1.170994e-002
122	4.100000e+000	2.400000e-002	3.564056e-002	-1.164056e-002
123	4.130000e+000	2.400000e-002	3.460232e-002	-1.060232e-002
124	4.170000e+000	2.300000e-002	3.326490e-002	-1.026490e-002
125	4.200000e+000	2.200000e-002	3.229587e-002	-1.029587e-002
126	4.230000e+000	2.100000e-002	3.135507e-002	-1.035507e-002
127	4.270000e+000	2.200000e-002	3.014316e-002	-8.143165e-003
128	4.300000e+000	2.100000e-002	2.926507e-002	-8.265073e-003
129	4.330000e+000	1.800000e-002	2.841256e-002	-1.041256e-002
130	4.370000e+000	1.800000e-002	2.731438e-002	-9.314384e-003
131	4.400000e+000	1.800000e-002	2.651870e-002	-8.518697e-003
132	4.430000e+000	1.700000e-002	2.574619e-002	-8.746189e-003
133	4.470000e+000	1.700000e-002	2.475107e-002	-7.751070e-003

Bouwer & Rice

TFS-MW-15



Gravel Pack Porosity
Fixed Value = 0.3

Calculation Type
Selected Value = Isotropic

Correction Type
Selected Value = Recovery within Screen

Kz/Kr
Fixed Value = 1

Effective Casing Inner Diameter
Calculated Value = 0.401549 ft

Effective Screen Inner Diameter
Calculated Value = 0.6875 ft

A
Calculated Value = 2.3201

B
Calculated Value = 0.359122

C
Calculated Value = 1.90434

Linear Regression Slope
Fixed Value = -1.13834 ft/min

Linear Regression Intercept
Fixed Value = 1.61436 ft

ANALYSIS STATISTICS

Regression Line
Slope: -1.138339 ft/min
Intercept: 1.614359 ft

Residual Mean = -0.354863
Residual Standard Dev. = 0.400504
Residual Sum of Squares = 28.633158
Absolute Residual Mean = 0.357026
Minimum Residual = -1.586548
Maximum Residual = 0.108107

DATA DETAIL

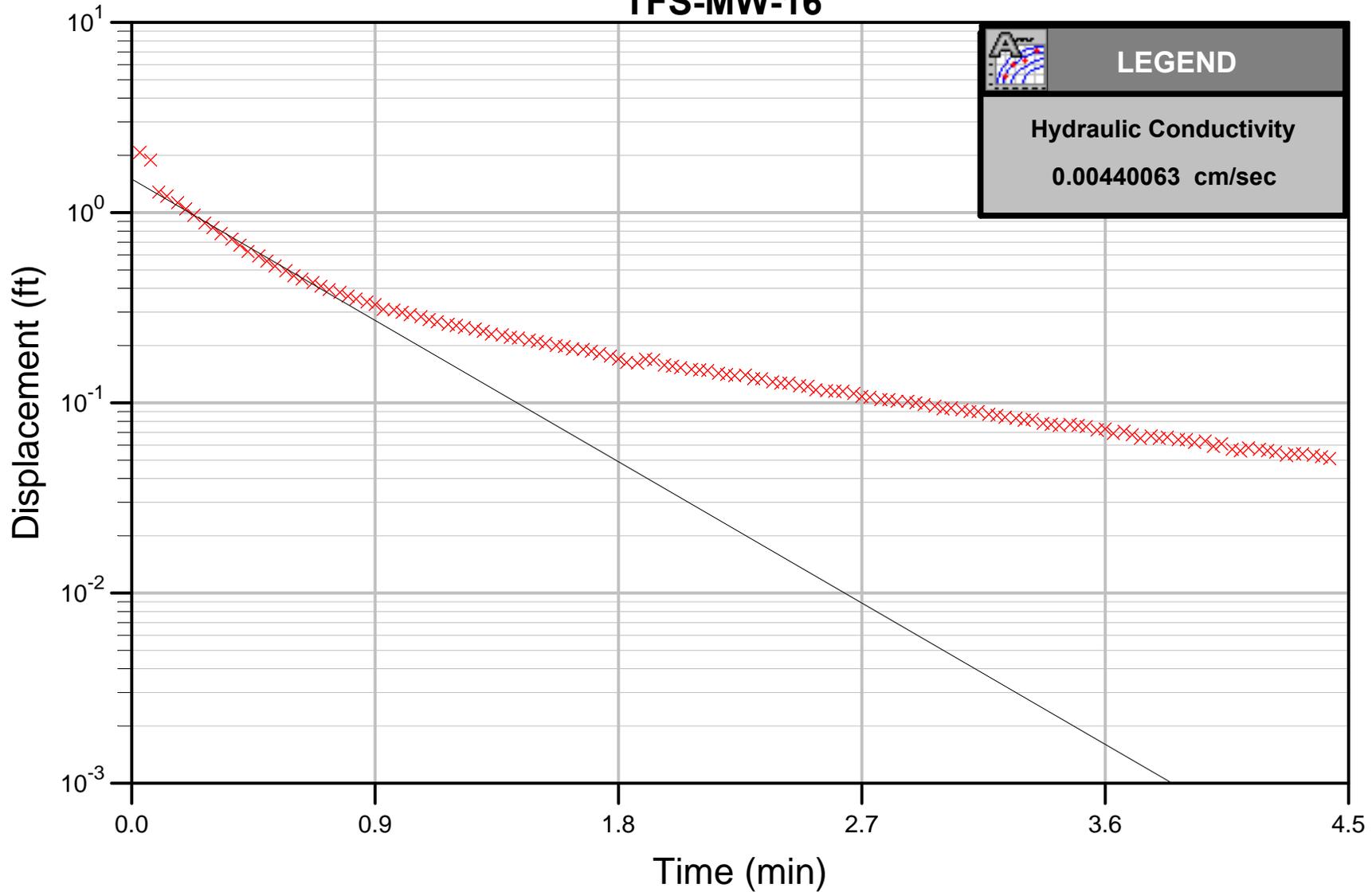
Index	Time (min)	Obs. Displacement (ft)	Calc. Displacement (ft)	Residual
0	3.000000e-002	3.220000e+000	3.111893e+000	1.081071e-001
1	7.000000e-002	2.364000e+000	2.973375e+000	-6.093748e-001
2	1.000000e-001	1.287000e+000	2.873548e+000	-1.586548e+000
3	1.300000e-001	1.401000e+000	2.777072e+000	-1.376072e+000
4	1.700000e-001	1.307000e+000	2.653458e+000	-1.346458e+000
5	2.000000e-001	1.257000e+000	2.564372e+000	-1.307372e+000
6	2.300000e-001	1.204000e+000	2.478276e+000	-1.274276e+000
7	2.700000e-001	1.158000e+000	2.367962e+000	-1.209962e+000
8	3.000000e-001	1.116000e+000	2.288461e+000	-1.172461e+000
9	3.300000e-001	1.075000e+000	2.211629e+000	-1.136629e+000
10	3.700000e-001	1.036000e+000	2.113184e+000	-1.077184e+000
11	4.000000e-001	9.980000e-001	2.042237e+000	-1.044237e+000
12	4.300000e-001	9.620000e-001	1.973671e+000	-1.011671e+000
13	4.700000e-001	9.310000e-001	1.885818e+000	-9.548184e-001
14	5.000000e-001	8.980000e-001	1.822505e+000	-9.245046e-001
15	5.300000e-001	8.680000e-001	1.761316e+000	-8.933165e-001
16	5.700000e-001	8.350000e-001	1.682916e+000	-8.479159e-001
17	6.000000e-001	8.070000e-001	1.626414e+000	-8.194143e-001

18	6.300000e-001	7.820000e-001	1.571810e+000	-7.898097e-001
19	6.700000e-001	7.530000e-001	1.501845e+000	-7.488445e-001
20	7.000000e-001	7.310000e-001	1.451422e+000	-7.204221e-001
21	7.300000e-001	7.050000e-001	1.402693e+000	-6.976926e-001
22	7.700000e-001	6.810000e-001	1.340255e+000	-6.592553e-001
23	8.000000e-001	6.590000e-001	1.295258e+000	-6.362580e-001
24	8.300000e-001	6.370000e-001	1.251771e+000	-6.147715e-001
25	8.700000e-001	6.160000e-001	1.196052e+000	-5.800520e-001
26	9.000000e-001	5.950000e-001	1.155896e+000	-5.608962e-001
27	9.300000e-001	5.750000e-001	1.117089e+000	-5.420886e-001
28	9.700000e-001	5.560000e-001	1.067364e+000	-5.113642e-001
29	1.000000e+000	5.390000e-001	1.031529e+000	-4.925289e-001
30	1.030000e+000	5.240000e-001	9.968967e-001	-4.728967e-001
31	1.070000e+000	5.050000e-001	9.525224e-001	-4.475224e-001
32	1.100000e+000	4.900000e-001	9.205427e-001	-4.305427e-001
33	1.130000e+000	4.760000e-001	8.896367e-001	-4.136367e-001
34	1.170000e+000	4.580000e-001	8.500368e-001	-3.920368e-001
35	1.200000e+000	4.460000e-001	8.214980e-001	-3.754980e-001
36	1.230000e+000	4.290000e-001	7.939173e-001	-3.649173e-001
37	1.270000e+000	4.160000e-001	7.585781e-001	-3.425781e-001
38	1.300000e+000	4.040000e-001	7.331098e-001	-3.291098e-001
39	1.330000e+000	3.920000e-001	7.084967e-001	-3.164967e-001
40	1.370000e+000	3.800000e-001	6.769597e-001	-2.969597e-001
41	1.400000e+000	3.670000e-001	6.542317e-001	-2.872317e-001
42	1.430000e+000	3.560000e-001	6.322668e-001	-2.762668e-001
43	1.470000e+000	3.490000e-001	6.041230e-001	-2.551230e-001
44	1.500000e+000	3.370000e-001	5.838404e-001	-2.468404e-001
45	1.530000e+000	3.270000e-001	5.642388e-001	-2.372388e-001
46	1.570000e+000	3.190000e-001	5.391231e-001	-2.201231e-001
47	1.600000e+000	3.070000e-001	5.210228e-001	-2.140228e-001
48	1.630000e+000	2.960000e-001	5.035301e-001	-2.075301e-001
49	1.670000e+000	2.880000e-001	4.811168e-001	-1.931168e-001
50	1.700000e+000	2.790000e-001	4.649639e-001	-1.859639e-001
51	1.730000e+000	2.700000e-001	4.493534e-001	-1.793534e-001
52	1.770000e+000	2.620000e-001	4.293516e-001	-1.673516e-001
53	1.800000e+000	2.540000e-001	4.149367e-001	-1.609367e-001
54	1.830000e+000	2.460000e-001	4.010057e-001	-1.550057e-001
55	1.870000e+000	2.390000e-001	3.831560e-001	-1.441560e-001
56	1.900000e+000	2.320000e-001	3.702920e-001	-1.382920e-001
57	1.930000e+000	2.250000e-001	3.578600e-001	-1.328600e-001
58	1.970000e+000	2.200000e-001	3.419307e-001	-1.219307e-001
59	2.000000e+000	2.140000e-001	3.304509e-001	-1.164509e-001
60	2.030000e+000	2.070000e-001	3.193564e-001	-1.123564e-001
61	2.070000e+000	2.000000e-001	3.051411e-001	-1.051411e-001
62	2.100000e+000	1.960000e-001	2.948964e-001	-9.889640e-002
63	2.130000e+000	1.890000e-001	2.849957e-001	-9.599566e-002
64	2.170000e+000	1.830000e-001	2.723098e-001	-8.930979e-002
65	2.200000e+000	1.780000e-001	2.631674e-001	-8.516736e-002
66	2.230000e+000	1.730000e-001	2.543319e-001	-8.133187e-002
67	2.270000e+000	1.690000e-001	2.430109e-001	-7.401093e-002
68	2.300000e+000	1.640000e-001	2.348522e-001	-7.085217e-002
69	2.330000e+000	1.590000e-001	2.269673e-001	-6.796733e-002
70	2.370000e+000	1.550000e-001	2.168645e-001	-6.186445e-002
71	2.400000e+000	1.510000e-001	2.095835e-001	-5.858352e-002
72	2.430000e+000	1.460000e-001	2.025470e-001	-5.654704e-002
73	2.470000e+000	1.420000e-001	1.935312e-001	-5.153117e-002
74	2.500000e+000	1.390000e-001	1.870336e-001	-4.803362e-002
75	2.530000e+000	1.350000e-001	1.807542e-001	-4.575422e-002
76	2.570000e+000	1.310000e-001	1.727084e-001	-4.170840e-002
77	2.600000e+000	1.270000e-001	1.669100e-001	-3.990995e-002
78	2.630000e+000	1.240000e-001	1.613062e-001	-3.730618e-002
79	2.670000e+000	1.220000e-001	1.541260e-001	-3.212604e-002
80	2.700000e+000	1.180000e-001	1.489515e-001	-3.095147e-002
81	2.730000e+000	1.150000e-001	1.439506e-001	-2.895062e-002
82	2.770000e+000	1.100000e-001	1.375430e-001	-2.754303e-002
83	2.800000e+000	1.080000e-001	1.329252e-001	-2.492521e-002
84	2.830000e+000	1.060000e-001	1.284624e-001	-2.246242e-002
85	2.870000e+000	1.020000e-001	1.227442e-001	-2.074424e-002
86	2.900000e+000	1.010000e-001	1.186233e-001	-1.762327e-002
87	2.930000e+000	9.900000e-002	1.146407e-001	-1.564066e-002
88	2.970000e+000	9.500000e-002	1.095377e-001	-1.453772e-002

89	3.000000e+000	9.300000e-002	1.058601e-001	-1.286014e-002
90	3.030000e+000	8.800000e-002	1.023060e-001	-1.430603e-002
91	3.070000e+000	8.800000e-002	9.775213e-002	-9.752131e-003
92	3.100000e+000	8.700000e-002	9.447024e-002	-7.470236e-003
93	3.130000e+000	8.500000e-002	9.129853e-002	-6.298526e-003
94	3.170000e+000	8.200000e-002	8.723460e-002	-5.234602e-003
95	3.200000e+000	7.800000e-002	8.430582e-002	-6.305819e-003
96	3.230000e+000	7.800000e-002	8.147537e-002	-3.475365e-003
97	3.270000e+000	7.600000e-002	7.784870e-002	-1.848695e-003
98	3.300000e+000	7.500000e-002	7.523503e-002	-2.350309e-004
99	3.330000e+000	7.200000e-002	7.270912e-002	-7.091168e-004

Bouwer & Rice

TFS-MW-16



Gravel Pack Porosity
Fixed Value = 0.3

Calculation Type
Selected Value = Isotropic

Correction Type
Selected Value = Recovery within Screen

Kz/Kr
Fixed Value = 1

Effective Casing Inner Diameter
Calculated Value = 0.401549 ft

Effective Screen Inner Diameter
Calculated Value = 0.6875 ft

A
Calculated Value = 2.3201

B
Calculated Value = 0.359122

C
Calculated Value = 1.90434

Linear Regression Slope
Fixed Value = -1.89966 ft/min

Linear Regression Intercept
Fixed Value = 1.49086 ft

ANALYSIS STATISTICS

Regression Line
Slope: -1.899660 ft/min
Intercept: 1.490861 ft

Residual Mean = 0.017980
Residual Standard Dev. = 0.135890
Residual Sum of Squares = 2.498969
Absolute Residual Mean = 0.108840
Minimum Residual = -0.430345
Maximum Residual = 0.114994

DATA DETAIL

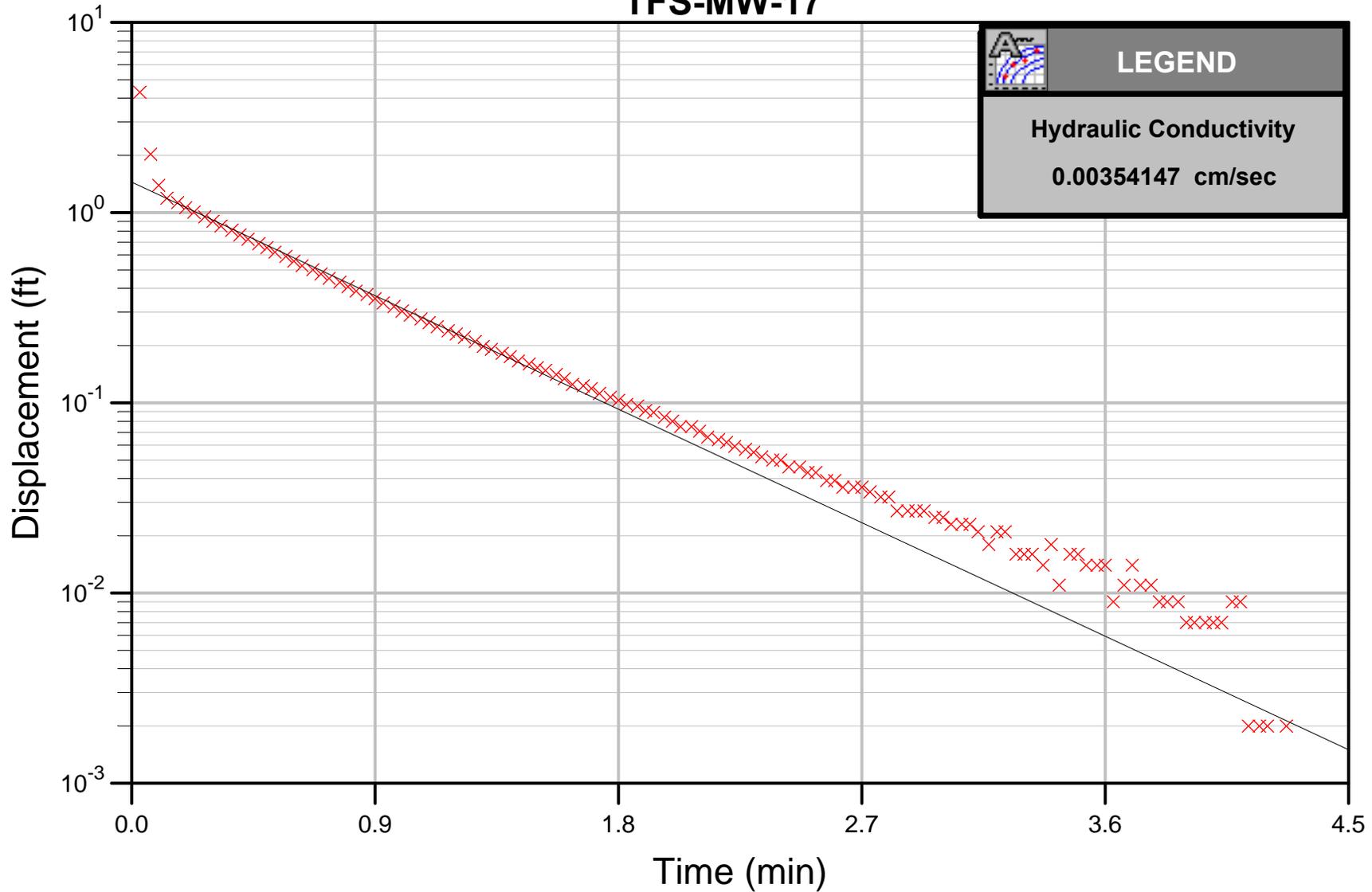
Index	Time (min)	Obs. Displacement (ft)	Calc. Displacement (ft)	Residual
0	3.000000e-002	2.073000e+000	1.958163e+000	1.148365e-001
1	7.000000e-002	1.890000e+000	1.814882e+000	7.511772e-002
2	1.000000e-001	1.284000e+000	1.714345e+000	-4.303445e-001
3	1.300000e-001	1.219000e+000	1.619376e+000	-4.003762e-001
4	1.700000e-001	1.128000e+000	1.500884e+000	-3.728844e-001
5	2.000000e-001	1.046000e+000	1.417741e+000	-3.717410e-001
6	2.300000e-001	9.670000e-001	1.339203e+000	-3.722034e-001
7	2.700000e-001	8.830000e-001	1.241212e+000	-3.582123e-001
8	3.000000e-001	8.340000e-001	1.172454e+000	-3.384537e-001
9	3.300000e-001	7.760000e-001	1.107504e+000	-3.315041e-001
10	3.700000e-001	7.250000e-001	1.026467e+000	-3.014667e-001
11	4.000000e-001	6.750000e-001	9.696042e-001	-2.946042e-001
12	4.300000e-001	6.250000e-001	9.158917e-001	-2.908917e-001
13	4.700000e-001	5.920000e-001	8.488748e-001	-2.568748e-001
14	5.000000e-001	5.560000e-001	8.018503e-001	-2.458503e-001
15	5.300000e-001	5.240000e-001	7.574307e-001	-2.334307e-001
16	5.700000e-001	4.950000e-001	7.020086e-001	-2.070086e-001
17	6.000000e-001	4.660000e-001	6.631199e-001	-1.971199e-001

18	6.300000e-001	4.480000e-001	6.263855e-001	-1.783855e-001
19	6.700000e-001	4.290000e-001	5.805522e-001	-1.515522e-001
20	7.000000e-001	4.100000e-001	5.483917e-001	-1.383917e-001
21	7.300000e-001	3.940000e-001	5.180128e-001	-1.240128e-001
22	7.700000e-001	3.810000e-001	4.801092e-001	-9.910922e-002
23	8.000000e-001	3.640000e-001	4.535129e-001	-8.951294e-002
24	8.300000e-001	3.520000e-001	4.283900e-001	-7.639000e-002
25	8.700000e-001	3.390000e-001	3.970442e-001	-5.804419e-002
26	9.000000e-001	3.290000e-001	3.750494e-001	-4.604940e-002
27	9.300000e-001	3.100000e-001	3.542731e-001	-4.427305e-002
28	9.700000e-001	3.080000e-001	3.283505e-001	-2.035047e-002
29	1.000000e+000	2.990000e-001	3.101611e-001	-1.116106e-002
30	1.030000e+000	2.910000e-001	2.929793e-001	-1.979286e-003
31	1.070000e+000	2.840000e-001	2.715416e-001	1.245836e-002
32	1.100000e+000	2.740000e-001	2.564992e-001	1.750076e-002
33	1.130000e+000	2.670000e-001	2.422901e-001	2.470988e-002
34	1.170000e+000	2.590000e-001	2.245615e-001	3.443854e-002
35	1.200000e+000	2.550000e-001	2.121216e-001	4.287841e-002
36	1.230000e+000	2.490000e-001	2.003708e-001	4.862916e-002
37	1.270000e+000	2.440000e-001	1.857095e-001	5.829054e-002
38	1.300000e+000	2.380000e-001	1.754218e-001	6.257816e-002
39	1.330000e+000	2.300000e-001	1.657041e-001	6.429588e-002
40	1.370000e+000	2.270000e-001	1.535794e-001	7.342065e-002
41	1.400000e+000	2.210000e-001	1.450716e-001	7.592838e-002
42	1.430000e+000	2.190000e-001	1.370352e-001	8.196481e-002
43	1.470000e+000	2.140000e-001	1.270082e-001	8.699184e-002
44	1.500000e+000	2.100000e-001	1.199724e-001	9.002762e-002
45	1.530000e+000	2.050000e-001	1.133264e-001	9.167365e-002
46	1.570000e+000	2.000000e-001	1.050341e-001	9.496587e-002
47	1.600000e+000	1.980000e-001	9.921562e-002	9.878438e-002
48	1.630000e+000	1.920000e-001	9.371944e-002	9.828056e-002
49	1.670000e+000	1.910000e-001	8.686188e-002	1.041381e-001
50	1.700000e+000	1.870000e-001	8.205005e-002	1.049499e-001
51	1.730000e+000	1.810000e-001	7.750478e-002	1.034952e-001
52	1.770000e+000	1.760000e-001	7.183366e-002	1.041663e-001
53	1.800000e+000	1.700000e-001	6.785434e-002	1.021457e-001
54	1.830000e+000	1.630000e-001	6.409546e-002	9.890454e-002
55	1.870000e+000	1.620000e-001	5.940552e-002	1.025945e-001
56	1.900000e+000	1.700000e-001	5.611468e-002	1.138853e-001
57	1.930000e+000	1.680000e-001	5.300613e-002	1.149939e-001
58	1.970000e+000	1.580000e-001	4.912761e-002	1.088724e-001
59	2.000000e+000	1.560000e-001	4.640612e-002	1.095939e-001
60	2.030000e+000	1.530000e-001	4.383539e-002	1.091646e-001
61	2.070000e+000	1.500000e-001	4.062790e-002	1.093721e-001
62	2.100000e+000	1.490000e-001	3.837727e-002	1.106227e-001
63	2.130000e+000	1.480000e-001	3.625131e-002	1.117487e-001
64	2.170000e+000	1.430000e-001	3.359876e-002	1.094012e-001
65	2.200000e+000	1.410000e-001	3.173751e-002	1.092625e-001
66	2.230000e+000	1.390000e-001	2.997937e-002	1.090206e-001
67	2.270000e+000	1.400000e-001	2.778574e-002	1.122143e-001
68	2.300000e+000	1.340000e-001	2.624651e-002	1.077535e-001
69	2.330000e+000	1.340000e-001	2.479255e-002	1.092074e-001
70	2.370000e+000	1.290000e-001	2.297845e-002	1.060215e-001
71	2.400000e+000	1.270000e-001	2.170553e-002	1.052945e-001
72	2.430000e+000	1.270000e-001	2.050313e-002	1.064969e-001
73	2.470000e+000	1.230000e-001	1.900289e-002	1.039971e-001
74	2.500000e+000	1.220000e-001	1.795020e-002	1.040498e-001
75	2.530000e+000	1.170000e-001	1.695582e-002	1.000442e-001
76	2.570000e+000	1.160000e-001	1.571515e-002	1.002849e-001
77	2.600000e+000	1.150000e-001	1.484458e-002	1.001554e-001
78	2.630000e+000	1.150000e-001	1.402225e-002	1.009778e-001
79	2.670000e+000	1.120000e-001	1.299622e-002	9.900378e-002
80	2.700000e+000	1.080000e-001	1.227628e-002	9.572372e-002
81	2.730000e+000	1.070000e-001	1.159622e-002	9.540378e-002
82	2.770000e+000	1.040000e-001	1.074771e-002	9.325229e-002
83	2.800000e+000	1.040000e-001	1.015233e-002	9.384767e-002
84	2.830000e+000	1.020000e-001	9.589926e-003	9.241007e-002
85	2.870000e+000	1.020000e-001	8.888220e-003	9.311178e-002
86	2.900000e+000	1.000000e-001	8.395845e-003	9.160415e-002
87	2.930000e+000	9.800000e-002	7.930747e-003	9.006925e-002
88	2.970000e+000	9.600000e-002	7.350444e-003	8.864956e-002

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90	3.030000e+000	9.400000e-002	6.558626e-003	8.744137e-002
91	3.070000e+000	9.200000e-002	6.078723e-003	8.592128e-002
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93	3.130000e+000	9.000000e-002	5.423900e-003	8.457610e-002
94	3.170000e+000	8.700000e-002	5.027027e-003	8.197297e-002
95	3.200000e+000	8.600000e-002	4.748548e-003	8.125145e-002
96	3.230000e+000	8.400000e-002	4.485496e-003	7.951450e-002
97	3.270000e+000	8.300000e-002	4.157287e-003	7.884271e-002
98	3.300000e+000	8.100000e-002	3.926988e-003	7.707301e-002
99	3.330000e+000	8.200000e-002	3.709448e-003	7.829055e-002
100	3.370000e+000	7.800000e-002	3.438023e-003	7.456198e-002
101	3.400000e+000	7.700000e-002	3.247569e-003	7.375243e-002
102	3.430000e+000	7.600000e-002	3.067666e-003	7.293233e-002
103	3.470000e+000	7.700000e-002	2.843201e-003	7.415680e-002
104	3.500000e+000	7.600000e-002	2.685698e-003	7.331430e-002
105	3.530000e+000	7.500000e-002	2.536920e-003	7.246308e-002
106	3.570000e+000	7.200000e-002	2.351291e-003	6.964871e-002
107	3.600000e+000	7.300000e-002	2.221038e-003	7.077896e-002
108	3.630000e+000	6.900000e-002	2.098001e-003	6.690200e-002
109	3.670000e+000	7.100000e-002	1.944488e-003	6.905551e-002
110	3.700000e+000	6.800000e-002	1.836770e-003	6.616323e-002
111	3.730000e+000	6.500000e-002	1.735020e-003	6.326498e-002
112	3.770000e+000	6.700000e-002	1.608066e-003	6.539193e-002
113	3.800000e+000	6.500000e-002	1.518985e-003	6.348101e-002
114	3.830000e+000	6.600000e-002	1.434839e-003	6.456516e-002
115	3.870000e+000	6.400000e-002	1.329850e-003	6.267015e-002
116	3.900000e+000	6.400000e-002	1.256182e-003	6.274382e-002
117	3.930000e+000	6.200000e-002	1.186594e-003	6.081341e-002
118	3.970000e+000	6.300000e-002	1.099769e-003	6.190023e-002
119	4.000000e+000	5.900000e-002	1.038846e-003	5.796115e-002
120	4.030000e+000	6.100000e-002	9.812978e-004	6.001870e-002
121	4.070000e+000	5.700000e-002	9.094951e-004	5.609050e-002
122	4.100000e+000	5.600000e-002	8.591124e-004	5.514089e-002
123	4.130000e+000	5.800000e-002	8.115208e-004	5.718848e-002
124	4.170000e+000	5.700000e-002	7.521408e-004	5.624786e-002
125	4.200000e+000	5.600000e-002	7.104750e-004	5.528953e-002
126	4.230000e+000	5.500000e-002	6.711173e-004	5.432888e-002
127	4.270000e+000	5.300000e-002	6.220108e-004	5.237799e-002
128	4.300000e+000	5.400000e-002	5.875537e-004	5.341245e-002
129	4.330000e+000	5.400000e-002	5.550054e-004	5.344499e-002
130	4.370000e+000	5.300000e-002	5.143950e-004	5.248560e-002
131	4.400000e+000	5.200000e-002	4.858994e-004	5.151410e-002
132	4.430000e+000	5.100000e-002	4.589824e-004	5.054102e-002

Bouwer & Rice

TFS-MW-17



AQUIFERWIN32 ANALYSIS SUMMARY FILE

Selected Analysis: Bouwer & Rice, 1976 (Unconfined Aquifer)

Slug test for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells

SITE INFORMATION

Site Designator: Boca Chica TFS
Job Number: 426847
Client:
Site Name: Boca Chica
Additional Info:

AQUIFER TEST INFORMATION

Test Designator: TFS-MW-17
Job Number: 426847
Date: June 5, 2012
Area Name: Boca Chica TFS
Additional Info:
water at 9 ft in screen

ANALYSIS INFORMATION

Analysis Designator: MW17
Job Number: 426847
Date: June 1, 2012
Analyst Name: Michael Karafa
Additional Info:

ANALYSIS SUMMARY

Simple Analysis - No Wells Defined

Number of Points = 130 Manual Match

ANALYSIS PARAMETERS

Casing Inner Diameter Fixed Value	= 0.166667 ft
Screen Inner Diameter Fixed Value	= 0.166667 ft
Diameter of Drilled Hole Fixed Value	= 0.6875 ft
Screen Length Fixed Value	= 9 ft
Depth to Screen Top Fixed Value	= 0 ft
Initial Displacement Fixed Value	= 1.45792 ft
Hydraulic Conductivity Calculated Value	= 0.00354147 cm/sec
Aquifer Thickness Fixed Value	= 50 ft

Gravel Pack Porosity
Fixed Value = 0.3

Calculation Type
Selected Value = Isotropic

Correction Type
Selected Value = Recovery within Screen

Kz/Kr
Fixed Value = 1

Effective Casing Inner Diameter
Calculated Value = 0.401549 ft

Effective Screen Inner Diameter
Calculated Value = 0.6875 ft

A
Calculated Value = 2.3201

B
Calculated Value = 0.359122

C
Calculated Value = 1.90434

Linear Regression Slope
Fixed Value = -1.52878 ft/min

Linear Regression Intercept
Fixed Value = 1.45792 ft

ANALYSIS STATISTICS

Regression Line
Slope: -1.528781 ft/min
Intercept: 1.457923 ft

Residual Mean = 0.029889
Residual Standard Dev. = 0.261260
Residual Sum of Squares = 8.989529
Absolute Residual Mean = 0.039133
Minimum Residual = -0.030510
Maximum Residual = 2.903432

DATA DETAIL

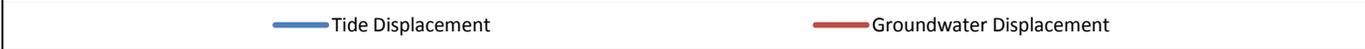
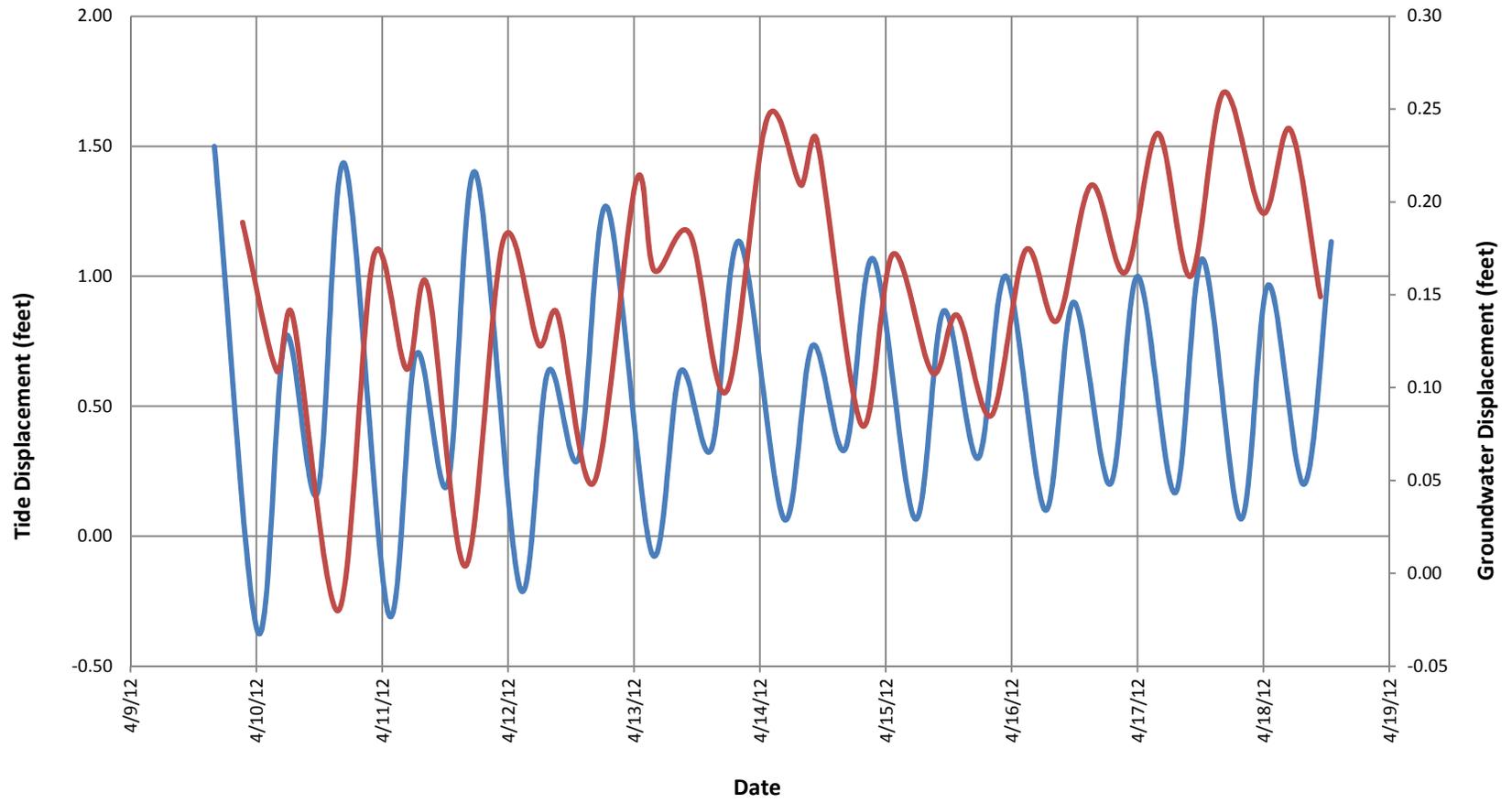
Index	Time (min)	Obs. Displacement (ft)	Calc. Displacement (ft)	Residual
0	3.000000e-002	4.296000e+000	1.392568e+000	2.903432e+000
1	7.000000e-002	2.031000e+000	1.309962e+000	7.210377e-001
2	1.000000e-001	1.392000e+000	1.251240e+000	1.407602e-001
3	1.300000e-001	1.190000e+000	1.195150e+000	-5.149773e-003
4	1.700000e-001	1.130000e+000	1.124255e+000	5.745351e-003
5	2.000000e-001	1.062000e+000	1.073857e+000	-1.185702e-002
6	2.300000e-001	1.005000e+000	1.025719e+000	-2.071860e-002
7	2.700000e-001	9.500000e-001	9.648740e-001	-1.487397e-002
8	3.000000e-001	9.000000e-001	9.216210e-001	-2.162099e-002
9	3.300000e-001	8.500000e-001	8.803069e-001	-3.030694e-002
10	3.700000e-001	8.070000e-001	8.280880e-001	-2.108799e-002
11	4.000000e-001	7.630000e-001	7.909668e-001	-2.796680e-002
12	4.300000e-001	7.250000e-001	7.555097e-001	-3.050966e-002
13	4.700000e-001	6.860000e-001	7.106936e-001	-2.469356e-002
14	5.000000e-001	6.540000e-001	6.788349e-001	-2.483488e-002
15	5.300000e-001	6.200000e-001	6.484043e-001	-2.840435e-002
16	5.700000e-001	5.880000e-001	6.099416e-001	-2.194163e-002
17	6.000000e-001	5.560000e-001	5.825994e-001	-2.659942e-002

18	6.300000e-001	5.260000e-001	5.564829e-001	-3.048289e-002
19	6.700000e-001	5.010000e-001	5.234729e-001	-2.247286e-002
20	7.000000e-001	4.760000e-001	5.000068e-001	-2.400684e-002
21	7.300000e-001	4.510000e-001	4.775927e-001	-2.659273e-002
22	7.700000e-001	4.310000e-001	4.492624e-001	-1.826240e-002
23	8.000000e-001	4.080000e-001	4.291230e-001	-2.112305e-002
24	8.300000e-001	3.870000e-001	4.098865e-001	-2.288649e-002
25	8.700000e-001	3.710000e-001	3.855724e-001	-1.457242e-002
26	9.000000e-001	3.530000e-001	3.682881e-001	-1.528814e-002
27	9.300000e-001	3.350000e-001	3.517787e-001	-1.677867e-002
28	9.700000e-001	3.210000e-001	3.309115e-001	-9.911501e-003
29	1.000000e+000	3.030000e-001	3.160775e-001	-1.307754e-002
30	1.030000e+000	2.890000e-001	3.019085e-001	-1.290854e-002
31	1.070000e+000	2.760000e-001	2.839996e-001	-7.999620e-003
32	1.100000e+000	2.640000e-001	2.712686e-001	-7.268601e-003
33	1.130000e+000	2.510000e-001	2.591083e-001	-8.108283e-003
34	1.170000e+000	2.390000e-001	2.437382e-001	-4.738231e-003
35	1.200000e+000	2.300000e-001	2.328120e-001	-2.812033e-003
36	1.230000e+000	2.210000e-001	2.223756e-001	-1.375630e-003
37	1.270000e+000	2.100000e-001	2.091845e-001	8.154762e-004
38	1.300000e+000	1.980000e-001	1.998073e-001	-1.807286e-003
39	1.330000e+000	1.910000e-001	1.908504e-001	1.495938e-004
40	1.370000e+000	1.820000e-001	1.795293e-001	2.470655e-003
41	1.400000e+000	1.750000e-001	1.714815e-001	3.518523e-003
42	1.430000e+000	1.660000e-001	1.637944e-001	2.205624e-003
43	1.470000e+000	1.600000e-001	1.540783e-001	5.921748e-003
44	1.500000e+000	1.530000e-001	1.471713e-001	5.828705e-003
45	1.530000e+000	1.480000e-001	1.405740e-001	7.426039e-003
46	1.570000e+000	1.410000e-001	1.322352e-001	8.764750e-003
47	1.600000e+000	1.340000e-001	1.263075e-001	7.692538e-003
48	1.630000e+000	1.250000e-001	1.206454e-001	4.354597e-003
49	1.670000e+000	1.230000e-001	1.134888e-001	9.511166e-003
50	1.700000e+000	1.190000e-001	1.084014e-001	1.059860e-002
51	1.730000e+000	1.120000e-001	1.035420e-001	8.457970e-003
52	1.770000e+000	1.070000e-001	9.740002e-002	9.599983e-003
53	1.800000e+000	1.030000e-001	9.303381e-002	9.966191e-003
54	1.830000e+000	9.800000e-002	8.886333e-002	9.136673e-003
55	1.870000e+000	9.600000e-002	8.359204e-002	1.240796e-002
56	1.900000e+000	9.100000e-002	7.984481e-002	1.115519e-002
57	1.930000e+000	8.900000e-002	7.626556e-002	1.273444e-002
58	1.970000e+000	8.400000e-002	7.174156e-002	1.225844e-002
59	2.000000e+000	8.000000e-002	6.852556e-002	1.147444e-002
60	2.030000e+000	7.500000e-002	6.545372e-002	9.546276e-003
61	2.070000e+000	7.500000e-002	6.157107e-002	1.342893e-002
62	2.100000e+000	7.100000e-002	5.881099e-002	1.218901e-002
63	2.130000e+000	6.600000e-002	5.617463e-002	9.825365e-003
64	2.170000e+000	6.400000e-002	5.284241e-002	1.115759e-002
65	2.200000e+000	6.200000e-002	5.047361e-002	1.152639e-002
66	2.230000e+000	5.900000e-002	4.821100e-002	1.078900e-002
67	2.270000e+000	5.700000e-002	4.535117e-002	1.164883e-002
68	2.300000e+000	5.500000e-002	4.331819e-002	1.168181e-002
69	2.330000e+000	5.200000e-002	4.137634e-002	1.062366e-002
70	2.370000e+000	5.000000e-002	3.892193e-002	1.107807e-002
71	2.400000e+000	5.000000e-002	3.717716e-002	1.282284e-002
72	2.430000e+000	4.600000e-002	3.551059e-002	1.048941e-002
73	2.470000e+000	4.600000e-002	3.340414e-002	1.259586e-002
74	2.500000e+000	4.300000e-002	3.190671e-002	1.109329e-002
75	2.530000e+000	4.300000e-002	3.047641e-002	1.252359e-002
76	2.570000e+000	3.900000e-002	2.866858e-002	1.033142e-002
77	2.600000e+000	3.900000e-002	2.738344e-002	1.161656e-002
78	2.630000e+000	3.600000e-002	2.615590e-002	9.844096e-003
79	2.670000e+000	3.600000e-002	2.460436e-002	1.139564e-002
80	2.700000e+000	3.600000e-002	2.350141e-002	1.249859e-002
81	2.730000e+000	3.400000e-002	2.244790e-002	1.155210e-002
82	2.770000e+000	3.200000e-002	2.111631e-002	1.088369e-002
83	2.800000e+000	3.200000e-002	2.016972e-002	1.183028e-002
84	2.830000e+000	2.700000e-002	1.926556e-002	7.734445e-003
85	2.870000e+000	2.700000e-002	1.812274e-002	8.877259e-003
86	2.900000e+000	2.700000e-002	1.731034e-002	9.689658e-003
87	2.930000e+000	2.700000e-002	1.653436e-002	1.046564e-002
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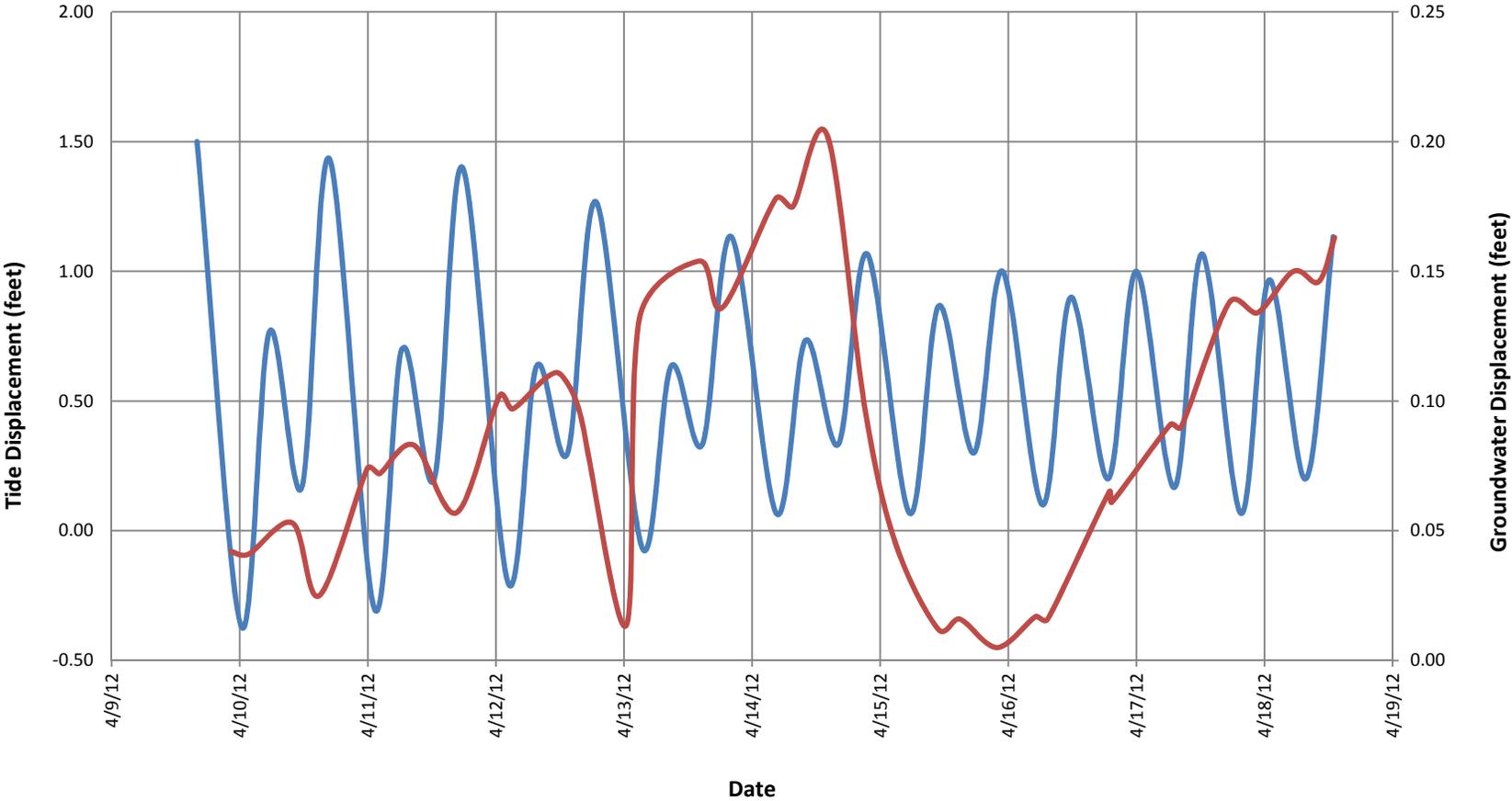
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91	3.070000e+000	2.300000e-002	1.334860e-002	9.651401e-003
92	3.100000e+000	2.300000e-002	1.275021e-002	1.024979e-002
93	3.130000e+000	2.100000e-002	1.217865e-002	8.821348e-003
94	3.170000e+000	1.800000e-002	1.145623e-002	6.543774e-003
95	3.200000e+000	2.100000e-002	1.094267e-002	1.005733e-002
96	3.230000e+000	2.100000e-002	1.045214e-002	1.054786e-002
97	3.270000e+000	1.600000e-002	9.832127e-003	6.167873e-003
98	3.300000e+000	1.600000e-002	9.391376e-003	6.608624e-003
99	3.330000e+000	1.600000e-002	8.970384e-003	7.029616e-003
100	3.370000e+000	1.400000e-002	8.438269e-003	5.561731e-003
101	3.400000e+000	1.800000e-002	8.060002e-003	9.939998e-003
102	3.430000e+000	1.100000e-002	7.698691e-003	3.301309e-003
103	3.470000e+000	1.600000e-002	7.242012e-003	8.757988e-003
104	3.500000e+000	1.600000e-002	6.917370e-003	9.082630e-003
105	3.530000e+000	1.400000e-002	6.607281e-003	7.392719e-003
106	3.570000e+000	1.400000e-002	6.215344e-003	7.784656e-003
107	3.600000e+000	1.400000e-002	5.936725e-003	8.063275e-003
108	3.630000e+000	9.000000e-003	5.670596e-003	3.329404e-003
109	3.670000e+000	1.100000e-002	5.334222e-003	5.665778e-003
110	3.700000e+000	1.400000e-002	5.095101e-003	8.904899e-003
111	3.730000e+000	1.100000e-002	4.866700e-003	6.133300e-003
112	3.770000e+000	1.100000e-002	4.578012e-003	6.421988e-003
113	3.800000e+000	9.000000e-003	4.372791e-003	4.627209e-003
114	3.830000e+000	9.000000e-003	4.176769e-003	4.823231e-003
115	3.870000e+000	9.000000e-003	3.929007e-003	5.070993e-003
116	3.900000e+000	7.000000e-003	3.752880e-003	3.247120e-003
117	3.930000e+000	7.000000e-003	3.584647e-003	3.415353e-003
118	3.970000e+000	7.000000e-003	3.372009e-003	3.627991e-003
119	4.000000e+000	7.000000e-003	3.220850e-003	3.779150e-003
120	4.030000e+000	7.000000e-003	3.076467e-003	3.923533e-003
121	4.070000e+000	9.000000e-003	2.893974e-003	6.106026e-003
122	4.100000e+000	9.000000e-003	2.764244e-003	6.235756e-003
123	4.130000e+000	2.000000e-003	2.640330e-003	-6.403298e-004
124	4.170000e+000	2.000000e-003	2.483708e-003	-4.837080e-004
125	4.200000e+000	2.000000e-003	2.372369e-003	-3.723694e-004
126	4.230000e+000	0.000000e+000	2.266022e-003	-2.266022e-003
127	4.270000e+000	2.000000e-003	2.131604e-003	-1.316036e-004
128	4.300000e+000	0.000000e+000	2.036049e-003	-2.036049e-003
129	4.330000e+000	0.000000e+000	1.944778e-003	-1.944778e-003

Appendix F
Tidal Influence Graphs

TFS-MW-01

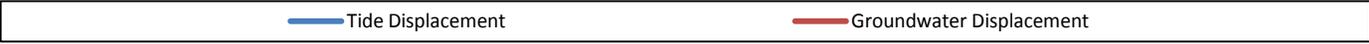
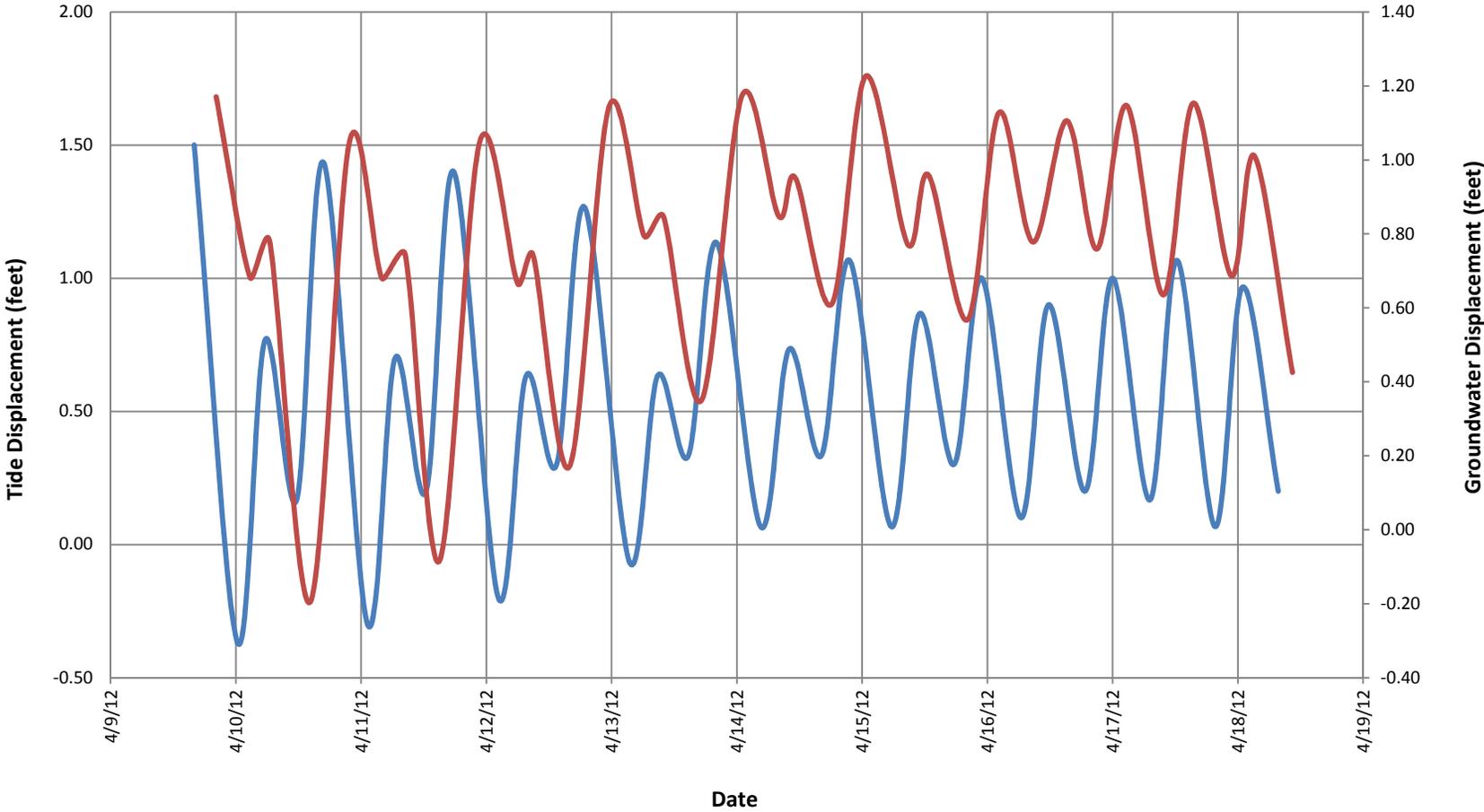


TFS-MW-06

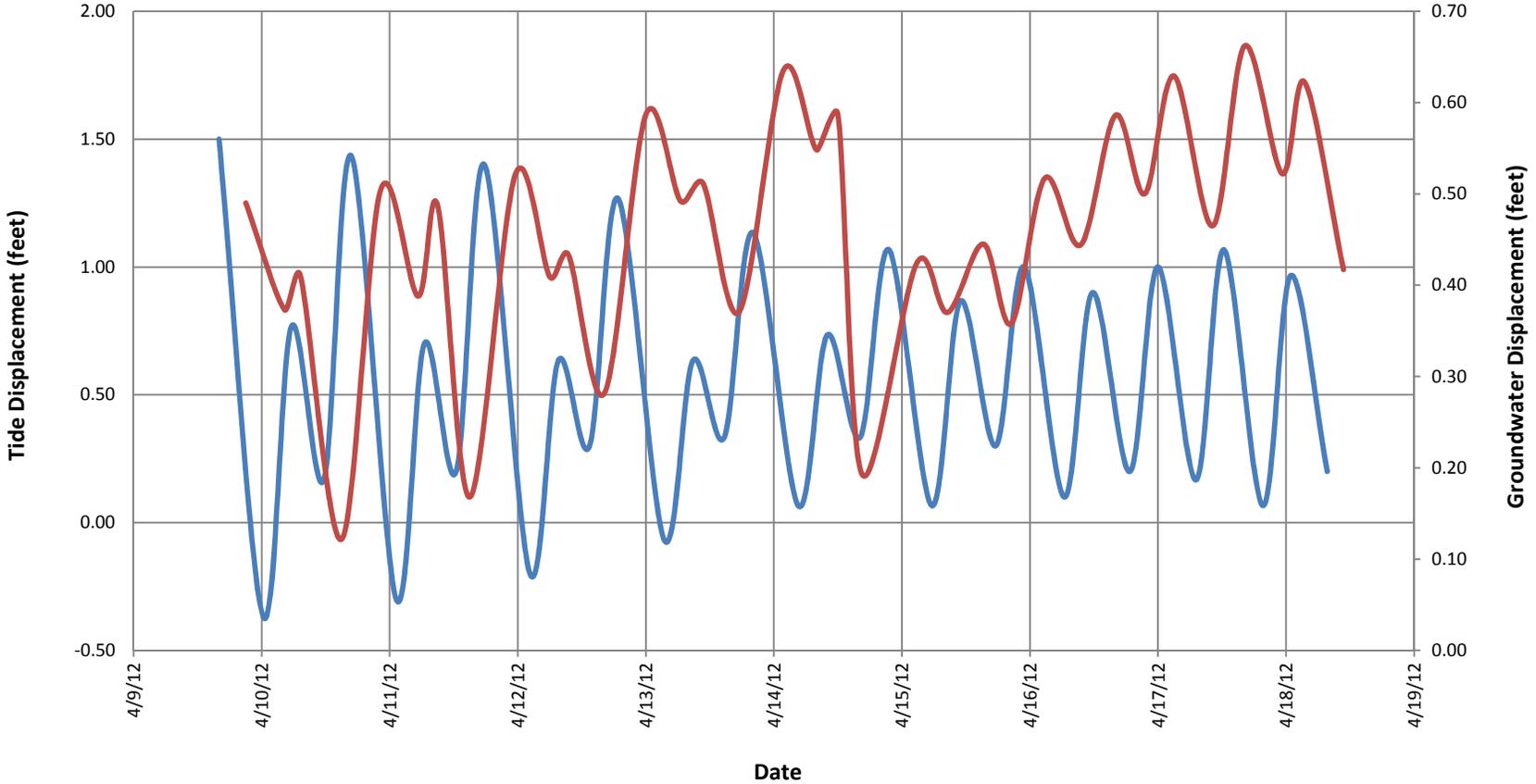


— Tide Displacement — Groundwater Displacement

TFS-MW-8D

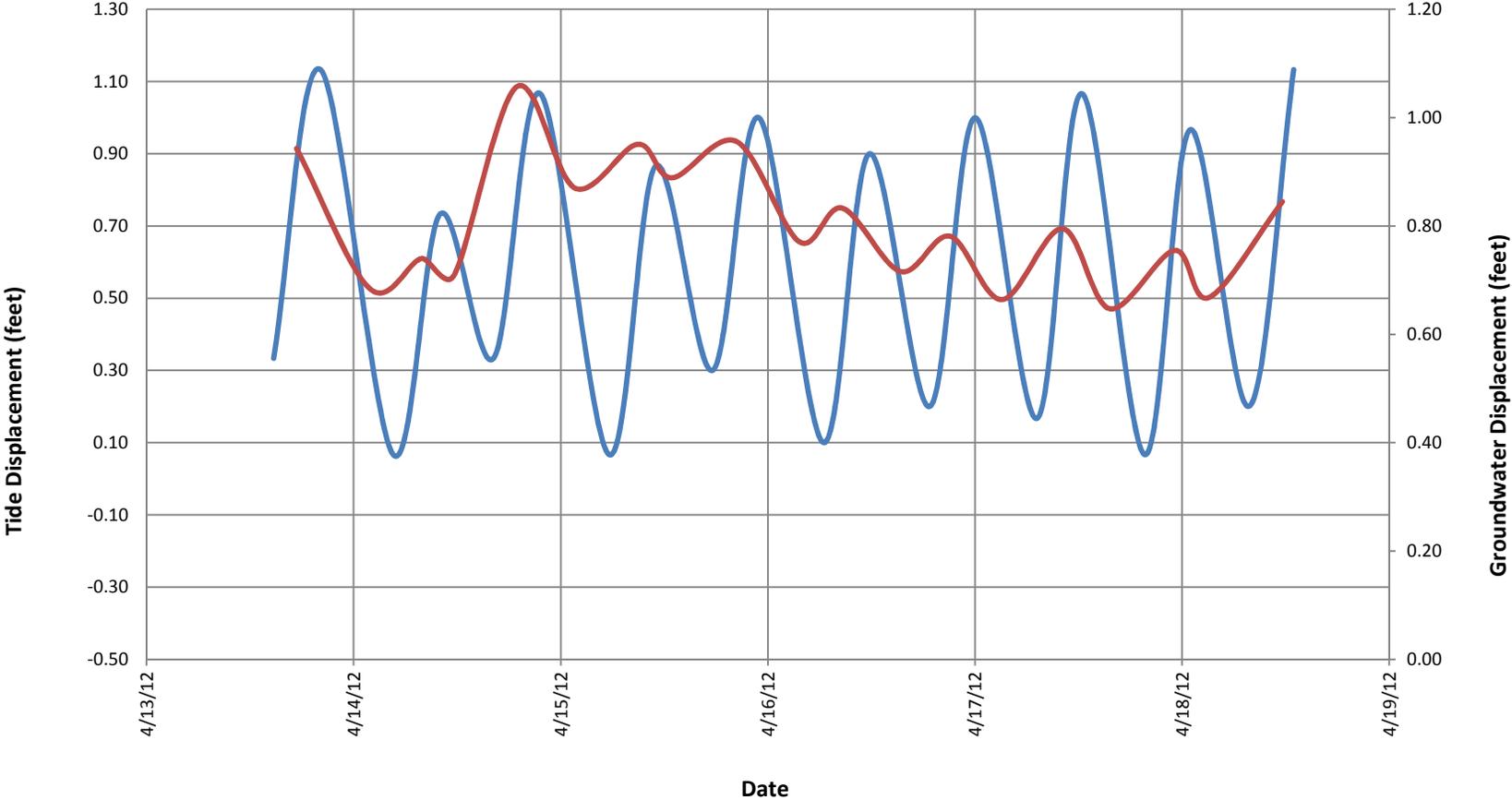


TFS-MW-11



— Tide Displacement — Groundwater Displacement

TFS-MW-17



Appendix G
Data Validation Summary and Laboratory Data

MEMORANDUM

CH2MHILL

Data Validation Summary - NAS Key West Boca Chica / TFS - Phase 1 Groundwater Sampling 2012

TO: Greg Rowell/CH2M HILL/ATL

FROM: Camden Robinson/CH2M HILL/ATL

DATE: June 13th, 2012

The purpose of this memorandum is to present the results of the data validation process for the samples collected at the Naval Air Station in Key West, Florida. The samples were collected on April 19th, 2012 thru April 20th, 2012.

The specific samples and analytical fractions reviewed are summarized below in Table 1.

The Quality Control areas that were reviewed and the resulting findings are documented within each subsection that follows. This data was validated for compliance with the analytical method requirements. This process also included a review of the data to assess the accuracy, precision, and completeness based upon procedures described in the guidance documents such as the Environmental Protection Agency (EPA *National Functional Guidelines for Organic Data Review* (EPA 2008). Quality assurance/quality control (QA/QC) summary forms and data reports were reviewed.

Samples were submitted to PEL a division of Spectrum Analytical Inc. of Tampa, Florida, for the following analyses: SW-846 8260B Volatile Organic Compounds (VOC), SW-846 1311/8260B Toxic Characteristic Leaching Procedure Volatile Organic Compounds (TCLP VOCs), SW-846 8270D Semi volatile Organic Compounds (SVOC), SW-846 8270D SIM Polycyclic Aromatic Hydrocarbons, and Total Petroleum Hydrocarbon by method FL-PRO.

Sample results that were not within the acceptance limits were appended with a qualifying flag, which consisted of a single- or double-letter code that indicated a possible problem with the data. The qualifying flags originated during the data review and validation processes. These also include the secondary, or the two/three-digit "sub-qualifier" flags. The secondary qualifiers provide the reasoning behind the assignment of a qualifier flag to the data. The secondary qualifiers are presented and defined below.

Attachment 1 lists the changes in data qualifiers, due to the validation process.

The following primary flags were used to qualify the data:

- [=] Detected. The analyte was analyzed for and detected at the concentration shown.
- [J] Estimated. The analyte was present but the reported value may not be accurate or precise.

[U] Undetected. The analyte was analyzed for but not detected above the method detection limit.

[UJ] Detection limit estimated. The analyte was analyzed for but qualified as not detected; the result is estimated.

[UR] Rejected. The data is not useable. The absence of the analyte cannot be verified.

[R] Rejected. The data is not useable.

Secondary Qualifier Codes

<u>Code</u>	<u>Definition</u>
2SH	Second Source Accuracy High
2SL	Second Source Accuracy Low
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BL	Blank
BSH	Blank Spike/LCS Recovery High
BSL	Blank Spike/LCS Recovery Low
CCH	Continuing Calibration Verification Accuracy High
CCL	Continuing Calibration Verification Accuracy Low
DL	Dilution
FD	Field Duplicate
LD	Laboratory Duplicate
HT	Holding Time
ICH	Initial Calibration High
ICL	Initial Calibration Low
ISH	Internal Standard Area Response High
ISL	Internal Standard Area Response Low
LR	Linear Range (Exceeded calibration range)
MD	Matrix Spike/Matrix Spike Duplicate Precision
MSH	Matrix Spike and/or Matrix Spike Duplicate Recovery High
MSL	Matrix Spike and/or Matrix Spike Duplicate Recovery Low
OT	Other
RE	Re-extraction
RF	Response Factor
SSH	Spiked Surrogate Recovery High
SSL	Spiked Surrogate Recovery Low
TN	Tune
EMPC	Estimated Maximum Possible Concentration

Table 1 - Chemical Analytical Methods – Field and Quality Control Samples

SDG	Sample ID	Lab Sample ID	Matrix	Sample Type	Date Collected	Analyses Performed
3505704	TFS-MW-03	350579401	GW	N	04/19/2012	[1], [2], [3], [4]
3505704	TFS-MW-06	350579402	GW	N	04/19/2012	[1], [2], [3], [4]
3505704	TFS-MW-FD1	350579403	GW	FD	04/19/2012	[1], [2], [3], [4]
3505704	TFS-MW-15	350579404	GW	N	04/19/2012	[1], [2], [3], [4]
3505704	TFS-MW-16	350579405	GW	N	04/19/2012	[1], [2], [3], [4]
3505704	TFS-MW-TB2	350579406	WQ	TB	04/19/2012	[1]
3505806	TFS-MW-17	350580601	GW	N	04/20/2012	[1], [2], [3], [4]
3505806	TFS-MW-17-RS	350580602	WQ	RB	04/20/2012	[1], [2], [3], [4]
3505806	TFS-MW-17-MS	350580603	WQ	MS	04/20/2012	[1], [2], [3], [4]
3505806	TFS-MW-17-MSD	350580604	WQ	SD	04/20/2012	[1], [2], [3], [4]
3505806	TFS-MW-TB	350580605	WQ	TB	04/20/2012	[1]
3505816	IDW-SOIL-1	350581601	S	N	04/20/2012	[4], [5]
3505816	IDW-LIQ-1	350581602	LIQ	N	04/20/2012	[1], [4]

MATRIX CODE

GW – Groundwater
WQ – Water Quality Control
S – Solid
LIQ – Liquid Waste

SAMPLE TYPE CODE

N – Native Sample
RB – Rinsate Blank
TB – Trip Blank
FD – Field Duplicate
MS – Matrix Spike
SD – Matrix Spike Duplicate

ANALYSIS CODE

[1] – VOC – Volatile Organic Compounds by SW-846 method 8260B
[2] – SVOC – Semivolatile Organic Compounds by SW-846 method 8270D
[3] – PAH – Polycyclic Aromatic Hydrocarbons by SW-846 method 8270D SIM
[4] – TPH – Total Petroleum Hydrocarbon by method FL-PRO
[5] – TCLP VOC – Toxic Characteristic Leaching Procedure Volatile Organic Compounds by SW-846 method 1311/8260B

Organic Parameters

Quality Control Review

The following list represents the QA/QC measures that were reviewed during the data quality evaluation procedure for organic data.

- **Holding Times** – The holding times are evaluated to verify that samples were extracted and analyzed within holding times.
- **Blank samples** – Method blanks, rinsate blanks, and trip blanks were provided for this project. Blank samples enable the reviewer to determine if an analyte may be attributed to sampling or laboratory procedures, rather than environmental contamination from site activities.
- **Surrogate Recoveries** – Surrogate Compounds are added to each sample and the recoveries are used to monitor lab performance and possible matrix interference.
- **Lab Control Sample (LCS)** – This sample is a “controlled matrix”, either laboratory reagent water or Ottawa sand, in which target compounds have been added prior to extraction/analysis. The recoveries serve as a monitor of the overall performance of each step during the analysis, including sample preparation.
- **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples** – Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. Precision information is also determined by calculating the reproducibility between the recoveries of each spiked parameter.
- **Field Duplicate Samples** – These samples are collected to determine precision between a native and its duplicate. This information can only be determined when target compounds are detected.
- **GC/MS Tuning** – The mass spectrum of the tuning compound is evaluated for method compliance. The criteria are established to verify the proper mass assignment and mass resolution.
- **Initial Calibration** – The initial calibration ensures that the instrument is capable of producing acceptable qualitative and quantitative data for the compounds of interest.
- **Continuing Calibration** – The continuing calibration checks satisfactory performance of the instrument and its predicted response to the target compounds.
- **Internal Standards** – The internal standards (retention time and response) are evaluated for method compliance. The internal standards are used in quantitation of the target parameters and monitor the instrument sensitivity and response for stability during each analysis.

Major Technical Issues

No major technical issues were identified.

Minor Technical Issues for Volatile Organic Compounds (VOCs) Analyses

Holding Time

All samples analyses were performed within hold time.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

The initial calibration (ICAL), second source calibration (2nd Source), and continuing calibration (CCAL) average response factors for the analytes listed below were outside criteria:

TABLE 2

Response Factors Out of QC Limits: Volatile Organic Compounds

NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794 3505806	ICAL	Acrolein	0.03756	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794 3505806	ICAL	Isobutyl Alcohol	0.00574	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR

TABLE 2

Response Factors Out of QC Limits: Volatile Organic Compounds

NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794 3505806	ICAL	1,4-Dioxane	0.00222	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794 3505806	2 nd Source	Acrolein	0.03119	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794 3505806	2 nd Source	Isobutyl Alcohol	0.00473	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794 3505806	2 nd Source	1,4-Dioxane	0.00249	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794	CCAL	Isobutyl Alcohol	0.00577	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16	UR

TABLE 2

Response Factors Out of QC Limits: Volatile Organic Compounds
 NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794	CCAL	1,4-Dioxane	0.00275	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16	UR
3505806	CCAL	Isobutyl Alcohol	0.00503	0.050	TFS-MW-17	UR
3505806	CCAL	1,4-Dioxane	0.0022	0.050	TFS-MW-17	UR

The analytes listed are considered poor performers. All associated sample results were non-detect, therefore the quantitation limits reported for these compounds should be considered qualitatively invalid. This has been indicated by appending a "UR" qualifier next to the detection limit for these compounds in the associated field samples with a validation note of "RF" indicating that the results are not usable as the presence or absence of these compounds in these samples cannot be verified.

Blanks

The volatile organic compounds detected in the blank samples are listed in Table 3.

TABLE 3

Blank Contamination: Volatile Organic Compounds
 NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Sample ID	Sample Type	Parameter	Lab Result	Units	Samples Affected	Flag Concentrations less than the value listed below
3505794	TFS-MW-TB2	TB	Acetone	3.1	ug/L	TFS-MW-15 TFS-MW-16	31 ug/L
3505794	Method Blank	MB	Acetone	2.3	ug/L	TFS-MW-15 TFS-MW-16	23 ug/L
3505794	Method Blank	MB	Carbon Disulfide	0.32	ug/L	TFS-MW-15 TFS-MW-16	1.60 ug/L
3505816	Method Blank	MB	Acetone	0.0023	mg/L	IDW-LIQ-1	0.023 mg/L

Flags were applied to the analytes in the associated samples in the following manner:

When the analytes were detected in the trip blank and/or method blank, the detected compounds, that were less than 5 times the concentration detected for the analytes listed (10 times for common laboratory contaminants), were flagged "U" due to possible laboratory and/or field contamination with a validation note of "BL".

Laboratory Control Sample Recoveries

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field sample TFS-MW-17. The matrix spike / matrix spike duplicate (MS/MSD) accuracy and precision objectives were met.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 4 below.

TABLE 4						
Surrogate Recoveries Out of QC Limits: Volatile Organic Compounds						
NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012						
SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794	TFS-MW-15	Dibromofluoromethane	118%	85-115	TFS-MW-15	Detects-J
3505806	TFS-MW-17	Dibromofluoromethane	116%	85-115	TFS-MW-17	Detects-J
3505816	IDW-LIQ-1	Dibromofluoromethane	120%	85-115	IDW-LIQ-1	Detects-J

The associated analytes for the samples listed above were qualified with a "J" as estimated due to the surrogate recovery was outside the acceptable limit that is listed in Table 4 with a validation note of "SSH".

Field Duplicates

Field samples TFS-MW-06 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Toxic Characteristic Leaching Procedure Volatile Organic Compounds (TCLP VOCs) Analyses

Holding Time

All samples analyses were performed within hold time.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

The initial calibration (ICAL), second source calibration (2nd Source), and continuing calibration criteria were met.

Blanks

There were no detections in the method blank samples.

Laboratory Control Sample Recoveries

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits.

Rejected Data

No data were rejected based upon the validation process for this sampling event.

Minor Technical Issues for Semi-Volatile Organic Compounds (SVOCs) Analyses

Holding Time

All samples collected on 4/19/12 were re-extracted outside 2 times the technical holding time in order to confirm spike recoveries reported outside the method target acceptance limits noted in the initial analysis. During the data validation, all the sample results are evaluated and the "best answer" for each sample and analysis is chosen, and the other results are rejected. Therefore, all re-extracted results were rejected, since the initial extraction results provided more usable data as qualified.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

The initial calibration (ICAL), second source calibration (2nd Source), and continuing calibration (CCAL) average response factors for the analytes listed below were outside criteria:

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794 3505806	ICAL	4-nitroquinoline-1-oxide	0.00936	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794 3505806	ICAL	Methapyriline	0.01339	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	UR
3505794	CCAL	Methapyriline	0.01541	0.050	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16	UR
3505806	CCAL	Methapyriline	0.01554	0.050	TFS-MW-17	UR
3505806	CCAL	Kepone	0.04085	0.050	TFS-MW-17	UR

All associated sample results were non-detect, therefore the quantitation limits reported for these compounds should be considered qualitatively invalid. This has been indicated by appending a "UR" qualifier next to the detection limit for these compounds in the associated field samples with a validation note of "RF" indicating that the results are not usable as the presence or absence of these compounds in these samples cannot be verified.

Blank Contaminants

There were no detections in the equipment and method blank samples.

Laboratory Control Sample Recoveries

The laboratory control sample recoveries were outside acceptable quality control limit as noted in Table 6 below.

TABLE 6

Laboratory Control Sample Recovery Out of QC Limits: Semi-Volatile Organic Compounds

NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794	Laboratory Control Sample	a,a-Dimethylphenethylamine	68.2%, 0%	70-130	TFS-MW-03	Non-Detects - UJ
			9.2%, 8.8%	28-143	TFS-MW-06	
	Laboratory Control Sample Duplicate	1,4-Naphthoquinone	47.2%, 49.8%	70-130	TFS-MW-FD1	
		2-Naphthylamine			TFS-MW-15	
					TFS-MW-16	
3505806	Laboratory Control Sample	a,a-Dimethylphenethylamine	62%	70-130	TFS-MW-17	Non-Detects - UJ
		1-Naphthylamine	35.8%	38-91		
		2-Naphthylamine	36%	70-130		
3505794 3505806	Laboratory Control Sample Laboratory Control Sample Duplicate	Hexachloropropene	0%, 0%	21-105	TFS-MW-03 TFS-MW-06 TFS-MW-FD1 TFS-MW-15 TFS-MW-16 TFS-MW-17	Non-Detects - UR
3505806	Laboratory Control Sample	1,4-Naphthoquinone	0%	28-143	TFS-MW-17	

The quantitation limits for the samples noted above were qualified as indicated above due to laboratory control sample and/or laboratory control sample duplicate recoveries were outside the acceptable limits that are listed in Table 6 with a validation note of "BSL" for low percent recovery. The samples were re-extracted 2 times outside the technical holding times, but yielded similar recoveries. The results for hexachloropropene and 1,4-naphthoquinone (for sample TFS-MW-17) were rejected, and are considered not usable as

the presence or absence of these compounds in these samples cannot be verified since the LCS and/or LCSD samples were not recovered.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field sample TFS-MW-17. The matrix spike and matrix spike duplicate recoveries were outside acceptable quality control limit as noted in Table 7 below.

TABLE 7

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Semi-Volatile Organic Compounds
NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505806	Matrix Spike	a,a-Dimethylphenethylamine	0%, 0%	70-130	TFS-MW-17	Non-Detects – UJ or Invalid UR
	Matrix Spike Duplicate	Hexachloropropene	0%, 0%	21-105		
		1,4-Naphthoquinone	0%, 0%	28-143		
		1-Naphthylamine	31.4%, 26.2%	38-91		
		2-Naphthylamine	29.7%, 22.5%	70-130		
		4-Aminobiphenyl	45.8%, 42.6%	49-103		
		4-nitroquinoline-1-oxide	0%, 0%	10-125		
		Isodrin	44.9%, 47.8%	54-110		

The quantitation limits for the samples noted above were qualified as estimated or invalid due to matrix spike and matrix spike duplicate recoveries were outside the acceptable limits that are listed in Table 7 with a validation note of “MSL” for low percent recovery.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 8 below.

TABLE 8

Surrogate Recoveries Out of QC Limits: Semi-Volatile Organic Compounds
NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794	TFS-MW-15	Phenol-d5	7.5%	10-115	TFS-MW-15	Non-Detects-UJ

The quantitation limits of the associated analytes for the sample listed above were qualified with a "UJ" for non-detects as estimated due to the surrogate recovery was outside the acceptable limit that is listed in Table 8 with a validation note of "SSL".

Field Duplicates

Field samples TFS-MW-06 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Minor Technical Issues for Polycyclic Aromatic Hydrocarbons (PAH) Analyses

Holding Time

All samples analyses were performed within hold time.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

All Initial, 2nd Source, and Continuing Calibration criteria were met.

Blank Contaminants

There were no detections in the equipment and method blank samples.

Laboratory Control Sample Analysis

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field sample TFS-MW-17. The matrix spike / matrix spike duplicate (MS/MSD) accuracy and precision objectives were met.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits.

Field Duplicates

Field samples TFS-MW-06 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Rejected Data

No data were rejected based upon the validation process for this sampling event.

Minor Technical Issues for Total Petroleum Hydrocarbon (TPH) Analyses

Holding Time

All samples analyses were performed within hold time.

Instrument Performance

All Instrument Performance criteria were met.

Calibration

All Initial, 2nd Source, and Continuing Calibration criteria were met.

Blank Contaminants

There were no detections in the equipment and method blank samples.

Laboratory Control Sample Analysis

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field sample TFS-MW-17. The matrix spike / matrix spike duplicate (MS/MSD) accuracy and precision objectives were met.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 9 below.

TABLE 9						
Surrogate Recoveries Out of QC Limits: Total Petroleum Hydrocarbon						
NAS Key West Boca Chica / TFS – Phase 1 Groundwater Sampling 2012						
SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505794	TFS-MW-15	o-terphenyl	70.6%	82-142	TFS-MW-15	Detects-J

The TPH result for the sample listed above was qualified with a “J” as estimated due to the surrogate recovery was outside the acceptable limit that is listed in Table 9 with a validation note of “SSH”.

Field Duplicates

Field samples TFS-MW-06 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Rejected Data

No data were rejected based upon the validation process for this sampling event.

Data Usability

A review of the analytical data submitted regarding the investigation of NAS Key West Boca Chica, TFS-Phase 1 Groundwater Sampling 2012, by CH2M HILL has been completed. An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results should be considered usable as qualified.

The data user can use the data recognizing the potential data biases indicated by the data qualifiers assigned to some results. Data was qualified for a subset of results based on method and/or trip blank contamination, low response factors for the initial, second source, and/or continuing calibrations, low surrogate recovery bias, high surrogate recovery bias, low matrix recovery bias, low laboratory control sample and/or laboratory control sample duplicate recovery bias. The data user should be cautioned about using results that have been rejected because of very low spike recovery bias since the presence or absence of these compounds cannot be verified

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

UR-RF

c-k

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

C:K

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

c.k

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

C.P

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 5794-04.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2318

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10 UR-RF
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.65	J	0.19	0.38	1 U-BL
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	5.5	J	1.3	2.6	10 U-BL
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.81		0.17	0.34	0.5 J-SSH
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-15

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 5794-04.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2318

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.25	J	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.26	J	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: <u>Spectrum Analytical, Inc.</u>	Contract: <u>NAS Key West / Boca Chica /</u>	TFS-MW-15
Lab Code: <u>PEL</u>	Case No. _____	SAS No: _____
Matrix: <u>WATER</u>	Lab Sample ID: <u>350579404</u>	SDG No.: <u>3505794</u>
Sample wt/vol: <u>5</u>	Units: <u>ML</u>	Lab File ID <u>5794-04.D</u>
Concentrated Extract Volume: <u>5</u>	Date Received: <u>04/20/12</u>	Date Extracted: _____
Level:(low/med) <u>LOW</u>	Date Analyzed: <u>05/02/12</u>	Time: <u>2318</u>
PercentSolids: <u>0</u>	decanted : _____	Dilution Factor: <u>1</u>
Extraction: <u>PURGETRAP</u>	Station ID: _____	Method: <u>8260</u>
GPC Cleanup : (Y/N) _____	pH: _____	
Column(1): <u>DB-624</u>	ID: <u>0.18</u>	(mm)
CONCENTRATION UNITS: <u>UG/L</u>		

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

o-d

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.99	✓	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.9	✓	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

AN

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-16

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

A.K

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-TB2

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	3.1	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

P.T

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-TB2

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-TB2

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1102

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1125

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.17		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.036	J	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.08		0.02	0.041	0.051
86-73-7	Fluorene	0.021	J	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.023	J	0.02	0.041	0.051
129-00-0	Pyrene	0.042	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-FD1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.18		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.04	J	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.084		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.024	J	0.02	0.041	0.051
85-01-8	Phenanthrene	0.025	J	0.02	0.041	0.051
129-00-0	Pyrene	0.044	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1213

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	2.8		0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	2		0.02	0.041	0.051
83-32-9	Acenaphthene	2.4		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.1		0.02	0.041	0.051
120-12-7	Anthracene	0.78		0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.18		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.094		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	2.3		0.02	0.041	0.051
86-73-7	Fluorene	3.4		0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	2.9		0.02	0.041	0.051
85-01-8	Phenanthrene	3.5		0.02	0.041	0.051
129-00-0	Pyrene	1.3		0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1237

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / EPA Sample No.
TFS-MW-03

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 794-1.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1626

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

c.k

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 794-2.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1649

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	920		255	510	510

C-1

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 350579403 Lab File ID 794-3.D
 Sample wt/vol: 980 Units: ML Date Received: 04/20/12
 Concentrated Extract Volume: 2 Date Extracted: 04/25/12
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1711
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: _____ Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	900		255	510	510

C.T

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 794-4D5.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/26/12 Time: 0728

PercentSolids: 0 decanted : Dilution Factor: 5

Extraction: SEPF Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	22400		1280	2550	2550

J-SSH

0.1

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / EPA Sample No.
TFS-MW-16

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 794-5.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1756

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	320	J	255	510	510

C.K

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

c-k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID: 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6 UJ-BSL
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1 UR-BSL
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3 UJ-BSL
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1 UJ-BSL
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-03

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

C-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / EPA Sample No. TFS-MW-03RE1
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D
 Sample wt/vol: 980 Units: ML Date Received: 04/20/12
 Concentrated Extract Volume: 1 Date Extracted: 05/03/12
 Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: _____ Method: 8270
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): HPMS-5 ID: 0.25 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE



c.k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyrilone	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE



SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-06

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

c.t

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-06

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL

UR-BSL

UJ-BSL

UJ-BSL

c.t

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-06

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyrilone	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-06RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-06RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-06RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-06RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-FD1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL

UR-BSL

UJ-BSL

UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2 UR-RF
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5 UR-RF
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-FD1RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

c-k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-FD1RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE
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C.K

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-FD1RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-FD1RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE



SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

UJ-SSL

UJ-SSL

UJ-SSL

UJ-SSL

C.A

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3	
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1	
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1	
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4	
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5	
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2	
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1	
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5	
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6	UJ-BSL
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1	
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1	UR-BSL
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5	
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3	
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5	
94-59-7	Safrole	5.1	U	2.6	5.1	5.1	
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3	UJ-BSL
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1	
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5	
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1	UJ-BSL
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1	
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1	
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3	
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1	
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1	
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1	
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-15

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1	<i>R-RE</i> 
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2	
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2	
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5	
140-57-8	Aramite	8.2	U	4.1	8.2	8.2	
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1	
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1	
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1	
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5	
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7	
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1	
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1	
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3	
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1	
143-50-0	Kepone	32.6	U	16.3	32.6	32.6	
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

C-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3	
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1	
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1	
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4	
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5	
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2	
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1	
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5	
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6	UJ-BSL
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1	
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1	UR-BSL
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5	
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3	
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5	
94-59-7	Safrole	5.1	U	2.6	5.1	5.1	
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3	UJ-BSL
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1	
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5	
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1	
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1	UJ-BSL
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1	
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3	
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1	
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1	
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1	
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1	

c.k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyrilone	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

CK

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code: PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1	<i>R-RE</i> 
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2	
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2	
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5	
140-57-8	Aramite	8.2	U	4.1	8.2	8.2	
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1	
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1	
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1	
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5	
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7	
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1	
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1	
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3	
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1	
143-50-0	Kepone	32.6	U	16.3	32.6	32.6	
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9	

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	2.7		0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

UR-RF
J-SSH

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-MW-17

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code: PEL Case No. SAS No: SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

C-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No.
TFS-MW-17-RS

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: rinsate Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	11.8		1.3	2.6	10
78-93-3	2-Butanone	2.1	J	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code: PEL Case No. SAS No: SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: rinsate Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. TFS-MW-17-RS
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D
 Sample wt/vol: 5 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: rinsate Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-TB3

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: TB3 Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.9	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-TB3

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: TB3 Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. TFS-MW-TB3
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D
 Sample wt/vol: 5 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: TB3 Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

OK

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1214

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.026	J	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.022	J	0.02	0.041	0.051
83-32-9	Acenaphthene	1.2		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.023	J	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.045	J	0.02	0.041	0.051
86-73-7	Fluorene	0.043	J	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.055		0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

c.d

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1238

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No.
TFS-MW-17
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 806-1.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/25/12
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1818
 PercentSolids: 0 decanted : Dilution Factor: 1
 Extraction: SEPF Station ID: Method: FL-PRO
 GPC Cleanup : (Y/N) N pH:
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1700		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. TFS-MW-17-RS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 806-2.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/25/12
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1840
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: rinsate Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL,MSL

UR-BSL,MSL

UR-BSL,MSL

UJ-BSL,MSL

UJ-BSL,MSL

UJ-MSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF, MSL
UR-RF

UJ-MSL

UR-RF

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. IDW-SOIL-1

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 581601.D

Sample wt/vol: 0.5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1513

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Soils Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-35-4	1,1-Dichloroethene	0.0038	U	0.0019	0.0038	0.7
107-06-2	1,2-Dichloroethane	0.003	U	0.0015	0.003	0.5
78-93-3	2-Butanone	0.04	U	0.02	0.04	200
71-43-2	Benzene	0.0034	U	0.0017	0.0034	0.5
56-23-5	Carbon tetrachloride	0.0028	U	0.0014	0.0028	0.5
108-90-7	Chlorobenzene	0.0032	U	0.0016	0.0032	100
67-66-3	Chloroform	0.0032	U	0.0016	0.0032	6
127-18-4	Tetrachloroethene	0.0042	U	0.0021	0.0042	0.7
79-01-6	Trichloroethene	0.0038	U	0.0019	0.0038	0.5
75-01-4	Vinyl chloride	0.0036	U	0.0018	0.0036	0.2
106-46-7	1,4-Dichlorobenzene	0.003	U	0.0015	0.003	7.5

C-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code: PEL Case No. SAS No: SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 581602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1021

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Water Method: 8260

GPC Cleanup: (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.0012	U	0.0006	0.0012	0.0012
74-87-3	Chloromethane	0.00064	U	0.00032	0.00064	0.001
75-01-4	Vinyl chloride	0.00036	U	0.00018	0.00036	0.001
74-83-9	Bromomethane	0.00086	U	0.00043	0.00086	0.001
75-00-3	Chloroethane	0.00144	U	0.00072	0.00144	0.00144
75-69-4	Trichlorofluoromethane	0.0008	U	0.0004	0.0008	0.001
75-35-4	1,1-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
75-15-0	Carbon disulfide	0.00038	U	0.00019	0.00038	0.001
75-09-2	Methylene chloride	0.00132	U	0.00066	0.00132	0.005
156-60-5	trans-1,2-Dichloroethene	0.00066	U	0.00033	0.00066	0.00066
75-34-3	1,1-Dichloroethane	0.001	U	0.0005	0.001	0.001
67-64-1	Acetone	0.0042	J	0.0013	0.0026	0.01
156-59-2	cis-1,2-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
74-97-5	Bromochloromethane	0.00034	U	0.00017	0.00034	0.001
78-93-3	2-Butanone	0.004	U	0.002	0.004	0.004
67-66-3	Chloroform	0.00032	U	0.00016	0.00032	0.0005
71-55-6	1,1,1-Trichloroethane	0.00028	U	0.00014	0.00028	0.001
56-23-5	Carbon tetrachloride	0.00028	U	0.00014	0.00028	0.0005
71-43-2	Benzene	0.00034	U	0.00017	0.00034	0.0005
107-06-2	1,2-Dichloroethane	0.0003	U	0.00015	0.0003	0.0005
79-01-6	Trichloroethene	0.00038	U	0.00019	0.00038	0.0005
78-87-5	1,2-Dichloropropane	0.0003	U	0.00015	0.0003	0.001
75-27-4	Bromodichloromethane	0.0003	U	0.00015	0.0003	0.0005
10061-01-5	cis-1,3-Dichloropropene	0.0008	U	0.0004	0.0008	0.001
108-10-1	4-Methyl-2-pentanone	0.002	U	0.001	0.002	0.004
108-88-3	Toluene	0.0006	J	0.00014	0.00028	0.001

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code: PEL Case No.: SAS No: SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 581602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1021

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Water Method: 8260

GPC Cleanup: (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-02-6	trans-1,3-Dichloropropene	0.0006	U	0.0003	0.0006	0.001
79-00-5	1,1,2-Trichloroethane	0.0004	U	0.0002	0.0004	0.001
127-18-4	Tetrachloroethene	0.00042	U	0.00021	0.00042	0.0005
591-78-6	2-Hexanone	0.00096	U	0.00048	0.00096	0.004
124-48-1	Dibromochloromethane	0.00026	U	0.00013	0.00026	0.0005
106-93-4	1,2-Dibromoethane	0.00022	U	0.00011	0.00022	0.001
108-90-7	Chlorobenzene	0.00032	U	0.00016	0.00032	0.0005
100-41-4	Ethylbenzene	0.00044	U	0.00022	0.00044	0.0005
100-42-5	Styrene	0.00024	U	0.00012	0.00024	0.001
75-25-2	Bromoform	0.00038	U	0.00019	0.00038	0.001
98-82-8	Isopropylbenzene	0.00028	U	0.00014	0.00028	0.001
79-34-5	1,1,1,2-Tetrachloroethane	0.00026	U	0.00013	0.00026	0.001
541-73-1	1,3-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.002
106-46-7	1,4-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.003
95-50-1	1,2-Dichlorobenzene	0.0005	U	0.00025	0.0005	0.001
96-12-8	1,2-Dibromo-3-chloropropane	0.002	U	0.001	0.002	0.002
120-82-1	1,2,4-Trichlorobenzene	0.0008	U	0.0004	0.0008	0.001
87-61-6	1,2,3-Trichlorobenzene	0.001	U	0.0005	0.001	0.002
1330-20-7	Xylene (total)	0.001	U	0.0005	0.001	0.002
1634-04-4	Methyl tert-butyl ether	0.001	U	0.0005	0.001	0.001
76-13-1	1,1,1,2-Trichloro-1,2,2-trifluoroethane	0.001	U	0.0005	0.001	0.001
108-87-2	Methylcyclohexane	0.00054	U	0.00027	0.00054	0.001
79-20-9	Methyl Acetate	0.00076	U	0.00038	0.00076	0.001
110-82-7	Cyclohexane	0.0004	U	0.0002	0.0004	0.001

OK

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

IDW-SOIL-1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 816-1.D

Sample wt/vol: 33.18 Units: G Date Received: 04/21/12

Concentrated Extract Volume: 2 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 2213

PercentSolids: 85.1 decanted :

Extraction: SONC Dilution Factor: 1 Station ID: IDW Soils Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	26.9	U	15.2	26.9	26.9

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

IDW-LIQ-1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 816-2.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 2 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1542

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: IDW Water Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	3300		255	510	510

o-k

3505794

		1000 Abernathy Rd, Ste 1000 Atlanta, GA 30328 Tel No: (770) 604-9187 Fax No: (770) 604-9282		<h1>CHAIN-OF-CUSTODY RECORD</h1>				COC NUMBER 426247-04-1912-01										
NAS Key West TFS		PROJECT NUMBER: 42647		LAB NAME AND CONTACT: PEL / M. Gudnason		FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Bethany Garvey		RECIPIENT 1 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone										
PROJECT PHASE/SITE/TASK: MW Sampling		CTO CK DO NUMBER:		LAB PO NUMBER:		FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company): Greg Rowell		RECIPIENT 2 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone										
PROJECT CONTACT: Greg Rowell		PROJECT TEL NO AND FAX NO.:		LAB TEL NO AND FAX NO.:		FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):		RECIPIENT 3 (Address, Tel No., and Fax No.):										
greg.rowell@ch2m.com																		
ANALYSES REQUIRED (Include Method Numbers)																		
ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAJ (calendar days)	6260 VOL	6270 D/S 107	FL-PRO	Sulfate	Sulfide	Wetox/NH4	ALK	TDC	SAMPLE TYPE (see codes on SOP)	COMMENTS: SCREENING READINGS	LAB ID (for lab's use)
1	TFS-MW-03		GW	4-19-12	0930	HS		3	4	2	X	1	X	X	3	N		-01
2	TFS-MW-06		GW	4-19-12	1115			3	4	2	X	1	X	X	3	N		-02
3	TFS-MW-FDI		GW	4-19-12	-			3	4	2	X	1	X	X	3	N/GC		-03
4	TFS-MW-15		GW	4-19-12	1326			3	4	2						N		-04
5	TFS-MW-16		GW	4-19-12	1420			3	4	2						N		-05
6	TFS-MW-TB2		W	4-19-12				2								RC		-06
7																		
8																		
9																		
10																		
SAMPLER(S) AND COMPANY: (please print)				COURIER AND SHIPPING NUMBER:				SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (time lab's use)										
Nike Monroe / [Signature]				FEDEX				PH > 9 sm 4500 5-air Temp 4.6C, 3.1C 4.9 pH'd FLPRO, TOC										
RELINQUISHED BY		DATE		TIME		RECEIVED BY		DATE		TIME								
Printed Name and Signature: Nike Monroe / [Signature]		4-19-12		1615		Printed Name and Signature: FEDEX		4-19-12		1615								
Printed Name and Signature: [Signature]						Printed Name and Signature: [Signature]		4-20-12		955								
Printed Name and Signature:						Printed Name and Signature:												

3505794

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3505806
MK



1000 Abernathy Rd, Ste 1600
Atlanta, GA 30328
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
426847-042012-02

NAS Key West TFS		PROJECT NUMBER: 426847	LAB NAME AND CONTACT: PEL/M. Gudmason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company) Bethany Garvey	RECIPIENT 1 (Address, Tel No., and Fax No.) Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling		CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company) Greg Rowell	RECIPIENT 2 (Address, Tel No., and Fax No.) Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT Greg Rowell greg.rowell@ch2m.com		PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No., and Fax No.):

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)											SAMPLE TYPE (see codes on SOP)	COMMENTS/SCREENING READINGS	LAB ID (for lab's use)
								8260B VOC	8270D SPC	8270S SIM	FL-PRO/TEA	Sulfate	Sulfide	Nitrate/NH4	ALK	TOC	BOB1	BP51			
1	TFS-MW-17-RS	rinsate	W	4-20-12	1025	28	3	2	2	2	2	1							QC		02
2	TFS-MW-17	MW-17	GW	4-20-12	1105	28	3	2	2	2	2	X	1	X	X	3			N		-01
3	TFS-MW-17-MS	MS	GW	4-20-12	1110	28	3	2	2	2									QC		-03
4	TFS-MW-17-MSD	MSD	GW	4-20-12	1110	28	3	2	2	2	1								QC		-04
5	TFS-MW-TB3	TB3	W	4-20-12	—	28	2												QC		-05
6	IDW SOIL 1	IDW soils	S	4-22-12	1420	28	1	1	X									SW	FCFPs		-06
7	IDW LIG 1	IDW water	GW	4-22-12	1425	28	3	1	1	1								AW			-07
8																					
9																					
10																					

SAMPLER(S) AND COMPANY: (please print) Nikki Monroe/CH2MHILL		CARRIER AND SHIPPING NUMBER: FEDEX		SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use) Temp. 2.8, 3.0, 4.2 PH 7.9 SM 45003-2P PH 2.8260, FL-PRO, TOC			
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
Nikki Monroe	4-20-12	1700	FEDEX	4-20-12	1700		
			Marianna Keohane	4-21-12	09:15		

Distribution: Original - Laboratory (To be returned with Analytical Report); Copy 1 - Project File; Copy 2 - PMO

Sample 02 and 04 = 1 FL-PRO amber broken in transit

3505806

219

3505806
MLC

		1000 Abernathy Rd, Ste 1600 Atlanta, GA 30328 Tel No: (770) 604-9182 Fax No: (770) 604-9282										CHAIN-OF-CUSTODY RECORD			COC NUMBER: 426847-042012-02							
NAS Key West TFS		PROJECT NUMBER: 426847		LAB NAME AND CONTACT: PEL / M. Gudrason			FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Bethany Garvey			RECIPIENT 1 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone												
PROJECT PHASE/SITE/TASK: MW Sampling		CTO OR DO NUMBER:		LAB PO NUMBER:			FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company): Greg Rowell			RECIPIENT 2 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone												
PROJECT CONTACT: Greg Rowell greg.rowell@ch2m.com		PROJECT TEL NO AND FAX NO:		LAB TEL NO AND FAX NO:			FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):			RECIPIENT 3 (Address, Tel No., and Fax No.):												
ANALYSES REQUIRED (Include Method Numbers)													SAMPLE TYPE (see codes on SOP)		COMMENTS/SCREENING READINGS		LAB ID (for lab's use)					
ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	8082	9040C	101001	9045											
1	IDW-507C-1	IDW 5-15	S	4-20-12	1420	28	X	X	X											SW	FCLP5	-06
2	IDW LIG-1	IDW waters	S	4-20-12	1425	28	X	X	X											LW		-07
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
SAMPLER(S) AND COMPANY: (please print) N. Kk: Monroe / CH2M HILL				COURIER AND SHIPPING NUMBER: FEDEX				SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)														
RELINQUISHED BY: N. Kk: Monroe / <i>[Signature]</i>				DATE: 4-20-12		TIME: 1700		RECEIVED BY: FEDEX				DATE: 4-20-12		TIME: 1700								
Printed Name and Signature: N. Kk: Monroe / <i>[Signature]</i>								Printed Name and Signature: FEDEX														
Printed Name and Signature:								Printed Name and Signature:														
Printed Name and Signature:								Printed Name and Signature: Marianna Keohawe <i>[Signature]</i>				DATE: 4-21-12		TIME: 09:15								

3505806

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3505806 MK

3505816
M



1000 Abernathy Rd, Ste 1600
Atlanta, GA 30328
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
426847-042012-02

NAS Key West TFS	PROJECT NUMBER: 426847	LAB NAME AND CONTACT: PEL/M. Gudmason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Bethany Garvey	RECIPIENT 1 (Address, Tel No. and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling	CTO OR DO NUMBER:	LAB PO NUMBER: 813 888 9507 x 242	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company): Greg Rowell	RECIPIENT 2 (Address, Tel No. and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT: Greg Rowell	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):	RECIPIENT 3 (Address, Tel No. and Fax No.):
greg.rowell@ch2m.com				

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	LAT (calendar days)	ANALYSES REQUIRED (include ticked numbers)											SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								6200B VOC	8270D SVOC	8270S SIM	FL/RO/TEA	Sulfate	Sulfide	Mercury/Am	ALK	TOC	BOB1	8P51			
1	TFS-MW-17-RS	ring gate	W	4-20-12	1025	28	2	2	2									QC		9-10	
2	TFS-MW-17	MW-17	GW	4-20-12	1105	28	3	2	2	2	X	1	X	X	3			QC	4-23-12	9-10	
3	TFS-MW-17-M5	M5	GW	4-20-12	1110	28	3	2	2	2								QC	4-23-12	9-10	
4	TFS-MW-17-MSD	M5D	GW	4-20-12	1110	28	3	2	2	2								QC	4-23-12	9-10	
5	TFS-MW-17B3	17B3	W	4-20-12		28	2											QC		9-10	
6	IDW-SOIL-1	IDW soils	S	4-20-12	1420	28	1	1	X									SW	TCLPs -01	9-10	
7	IDW-LIQ-1	IDW water	GW	4-20-12	1425	28	3	1	1	1					1	1	1	AW	02	01	

SAMPLER(S) AND COMPANY: (please print) Niki Monroe/CH2M HILL
 COURIER AND SHIPPING NUMBER: FEDEX 1010 sent to Rhode Island
 SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use): Temp. 2.8, 3.0, 4.2 PH > 9 Sm 45005-21
 PH < 2.8260, FL-Pro, TOC

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Niki Monroe / [Signature]	4-20-12	1700	FEDEX	4-20-12	1700
			Marianna Keohane [Signature]	4-21-12	09:15

Distribution: Original - Laboratory (To be returned with Analytical Report); [] Copy 1 - Project File; [] Copy 2 - PMO

Sample 02 = 8081 amber broken in transit

Form CCI001, Rev 06/08

3505816

476

MEMORANDUM

CH2MHILL

Data Validation Summary - NAS Key West Boca Chica / TFS -Sediment and Surface Water Sampling 2012

TO: Greg Rowell/CH2M HILL/ATL

FROM: Camden Robinson/CH2M HILL/ATL

DATE: June 18th, 2012

The purpose of this memorandum is to present the results of the data validation process for the samples collected at the Naval Air Station in Key West, Florida. The samples were collected on April 12th, 2012.

The specific samples and analytical fractions reviewed are summarized below in Table 1.

The Quality Control areas that were reviewed and the resulting findings are documented within each subsection that follows. This data was validated for compliance with the analytical method requirements. This process also included a review of the data to assess the accuracy, precision, and completeness based upon procedures described in the guidance documents such as the Environmental Protection Agency (*EPA National Functional Guidelines for Organic Data Review (EPA 2008)*). Quality assurance/quality control (QA/QC) summary forms and data reports were reviewed.

Samples were submitted to PEL a division of Spectrum Analytical Inc. of Tampa, Florida, for the following analyses: SW-846 8260B Volatile Organic Compounds (VOC), SW-846 8270D Semi volatile Organic Compounds (SVOC), SW-846 8270D SIM Polycyclic Aromatic Hydrocarbons, and Total Petroleum Hydrocarbon by method FL-PRO.

Sample results that were not within the acceptance limits were appended with a qualifying flag, which consisted of a single- or double-letter code that indicated a possible problem with the data. The qualifying flags originated during the data review and validation processes. These also include the secondary, or the two/three-digit "sub-qualifier" flags. The secondary qualifiers provide the reasoning behind the assignment of a qualifier flag to the data. The secondary qualifiers are presented and defined below.

Attachment 1 lists the changes in data qualifiers, due to the validation process.

The following primary flags were used to qualify the data:

- [=] Detected. The analyte was analyzed for and detected at the concentration shown.
- [J] Estimated. The analyte was present but the reported value may not be accurate or precise.

[U] Undetected. The analyte was analyzed for but not detected above the method detection limit.

[UJ] Detection limit estimated. The analyte was analyzed for but qualified as not detected; the result is estimated.

[UR] Rejected. The data is not useable. The absence of the analyte cannot be verified.

[R] Rejected. The data is not useable.

Secondary Qualifier Codes

<u>Code</u>	<u>Definition</u>
2SH	Second Source Accuracy High
2SL	Second Source Accuracy Low
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BL	Blank
BSH	Blank Spike/LCS Recovery High
BSL	Blank Spike/LCS Recovery Low
CCH	Continuing Calibration Verification Accuracy High
CCL	Continuing Calibration Verification Accuracy Low
DL	Dilution
FD	Field Duplicate
LD	Laboratory Duplicate
HT	Holding Time
ICH	Initial Calibration High
ICL	Initial Calibration Low
ISH	Internal Standard Area Response High
ISL	Internal Standard Area Response Low
LR	Linear Range (Exceeded calibration range)
MD	Matrix Spike/Matrix Spike Duplicate Precision
MSH	Matrix Spike and/or Matrix Spike Duplicate Recovery High
MSL	Matrix Spike and/or Matrix Spike Duplicate Recovery Low
OT	Other
RE	Re-extraction
RF	Response Factor
SSH	Spiked Surrogate Recovery High
SSL	Spiked Surrogate Recovery Low
TN	Tune
EMPC	Estimated Maximum Possible Concentration

Table 1 - Chemical Analytical Methods – Field and Quality Control Samples

SDG	Sample ID	Lab Sample ID	Matrix	Sample Type	Date Collected	Analyses Performed
3505724	TFS-SD-01	350572401	S	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-01	350572402	SW	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-02	350572403	S	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-03	350572404	S	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-02	350572405	SW	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-03	350572406	SW	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-04	350572407	S	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-04	350572408	SW	N	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-FD	350572409	S	FD	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-FD	350572410	SW	FD	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-04MS	350572411	SQ	MS	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-04MSD	350572412	SQ	SD	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-03MS	350572413	WQ	MS	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SW-03MSD	350572414	WQ	SD	04/12/2012	[1], [2], [3], [4]
3505724	TFS-SD-EB	350572415	WQ	EB	04/12/2012	[1], [2], [3], [4]
3505724	TFS-TB01	350572416	WQ	TB	04/12/2012	[1]
MATRIX CODE						
SW – Surface Water						
WQ – Water Quality Control						
S – Soils						
SQ – Soil Quality Control						
SAMPLE TYPE CODE						
N – Native Sample						
EB – Equipment Blank						
TB – Trip Blank						
FD – Field Duplicate						
MS – Matrix Spike						
SD – Matrix Spike Duplicate						
ANALYSIS CODE						
[1] – VOC – Volatile Organic Compounds by SW-846 method 8260B						
[2] – SVOC – Semivolatile Organic Compounds by SW-846 method 8270D						
[3] – PAH – Polycyclic Aromatic Hydrocarbons by SW-846 method 8270D SIM						
[4] – TPH – Total Petroleum Hydrocarbon by method FL-PRO						

Organic Parameters

Quality Control Review

The following list represents the QA/QC measures that were reviewed during the data quality evaluation procedure for organic data.

- **Holding Times** – The holding times are evaluated to verify that samples were extracted and analyzed within holding times.
- **Blank samples** – Method blanks, equipment blanks, and trip blanks were provided for this project. Blank samples enable the reviewer to determine if an analyte may be attributed to sampling or laboratory procedures, rather than environmental contamination from site activities.
- **Surrogate Recoveries** – Surrogate Compounds are added to each sample and the recoveries are used to monitor lab performance and possible matrix interference.
- **Lab Control Sample (LCS)** – This sample is a “controlled matrix”, either laboratory reagent water or Ottawa sand, in which target compounds have been added prior to extraction/analysis. The recoveries serve as a monitor of the overall performance of each step during the analysis, including sample preparation.
- **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples** – Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. Precision information is also determined by calculating the reproducibility between the recoveries of each spiked parameter.
- **Field Duplicate Samples** – These samples are collected to determine precision between a native and its duplicate. This information can only be determined when target compounds are detected.
- **GC/MS Tuning** – The mass spectrum of the tuning compound is evaluated for method compliance. The criteria are established to verify the proper mass assignment and mass resolution.
- **Initial Calibration** – The initial calibration ensures that the instrument is capable of producing acceptable qualitative and quantitative data for the compounds of interest.
- **Continuing Calibration** – The continuing calibration checks satisfactory performance of the instrument and its predicted response to the target compounds.
- **Internal Standards** – The internal standards (retention time and response) are evaluated for method compliance. The internal standards are used in quantitation of the target parameters and monitor the instrument sensitivity and response for stability during each analysis.

Major Technical Issues

No major technical issues were identified.

Minor Technical Issues for Volatile Organic Compounds (VOCs) Analyses

Holding Time

All samples analyses were performed within hold time.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met with the exception of the internal standard 1,4-dichlorobenzene-d4 was bias low for sample TFS-SD-01. The sample was re-analyzed with similar results reported. Low internal standard recoveries are indicative of matrix interferences with the associated compounds; therefore a "UJ" qualifier was appended to the associated analytes for sample TFS-SD-01 to indicate that the reported values are quantitative estimates with a validation note of "ISL".

Calibration

The initial calibration (ICAL), second source calibration (2nd Source), and continuing calibration (CCAL) average response factors for the analytes listed below were outside criteria:

TABLE 2						
Response Factors Out of QC Limits: Volatile Organic Compounds						
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012						
SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	ICAL	Isobutyl Alcohol	0.0086	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR
3505724	ICAL	1,4-Dioxane	0.00534	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR

TABLE 2

Response Factors Out of QC Limits: Volatile Organic Compounds

NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	2 nd Source	Isobutyl Alcohol	0.02517	0.050	TFS-SD-01 TFS-SD-02 TFS-SD-03 TFS-SD-04 TFS-SD-FD	UR
3505724	2 nd Source	1,4-Dioxane	0.00333	0.050	TFS-SD-01 TFS-SD-02 TFS-SD-03 TFS-SD-04 TFS-SD-FD	UR
3505724	2 nd Source	Isobutyl Alcohol	0.00878	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR
3505724	2 nd Source	1,4-Dioxane	0.00435	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR
3505724	CCAL	Isobutyl Alcohol	0.02674	0.050	TFS-SD-01	UR
3505724	CCAL	1,4-Dioxane	0.00321	0.050	TFS-SD-01	UR
3505724	CCAL	Isobutyl Alcohol	0.03125	0.050	TFS-SD-02 TFS-SD-03 TFS-SD-04 TFS-SD-FD	UR
3505724	CCAL	1,4-Dioxane	0.00376	0.050	TFS-SD-02 TFS-SD-03 TFS-SD-04 TFS-SD-FD	UR

TABLE 2

Response Factors Out of QC Limits: Volatile Organic Compounds

NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	CCAL	Isobutyl Alcohol	0.00794	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR
3505724	CCAL	1,4-Dioxane	0.00451	0.050	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR

The analytes listed are considered poor performers. All associated sample results were non-detect, therefore the quantitation limits reported for these compounds should be considered qualitatively invalid. This has been indicated by appending a "UR" qualifier next to the detection limit for these compounds in the associated field samples with a validation note of "RF" indicating that the results are not usable as the presence or absence of these compounds in these samples cannot be verified.

Blanks

The volatile organic compounds detected in the blank samples are listed in Table 3.

TABLE 3

Blank Contamination: Volatile Organic Compounds

NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample ID	Sample Type	Parameter	Lab Result	Units	Samples Affected	Flag Concentrations less than the value listed below
3505724	Method Blank	MB	Acetone	2.6	ug/L	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	26 ug/L

TABLE 3
Blank Contamination: Volatile Organic Compounds
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample ID	Sample Type	Parameter	Lab Result	Units	Samples Affected	Flag Concentrations less than the value listed below
3505724	TFS-TB01	TB	Carbon Disulfide	0.27	ug/L	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	1.35 ug/L

Flags were applied to the analytes in the associated samples in the following manner:

When the analytes were detected in the trip blank and/or method blank, the detected compounds, that were less than 5 times the concentration detected for the analytes listed (10 times for common laboratory contaminants), were flagged "U" due to possible laboratory and/or field contamination with a validation note of "BL".

Laboratory Control Sample Recoveries

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field samples TFS-SD-04 and TFS-SW-03. The matrix spike and matrix spike duplicate recoveries were outside acceptable quality control limit as noted in Table 4 below.

TABLE 4
Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Volatile Organic Compounds
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike Matrix Spike Duplicate	Methyl Iodide	68.5%, 51.5%	75-152	TFS-SW-03	Non-Detects - UJ

TABLE 4

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike	Acrolein	0%, 0%	31-148	TFS-SD-04	Non-Detects – UJ
		Vinyl Acetate	67.4%, 55.6%	77-150		
	Matrix Spike Duplicate	Ethyl Methacrylate	69%, 69.5%	73-121		
		Chlorobenzene	69%, 72.6%	75-125		
		1,1,1,2-Tetrachloroethane	70.5%, 71.4%	75-125		
		Styrene	59.3%, 59.5%	75-125		
		Xylene	66%, 73.6%	82-124		

The quantitation limits for the samples noted above were qualified as estimated due to matrix spike and matrix spike duplicate recoveries were outside the acceptable limits that are listed in Table 4 with a validation note of “MSL” for low percent recovery.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 5 below.

TABLE 5

Surrogate Recoveries Out of QC Limits: Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	TFS-SD-01	4-Bromofluorobenzene	122%	85-120	TFS-SD-01	Detects-J
3505724	TFS-SD-02	4-Bromofluorobenzene	78%	85-120	TFS-SD-02	Non-Detects-UJ
						Detects-J

The associated analytes for the samples listed above were qualified with a “J” for detects and “UJ” for non-detects as estimated due to the surrogate recoveries were outside the acceptable limits that are listed in Table 5 with a validation note of “SSH” for high recovery or “SSL” for low recovery.

Field Duplicates

Field samples TFS-SD-01 and TFS-SW-02 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Minor Technical Issues for Semi-Volatile Organic Compounds (SVOCs) Analyses

Holding Time

All samples were re-extracted outside 2 times the technical holding time in order to confirm spike recoveries reported outside the method target acceptance limits noted in the initial analysis. During the data validation, all the sample results are evaluated and the "best answer" for each sample and analysis is chosen, and the other results are rejected. Therefore, all re-extracted results were rejected, since the initial extraction results provided more usable data as qualified.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

The initial calibration (ICAL), second source calibration (2nd Source), and continuing calibration (CCAL) average response factors for the analytes listed below were outside criteria:

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	ICAL	4-nitroquinoline-1-oxide	0.00936	0.050	TFS-SD-01 TFS-SW-01 TFS-SD-02 TFS-SD-03 TFS-SW-02 TFS-SW-03 TFS-SD-04 TFS-SW-04 TFS-SD-FD TFS-SW-FD	UR

TABLE 6

Response Factors Out of QC Limits: Semi-Volatile Organic Compounds

NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Calibration	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	ICAL	Methapyriline	0.01339	0.050	TFS-SD-01 TFS-SW-01 TFS-SD-02 TFS-SD-03 TFS-SW-02 TFS-SW-03 TFS-SD-04 TFS-SW-04 TFS-SD-FD TFS-SW-FD	UR
3505724	CCAL	Methapyriline	0.01522	0.050	TFS-SW-01 TFS-SD-02 TFS-SD-03 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	UR
3505724	CCAL	Methapyriline	0.01541	0.050	TFS-SD-01 TFS-SD-04 TFS-SD-FD	UR

All associated sample results were non-detect, therefore the quantitation limits reported for these compounds should be considered qualitatively invalid. This has been indicated by appending a "UR" qualifier next to the detection limit for these compounds in the associated field samples with a validation note of "RF" indicating that the results are not usable as the presence or absence of these compounds in these samples cannot be verified.

Blank Contaminants

There were detections of Di-n-butylphthalate and Bis(2-ethylhexyl)phthalate in the method; however all associated sample results were non-detect, so no qualifiers were needed.

Laboratory Control Sample Recoveries

The laboratory control sample recoveries were outside acceptable quality control limit as noted in Table 7 below.

TABLE 7						
Laboratory Control Sample Recovery Out of QC Limits: Semi-Volatile Organic Compounds						
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012						
SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Laboratory Control Sample	2-Picoline	55%	70-130	TFS-SD-01	Non-Detects - UJ
		n-nitrosomethylethylamine	60%	70-130	TFS-SD-02	
		n-nitrosodiethylamine	65%	70-130	TFS-SD-03	
		methylmethanesulfonate	60%	70-130	TFS-SD-04	
		o-toluidine	65%	70-130	TFS-SD-FD	
		a,a-Dimethylphenethylamine	31.5%	70-130		
		Hexachloropropene	55%	70-130		
		1-Naphthylamine	65%	70-130		
		Dinoseb	65%	70-130		
		4-nitroquinoline-1-oxide	65%	70-130		
		1,3,5-Trinitrobenzene	42%	70-130		
		Kepone	55%	70-130		
3505724	Laboratory Control Sample	1,4-Naphthoquinone	5.5%	70-130	TFS-SD-01	Non-Detects - UR
		Methapyriline	0%	70-130	TFS-SD-02	
					TFS-SD-03	
					TFS-SD-04	
					TFS-SD-FD	
3505724	Laboratory Control Sample	a,a-Dimethylphenethylamine	53.8%	70-130	TFS-SW-01	Non-Detects - UJ
					TFS-SW-02	
					TFS-SW-03	
					TFS-SW-04	
					TFS-SW-FD	

TABLE 7

Laboratory Control Sample Recovery Out of QC Limits: Semi-Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Laboratory Control Sample	1,4-Naphthoquinone	0%	28-143	TFS-SW-01 TFS-SW-02 TFS-SW-03 TFS-SW-04 TFS-SW-FD	Non-Detects - UR

The quantitation limits for the samples noted above were qualified as indicated above due to laboratory control sample recoveries were outside the acceptable limits that are listed in Table 7 with a validation note of "BSL" for low percent recovery. The samples were re-extracted 2 times outside the technical holding times, but yielded similar recoveries. The results for 1,4-naphthoquinone and methapyryline were rejected, and are considered not usable as the presence or absence of these compounds in these samples cannot be verified since the LCS and/or LCSD samples were not recovered.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field samples TFS-SD-04 and TFS-SW-03. The matrix spike and matrix spike duplicate recoveries were outside acceptable quality control limit as noted in Table 8 below.

TABLE 8

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Semi-Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike	a,a-Dimethylphenethylamine	40.7%, 46.8%	70-130	TFS-SW-03	Non-Detects - UJ or Invalid UR
	Matrix Spike Duplicate	1,4-Naphthoquinone	0%, 0%	28-143		

TABLE 8

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Semi-Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike	Hexchlorocyclopentadiene	0%, 0%	24-119	TFS-SD-04	Non-Detects – UJ or Invalid UR
		2,4-Dinitrophenol	0%, 0%	15-130		
	Matrix Spike Duplicate	4,6-Dinitro-2-methylphenol	23.1%, 16%	30-135		
		Di-n-butylphthalate	48.3%, 33.3%	55-110		
		2-Picoline	48.3%, 36.7%	70-130		
		n-nitrosomethylethylamine	51.7%, 40%	70-130		
		n-nitrosodiethylamine	51.7%, 43.3%	70-130		
		methylmethanesulfonate	37.9%, 31%	70-130		
		Ethyl methanesulfonate	58.6%, 46.7%	70-130		
		N-Nitrosopyrrolidine	55.2%, 46.7%	70-130		
		Acetophenone	60.3%, 45.8%	70-130		
		N-Nitrosomorpholine	62.1%, 46.7%	70-130		
		o-Toluidine	44.8%, 36.7%	70-130		
		a,a-Dimethylphenethylamine	41.4%, 0%	70-130		
		2,6-Dichlorophenol	58.6%, 46.7%	70-130		
		Hexachloropropene	19.3%, 13.7%	70-130		
		N-Nitrosodibutylamine	62.1%, 46.7%	70-130		
		Isosafrole	55.2%, 40%	70-130		
		1,2,4,5-Tetrachlorobenzene	48.3%, 40%	70-130		
		Safrole	58.6%, 46.7%	70-130		
		1,3-Dinitrobenzene	62.1%, 50%	70-130		
		Pentachlorobenzene	48.3%, 36.7%	70-130		
		1-Naphthylamine	58.6%, 46.7%	70-130		
		2-Naphthylamine	41.4%, 30.7%	70-130		
		2,3,4,6-Tetrachlorophenol	48.3%, 36.7%	70-130		
		5-Nitro-o-toluidine	48.3%, 43.3%	70-130		
		p-Phenylenediamine	62.1%, 46.7%	70-130		
		Phenacetin	58.6%, 46.7%	70-130		
		4-Aminobiphenyl	51.7%, 40%	70-130		
		Pronamide	55.2%, 43.3%	70-130		
		Pentachloronitrobenzene	55.2%, 43.3%	70-130		
		Dinoseb	55.2%, 40%	70-130		

TABLE 8

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: Semi-Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
		4-nitroquinoline-1-oxide	25.2%, 13%	70-130		
		Aramite	41.4%, 33.3%	70-130		
		p-Dimethylaminoazobenzene	44.8%, 36.7%	70-130		
		2-Acetylaminofluorene	48.3%, 36.7%	70-130		
		7,12-Dimethylbenz(a)anthracene	44.8%, 33.3%	56-122		
		3-Methylcholanthrene	41.4%, 36.7%	55-121		
		N-Nitrosopiperidine	58.6%, 46.7%	70-130		
		1,3,5-Trinitrobenzene	27.2%, 22.7%	70-130		
		Diallate	44.8%, 33.3%	70-130		
		Isodrin	44.8%, 36.7%	70-130		
		Chlorobenzilate	41.4%, 33.3%	70-130		
		Kepone	25.2%, 20.7%	70-130		
		o,o,o-Triethylphosphorothioate	48.3%, 33.3%	70-130		
3505724	Matrix Spike	1,4-Naphthoquinone	0%, 0%	70-130	TFS-SD-04	Non-Detects – UJ or Invalid UR
	Matrix Spike Duplicate					

The quantitation limits for the samples noted above were qualified as estimated or invalid due to matrix spike and matrix spike duplicate recoveries were outside the acceptable limits that are listed in Table 8 with a validation note of "MSL" for low percent recovery.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 9 below.

TABLE 9

Surrogate Recoveries Out of QC Limits: Semi-Volatile Organic Compounds
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
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TABLE 9

Surrogate Recoveries Out of QC Limits: Semi-Volatile Organic Compounds

NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	TFS-SW-01	2-Fluorophenol	14.8%	20-110	TFS-SW-01	Non-Detects-UJ
		2,4,6-Tribromophenol	31.3%	40-125		
3505724	TFS-SW-FD	Nitrobenzene-d5	35.9%	40-110	TFS-SW-FD	Non-Detects-UJ
		2-Fluorobiphenyl	34.3%	50-110		
		2,4,6-Tribromophenol	38.7%	40-125		
		p-Terphenyl-d14	42.2%	50-135		
3505724	TFS-SD-02	2-Fluorobiphenyl	16.6%	45-105	TFS-SD-02	Non-Detects-UJ
3505724	TFS-SD-03	2-Fluorobiphenyl	35.3%	45-105	TFS-SD-03	Non-Detects-UJ
3505724	TFS-SD-04	2-Fluorobiphenyl	33.3%	45-105	TFS-SD-04	Non-Detects-UJ
3505724	TFS-SD-FD	2-Fluorobiphenyl	27.4%	45-105	TFS-SD-FD	Non-Detects-UJ

The quantitation limits of the associated analytes for the samples listed above were qualified with a "UJ" for non-detects as estimated due to the surrogate recoveries were outside the acceptable limits that are listed in Table 9 with a validation note of "SSL".

Field Duplicates

Field samples TFS-SD-01 and TFS-SW-02 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Minor Technical Issues for Polycyclic Aromatic Hydrocarbons (PAH) Analyses

Holding Time

All samples analyses were performed within hold time.

GC/MS Instrument Performance

All GC/MS Instrument Performance criteria were met.

Calibration

All Initial, 2nd Source, and Continuing Calibration criteria were met.

Blanks

The PAH compounds detected in the blank samples are listed in Table 10.

TABLE 10
Blank Contamination: PAH
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample ID	Sample Type	Parameter	Lab Result	Units	Samples Affected	Flag Concentrations less than the value listed below
3505724	Method Blank	MB	Naphthalene	0.0016	mg/kg	TFS-SD-FD	0.008 mg/kg

Flags were applied to the analytes in the associated samples in the following manner:

When the analyte was detected in the method blank, the detected compound, that were less than 5 times the concentration detected for the analyte listed, was flagged "U" due to possible laboratory contamination with a validation note of "BL".

Laboratory Control Sample Analysis

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field samples TFS-SD-04 and TFS-SW-03. The matrix spike and matrix spike duplicate recoveries were outside acceptable quality control limit as noted in Table 11 below.

TABLE 11
Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: PAH
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike	Benzo(b)fluoranthene	52.9%, 21.6%	56-173	TFS-SW-03	Detects – J
		Benzo(k)fluoranthene	52.5%, 48.6%	56-158		
	Matrix Spike Duplicate	Chrysene	45.1%, 35.3%	55-128		

TABLE 11

Matrix Spike and Matrix Spike Duplicate Recovery Out of QC Limits: PAH
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	Matrix Spike Matrix Spike Duplicate	PAHs	NA	NA	TFS-SD-04	Accuracy and precision objectives could not be evaluated due to sample heterogeneity

The detects for the samples noted above were qualified as estimated "J" due to matrix spike and matrix spike duplicate recoveries were outside the acceptable limits that are listed in Table 11 with a validation note of "MSL" for low percent recovery.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 12 below.

TABLE 12

Surrogate Recoveries Out of QC Limits: PAH
 NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012

SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	TFS-SD-02	p-Terphenyl 2-Fluorobiphenyl	37.8% 42.2%	43-145 43-145	TFS-SD-02	Non-Detects-UJ Detects-J
3505724	TFS-SD-03	p-Terphenyl	30.3%	43-145	TFS-SD-03	Non-Detects-UJ Detects-J

The results for the samples listed above were qualified with a "UJ" for non-detects or a "J" for detects as estimated due to the surrogate recovery was outside the acceptable limit that is listed in Table 12 with a validation note of "SSL".

Field Duplicates

Field samples TFS-SD-01 and TFS-SW-02 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Rejected Data

No data were rejected based upon the validation process for this sampling event.

Minor Technical Issues for Total Petroleum Hydrocarbon (TPH) Analyses

Holding Time

All samples analyses were performed within hold time.

Instrument Performance

All Instrument Performance criteria were met.

Calibration

All Initial, 2nd Source, and Continuing Calibration criteria were met.

Blank Contaminants

There were no detections in the equipment and method blank samples.

Laboratory Control Sample Analysis

Laboratory control samples (LCS) were prepared and analyzed with each sample preparation batch and analytical run. Laboratory accuracy objectives were met for all LCS samples.

Matrix Spike and Matrix Spike Duplicate Recoveries

A matrix spike and spike duplicate samples were collected and analyzed using field samples TFS-SD-04 and TFS-SW-03. The matrix spike / matrix spike duplicate (MS/MSD) accuracy and precision objectives were met.

Surrogate Recoveries

All surrogate recoveries were within acceptable quality control limits, except as noted in Table 13 below.

TABLE 13						
Surrogate Recoveries Out of QC Limits: Total Petroleum Hydrocarbon						
NAS Key West Boca Chica / Sediment and Surface Water Sampling 2012						
SDG	Sample	Parameter	Recovery	Recovery Limits	Associated Samples	Flag
3505724	TFS-SW-02	o-terphenyl	64.7%	82-142	TFS-SW-02	Detects-J
3505724	TFS-SW-03	o-terphenyl	70.6%	82-142	TFS-SW-03	Detects-J
3505724	TFS-SW-04	o-terphenyl	41.2%	82-142	TFS-SW-04	Detects-J
3505724	TFS-SW-FD	o-terphenyl	58.8%	82-142	TFS-SW-FD	Detects-J
3505724	TFS-SD-01	C-39	59.1%	82-142	TFS-SD-01	Detects-J

The TPH results for the samples listed above were qualified with a "J" as estimated due to the surrogate recoveries were outside the acceptable limits that are listed in Table 13 with a validation note of "SSL". The laboratory noted that during extraction, samples TPS-SW-01, TPS-SW-02, TFS-SW-03, TFS-SW-04, and TFS-SW-FD exhibited heavy emulsion and required additional cleanup. This emulsion is most likely caused by sample matrix and is the probable cause for surrogate recoveries that are below criteria.

Field Duplicates

Field samples TFS-SD-01 and TFS-SW-02 were collected and analyzed in duplicate. Field duplicate precision objectives were met.

Rejected Data

No data were rejected based upon the validation process for this sampling event.

Data Usability

A review of the analytical data submitted regarding the investigation of NAS Key West Boca Chica, Sediment and Surface Water Sampling 2012, by CH2M HILL has been completed. An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results should be considered usable as qualified.

The data user can use the data recognizing the potential data biases indicated by the data qualifiers assigned to some results. Data was qualified for a subset of results based on method and/or trip blank contamination, low response factors for the initial, second source, and/or continuing calibrations, low internal standard recovery, low surrogate recovery bias, high surrogate recovery bias, low matrix recovery bias, low laboratory control sample and/or laboratory control sample duplicate recovery bias. The data user should be cautioned about using results that have been rejected because of very low spike recovery bias since the presence or absence of these compounds cannot be verified

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00148	U	0.000738	0.00148	0.00246
74-87-3	Chloromethane	0.000934	U	0.000467	0.000934	0.00246
75-01-4	Vinyl chloride	0.00148	U	0.000738	0.00148	0.00246
74-83-9	Bromomethane	0.00295	U	0.00148	0.00295	0.00295
75-00-3	Chloroethane	0.00182	U	0.00091	0.00182	0.00246
75-69-4	Trichlorofluoromethane	0.00108	U	0.000541	0.00108	0.00246
75-35-4	1,1-Dichloroethene	0.000836	U	0.000418	0.000836	0.00246
107-02-8	Acrolein	0.00738	U	0.00369	0.00738	0.0123
74-88-4	Methyl iodide	0.00369	U	0.00184	0.00369	0.00369
75-15-0	Carbon disulfide	0.00369	U	0.00184	0.00369	0.00369
75-09-2	Methylene chloride	0.00295	U	0.00148	0.00295	0.00615
156-60-5	trans-1,2-Dichloroethene	0.000959	U	0.00048	0.000959	0.00246
107-13-1	Acrylonitrile	0.00467	U	0.00234	0.00467	0.00615
75-34-3	1,1-Dichloroethane	0.000836	U	0.000418	0.000836	0.00246
67-64-1	Acetone	0.011	J	0.0016	0.0032	0.0123
78-93-3	2-Butanone	0.00344	U	0.00172	0.00344	0.0123
67-66-3	Chloroform	0.00133	U	0.000664	0.00133	0.00246
71-55-6	1,1,1-Trichloroethane	0.00246	U	0.00123	0.00246	0.00246
56-23-5	Carbon tetrachloride	0.00148	U	0.000738	0.00148	0.00246
71-43-2	Benzene	0.00123	U	0.000615	0.00123	0.00246
107-06-2	1,2-Dichloroethane	0.00246	U	0.00123	0.00246	0.00246
79-01-6	Trichloroethene	0.00108	U	0.000541	0.00108	0.00246
108-05-4	Vinyl acetate	0.00369	U	0.00184	0.00369	0.00369
78-87-5	1,2-Dichloropropane	0.00155	U	0.000775	0.00155	0.00246
74-95-3	Dibromomethane	0.00162	U	0.000812	0.00162	0.00246
75-27-4	Bromodichloromethane	0.000787	U	0.000393	0.000787	0.00246

J-SSH

a.t

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00103	U	0.000516	0.00103	0.00246
108-10-1	4-Methyl-2-pentanone	0.00393	U	0.00197	0.00393	0.0123
108-88-3	Toluene	0.000713	U	0.000356	0.000713	0.00246
10061-02-6	trans-1,3-Dichloropropene	0.00246	U	0.00123	0.00246	0.00246
97-63-2	Ethyl methacrylate	0.00492	U	0.00246	0.00492	0.00615
79-00-5	1,1,2-Trichloroethane	0.00202	U	0.00101	0.00202	0.00246
127-18-4	Tetrachloroethene	0.00229	U	0.00114	0.00229	0.00246
591-78-6	2-Hexanone	0.0032	U	0.0016	0.0032	0.0123
124-48-1	Dibromochloromethane	0.00113	U	0.000566	0.00113	0.00246
106-93-4	1,2-Dibromoethane	0.00202	U	0.00101	0.00202	0.00246
108-90-7	Chlorobenzene	0.000861	U	0.00043	0.000861	0.00246
630-20-6	1,1,1,2-Tetrachloroethane	0.00182	U	0.00091	0.00182	0.00246
100-41-4	Ethylbenzene	0.0017	U	0.000848	0.0017	0.00246
100-42-5	Styrene	0.000688	U	0.000344	0.000688	0.00246
75-25-2	Bromoform	0.00113	U	0.000566	0.00113	0.00246
79-34-5	1,1,2,2-Tetrachloroethane	0.00145	U	0.000725	0.00145	0.00246
96-18-4	1,2,3-Trichloropropane	0.00295	U	0.00148	0.00295	0.00295
96-12-8	1,2-Dibromo-3-chloropropane	0.00688	U	0.00344	0.00688	0.00688
110-57-6	1,4-Dichloro-2-butene	0.00984	U	0.00492	0.00984	0.0123
75-05-8	Acetonitrile	0.0138	U	0.00688	0.0138	0.0246
107-05-1	Allyl chloride	0.00133	U	0.000664	0.00133	0.00246
123-91-1	1,4-Dioxane	0.24	U	0.12	0.24	0.24
78-83-1	Isobutyl alcohol	0.0393	U	0.0197	0.0393	0.12
126-98-7	Methacrylonitrile	0.014	U	0.00701	0.014	0.0246
80-62-6	Methyl methacrylate	0.0017	U	0.000848	0.0017	0.00246
107-12-0	Propionitrile	0.0492	U	0.0246	0.0492	0.0492

UJ-TSL

UJ-TSL

UJ-TSL

UJ-TSL

UR-RF

UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000984	U	0.000492	0.000984	0.00246
1330-20-7	Xylene (total)	0.00167	U	0.000836	0.00167	0.00492

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-01RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 5724-01R1.D

Sample wt/vol: 6.51 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00184	U	0.000918	0.00184	0.00306
74-87-3	Chloromethane	0.00116	U	0.000581	0.00116	0.00306
75-01-4	Vinyl chloride	0.00184	U	0.000918	0.00184	0.00306
74-83-9	Bromomethane	0.00367	U	0.00184	0.00367	0.00367
75-00-3	Chloroethane	0.00226	U	0.00113	0.00226	0.00306
75-69-4	Trichlorofluoromethane	0.00135	U	0.000673	0.00135	0.00306
75-35-4	1,1-Dichloroethene	0.00104	U	0.00052	0.00104	0.00306
107-02-8	Acrolein	0.00918	U	0.00459	0.00918	0.0153
74-88-4	Methyl iodide	0.00459	U	0.0023	0.00459	0.00459
75-15-0	Carbon disulfide	0.00459	U	0.0023	0.00459	0.00459
75-09-2	Methylene chloride	0.00367	U	0.00184	0.00367	0.00765
156-60-5	trans-1,2-Dichloroethene	0.00119	U	0.000597	0.00119	0.00306
107-13-1	Acrylonitrile	0.00581	U	0.00291	0.00581	0.00765
75-34-3	1,1-Dichloroethane	0.00104	U	0.00052	0.00104	0.00306
67-64-1	Acetone	0.0061	J	0.00199	0.00398	0.0153
78-93-3	2-Butanone	0.00428	U	0.00214	0.00428	0.0153
67-66-3	Chloroform	0.00165	U	0.000826	0.00165	0.00306
71-55-6	1,1,1-Trichloroethane	0.00306	U	0.00153	0.00306	0.00306
56-23-5	Carbon tetrachloride	0.00184	U	0.000918	0.00184	0.00306
71-43-2	Benzene	0.00153	U	0.000765	0.00153	0.00306
107-06-2	1,2-Dichloroethane	0.00306	U	0.00153	0.00306	0.00306
79-01-6	Trichloroethene	0.00135	U	0.000673	0.00135	0.00306
108-05-4	Vinyl acetate	0.00459	U	0.0023	0.00459	0.00459
78-87-5	1,2-Dichloropropane	0.00193	U	0.000964	0.00193	0.00306
74-95-3	Dibromomethane	0.00202	U	0.00101	0.00202	0.00306
75-27-4	Bromodichloromethane	0.000979	U	0.00049	0.000979	0.00306

R-RE

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID: 5724-01R1.D

Sample wt/vol: 6.51 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455

PercentSolids: 50.2 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00128	U	0.000643	0.00128	0.00306
108-10-1	4-Methyl-2-pentanone	0.0049	U	0.00245	0.0049	0.0153
108-88-3	Toluene	0.000887	U	0.000444	0.000887	0.00306
10061-02-6	trans-1,3-Dichloropropene	0.00306	U	0.00153	0.00306	0.00306
97-63-2	Ethyl methacrylate	0.00612	U	0.00306	0.00612	0.00765
79-00-5	1,1,2-Trichloroethane	0.00251	U	0.00125	0.00251	0.00306
127-18-4	Tetrachloroethene	0.00284	U	0.00142	0.00284	0.00306
591-78-6	2-Hexanone	0.00398	U	0.00199	0.00398	0.0153
124-48-1	Dibromochloromethane	0.00141	U	0.000704	0.00141	0.00306
106-93-4	1,2-Dibromoethane	0.00251	U	0.00125	0.00251	0.00306
108-90-7	Chlorobenzene	0.00107	U	0.000536	0.00107	0.00306
630-20-6	1,1,1,2-Tetrachloroethane	0.00226	U	0.00113	0.00226	0.00306
100-41-4	Ethylbenzene	0.00211	U	0.00106	0.00211	0.00306
100-42-5	Styrene	0.000857	U	0.000428	0.000857	0.00306
75-25-2	Bromoform	0.00141	U	0.000704	0.00141	0.00306
79-34-5	1,1,2,2-Tetrachloroethane	0.0018	U	0.000903	0.0018	0.00306
96-18-4	1,2,3-Trichloropropane	0.00367	U	0.00184	0.00367	0.00367
96-12-8	1,2-Dibromo-3-chloropropane	0.00857	U	0.00428	0.00857	0.00857
110-57-6	1,4-Dichloro-2-butene	0.0122	U	0.00612	0.0122	0.0153
75-05-8	Acetonitrile	0.0171	U	0.00857	0.0171	0.0306
107-05-1	Allyl chloride	0.00165	U	0.000826	0.00165	0.00306
123-91-1	1,4-Dioxane	0.31	U	0.15	0.31	0.31
78-83-1	Isobutyl alcohol	0.049	U	0.0245	0.049	0.15
126-98-7	Methacrylonitrile	0.0174	U	0.00872	0.0174	0.0306
80-62-6	Methyl methacrylate	0.00211	U	0.00106	0.00211	0.00306
107-12-0	Propionitrile	0.0612	U	0.0306	0.0612	0.0612

R-RE

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-01RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID: 5724-01R1.D

Sample wt/vol: 6.51 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455

PercentSolids: 50.2 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
126-99-8	Chloroprene	0.00122	U	0.000612	0.00122	0.00306	R-RE
1330-20-7	Xylene (total)	0.00208	U	0.00104	0.00208	0.00612	↓

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-01RE2

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00354	U	0.00177	0.00354	0.00589
74-87-3	Chloromethane	0.00224	U	0.00112	0.00224	0.00589
75-01-4	Vinyl chloride	0.00354	U	0.00177	0.00354	0.00589
74-83-9	Bromomethane	0.00707	U	0.00354	0.00707	0.00707
75-00-3	Chloroethane	0.00436	U	0.00218	0.00436	0.00589
75-69-4	Trichlorofluoromethane	0.00259	U	0.0013	0.00259	0.00589
75-35-4	1,1-Dichloroethene	0.002	U	0.001	0.002	0.00589
107-02-8	Acrolein	0.0177	U	0.00884	0.0177	0.0295
74-88-4	Methyl iodide	0.00884	U	0.00442	0.00884	0.00884
75-15-0	Carbon disulfide	0.00884	U	0.00442	0.00884	0.00884
75-09-2	Methylene chloride	0.00707	U	0.00354	0.00707	0.0147
156-60-5	trans-1,2-Dichloroethene	0.0023	U	0.00115	0.0023	0.00589
107-13-1	Acrylonitrile	0.0112	U	0.0056	0.0112	0.0147
75-34-3	1,1-Dichloroethane	0.002	U	0.001	0.002	0.00589
67-64-1	Acetone	0.0261	J	0.00383	0.00766	0.0295
78-93-3	2-Butanone	0.00825	U	0.00412	0.00825	0.0295
67-66-3	Chloroform	0.00318	U	0.00159	0.00318	0.00589
71-55-6	1,1,1-Trichloroethane	0.00589	U	0.00295	0.00589	0.00589
56-23-5	Carbon tetrachloride	0.00354	U	0.00177	0.00354	0.00589
71-43-2	Benzene	0.00295	U	0.00147	0.00295	0.00589
107-06-2	1,2-Dichloroethane	0.00589	U	0.00295	0.00589	0.00589
79-01-6	Trichloroethene	0.00259	U	0.0013	0.00259	0.00589
108-05-4	Vinyl acetate	0.00884	U	0.00442	0.00884	0.00884
78-87-5	1,2-Dichloropropane	0.00371	U	0.00186	0.00371	0.00589
74-95-3	Dibromomethane	0.00389	U	0.00194	0.00389	0.00589
75-27-4	Bromodichloromethane	0.00188	U	0.000943	0.00188	0.00589

R-EE

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-01RE2

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00248	U	0.00124	0.00248	0.00589
108-10-1	4-Methyl-2-pentanone	0.00943	U	0.00471	0.00943	0.0295
108-88-3	Toluene	0.00171	U	0.000854	0.00171	0.00589
10061-02-6	trans-1,3-Dichloropropene	0.00589	U	0.00295	0.00589	0.00589
97-63-2	Ethyl methacrylate	0.0118	U	0.00589	0.0118	0.0147
79-00-5	1,1,2-Trichloroethane	0.00483	U	0.00242	0.00483	0.00589
127-18-4	Tetrachloroethene	0.00548	U	0.00274	0.00548	0.00589
591-78-6	2-Hexanone	0.00766	U	0.00383	0.00766	0.0295
124-48-1	Dibromochloromethane	0.00271	U	0.00136	0.00271	0.00589
106-93-4	1,2-Dibromoethane	0.00483	U	0.00242	0.00483	0.00589
108-90-7	Chlorobenzene	0.00206	U	0.00103	0.00206	0.00589
630-20-6	1,1,1,2-Tetrachloroethane	0.00436	U	0.00218	0.00436	0.00589
100-41-4	Ethylbenzene	0.00407	U	0.00203	0.00407	0.00589
100-42-5	Styrene	0.00165	U	0.000825	0.00165	0.00589
75-25-2	Bromoform	0.00271	U	0.00136	0.00271	0.00589
79-34-5	1,1,2,2-Tetrachloroethane	0.00348	U	0.00174	0.00348	0.00589
96-18-4	1,2,3-Trichloropropane	0.00707	U	0.00354	0.00707	0.00707
96-12-8	1,2-Dibromo-3-chloropropane	0.0165	U	0.00825	0.0165	0.0165
110-57-6	1,4-Dichloro-2-butene	0.0236	U	0.0118	0.0236	0.0295
75-05-8	Acetonitrile	0.033	U	0.0165	0.033	0.0589
107-05-1	Allyl chloride	0.00318	U	0.00159	0.00318	0.00589
123-91-1	1,4-Dioxane	0.59	U	0.29	0.59	0.59
78-83-1	Isobutyl alcohol	0.0943	U	0.0471	0.0943	0.29
126-98-7	Methacrylonitrile	0.0336	U	0.0168	0.0336	0.0589
80-62-6	Methyl methacrylate	0.00407	U	0.00203	0.00407	0.00589
107-12-0	Propionitrile	0.12	U	0.0589	0.12	0.12

R-RE

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE2

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
126-99-8	Chloroprene	0.00236	U	0.00118	0.00236	0.00589	R-RE
1330-20-7	Xylene (total)	0.00401	U	0.002	0.00401	0.0118	↓

C.K

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.23	U	0.19	0.38	1 U-BL
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	5.4	U	1.3	2.6	10 U-BL
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.31	J	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID: 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-02

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00188	U	0.000939	0.00188	0.00313
74-87-3	Chloromethane	0.00119	U	0.000594	0.00119	0.00313
75-01-4	Vinyl chloride	0.00188	U	0.000939	0.00188	0.00313
74-83-9	Bromomethane	0.00375	U	0.00188	0.00375	0.00375
75-00-3	Chloroethane	0.00232	U	0.00116	0.00232	0.00313
75-69-4	Trichlorofluoromethane	0.00138	U	0.000688	0.00138	0.00313
75-35-4	1,1-Dichloroethene	0.00106	U	0.000532	0.00106	0.00313
107-02-8	Acrolein	0.00939	U	0.00469	0.00939	0.0156
74-88-4	Methyl iodide	0.00469	U	0.00235	0.00469	0.00469
75-15-0	Carbon disulfide	0.00469	U	0.00235	0.00469	0.00469
75-09-2	Methylene chloride	0.00375	U	0.00188	0.00375	0.00782
156-60-5	trans-1,2-Dichloroethene	0.00122	U	0.00061	0.00122	0.00313
107-13-1	Acrylonitrile	0.00594	U	0.00297	0.00594	0.00782
75-34-3	1,1-Dichloroethane	0.00106	U	0.000532	0.00106	0.00313
67-64-1	Acetone	0.0238		0.00203	0.00407	0.0156
78-93-3	2-Butanone	0.00438	U	0.00219	0.00438	0.0156
67-66-3	Chloroform	0.00169	U	0.000845	0.00169	0.00313
71-55-6	1,1,1-Trichloroethane	0.00313	U	0.00156	0.00313	0.00313
56-23-5	Carbon tetrachloride	0.00188	U	0.000939	0.00188	0.00313
71-43-2	Benzene	0.00156	U	0.000782	0.00156	0.00313
107-06-2	1,2-Dichloroethane	0.00313	U	0.00156	0.00313	0.00313
79-01-6	Trichloroethene	0.00138	U	0.000688	0.00138	0.00313
108-05-4	Vinyl acetate	0.00469	U	0.00235	0.00469	0.00469
78-87-5	1,2-Dichloropropane	0.00197	U	0.000986	0.00197	0.00313
74-95-3	Dibromomethane	0.00206	U	0.00103	0.00206	0.00313
75-27-4	Bromodichloromethane	0.001	U	0.000501	0.001	0.00313

R-RE

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID: 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00131	U	0.000657	0.00131	0.00313
108-10-1	4-Methyl-2-pentanone	0.00501	U	0.0025	0.00501	0.0156
108-88-3	Toluene	0.000907	U	0.000454	0.000907	0.00313
10061-02-6	trans-1,3-Dichloropropene	0.00313	U	0.00156	0.00313	0.00313
97-63-2	Ethyl methacrylate	0.00626	U	0.00313	0.00626	0.00782
79-00-5	1,1,2-Trichloroethane	0.00256	U	0.00128	0.00256	0.00313
127-18-4	Tetrachloroethene	0.00291	U	0.00145	0.00291	0.00313
591-78-6	2-Hexanone	0.00407	U	0.00203	0.00407	0.0156
124-48-1	Dibromochloromethane	0.00144	U	0.00072	0.00144	0.00313
106-93-4	1,2-Dibromoethane	0.00256	U	0.00128	0.00256	0.00313
108-90-7	Chlorobenzene	0.0011	U	0.000548	0.0011	0.00313
630-20-6	1,1,1,2-Tetrachloroethane	0.00232	U	0.00116	0.00232	0.00313
100-41-4	Ethylbenzene	0.00216	U	0.00108	0.00216	0.00313
100-42-5	Styrene	0.000876	U	0.000438	0.000876	0.00313
75-25-2	Bromoform	0.00144	U	0.00072	0.00144	0.00313
79-34-5	1,1,2,2-Tetrachloroethane	0.00185	U	0.000923	0.00185	0.00313
96-18-4	1,2,3-Trichloropropane	0.00375	U	0.00188	0.00375	0.00375
96-12-8	1,2-Dibromo-3-chloropropane	0.00876	U	0.00438	0.00876	0.00876
110-57-6	1,4-Dichloro-2-butene	0.0125	U	0.00626	0.0125	0.0156
75-05-8	Acetonitrile	0.0175	U	0.00876	0.0175	0.0313
107-05-1	Allyl chloride	0.00169	U	0.000845	0.00169	0.00313
123-91-1	1,4-Dioxane	0.31	U	0.16	0.31	0.31
78-83-1	Isobutyl alcohol	0.0501	U	0.025	0.0501	0.16
126-98-7	Methacrylonitrile	0.0178	U	0.00892	0.0178	0.0313
80-62-6	Methyl methacrylate	0.00216	U	0.00108	0.00216	0.00313
107-12-0	Propionitrile	0.0626	U	0.0313	0.0626	0.0626

R-RE

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID: 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00125	U	0.000626	0.00125	0.00313
1330-20-7	Xylene (total)	0.00213	U	0.00106	0.00213	0.00626

R-RE
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C-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-02RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00221	U	0.0011	0.00221	0.00368
74-87-3	Chloromethane	0.0014	U	0.0007	0.0014	0.00368
75-01-4	Vinyl chloride	0.00221	U	0.0011	0.00221	0.00368
74-83-9	Bromomethane	0.00442	U	0.00221	0.00442	0.00442
75-00-3	Chloroethane	0.00272	U	0.00136	0.00272	0.00368
75-69-4	Trichlorofluoromethane	0.00162	U	0.00081	0.00162	0.00368
75-35-4	1,1-Dichloroethene	0.00125	U	0.000626	0.00125	0.00368
107-02-8	Acrolein	0.011	U	0.00552	0.011	0.0184
74-88-4	Methyl iodide	0.00552	U	0.00276	0.00552	0.00552
75-15-0	Carbon disulfide	0.00552	U	0.00276	0.00552	0.00552
75-09-2	Methylene chloride	0.00442	U	0.00221	0.00442	0.0092
156-60-5	trans-1,2-Dichloroethene	0.00144	U	0.000718	0.00144	0.00368
107-13-1	Acrylonitrile	0.007	U	0.0035	0.007	0.0092
75-34-3	1,1-Dichloroethane	0.00125	U	0.000626	0.00125	0.00368
67-64-1	Acetone	0.0179	J	0.00239	0.00479	0.0184
78-93-3	2-Butanone	0.00515	U	0.00258	0.00515	0.0184
67-66-3	Chloroform	0.00199	U	0.000994	0.00199	0.00368
71-55-6	1,1,1-Trichloroethane	0.00368	U	0.00184	0.00368	0.00368
56-23-5	Carbon tetrachloride	0.00221	U	0.0011	0.00221	0.00368
71-43-2	Benzene	0.00184	U	0.00092	0.00184	0.00368
107-06-2	1,2-Dichloroethane	0.00368	U	0.00184	0.00368	0.00368
79-01-6	Trichloroethene	0.00162	U	0.00081	0.00162	0.00368
108-05-4	Vinyl acetate	0.00552	U	0.00276	0.00552	0.00552
78-87-5	1,2-Dichloropropane	0.00232	U	0.00116	0.00232	0.00368
74-95-3	Dibromomethane	0.00243	U	0.00121	0.00243	0.00368
75-27-4	Bromodichloromethane	0.00118	U	0.000589	0.00118	0.00368

UJ-SSL
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 J-SSL
 UJ-SSL
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VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00155	U	0.000773	0.00155	0.00368
108-10-1	4-Methyl-2-pentanone	0.00589	U	0.00294	0.00589	0.0184
108-88-3	Toluene	0.00107	U	0.000534	0.00107	0.00368
10061-02-6	trans-1,3-Dichloropropene	0.00368	U	0.00184	0.00368	0.00368
97-63-2	Ethyl methacrylate	0.00736	U	0.00368	0.00736	0.0092
79-00-5	1,1,2-Trichloroethane	0.00302	U	0.00151	0.00302	0.00368
127-18-4	Tetrachloroethene	0.00342	U	0.00171	0.00342	0.00368
591-78-6	2-Hexanone	0.00479	U	0.00239	0.00479	0.0184
124-48-1	Dibromochloromethane	0.00169	U	0.000847	0.00169	0.00368
106-93-4	1,2-Dibromoethane	0.00302	U	0.00151	0.00302	0.00368
108-90-7	Chlorobenzene	0.00129	U	0.000644	0.00129	0.00368
630-20-6	1,1,1,2-Tetrachloroethane	0.00272	U	0.00136	0.00272	0.00368
100-41-4	Ethylbenzene	0.00254	U	0.00127	0.00254	0.00368
100-42-5	Styrene	0.00103	U	0.000515	0.00103	0.00368
75-25-2	Bromoform	0.00169	U	0.000847	0.00169	0.00368
79-34-5	1,1,2,2-Tetrachloroethane	0.00217	U	0.00109	0.00217	0.00368
96-18-4	1,2,3-Trichloropropane	0.00442	U	0.00221	0.00442	0.00442
96-12-8	1,2-Dibromo-3-chloropropane	0.0103	U	0.00515	0.0103	0.0103
110-57-6	1,4-Dichloro-2-butene	0.0147	U	0.00736	0.0147	0.0184
75-05-8	Acetonitrile	0.0206	U	0.0103	0.0206	0.0368
107-05-1	Allyl chloride	0.00199	U	0.000994	0.00199	0.00368
123-91-1	1,4-Dioxane	0.37	U	0.18	0.37	0.37
78-83-1	Isobutyl alcohol	0.0589	U	0.0294	0.0589	0.18
126-98-7	Methacrylonitrile	0.021	U	0.0105	0.021	0.0368
80-62-6	Methyl methacrylate	0.00254	U	0.00127	0.00254	0.00368
107-12-0	Propionitrile	0.0736	U	0.0368	0.0736	0.0736

UJ-SSL
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C-A

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00147	U	0.000736	0.00147	0.00368
1330-20-7	Xylene (total)	0.0025	U	0.00125	0.0025	0.00736

UJ-SSL
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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-03

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D

Sample wt/vol: 7.92 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00129	U	0.000643	0.00129	0.00214
74-87-3	Chloromethane	0.000814	U	0.000407	0.000814	0.00214
75-01-4	Vinyl chloride	0.00129	U	0.000643	0.00129	0.00214
74-83-9	Bromomethane	0.00257	U	0.00129	0.00257	0.00257
75-00-3	Chloroethane	0.00159	U	0.000793	0.00159	0.00214
75-69-4	Trichlorofluoromethane	0.000943	U	0.000472	0.000943	0.00214
75-35-4	1,1-Dichloroethene	0.000729	U	0.000364	0.000729	0.00214
107-02-8	Acrolein	0.00643	U	0.00322	0.00643	0.0107
74-88-4	Methyl iodide	0.00322	U	0.00161	0.00322	0.00322
75-15-0	Carbon disulfide	0.00322	U	0.00161	0.00322	0.00322
75-09-2	Methylene chloride	0.00257	U	0.00129	0.00257	0.00536
156-60-5	trans-1,2-Dichloroethene	0.000836	U	0.000418	0.000836	0.00214
107-13-1	Acrylonitrile	0.00407	U	0.00204	0.00407	0.00536
75-34-3	1,1-Dichloroethane	0.000729	U	0.000364	0.000729	0.00214
67-64-1	Acetone	0.0282		0.00139	0.00279	0.0107
78-93-3	2-Butanone	0.003	U	0.0015	0.003	0.0107
67-66-3	Chloroform	0.00116	U	0.000579	0.00116	0.00214
71-55-6	1,1,1-Trichloroethane	0.00214	U	0.00107	0.00214	0.00214
56-23-5	Carbon tetrachloride	0.00129	U	0.000643	0.00129	0.00214
71-43-2	Benzene	0.00107	U	0.000536	0.00107	0.00214
107-06-2	1,2-Dichloroethane	0.00214	U	0.00107	0.00214	0.00214
79-01-6	Trichloroethene	0.000943	U	0.000472	0.000943	0.00214
108-05-4	Vinyl acetate	0.00322	U	0.00161	0.00322	0.00322
78-87-5	1,2-Dichloropropane	0.00135	U	0.000675	0.00135	0.00214
74-95-3	Dibromomethane	0.00141	U	0.000707	0.00141	0.00214
75-27-4	Bromodichloromethane	0.000686	U	0.000343	0.000686	0.00214

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D

Sample wt/vol: 7.92 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.0009	U	0.00045	0.0009	0.00214
108-10-1	4-Methyl-2-pentanone	0.00343	U	0.00171	0.00343	0.0107
108-88-3	Toluene	0.000622	U	0.000311	0.000622	0.00214
10061-02-6	trans-1,3-Dichloropropene	0.00214	U	0.00107	0.00214	0.00214
97-63-2	Ethyl methacrylate	0.00429	U	0.00214	0.00429	0.00536
79-00-5	1,1,2-Trichloroethane	0.00176	U	0.000879	0.00176	0.00214
127-18-4	Tetrachloroethene	0.00199	U	0.000997	0.00199	0.00214
591-78-6	2-Hexanone	0.00279	U	0.00139	0.00279	0.0107
124-48-1	Dibromochloromethane	0.000986	U	0.000493	0.000986	0.00214
106-93-4	1,2-Dibromoethane	0.00176	U	0.000879	0.00176	0.00214
108-90-7	Chlorobenzene	0.00075	U	0.000375	0.00075	0.00214
630-20-6	1,1,1,2-Tetrachloroethane	0.00159	U	0.000793	0.00159	0.00214
100-41-4	Ethylbenzene	0.00148	U	0.00074	0.00148	0.00214
100-42-5	Styrene	0.0006	U	0.0003	0.0006	0.00214
75-25-2	Bromoform	0.000986	U	0.000493	0.000986	0.00214
79-34-5	1,1,2,2-Tetrachloroethane	0.00126	U	0.000632	0.00126	0.00214
96-18-4	1,2,3-Trichloropropane	0.00257	U	0.00129	0.00257	0.00257
96-12-8	1,2-Dibromo-3-chloropropane	0.006	U	0.003	0.006	0.006
110-57-6	1,4-Dichloro-2-butene	0.00857	U	0.00429	0.00857	0.0107
75-05-8	Acetonitrile	0.012	U	0.006	0.012	0.0214
107-05-1	Allyl chloride	0.00116	U	0.000579	0.00116	0.00214
123-91-1	1,4-Dioxane	0.21	U	0.11	0.21	0.21
78-83-1	Isobutyl alcohol	0.0343	U	0.0171	0.0343	0.11
126-98-7	Methacrylonitrile	0.0122	U	0.00611	0.0122	0.0214
80-62-6	Methyl methacrylate	0.00148	U	0.00074	0.00148	0.00214
107-12-0	Propionitrile	0.0429	U	0.0214	0.0429	0.0429

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VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-03
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D
 Sample wt/vol: 7.92 Units: G Date Received: 04/13/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551
 PercentSolids: 58.9 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: _____ Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000857	U	0.000429	0.000857	0.00214
1330-20-7	Xylene (total)	0.00146	U	0.000729	0.00146	0.00429

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.53	J	0.19	0.38	1 U-BL
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6.9	J	1.3	2.6	10 U-BL
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.24	J	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

C-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.25	J	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	2.2		0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

CL

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-02
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D
 Sample wt/vol: 5 Units: ML Date Received: 04/13/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: _____ Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-03

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.34	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.34	J	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00152	U	0.00076	0.00152	0.00253
74-87-3	Chloromethane	0.000963	U	0.000481	0.000963	0.00253
75-01-4	Vinyl chloride	0.00152	U	0.00076	0.00152	0.00253
74-83-9	Bromomethane	0.00304	U	0.00152	0.00304	0.00304
75-00-3	Chloroethane	0.00187	U	0.000937	0.00187	0.00253
75-69-4	Trichlorofluoromethane	0.00111	U	0.000557	0.00111	0.00253
75-35-4	1,1-Dichloroethene	0.000861	U	0.000431	0.000861	0.00253
107-02-8	Acrolein	0.0076	U	0.0038	0.0076	0.0127 <i>UJ-MSL</i>
74-88-4	Methyl iodide	0.0038	U	0.0019	0.0038	0.0038
75-15-0	Carbon disulfide	0.0038	U	0.0019	0.0038	0.0038
75-09-2	Methylene chloride	0.00304	U	0.00152	0.00304	0.00633
156-60-5	trans-1,2-Dichloroethene	0.000988	U	0.000494	0.000988	0.00253
107-13-1	Acrylonitrile	0.00481	U	0.00241	0.00481	0.00633
75-34-3	1,1-Dichloroethane	0.000861	U	0.000431	0.000861	0.00253
67-64-1	Acetone	0.018		0.00165	0.00329	0.0127
78-93-3	2-Butanone	0.00355	U	0.00177	0.00355	0.0127
67-66-3	Chloroform	0.00137	U	0.000684	0.00137	0.00253
71-55-6	1,1,1-Trichloroethane	0.00253	U	0.00127	0.00253	0.00253
56-23-5	Carbon tetrachloride	0.00152	U	0.00076	0.00152	0.00253
71-43-2	Benzene	0.00127	U	0.000633	0.00127	0.00253
107-06-2	1,2-Dichloroethane	0.00253	U	0.00127	0.00253	0.00253
79-01-6	Trichloroethene	0.00111	U	0.000557	0.00111	0.00253
108-05-4	Vinyl acetate	0.0038	U	0.0019	0.0038	0.0038 <i>UJ-MSL</i>
78-87-5	1,2-Dichloropropane	0.0016	U	0.000798	0.0016	0.00253
74-95-3	Dibromomethane	0.00167	U	0.000836	0.00167	0.00253
75-27-4	Bromodichloromethane	0.000811	U	0.000405	0.000811	0.00253

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00106	U	0.000532	0.00106	0.00253
108-10-1	4-Methyl-2-pentanone	0.00405	U	0.00203	0.00405	0.0127
108-88-3	Toluene	0.000735	U	0.000367	0.000735	0.00253
10061-02-6	trans-1,3-Dichloropropene	0.00253	U	0.00127	0.00253	0.00253
97-63-2	Ethyl methacrylate	0.00507	U	0.00253	0.00507	0.00633 UJ-mst
79-00-5	1,1,2-Trichloroethane	0.00208	U	0.00104	0.00208	0.00253
127-18-4	Tetrachloroethene	0.00236	U	0.00118	0.00236	0.00253
591-78-6	2-Hexanone	0.00329	U	0.00165	0.00329	0.0127
124-48-1	Dibromochloromethane	0.00116	U	0.000583	0.00116	0.00253
106-93-4	1,2-Dibromoethane	0.00208	U	0.00104	0.00208	0.00253
108-90-7	Chlorobenzene	0.000887	U	0.000443	0.000887	0.00253 UJ-mst
630-20-6	1,1,1,2-Tetrachloroethane	0.00187	U	0.000937	0.00187	0.00253 UJ-mst
100-41-4	Ethylbenzene	0.00175	U	0.000874	0.00175	0.00253
100-42-5	Styrene	0.000709	U	0.000355	0.000709	0.00253 UJ-mst
75-25-2	Bromoform	0.00116	U	0.000583	0.00116	0.00253
79-34-5	1,1,2,2-Tetrachloroethane	0.00149	U	0.000747	0.00149	0.00253
96-18-4	1,2,3-Trichloropropane	0.00304	U	0.00152	0.00304	0.00304
96-12-8	1,2-Dibromo-3-chloropropane	0.00709	U	0.00355	0.00709	0.00709
110-57-6	1,4-Dichloro-2-butene	0.0101	U	0.00507	0.0101	0.0127
75-05-8	Acetonitrile	0.0142	U	0.00709	0.0142	0.0253
107-05-1	Allyl chloride	0.00137	U	0.000684	0.00137	0.00253
123-91-1	1,4-Dioxane	0.25	U	0.13	0.25	0.25 UR-RF
78-83-1	Isobutyl alcohol	0.0405	U	0.0203	0.0405	0.13 UR-RF
126-98-7	Methacrylonitrile	0.0144	U	0.00722	0.0144	0.0253
80-62-6	Methyl methacrylate	0.00175	U	0.000874	0.00175	0.00253
107-12-0	Propionitrile	0.0507	U	0.0253	0.0507	0.0507

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00101	U	0.000507	0.00101	0.00253
1330-20-7	Xylene (total)	0.00172	U	0.000861	0.00172	0.00507

UJ-MSL

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.49	U	0.19	0.38	1 U-BL
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	4	U	1.3	2.6	10 U-BL
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	1.1		0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	2
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

C.A

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00117	U	0.000584	0.00117	0.00194
74-87-3	Chloromethane	0.000739	U	0.00037	0.000739	0.00194
75-01-4	Vinyl chloride	0.00117	U	0.000584	0.00117	0.00194
74-83-9	Bromomethane	0.00233	U	0.00117	0.00233	0.00233
75-00-3	Chloroethane	0.00144	U	0.00072	0.00144	0.00194
75-69-4	Trichlorofluoromethane	0.000856	U	0.000428	0.000856	0.00194
75-35-4	1,1-Dichloroethene	0.000662	U	0.000331	0.000662	0.00194
107-02-8	Acrolein	0.00584	U	0.00292	0.00584	0.00973
74-88-4	Methyl iodide	0.00292	U	0.00146	0.00292	0.00292
75-15-0	Carbon disulfide	0.00292	U	0.00146	0.00292	0.00292
75-09-2	Methylene chloride	0.00233	U	0.00117	0.00233	0.00486
156-60-5	trans-1,2-Dichloroethene	0.000759	U	0.000379	0.000759	0.00194
107-13-1	Acrylonitrile	0.0037	U	0.00185	0.0037	0.00486
75-34-3	1,1-Dichloroethane	0.000662	U	0.000331	0.000662	0.00194
67-64-1	Acetone	0.0109		0.00126	0.00253	0.00973
78-93-3	2-Butanone	0.00272	U	0.00136	0.00272	0.00973
67-66-3	Chloroform	0.00105	U	0.000525	0.00105	0.00194
71-55-6	1,1,1-Trichloroethane	0.00194	U	0.000973	0.00194	0.00194
56-23-5	Carbon tetrachloride	0.00117	U	0.000584	0.00117	0.00194
71-43-2	Benzene	0.000973	U	0.000486	0.000973	0.00194
107-06-2	1,2-Dichloroethane	0.00194	U	0.000973	0.00194	0.00194
79-01-6	Trichloroethene	0.000856	U	0.000428	0.000856	0.00194
108-05-4	Vinyl acetate	0.00292	U	0.00146	0.00292	0.00292
78-87-5	1,2-Dichloropropane	0.00122	U	0.000613	0.00122	0.00194
74-95-3	Dibromomethane	0.00128	U	0.000642	0.00128	0.00194
75-27-4	Bromodichloromethane	0.000622	U	0.000311	0.000622	0.00194

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-FD

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.000817	U	0.000408	0.000817	0.00194
108-10-1	4-Methyl-2-pentanone	0.00311	U	0.00156	0.00311	0.00973
108-88-3	Toluene	0.000564	U	0.000282	0.000564	0.00194
10061-02-6	trans-1,3-Dichloropropene	0.00194	U	0.000973	0.00194	0.00194
97-63-2	Ethyl methacrylate	0.00389	U	0.00194	0.00389	0.00486
79-00-5	1,1,2-Trichloroethane	0.0016	U	0.000798	0.0016	0.00194
127-18-4	Tetrachloroethene	0.00181	U	0.000905	0.00181	0.00194
591-78-6	2-Hexanone	0.00253	U	0.00126	0.00253	0.00973
124-48-1	Dibromochloromethane	0.000895	U	0.000447	0.000895	0.00194
106-93-4	1,2-Dibromoethane	0.0016	U	0.000798	0.0016	0.00194
108-90-7	Chlorobenzene	0.000681	U	0.00034	0.000681	0.00194
630-20-6	1,1,1,2-Tetrachloroethane	0.00144	U	0.00072	0.00144	0.00194
100-41-4	Ethylbenzene	0.00134	U	0.000671	0.00134	0.00194
100-42-5	Styrene	0.000545	U	0.000272	0.000545	0.00194
75-25-2	Bromoform	0.000895	U	0.000447	0.000895	0.00194
79-34-5	1,1,2,2-Tetrachloroethane	0.00115	U	0.000574	0.00115	0.00194
96-18-4	1,2,3-Trichloropropane	0.00233	U	0.00117	0.00233	0.00233
96-12-8	1,2-Dibromo-3-chloropropane	0.00545	U	0.00272	0.00545	0.00545
110-57-6	1,4-Dichloro-2-butene	0.00778	U	0.00389	0.00778	0.00973
75-05-8	Acetonitrile	0.0109	U	0.00545	0.0109	0.0194
107-05-1	Allyl chloride	0.00105	U	0.000525	0.00105	0.00194
123-91-1	1,4-Dioxane	0.19	U	0.0973	0.19	0.19
78-83-1	Isobutyl alcohol	0.0311	U	0.0156	0.0311	0.0973
126-98-7	Methacrylonitrile	0.0111	U	0.00554	0.0111	0.0194
80-62-6	Methyl methacrylate	0.00134	U	0.000671	0.00134	0.00194
107-12-0	Propionitrile	0.0389	U	0.0194	0.0389	0.0389

UR-RF
UR-RF

OK

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000778	U	0.000389	0.000778	0.00194
1330-20-7	Xylene (total)	0.00132	U	0.000662	0.00132	0.00389

OK

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.64	U	0.19	0.38	1 <i>u-bl</i>
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6	U	1.3	2.6	10 <i>u-bl</i>
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.19	J	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.78	J	0.4	0.8	1
75-27-4	Bromodichloromethane	0.19	J	0.15	0.3	0.5

OK

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	J	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	1.6		0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

UR-RF
UR-RF

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID: 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup: (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

OK

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	1.8	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

C-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.39	J	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

c-1

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-EB
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D
 Sample wt/vol: 5 Units: ML Date Received: 04/13/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: _____ Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

C.R.

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-TB01

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.27	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.2	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

C.K

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-TB01

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-TB01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.7 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/23/12

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 2010

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0041	U	0.0021	0.0041	0.0052
91-57-6	2-Methylnaphthalene	0.0041	U	0.0021	0.0041	0.0052
83-32-9	Acenaphthene	0.0022	J	0.0021	0.0041	0.0052
208-96-8	Acenaphthylene	0.0046	J	0.0021	0.0041	0.0052
120-12-7	Anthracene	0.0097		0.0021	0.0041	0.0052
56-55-3	Benzo(a)anthracene	0.12		0.0022	0.0043	0.0052
50-32-8	Benzo(a)pyrene	0.2		0.0028	0.0056	0.0056
205-99-2	Benzo(b)fluoranthene	0.32		0.0029	0.0059	0.0059
191-24-2	Benzo(g,h,i)perylene	0.13		0.0048	0.0096	0.0096
207-08-9	Benzo(k)fluoranthene	0.074		0.0032	0.0065	0.0065
218-01-9	Chrysene	0.1		0.002	0.004	0.0052
53-70-3	Dibenzo(a,h)anthracene	0.04		0.004	0.0081	0.0081
206-44-0	Fluoranthene	0.15		0.0021	0.0041	0.0052
86-73-7	Fluorene	0.0024	J	0.0021	0.0041	0.0052
193-39-5	Indeno(1,2,3-cd)pyrene	0.13		0.0046	0.0093	0.0093
91-20-3	Naphthalene	0.0043	U	0.0022	0.0043	0.0052
85-01-8	Phenanthrene	0.037		0.0021	0.0041	0.0052
129-00-0	Pyrene	0.11		0.0021	0.0041	0.0052

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-01

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.35 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1045

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.015		0.0024	0.0048	0.006
91-57-6	2-Methylnaphthalene	0.04		0.0024	0.0048	0.006
83-32-9	Acenaphthene	0.0048	U	0.0024	0.0048	0.006
208-96-8	Acenaphthylene	0.0048	U	0.0024	0.0048	0.006
120-12-7	Anthracene	0.0048	U	0.0024	0.0048	0.006
56-55-3	Benzo(a)anthracene	0.024		0.0025	0.0051	0.006
50-32-8	Benzo(a)pyrene	0.041		0.0032	0.0065	0.0065
205-99-2	Benzo(b)fluoranthene	0.063		0.0034	0.0069	0.0069
191-24-2	Benzo(g,h,i)perylene	0.026		0.0056	0.011	0.011
207-08-9	Benzo(k)fluoranthene	0.018		0.0038	0.0076	0.0076
218-01-9	Chrysene	0.024		0.0024	0.0047	0.006
53-70-3	Dibenzo(a,h)anthracene	0.0067	J	0.0047	0.0094	0.0094
206-44-0	Fluoranthene	0.036		0.0024	0.0048	0.006
86-73-7	Fluorene	0.0048	U	0.0024	0.0048	0.006
193-39-5	Indeno(1,2,3-cd)pyrene	0.024		0.0054	0.011	0.011
91-20-3	Naphthalene	0.022		0.0025	0.0051	0.006
85-01-8	Phenanthrene	0.0074		0.0024	0.0048	0.006
129-00-0	Pyrene	0.027		0.0024	0.0048	0.006

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UJ-SSL
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J-SSL
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UJ-SSL
J-SSL
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-03

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.62 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1109

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0035	U	0.0018	0.0035	0.0044
91-57-6	2-Methylnaphthalene	0.0021	J	0.0018	0.0035	0.0044
83-32-9	Acenaphthene	0.0024	J	0.0018	0.0035	0.0044
208-96-8	Acenaphthylene	0.0022	J	0.0018	0.0035	0.0044
120-12-7	Anthracene	0.0052		0.0018	0.0035	0.0044
56-55-3	Benzo(a)anthracene	0.029		0.0018	0.0037	0.0044
50-32-8	Benzo(a)pyrene	0.051		0.0024	0.0048	0.0048
205-99-2	Benzo(b)fluoranthene	0.066		0.0025	0.005	0.005
191-24-2	Benzo(g,h,i)perylene	0.037		0.0041	0.0082	0.0082
207-08-9	Benzo(k)fluoranthene	0.021		0.0028	0.0056	0.0056
218-01-9	Chrysene	0.028		0.0017	0.0034	0.0044
53-70-3	Dibenzo(a,h)anthracene	0.01		0.0034	0.0069	0.0069
206-44-0	Fluoranthene	0.04		0.0018	0.0035	0.0044
86-73-7	Fluorene	0.0024	J	0.0018	0.0035	0.0044
193-39-5	Indeno(1,2,3-cd)pyrene	0.03		0.004	0.008	0.008
91-20-3	Naphthalene	0.0037	U	0.0018	0.0037	0.0044
85-01-8	Phenanthrene	0.013		0.0018	0.0035	0.0044
129-00-0	Pyrene	0.032		0.0018	0.0035	0.0044

UJ-SSL
J-SSL
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UJ-SSL
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1316

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.025	J	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.042	J	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.025	J	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.027	J	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.021	J	0.02	0.041	0.051

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1052

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.056		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.1		0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.18		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.086		0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.052		0.02	0.041	0.051
218-01-9	Chrysene	0.07		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.1		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.074		0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.036	J	0.02	0.041	0.051
129-00-0	Pyrene	0.079		0.02	0.041	0.051

J-MSL

J-MSL

J-MSL

o.k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.04 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1132

PercentSolids: 54 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.022		0.002	0.0039	0.0049
91-57-6	2-Methylnaphthalene	0.067		0.002	0.0039	0.0049
83-32-9	Acenaphthene	0.0039	U	0.002	0.0039	0.0049
208-96-8	Acenaphthylene	0.0028	J	0.002	0.0039	0.0049
120-12-7	Anthracene	0.0054		0.002	0.0039	0.0049
56-55-3	Benzo(a)anthracene	0.061		0.0021	0.0041	0.0049
50-32-8	Benzo(a)pyrene	0.1		0.0027	0.0053	0.0053
205-99-2	Benzo(b)fluoranthene	0.16		0.0028	0.0056	0.0056
191-24-2	Benzo(g,h,i)perylene	0.1		0.0046	0.0092	0.0092
207-08-9	Benzo(k)fluoranthene	0.04		0.0031	0.0062	0.0062
218-01-9	Chrysene	0.063		0.0019	0.0038	0.0049
53-70-3	Dibenzo(a,h)anthracene	0.02		0.0038	0.0077	0.0077
206-44-0	Fluoranthene	0.11		0.002	0.0039	0.0049
86-73-7	Fluorene	0.0039	U	0.002	0.0039	0.0049
193-39-5	Indeno(1,2,3-cd)pyrene	0.082		0.0044	0.0089	0.0089
91-20-3	Naphthalene	0.03		0.0021	0.0041	0.0049
85-01-8	Phenanthrene	0.031		0.002	0.0039	0.0049
129-00-0	Pyrene	0.074		0.002	0.0039	0.0049

c.t

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.1		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.2		0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.3		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.17		0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.092		0.02	0.041	0.051
218-01-9	Chrysene	0.12		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.037	J	0.02	0.041	0.051
206-44-0	Fluoranthene	0.21		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.14		0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.072		0.02	0.041	0.051
129-00-0	Pyrene	0.15		0.02	0.041	0.051

C-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.43 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/23/12

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 2146

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0034	U	0.0017	0.0034	0.0042
91-57-6	2-Methylnaphthalene	0.0034	U	0.0017	0.0034	0.0042
83-32-9	Acenaphthene	0.004	J	0.0017	0.0034	0.0042
208-96-8	Acenaphthylene	0.0037	J	0.0017	0.0034	0.0042
120-12-7	Anthracene	0.0092		0.0017	0.0034	0.0042
56-55-3	Benzo(a)anthracene	0.14		0.0018	0.0035	0.0042
50-32-8	Benzo(a)pyrene	0.18		0.0023	0.0045	0.0045
205-99-2	Benzo(b)fluoranthene	0.26		0.0024	0.0048	0.0048
191-24-2	Benzo(g,h,i)perylene	0.098		0.0039	0.0078	0.0078
207-08-9	Benzo(k)fluoranthene	0.071		0.0026	0.0053	0.0053
218-01-9	Chrysene	0.096		0.0016	0.0033	0.0042
53-70-3	Dibenzo(a,h)anthracene	0.031		0.0033	0.0066	0.0066
206-44-0	Fluoranthene	0.14		0.0017	0.0034	0.0042
86-73-7	Fluorene	0.0031	J	0.0017	0.0034	0.0042
193-39-5	Indeno(1,2,3-cd)pyrene	0.094		0.0038	0.0076	0.0076
91-20-3	Naphthalene	0.0021	J	0.0018	0.0035	0.0042
85-01-8	Phenanthrene	0.041		0.0017	0.0034	0.0042
129-00-0	Pyrene	0.11		0.0017	0.0034	0.0042

U-BL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-FD

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1340

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.024	J	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.059		0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.028	J	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.04	J	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.067		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.036	J	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.022	J	0.02	0.041	0.051
218-01-9	Chrysene	0.028	J	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.04	J	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.031	J	0.02	0.041	0.051
91-20-3	Naphthalene	0.038	J	0.02	0.041	0.051
85-01-8	Phenanthrene	0.022	J	0.02	0.041	0.051
129-00-0	Pyrene	0.031	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1204

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

c.k

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 724-1.D

Sample wt/vol: 33.75 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1300

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	144		25.3	50.6	50.6

J-SSL

ca

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 724-2.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1320

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	2100		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 724-3.D

Sample wt/vol: 33.91 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1322

PercentSolids: 43.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	103		29	58	58

C-2

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 724-4.D

Sample wt/vol: 33.13 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1345

PercentSolids: 58.9 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	144		22	44	44

ck

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 724-5.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1342

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1100		255	510	510

J-SSL

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 724-6.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1405

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1200		255	510	510

J-SSL

CA

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

TFS-SD-04

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 724-7.D

Sample wt/vol: 33.47 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 0855

PercentSolids: 54 decanted: _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	91.1		23.7	47.5	47.5

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 724-8.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1140

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	860		255	510	510

J-SSL

c-k

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 724-9.D

Sample wt/vol: 33.46 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1407

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	95.7		20.6	41.2	41.2

ck

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 724-10.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1427

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	980		255	510	510

J-SSL

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 724-15.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1449

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

c-k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.82	U	0.41	0.82	0.82
62-75-9	N-Nitrosodimethylamine	0.22	U	0.11	0.22	0.31
62-53-3	Aniline	0.24	U	0.12	0.24	0.42
111-44-4	Bis(2-chloroethyl)ether	0.21	U	0.1	0.21	0.31
108-95-2	Phenol	0.2	U	0.1	0.2	0.77
95-57-8	2-Chlorophenol	0.21	U	0.11	0.21	0.42
541-73-1	1,3-Dichlorobenzene	0.19	U	0.094	0.19	0.42
106-46-7	1,4-Dichlorobenzene	0.19	U	0.097	0.19	0.42
95-50-1	1,2-Dichlorobenzene	0.18	U	0.088	0.18	0.42
100-51-6	Benzyl alcohol	0.28	U	0.14	0.28	1
108-60-1	2,2'-Oxybis(1-chloropropane)	0.68	U	0.34	0.68	0.68
95-48-7	2-Methylphenol	0.3	U	0.15	0.3	0.41
67-72-1	Hexachloroethane	0.15	U	0.077	0.15	0.42
621-64-7	N-Nitroso-di-n-propylamine	0.19	U	0.094	0.19	0.31
106-44-5	4-Methylphenol	0.18	U	0.091	0.18	0.42
98-95-3	Nitrobenzene	0.18	U	0.092	0.18	0.31
78-59-1	Isophorone	0.18	U	0.091	0.18	0.42
88-75-5	2-Nitrophenol	0.22	U	0.11	0.22	0.42
105-67-9	2,4-Dimethylphenol	0.18	U	0.088	0.18	0.41
111-91-1	Bis(2-chloroethoxy)methane	0.18	U	0.088	0.18	0.41
120-83-2	2,4-Dichlorophenol	0.23	U	0.12	0.23	0.31
120-82-1	1,2,4-Trichlorobenzene	0.18	U	0.089	0.18	0.42
106-47-8	4-Chloroaniline	0.19	U	0.097	0.19	0.42
87-68-3	Hexachlorobutadiene	0.18	U	0.089	0.18	0.42
59-50-7	4-Chloro-3-methylphenol	0.17	U	0.086	0.17	0.42
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.062	0.12	1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.21	U	0.1	0.21	0.41
95-95-4	2,4,5-Trichlorophenol	0.23	U	0.11	0.23	0.41
91-58-7	2-Chloronaphthalene	0.2	U	0.1	0.2	0.42
88-74-4	2-Nitroaniline	0.18	U	0.088	0.18	0.42
131-11-3	Dimethylphthalate	0.18	U	0.091	0.18	0.42
606-20-2	2,6-Dinitrotoluene	0.15	U	0.077	0.15	0.31
99-09-2	3-Nitroaniline	0.25	U	0.12	0.25	0.31
51-28-5	2,4-Dinitrophenol	0.68	U	0.34	0.68	1.5
132-64-9	Dibenzofuran	0.17	U	0.083	0.17	0.42
121-14-2	2,4-Dinitrotoluene	0.15	U	0.076	0.15	0.31
100-02-7	4-Nitrophenol	0.16	U	0.082	0.16	0.46
7005-72-3	4-Chlorophenyl-phenylether	0.16	U	0.079	0.16	0.42
84-66-2	Diethylphthalate	0.16	U	0.079	0.16	0.42
100-01-6	4-Nitroaniline	0.27	U	0.14	0.27	0.31
534-52-1	4,6-Dinitro-2-methylphenol	0.82	U	0.41	0.82	0.82
86-30-6	N-Nitrosodiphenylamine	0.19	U	0.097	0.19	0.41
101-55-3	4-Bromophenyl-phenylether	0.15	U	0.076	0.15	0.42
118-74-1	Hexachlorobenzene	0.16	U	0.082	0.16	0.41
87-86-5	Pentachlorophenol	0.41	U	0.2	0.41	0.77
84-74-2	Di-n-butylphthalate	0.14	U	0.068	0.14	0.42
85-68-7	Butylbenzylphthalate	0.19	U	0.097	0.19	0.42
91-94-1	3,3'-Dichlorobenzidine	0.18	U	0.091	0.18	0.31
117-81-7	Bis(2-ethylhexyl)phthalate	0.26	U	0.13	0.26	0.31
117-84-0	Di-n-octylphthalate	0.18	U	0.089	0.18	0.42
109-06-8	2-Picoline	0.15	U	0.077	0.15	0.42
10595-95-6	N-Nitrosomethylethylamine	0.17	U	0.083	0.17	0.31

4J-BSL
4J-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.16	U	0.082	0.16	0.77
66-27-3	Methylmethanesulfonate	0.18	U	0.088	0.18	0.42
62-50-0	Ethyl methanesulfonate	0.14	U	0.071	0.14	0.42
76-01-7	Pentachloroethane	0.14	U	0.072	0.14	0.42
930-55-2	N-Nitrosopyrrolidine	0.15	U	0.076	0.15	0.42
98-86-2	Acetophenone	0.31	U	0.15	0.31	0.42
59-89-2	N-Nitrosomorpholine	0.2	U	0.099	0.2	0.42
95-53-4	o-Toluidine	0.22	U	0.11	0.22	0.42
122-09-8	a,a-Dimethylphenethylamine	1.4	U	0.68	1.4	2.1
87-65-0	2,6-Dichlorophenol	0.21	U	0.1	0.21	0.31
1888-71-7	Hexachloropropene	0.14	U	0.069	0.14	0.42
924-16-3	N-Nitrosodibutylamine	0.18	U	0.088	0.18	0.31
120-58-1	Isosafrole	0.18	U	0.088	0.18	0.42
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.072	0.14	0.42
94-59-7	Safrole	0.2	U	0.1	0.2	0.42
130-15-4	1,4-Naphthoquinone	0.13	U	0.066	0.13	0.42
99-65-0	1,3-Dinitrobenzene	0.15	U	0.077	0.15	0.31
608-93-5	Pentachlorobenzene	0.15	U	0.077	0.15	0.42
134-32-7	1-Naphthylamine	0.2	U	0.1	0.2	0.42
91-59-8	2-Naphthylamine	0.82	U	0.41	0.82	0.82
58-90-2	2,3,4,6-Tetrachlorophenol	0.22	U	0.11	0.22	0.42
99-55-8	5-Nitro-o-toluidine	0.14	U	0.072	0.14	0.42
106-50-3	p-Phenylenediamine	0.18	U	0.089	0.18	0.42
62-44-2	Phenacetin	0.18	U	0.089	0.18	0.42
92-67-1	4-Aminobiphenyl	0.82	U	0.41	0.82	1
23950-58-5	Pronamide	0.11	U	0.057	0.11	0.42

UJ-BSL
UJ-BSL

UJ-BSL
UJ-BSL

UJ-BSL

UR-BSL

UJ-BSL

o-k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.14	U	0.071	0.14	0.41
88-85-7	Dinoseb	0.41	U	0.2	0.41	0.42
56-57-5	4-Nitroquinoline-1-oxide	0.31	U	0.15	0.31	2
91-80-5	Methapyriline	0.2	U	0.1	0.2	0.42
140-57-8	Aramite	0.62	U	0.31	0.62	0.62
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.072	0.14	0.42
53-96-3	2-Acetylaminofluorene	0.19	U	0.094	0.19	0.42
57-97-6	7,12-Dimethylbenz(a)anthracene	0.11	U	0.054	0.11	0.41
56-49-5	3-Methylcholanthrene	0.12	U	0.06	0.12	0.41
100-75-4	N-Nitrosopiperidine	0.13	U	0.066	0.13	0.42
99-35-4	1,3,5-Trinitrobenzene	0.62	U	0.31	0.62	0.62
2303-16-4	Diallate (Avadex)	0.23	U	0.11	0.23	0.41
465-73-6	Isodrin	0.15	U	0.076	0.15	0.42
510-15-6	Chlorobenzilate	0.086	U	0.043	0.086	0.41
143-50-0	Kepone	0.16	U	0.08	0.16	1.5
126-68-1	0,0,0-Triethylphosphorothioate	0.15	U	0.074	0.15	0.42

UJ-BSL
UR-RF,BSL
UR-RF,BSL

UJ-BSL

UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.83	U	0.42	0.83	0.83
62-75-9	N-Nitrosodimethylamine	0.22	U	0.11	0.22	0.31
62-53-3	Aniline	0.24	U	0.12	0.24	0.42
111-44-4	Bis(2-chloroethyl)ether	0.21	U	0.1	0.21	0.31
108-95-2	Phenol	0.2	U	0.1	0.2	0.78
95-57-8	2-Chlorophenol	0.22	U	0.11	0.22	0.42
541-73-1	1,3-Dichlorobenzene	0.19	U	0.095	0.19	0.42
106-46-7	1,4-Dichlorobenzene	0.2	U	0.098	0.2	0.42
95-50-1	1,2-Dichlorobenzene	0.18	U	0.089	0.18	0.42
100-51-6	Benzyl alcohol	0.29	U	0.14	0.29	1
108-60-1	2,2'-Oxybis(1-chloropropane)	0.69	U	0.34	0.69	0.69
95-48-7	2-Methylphenol	0.3	U	0.15	0.3	0.42
67-72-1	Hexachloroethane	0.16	U	0.078	0.16	0.42
621-64-7	N-Nitroso-di-n-propylamine	0.19	U	0.095	0.19	0.31
106-44-5	4-Methylphenol	0.18	U	0.092	0.18	0.42
98-95-3	Nitrobenzene	0.19	U	0.094	0.19	0.31
78-59-1	Isophorone	0.18	U	0.092	0.18	0.42
88-75-5	2-Nitrophenol	0.22	U	0.11	0.22	0.42
105-67-9	2,4-Dimethylphenol	0.18	U	0.089	0.18	0.42
111-91-1	Bis(2-chloroethoxy)methane	0.18	U	0.089	0.18	0.42
120-83-2	2,4-Dichlorophenol	0.23	U	0.12	0.23	0.31
120-82-1	1,2,4-Trichlorobenzene	0.18	U	0.09	0.18	0.42
106-47-8	4-Chloroaniline	0.2	U	0.098	0.2	0.42
87-68-3	Hexachlorobutadiene	0.18	U	0.09	0.18	0.42
59-50-7	4-Chloro-3-methylphenol	0.17	U	0.087	0.17	0.42
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.062	0.12	1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.21	U	0.11	0.21	0.42
95-95-4	2,4,5-Trichlorophenol	0.23	U	0.12	0.23	0.42
91-58-7	2-Chloronaphthalene	0.21	U	0.1	0.21	0.42
88-74-4	2-Nitroaniline	0.18	U	0.089	0.18	0.42
131-11-3	Dimethylphthalate	0.18	U	0.092	0.18	0.42
606-20-2	2,6-Dinitrotoluene	0.16	U	0.078	0.16	0.31
99-09-2	3-Nitroaniline	0.25	U	0.12	0.25	0.31
51-28-5	2,4-Dinitrophenol	0.69	U	0.34	0.69	1.6
132-64-9	Dibenzofuran	0.17	U	0.084	0.17	0.42
121-14-2	2,4-Dinitrotoluene	0.15	U	0.076	0.15	0.31
100-02-7	4-Nitrophenol	0.16	U	0.083	0.16	0.47
7005-72-3	4-Chlorophenyl-phenylether	0.16	U	0.08	0.16	0.42
84-66-2	Diethylphthalate	0.16	U	0.08	0.16	0.42
100-01-6	4-Nitroaniline	0.27	U	0.14	0.27	0.31
534-52-1	4,6-Dinitro-2-methylphenol	0.83	U	0.42	0.83	0.83
86-30-6	N-Nitrosodiphenylamine	0.2	U	0.098	0.2	0.42
101-55-3	4-Bromophenyl-phenylether	0.15	U	0.076	0.15	0.42
118-74-1	Hexachlorobenzene	0.16	U	0.083	0.16	0.42
87-86-5	Pentachlorophenol	0.42	U	0.21	0.42	0.78
84-74-2	Di-n-butylphthalate	0.14	U	0.069	0.14	0.42
85-68-7	Butylbenzylphthalate	0.2	U	0.098	0.2	0.42
91-94-1	3,3'-Dichlorobenzidine	0.18	U	0.092	0.18	0.31
117-81-7	Bis(2-ethylhexyl)phthalate	0.26	U	0.13	0.26	0.31
117-84-0	Di-n-octylphthalate	0.18	U	0.09	0.18	0.42
109-06-8	2-Picoline	0.16	U	0.078	0.16	0.42
10595-95-6	N-Nitrosomethylethylamine	0.17	U	0.084	0.17	0.31

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.16	U	0.083	0.16	0.78	R-RE ↓
66-27-3	Methylmethanesulfonate	0.18	U	0.089	0.18	0.42	
62-50-0	Ethyl methanesulfonate	0.14	U	0.072	0.14	0.42	
76-01-7	Pentachloroethane	0.15	U	0.073	0.15	0.42	
930-55-2	N-Nitrosopyrrolidine	0.15	U	0.076	0.15	0.42	
98-86-2	Acetophenone	0.31	U	0.16	0.31	0.42	
59-89-2	N-Nitrosomorpholine	0.2	U	0.1	0.2	0.42	
95-53-4	o-Toluidine	0.22	U	0.11	0.22	0.42	
122-09-8	a,a-Dimethylphenethylamine	1.4	U	0.69	1.4	2.1	
87-65-0	2,6-Dichlorophenol	0.21	U	0.1	0.21	0.31	
1888-71-7	Hexachloropropene	0.14	U	0.07	0.14	0.42	
924-16-3	N-Nitrosodibutylamine	0.18	U	0.089	0.18	0.31	
120-58-1	Isosafrole	0.18	U	0.089	0.18	0.42	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.15	U	0.073	0.15	0.42	
94-59-7	Safrole	0.21	U	0.1	0.21	0.42	
130-15-4	1,4-Naphthoquinone	0.13	U	0.067	0.13	0.42	
99-65-0	1,3-Dinitrobenzene	0.16	U	0.078	0.16	0.31	
608-93-5	Pentachlorobenzene	0.16	U	0.078	0.16	0.42	
134-32-7	1-Naphthylamine	0.21	U	0.1	0.21	0.42	
91-59-8	2-Naphthylamine	0.83	U	0.42	0.83	0.83	
58-90-2	2,3,4,6-Tetrachlorophenol	0.22	U	0.11	0.22	0.42	
99-55-8	5-Nitro-o-toluidine	0.15	U	0.073	0.15	0.42	
106-50-3	p-Phenylenediamine	0.18	U	0.09	0.18	0.42	
62-44-2	Phenacetin	0.18	U	0.09	0.18	0.42	
92-67-1	4-Aminobiphenyl	0.83	U	0.42	0.83	1	
23950-58-5	Pronamide	0.12	U	0.058	0.12	0.42	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.14	U	0.072	0.14	0.42
88-85-7	Dinoseb	0.42	U	0.21	0.42	0.42
56-57-5	4-Nitroquinoline-1-oxide	0.31	U	0.16	0.31	2.1
91-80-5	Methapyriline	0.21	U	0.1	0.21	0.42
140-57-8	Aramite	0.62	U	0.31	0.62	0.62
60-11-7	p-Dimethylaminoazobenzene	0.15	U	0.073	0.15	0.42
53-96-3	2-Acetylaminofluorene	0.19	U	0.095	0.19	0.42
57-97-6	7,12-Dimethylbenz(a)anthracene	0.11	U	0.055	0.11	0.42
56-49-5	3-Methylcholanthrene	0.12	U	0.061	0.12	0.42
100-75-4	N-Nitrosopiperidine	0.13	U	0.067	0.13	0.42
99-35-4	1,3,5-Trinitrobenzene	0.62	U	0.31	0.62	0.62
2303-16-4	Diallate (Avadex)	0.23	U	0.12	0.23	0.42
465-73-6	Isodrin	0.15	U	0.076	0.15	0.42
510-15-6	Chlorobenzilate	0.087	U	0.044	0.087	0.42
143-50-0	Kepone	0.16	U	0.081	0.16	1.6
126-68-1	0,0,0-Triethylphosphorothioate	0.15	U	0.075	0.15	0.42

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1 UJ-SSL
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9 UJ-SSL
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5 UJ-SSL
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5 UJ-SSL
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3 UJ-SSL
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2 UJ-SSL
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3 UJ-SSL
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3 UJ-SSL
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1 UJ-SSL
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4 UJ-SSL
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1	
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9	UJ-SSL
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7	UJ-SSL
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1	
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1	
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7	
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4	
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5	
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2	
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1	
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7	
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1	
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2	UJ-SSL
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9	UJ-SSL
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7	UJ-SSL
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1	UJ-SSL
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2	UJ-SSL
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1	UJ-SSL
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1	
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5	
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9	
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1	
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2	
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL

UR-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3	R-RE ↓
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5	
62-53-3	Aniline	5.7	U	2.8	5.7	5.7	
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1	
108-95-2	Phenol	3.5	U	1.7	3.5	4.1	
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9	
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5	
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5	
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3	
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2	
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7	
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3	
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3	
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1	
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4	
98-95-3	Nitrobenzene	2	U	1	2	4.1	
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8	
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1	
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7	
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1	
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3	
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3	
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1	
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1	
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5	
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-01RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

e-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-01RE1
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D
 Sample wt/vol: 980 Units: ML Date Received: 04/13/12
 Concentrated Extract Volume: 1 Date Extracted: 04/30/12
 Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152
 PercentSolids: 0 decanted: _____ Dilution Factor: 1
 Extraction: SEPF Station ID: _____ Method: 8270
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): HPMS-5 ID: 0.25 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

D-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-02

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.94	U	0.47	0.94	0.94
62-75-9	N-Nitrosodimethylamine	0.25	U	0.12	0.25	0.35
62-53-3	Aniline	0.27	U	0.14	0.27	0.48
111-44-4	Bis(2-chloroethyl)ether	0.24	U	0.12	0.24	0.35
108-95-2	Phenol	0.23	U	0.11	0.23	0.88
95-57-8	2-Chlorophenol	0.24	U	0.12	0.24	0.48
541-73-1	1,3-Dichlorobenzene	0.22	U	0.11	0.22	0.48
106-46-7	1,4-Dichlorobenzene	0.22	U	0.11	0.22	0.48
95-50-1	1,2-Dichlorobenzene	0.2	U	0.1	0.2	0.48
100-51-6	Benzyl alcohol	0.32	U	0.16	0.32	1.2
108-60-1	2,2'-Oxybis(1-chloropropane)	0.78	U	0.39	0.78	0.78
95-48-7	2-Methylphenol	0.34	U	0.17	0.34	0.47
67-72-1	Hexachloroethane	0.18	U	0.088	0.18	0.48
621-64-7	N-Nitroso-di-n-propylamine	0.22	U	0.11	0.22	0.35
106-44-5	4-Methylphenol	0.21	U	0.1	0.21	0.48
98-95-3	Nitrobenzene	0.21	U	0.11	0.21	0.35
78-59-1	Isophorone	0.21	U	0.1	0.21	0.48
88-75-5	2-Nitrophenol	0.25	U	0.13	0.25	0.48
105-67-9	2,4-Dimethylphenol	0.2	U	0.1	0.2	0.47
111-91-1	Bis(2-chloroethoxy)methane	0.2	U	0.1	0.2	0.47
120-83-2	2,4-Dichlorophenol	0.26	U	0.13	0.26	0.35
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.1	0.2	0.48
106-47-8	4-Chloroaniline	0.22	U	0.11	0.22	0.48
87-68-3	Hexachlorobutadiene	0.2	U	0.1	0.2	0.48
59-50-7	4-Chloro-3-methylphenol	0.2	U	0.099	0.2	0.48
77-47-4	Hexachlorocyclopentadiene	0.14	U	0.071	0.14	1.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.24	U	0.12	0.24	0.47
95-95-4	2,4,5-Trichlorophenol	0.26	U	0.13	0.26	0.47
91-58-7	2-Chloronaphthalene	0.24	U	0.12	0.24	0.48
88-74-4	2-Nitroaniline	0.2	U	0.1	0.2	0.48
131-11-3	Dimethylphthalate	0.21	U	0.1	0.21	0.48
606-20-2	2,6-Dinitrotoluene	0.18	U	0.088	0.18	0.35
99-09-2	3-Nitroaniline	0.28	U	0.14	0.28	0.35
51-28-5	2,4-Dinitrophenol	0.78	U	0.39	0.78	1.8
132-64-9	Dibenzofuran	0.19	U	0.095	0.19	0.48
121-14-2	2,4-Dinitrotoluene	0.17	U	0.087	0.17	0.35
100-02-7	4-Nitrophenol	0.19	U	0.094	0.19	0.53
7005-72-3	4-Chlorophenyl-phenylether	0.18	U	0.09	0.18	0.48
84-66-2	Diethylphthalate	0.18	U	0.09	0.18	0.48
100-01-6	4-Nitroaniline	0.31	U	0.16	0.31	0.35
534-52-1	4,6-Dinitro-2-methylphenol	0.94	U	0.47	0.94	0.94
86-30-6	N-Nitrosodiphenylamine	0.22	U	0.11	0.22	0.47
101-55-3	4-Bromophenyl-phenylether	0.17	U	0.087	0.17	0.48
118-74-1	Hexachlorobenzene	0.19	U	0.094	0.19	0.47
87-86-5	Pentachlorophenol	0.47	U	0.24	0.47	0.88
84-74-2	Di-n-butylphthalate	0.16	U	0.078	0.16	0.48
85-68-7	Butylbenzylphthalate	0.22	U	0.11	0.22	0.48
91-94-1	3,3'-Dichlorobenzidine	0.21	U	0.1	0.21	0.35
117-81-7	Bis(2-ethylhexyl)phthalate	0.29	U	0.15	0.29	0.35
117-84-0	Di-n-octylphthalate	0.2	U	0.1	0.2	0.48
109-06-8	2-Picoline	0.18	U	0.088	0.18	0.48
10595-95-6	N-Nitrosomethylethylamine	0.19	U	0.095	0.19	0.35

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-02

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.19	U	0.094	0.19	0.88	UJ-BSL
66-27-3	Methylmethanesulfonate	0.2	U	0.1	0.2	0.48	UJ-BSL
62-50-0	Ethyl methanesulfonate	0.16	U	0.081	0.16	0.48	
76-01-7	Pentachloroethane	0.17	U	0.083	0.17	0.48	
930-55-2	N-Nitrosopyrrolidine	0.17	U	0.087	0.17	0.48	
98-86-2	Acetophenone	0.35	U	0.18	0.35	0.48	
59-89-2	N-Nitrosomorpholine	0.23	U	0.11	0.23	0.48	
95-53-4	o-Toluidine	0.25	U	0.12	0.25	0.48	UJ-BSL
122-09-8	a,a-Dimethylphenethylamine	1.6	U	0.78	1.6	2.4	UJ-BSL
87-65-0	2,6-Dichlorophenol	0.24	U	0.12	0.24	0.35	
1888-71-7	Hexachloropropene	0.16	U	0.08	0.16	0.48	UJ-BSL
924-16-3	N-Nitrosodibutylamine	0.2	U	0.1	0.2	0.35	
120-58-1	Isosafrole	0.2	U	0.1	0.2	0.48	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.17	U	0.083	0.17	0.48	
94-59-7	Safrole	0.24	U	0.12	0.24	0.48	
130-15-4	1,4-Naphthoquinone	0.15	U	0.076	0.15	0.48	UR-BSL
99-65-0	1,3-Dinitrobenzene	0.18	U	0.088	0.18	0.35	
608-93-5	Pentachlorobenzene	0.18	U	0.088	0.18	0.48	
134-32-7	1-Naphthylamine	0.24	U	0.12	0.24	0.48	UJ-BSL
91-59-8	2-Naphthylamine	0.94	U	0.47	0.94	0.94	
58-90-2	2,3,4,6-Tetrachlorophenol	0.25	U	0.12	0.25	0.48	
99-55-8	5-Nitro-o-toluidine	0.17	U	0.083	0.17	0.48	
106-50-3	p-Phenylenediamine	0.2	U	0.1	0.2	0.48	
62-44-2	Phenacetin	0.2	U	0.1	0.2	0.48	
92-67-1	4-Aminobiphenyl	0.94	U	0.47	0.94	1.2	
23950-58-5	Pronamide	0.13	U	0.065	0.13	0.48	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.16	U	0.081	0.16	0.47
88-85-7	Dinoseb	0.47	U	0.24	0.47	0.48
56-57-5	4-Nitroquinoline-1-oxide	0.35	U	0.18	0.35	2.4
91-80-5	Methapyriline	0.23	U	0.12	0.23	0.48
140-57-8	Aramite	0.71	U	0.35	0.71	0.71
60-11-7	p-Dimethylaminoazobenzene	0.17	U	0.083	0.17	0.48
53-96-3	2-Acetylaminofluorene	0.22	U	0.11	0.22	0.48
57-97-6	7,12-Dimethylbenz(a)anthracene	0.12	U	0.062	0.12	0.47
56-49-5	3-Methylcholanthrene	0.14	U	0.069	0.14	0.47
100-75-4	N-Nitrosopiperidine	0.15	U	0.076	0.15	0.48
99-35-4	1,3,5-Trinitrobenzene	0.71	U	0.35	0.71	0.71
2303-16-4	Diallate (Avadex)	0.26	U	0.13	0.26	0.47
465-73-6	Isodrin	0.17	U	0.087	0.17	0.48
510-15-6	Chlorobenzilate	0.099	U	0.05	0.099	0.47
143-50-0	Kepone	0.18	U	0.092	0.18	1.8
126-68-1	0,0,0-Triethylphosphorothioate	0.17	U	0.085	0.17	0.48

UJ-BSL
UR-RF, BSL
UR-RF, BSL

UJ-BSL

UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SD-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.97	U	0.49	0.97	0.97
62-75-9	N-Nitrosodimethylamine	0.26	U	0.13	0.26	0.36
62-53-3	Aniline	0.28	U	0.14	0.28	0.49
111-44-4	Bis(2-chloroethyl)ether	0.24	U	0.12	0.24	0.36
108-95-2	Phenol	0.24	U	0.12	0.24	0.91
95-57-8	2-Chlorophenol	0.25	U	0.13	0.25	0.49
541-73-1	1,3-Dichlorobenzene	0.22	U	0.11	0.22	0.49
106-46-7	1,4-Dichlorobenzene	0.23	U	0.12	0.23	0.49
95-50-1	1,2-Dichlorobenzene	0.21	U	0.1	0.21	0.49
100-51-6	Benzyl alcohol	0.34	U	0.17	0.34	1.2
108-60-1	2,2'-Oxybis(1-chloropropane)	0.8	U	0.4	0.8	0.8
95-48-7	2-Methylphenol	0.35	U	0.18	0.35	0.49
67-72-1	Hexachloroethane	0.18	U	0.091	0.18	0.49
621-64-7	N-Nitroso-di-n-propylamine	0.22	U	0.11	0.22	0.36
106-44-5	4-Methylphenol	0.22	U	0.11	0.22	0.49
98-95-3	Nitrobenzene	0.22	U	0.11	0.22	0.36
78-59-1	Isophorone	0.22	U	0.11	0.22	0.49
88-75-5	2-Nitrophenol	0.26	U	0.13	0.26	0.49
105-67-9	2,4-Dimethylphenol	0.21	U	0.1	0.21	0.49
111-91-1	Bis(2-chloroethoxy)methane	0.21	U	0.1	0.21	0.49
120-83-2	2,4-Dichlorophenol	0.27	U	0.14	0.27	0.36
120-82-1	1,2,4-Trichlorobenzene	0.21	U	0.11	0.21	0.49
106-47-8	4-Chloroaniline	0.23	U	0.12	0.23	0.49
87-68-3	Hexachlorobutadiene	0.21	U	0.11	0.21	0.49
59-50-7	4-Chloro-3-methylphenol	0.2	U	0.1	0.2	0.49
77-47-4	Hexachlorocyclopentadiene	0.15	U	0.073	0.15	1.2

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-02RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.25	U	0.12	0.25	0.49
95-95-4	2,4,5-Trichlorophenol	0.27	U	0.14	0.27	0.49
91-58-7	2-Chloronaphthalene	0.24	U	0.12	0.24	0.49
88-74-4	2-Nitroaniline	0.21	U	0.1	0.21	0.49
131-11-3	Dimethylphthalate	0.22	U	0.11	0.22	0.49
606-20-2	2,6-Dinitrotoluene	0.18	U	0.091	0.18	0.36
99-09-2	3-Nitroaniline	0.29	U	0.15	0.29	0.36
51-28-5	2,4-Dinitrophenol	0.8	U	0.4	0.8	1.8
132-64-9	Dibenzofuran	0.2	U	0.099	0.2	0.49
121-14-2	2,4-Dinitrotoluene	0.18	U	0.09	0.18	0.36
100-02-7	4-Nitrophenol	0.19	U	0.097	0.19	0.55
7005-72-3	4-Chlorophenyl-phenylether	0.19	U	0.093	0.19	0.49
84-66-2	Diethylphthalate	0.19	U	0.093	0.19	0.49
100-01-6	4-Nitroaniline	0.32	U	0.16	0.32	0.36
534-52-1	4,6-Dinitro-2-methylphenol	0.97	U	0.49	0.97	0.97
86-30-6	N-Nitrosodiphenylamine	0.23	U	0.12	0.23	0.49
101-55-3	4-Bromophenyl-phenylether	0.18	U	0.09	0.18	0.49
118-74-1	Hexachlorobenzene	0.19	U	0.097	0.19	0.49
87-86-5	Pentachlorophenol	0.49	U	0.24	0.49	0.91
84-74-2	Di-n-butylphthalate	0.16	U	0.08	0.16	0.49
85-68-7	Butylbenzylphthalate	0.23	U	0.12	0.23	0.49
91-94-1	3,3'-Dichlorobenzidine	0.22	U	0.11	0.22	0.36
117-81-7	Bis(2-ethylhexyl)phthalate	0.3	U	0.15	0.3	0.36
117-84-0	Di-n-octylphthalate	0.21	U	0.11	0.21	0.49
109-06-8	2-Picoline	0.18	U	0.091	0.18	0.49
10595-95-6	N-Nitrosomethylethylamine	0.2	U	0.099	0.2	0.36

2-2E

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.19	U	0.097	0.19	0.91	R-RE ↓
66-27-3	Methylmethanesulfonate	0.21	U	0.1	0.21	0.49	
62-50-0	Ethyl methanesulfonate	0.17	U	0.084	0.17	0.49	
76-01-7	Pentachloroethane	0.17	U	0.086	0.17	0.49	
930-55-2	N-Nitrosopyrrolidine	0.18	U	0.09	0.18	0.49	
98-86-2	Acetophenone	0.36	U	0.18	0.36	0.49	
59-89-2	N-Nitrosomorpholine	0.23	U	0.12	0.23	0.49	
95-53-4	o-Toluidine	0.26	U	0.13	0.26	0.49	
122-09-8	a,a-Dimethylphenethylamine	1.6	U	0.8	1.6	2.4	
87-65-0	2,6-Dichlorophenol	0.24	U	0.12	0.24	0.36	
1888-71-7	Hexachloropropene	0.16	U	0.082	0.16	0.49	
924-16-3	N-Nitrosodibutylamine	0.21	U	0.1	0.21	0.36	
120-58-1	Isosafrole	0.21	U	0.1	0.21	0.49	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.17	U	0.086	0.17	0.49	
94-59-7	Safrole	0.24	U	0.12	0.24	0.49	
130-15-4	1,4-Naphthoquinone	0.16	U	0.079	0.16	0.49	
99-65-0	1,3-Dinitrobenzene	0.18	U	0.091	0.18	0.36	
608-93-5	Pentachlorobenzene	0.18	U	0.091	0.18	0.49	
134-32-7	1-Naphthylamine	0.24	U	0.12	0.24	0.49	
91-59-8	2-Naphthylamine	0.97	U	0.49	0.97	0.97	
58-90-2	2,3,4,6-Tetrachlorophenol	0.26	U	0.13	0.26	0.49	
99-55-8	5-Nitro-o-toluidine	0.17	U	0.086	0.17	0.49	
106-50-3	p-Phenylenediamine	0.21	U	0.11	0.21	0.49	
62-44-2	Phenacetin	0.21	U	0.11	0.21	0.49	
92-67-1	4-Aminobiphenyl	0.98	U	0.49	0.98	1.2	
23950-58-5	Pronamide	0.14	U	0.068	0.14	0.49	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.17	U	0.084	0.17	0.49
88-85-7	Dinoseb	0.49	U	0.24	0.49	0.49
56-57-5	4-Nitroquinoline-1-oxide	0.36	U	0.18	0.36	2.4
91-80-5	Methapyriline	0.24	U	0.12	0.24	0.49
140-57-8	Aramite	0.73	U	0.36	0.73	0.73
60-11-7	p-Dimethylaminoazobenzene	0.17	U	0.086	0.17	0.49
53-96-3	2-Acetylaminofluorene	0.22	U	0.11	0.22	0.49
57-97-6	7,12-Dimethylbenz(a)anthracene	0.13	U	0.064	0.13	0.49
56-49-5	3-Methylcholanthrene	0.14	U	0.071	0.14	0.49
100-75-4	N-Nitrosopiperidine	0.16	U	0.079	0.16	0.49
99-35-4	1,3,5-Trinitrobenzene	0.73	U	0.36	0.73	0.73
2303-16-4	Diallate (Avadex)	0.27	U	0.14	0.27	0.49
465-73-6	Isodrin	0.18	U	0.09	0.18	0.49
510-15-6	Chlorobenzilate	0.1	U	0.051	0.1	0.49
143-50-0	Kepone	0.19	U	0.095	0.19	1.8
126-68-1	0,0,0-Triethylphosphorothioate	0.18	U	0.088	0.18	0.49

R-RE
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n-k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.72	U	0.36	0.72	0.72
62-75-9	N-Nitrosodimethylamine	0.19	U	0.096	0.19	0.27
62-53-3	Aniline	0.21	U	0.1	0.21	0.36
111-44-4	Bis(2-chloroethyl)ether	0.18	U	0.091	0.18	0.27
108-95-2	Phenol	0.18	U	0.088	0.18	0.68
95-57-8	2-Chlorophenol	0.19	U	0.093	0.19	0.36
541-73-1	1,3-Dichlorobenzene	0.16	U	0.083	0.16	0.36
106-46-7	1,4-Dichlorobenzene	0.17	U	0.085	0.17	0.36
95-50-1	1,2-Dichlorobenzene	0.15	U	0.077	0.15	0.36
100-51-6	Benzyl alcohol	0.25	U	0.12	0.25	0.9
108-60-1	2,2'-Oxybis(1-chloropropane)	0.6	U	0.3	0.6	0.6
95-48-7	2-Methylphenol	0.26	U	0.13	0.26	0.36
67-72-1	Hexachloroethane	0.14	U	0.068	0.14	0.36
621-64-7	N-Nitroso-di-n-propylamine	0.16	U	0.083	0.16	0.27
106-44-5	4-Methylphenol	0.16	U	0.08	0.16	0.36
98-95-3	Nitrobenzene	0.16	U	0.081	0.16	0.27
78-59-1	Isophorone	0.16	U	0.08	0.16	0.36
88-75-5	2-Nitrophenol	0.2	U	0.098	0.2	0.36
105-67-9	2,4-Dimethylphenol	0.15	U	0.077	0.15	0.36
111-91-1	Bis(2-chloroethoxy)methane	0.15	U	0.077	0.15	0.36
120-83-2	2,4-Dichlorophenol	0.2	U	0.1	0.2	0.27
120-82-1	1,2,4-Trichlorobenzene	0.16	U	0.078	0.16	0.36
106-47-8	4-Chloroaniline	0.17	U	0.085	0.17	0.36
87-68-3	Hexachlorobutadiene	0.16	U	0.078	0.16	0.36
59-50-7	4-Chloro-3-methylphenol	0.15	U	0.076	0.15	0.36
77-47-4	Hexachlorocyclopentadiene	0.11	U	0.054	0.11	0.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.18	U	0.092	0.18	0.36
95-95-4	2,4,5-Trichlorophenol	0.2	U	0.1	0.2	0.36
91-58-7	2-Chloronaphthalene	0.18	U	0.09	0.18	0.36
88-74-4	2-Nitroaniline	0.15	U	0.077	0.15	0.36
131-11-3	Dimethylphthalate	0.16	U	0.08	0.16	0.36
606-20-2	2,6-Dinitrotoluene	0.14	U	0.068	0.14	0.27
99-09-2	3-Nitroaniline	0.22	U	0.11	0.22	0.27
51-28-5	2,4-Dinitrophenol	0.6	U	0.3	0.6	1.4
132-64-9	Dibenzofuran	0.15	U	0.073	0.15	0.36
121-14-2	2,4-Dinitrotoluene	0.13	U	0.066	0.13	0.27
100-02-7	4-Nitrophenol	0.14	U	0.072	0.14	0.41
7005-72-3	4-Chlorophenyl-phenylether	0.14	U	0.069	0.14	0.36
84-66-2	Diethylphthalate	0.14	U	0.069	0.14	0.36
100-01-6	4-Nitroaniline	0.24	U	0.12	0.24	0.27
534-52-1	4,6-Dinitro-2-methylphenol	0.72	U	0.36	0.72	0.72
86-30-6	N-Nitrosodiphenylamine	0.17	U	0.085	0.17	0.36
101-55-3	4-Bromophenyl-phenylether	0.13	U	0.066	0.13	0.36
118-74-1	Hexachlorobenzene	0.14	U	0.072	0.14	0.36
87-86-5	Pentachlorophenol	0.36	U	0.18	0.36	0.68
84-74-2	Di-n-butylphthalate	0.12	U	0.06	0.12	0.36
85-68-7	Butylbenzylphthalate	0.17	U	0.085	0.17	0.36
91-94-1	3,3'-Dichlorobenzidine	0.16	U	0.08	0.16	0.27
117-81-7	Bis(2-ethylhexyl)phthalate	0.22	U	0.11	0.22	0.27
117-84-0	Di-n-octylphthalate	0.16	U	0.078	0.16	0.36
109-06-8	2-Picoline	0.14	U	0.068	0.14	0.36
10595-95-6	N-Nitrosomethylethylamine	0.15	U	0.073	0.15	0.27

UJ-SSL

UJ-SSL

UJ-SSL

UJ-SSL

UJ-BSL
UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.14	U	0.072	0.14	0.68	UJ-BSL
66-27-3	Methylmethanesulfonate	0.15	U	0.077	0.15	0.36	UJ-BSL
62-50-0	Ethyl methanesulfonate	0.12	U	0.062	0.12	0.36	
76-01-7	Pentachloroethane	0.13	U	0.064	0.13	0.36	
930-55-2	N-Nitrosopyrrolidine	0.13	U	0.066	0.13	0.36	
98-86-2	Acetophenone	0.27	U	0.14	0.27	0.36	
59-89-2	N-Nitrosomorpholine	0.17	U	0.087	0.17	0.36	
95-53-4	o-Toluidine	0.19	U	0.095	0.19	0.36	UJ-BSL
122-09-8	a,a-Dimethylphenethylamine	1.2	U	0.6	1.2	1.8	UJ-BSL
87-65-0	2,6-Dichlorophenol	0.18	U	0.091	0.18	0.27	
1888-71-7	Hexachloropropene	0.12	U	0.061	0.12	0.36	UJ-BSL
924-16-3	N-Nitrosodibutylamine	0.15	U	0.077	0.15	0.27	
120-58-1	Isosafrole	0.15	U	0.077	0.15	0.36	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.13	U	0.064	0.13	0.36	
94-59-7	Safrole	0.18	U	0.09	0.18	0.36	
130-15-4	1,4-Naphthoquinone	0.12	U	0.058	0.12	0.36	UR-BSL
99-65-0	1,3-Dinitrobenzene	0.14	U	0.068	0.14	0.27	
608-93-5	Pentachlorobenzene	0.14	U	0.068	0.14	0.36	
134-32-7	1-Naphthylamine	0.18	U	0.09	0.18	0.36	UJ-BSL
91-59-8	2-Naphthylamine	0.72	U	0.36	0.72	0.72	
58-90-2	2,3,4,6-Tetrachlorophenol	0.19	U	0.095	0.19	0.36	
99-55-8	5-Nitro-o-toluidine	0.13	U	0.064	0.13	0.36	
106-50-3	p-Phenylenediamine	0.16	U	0.078	0.16	0.36	
62-44-2	Phenacetin	0.16	U	0.078	0.16	0.36	
92-67-1	4-Aminobiphenyl	0.72	U	0.36	0.72	0.91	
23950-58-5	Pronamide	0.1	U	0.05	0.1	0.36	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.062	0.12	0.36
88-85-7	Dinoseb	0.36	U	0.18	0.36	0.36
56-57-5	4-Nitroquinoline-1-oxide	0.27	U	0.14	0.27	1.8
91-80-5	Methapyriline	0.18	U	0.089	0.18	0.36
140-57-8	Aramite	0.54	U	0.27	0.54	0.54
60-11-7	p-Dimethylaminoazobenzene	0.13	U	0.064	0.13	0.36
53-96-3	2-Acetylaminofluorene	0.16	U	0.083	0.16	0.36
57-97-6	7,12-Dimethylbenz(a)anthracene	0.095	U	0.047	0.095	0.36
56-49-5	3-Methylcholanthrene	0.1	U	0.053	0.1	0.36
100-75-4	N-Nitrosopiperidine	0.12	U	0.058	0.12	0.36
99-35-4	1,3,5-Trinitrobenzene	0.54	U	0.27	0.54	0.54
2303-16-4	Diallate (Avadex)	0.2	U	0.1	0.2	0.36
465-73-6	Isodrin	0.13	U	0.066	0.13	0.36
510-15-6	Chlorobenzilate	0.076	U	0.038	0.076	0.36
143-50-0	Kepone	0.14	U	0.07	0.14	1.4
126-68-1	0,0,0-Triethylphosphorothioate	0.13	U	0.065	0.13	0.36

UJ-BSL
UR-RF, BSL
UR-RF, BSL

UJ-BSL

UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.72	U	0.36	0.72	0.72
62-75-9	N-Nitrosodimethylamine	0.19	U	0.096	0.19	0.27
62-53-3	Aniline	0.21	U	0.1	0.21	0.36
111-44-4	Bis(2-chloroethyl)ether	0.18	U	0.091	0.18	0.27
108-95-2	Phenol	0.18	U	0.088	0.18	0.68
95-57-8	2-Chlorophenol	0.19	U	0.093	0.19	0.36
541-73-1	1,3-Dichlorobenzene	0.16	U	0.082	0.16	0.36
106-46-7	1,4-Dichlorobenzene	0.17	U	0.085	0.17	0.36
95-50-1	1,2-Dichlorobenzene	0.15	U	0.077	0.15	0.36
100-51-6	Benzyl alcohol	0.25	U	0.12	0.25	0.9
108-60-1	2,2'-Oxybis(1-chloropropane)	0.6	U	0.3	0.6	0.6
95-48-7	2-Methylphenol	0.26	U	0.13	0.26	0.36
67-72-1	Hexachloroethane	0.14	U	0.068	0.14	0.36
621-64-7	N-Nitroso-di-n-propylamine	0.16	U	0.082	0.16	0.27
106-44-5	4-Methylphenol	0.16	U	0.08	0.16	0.36
98-95-3	Nitrobenzene	0.16	U	0.081	0.16	0.27
78-59-1	Isophorone	0.16	U	0.08	0.16	0.36
88-75-5	2-Nitrophenol	0.19	U	0.097	0.19	0.36
105-67-9	2,4-Dimethylphenol	0.15	U	0.077	0.15	0.36
111-91-1	Bis(2-chloroethoxy)methane	0.15	U	0.077	0.15	0.36
120-83-2	2,4-Dichlorophenol	0.2	U	0.1	0.2	0.27
120-82-1	1,2,4-Trichlorobenzene	0.16	U	0.078	0.16	0.36
106-47-8	4-Chloroaniline	0.17	U	0.085	0.17	0.36
87-68-3	Hexachlorobutadiene	0.16	U	0.078	0.16	0.36
59-50-7	4-Chloro-3-methylphenol	0.15	U	0.076	0.15	0.36
77-47-4	Hexachlorocyclopentadiene	0.11	U	0.054	0.11	0.9

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.18	U	0.092	0.18	0.36
95-95-4	2,4,5-Trichlorophenol	0.2	U	0.1	0.2	0.36
91-58-7	2-Chloronaphthalene	0.18	U	0.09	0.18	0.36
88-74-4	2-Nitroaniline	0.15	U	0.077	0.15	0.36
131-11-3	Dimethylphthalate	0.16	U	0.08	0.16	0.36
606-20-2	2,6-Dinitrotoluene	0.14	U	0.068	0.14	0.27
99-09-2	3-Nitroaniline	0.22	U	0.11	0.22	0.27
51-28-5	2,4-Dinitrophenol	0.6	U	0.3	0.6	1.4
132-64-9	Dibenzofuran	0.15	U	0.073	0.15	0.36
121-14-2	2,4-Dinitrotoluene	0.13	U	0.066	0.13	0.27
100-02-7	4-Nitrophenol	0.14	U	0.072	0.14	0.4
7005-72-3	4-Chlorophenyl-phenylether	0.14	U	0.069	0.14	0.36
84-66-2	Diethylphthalate	0.14	U	0.069	0.14	0.36
100-01-6	4-Nitroaniline	0.24	U	0.12	0.24	0.27
534-52-1	4,6-Dinitro-2-methylphenol	0.72	U	0.36	0.72	0.72
86-30-6	N-Nitrosodiphenylamine	0.17	U	0.085	0.17	0.36
101-55-3	4-Bromophenyl-phenylether	0.13	U	0.066	0.13	0.36
118-74-1	Hexachlorobenzene	0.14	U	0.072	0.14	0.36
87-86-5	Pentachlorophenol	0.36	U	0.18	0.36	0.68
84-74-2	Di-n-butylphthalate	0.12	U	0.06	0.12	0.36
85-68-7	Butylbenzylphthalate	0.17	U	0.085	0.17	0.36
91-94-1	3,3'-Dichlorobenzidine	0.16	U	0.08	0.16	0.27
117-81-7	Bis(2-ethylhexyl)phthalate	0.22	U	0.11	0.22	0.27
117-84-0	Di-n-octylphthalate	0.16	U	0.078	0.16	0.36
109-06-8	2-Picoline	0.14	U	0.068	0.14	0.36
10595-95-6	N-Nitrosomethylethylamine	0.15	U	0.073	0.15	0.27

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.14	U	0.072	0.14	0.68
66-27-3	Methylmethanesulfonate	0.15	U	0.077	0.15	0.36
62-50-0	Ethyl methanesulfonate	0.12	U	0.062	0.12	0.36
76-01-7	Pentachloroethane	0.13	U	0.064	0.13	0.36
930-55-2	N-Nitrosopyrrolidine	0.13	U	0.066	0.13	0.36
98-86-2	Acetophenone	0.27	U	0.14	0.27	0.36
59-89-2	N-Nitrosomorpholine	0.17	U	0.086	0.17	0.36
95-53-4	o-Toluidine	0.19	U	0.095	0.19	0.36
122-09-8	a,a-Dimethylphenethylamine	1.2	U	0.6	1.2	1.8
87-65-0	2,6-Dichlorophenol	0.18	U	0.091	0.18	0.27
1888-71-7	Hexachloropropene	0.12	U	0.061	0.12	0.36
924-16-3	N-Nitrosodibutylamine	0.15	U	0.077	0.15	0.27
120-58-1	Isosafrole	0.15	U	0.077	0.15	0.36
95-94-3	1,2,4,5-Tetrachlorobenzene	0.13	U	0.064	0.13	0.36
94-59-7	Safrole	0.18	U	0.09	0.18	0.36
130-15-4	1,4-Naphthoquinone	0.12	U	0.058	0.12	0.36
99-65-0	1,3-Dinitrobenzene	0.14	U	0.068	0.14	0.27
608-93-5	Pentachlorobenzene	0.14	U	0.068	0.14	0.36
134-32-7	1-Naphthylamine	0.18	U	0.09	0.18	0.36
91-59-8	2-Naphthylamine	0.72	U	0.36	0.72	0.72
58-90-2	2,3,4,6-Tetrachlorophenol	0.19	U	0.095	0.19	0.36
99-55-8	5-Nitro-o-toluidine	0.13	U	0.064	0.13	0.36
106-50-3	p-Phenylenediamine	0.16	U	0.078	0.16	0.36
62-44-2	Phenacetin	0.16	U	0.078	0.16	0.36
92-67-1	4-Aminobiphenyl	0.72	U	0.36	0.72	0.91
23950-58-5	Pronamide	0.1	U	0.05	0.1	0.36

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SD-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.062	0.12	0.36	R-RE ↓
88-85-7	Dinoseb	0.36	U	0.18	0.36	0.36	
56-57-5	4-Nitroquinoline-1-oxide	0.27	U	0.14	0.27	1.8	
91-80-5	Methapyriline	0.18	U	0.089	0.18	0.36	
140-57-8	Aramite	0.54	U	0.27	0.54	0.54	
60-11-7	p-Dimethylaminoazobenzene	0.13	U	0.064	0.13	0.36	
53-96-3	2-Acetylaminofluorene	0.16	U	0.082	0.16	0.36	
57-97-6	7,12-Dimethylbenz(a)anthracene	0.095	U	0.047	0.095	0.36	
56-49-5	3-Methylcholanthrene	0.1	U	0.053	0.1	0.36	
100-75-4	N-Nitrosopiperidine	0.12	U	0.058	0.12	0.36	
99-35-4	1,3,5-Trinitrobenzene	0.54	U	0.27	0.54	0.54	
2303-16-4	Diallate (Avadex)	0.2	U	0.1	0.2	0.36	
465-73-6	Isodrin	0.13	U	0.066	0.13	0.36	
510-15-6	Chlorobenzilate	0.076	U	0.038	0.076	0.36	
143-50-0	Kepone	0.14	U	0.07	0.14	1.4	
126-68-1	0,0,0-Triethylphosphorothioate	0.13	U	0.065	0.13	0.36	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

c.l

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6 UJ-BSL
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1 UR-BSL
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-02RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SW-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02RE1

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3	R-RE ↓
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1	
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1	
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4	
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5	
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2	
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1	
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5	
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6	
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1	
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1	
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5	
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3	
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5	
94-59-7	Safrole	5.1	U	2.6	5.1	5.1	
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3	
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1	
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5	
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1	
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1	
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1	
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3	
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1	
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1	
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1	
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SW-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyrilone	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

e-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-03

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL,MSL

UR-BSL,MSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.77	U	0.39	0.77	0.77
62-75-9	N-Nitrosodimethylamine	0.21	U	0.1	0.21	0.29
62-53-3	Aniline	0.22	U	0.11	0.22	0.39
111-44-4	Bis(2-chloroethyl)ether	0.19	U	0.097	0.19	0.29
108-95-2	Phenol	0.19	U	0.094	0.19	0.73
95-57-8	2-Chlorophenol	0.2	U	0.1	0.2	0.39
541-73-1	1,3-Dichlorobenzene	0.18	U	0.089	0.18	0.39
106-46-7	1,4-Dichlorobenzene	0.18	U	0.092	0.18	0.39
95-50-1	1,2-Dichlorobenzene	0.16	U	0.083	0.16	0.39
100-51-6	Benzyl alcohol	0.27	U	0.13	0.27	0.97
108-60-1	2,2'-Oxybis(1-chloropropane)	0.64	U	0.32	0.64	0.64
95-48-7	2-Methylphenol	0.28	U	0.14	0.28	0.39
67-72-1	Hexachloroethane	0.14	U	0.073	0.14	0.39
621-64-7	N-Nitroso-di-n-propylamine	0.18	U	0.089	0.18	0.29
106-44-5	4-Methylphenol	0.17	U	0.086	0.17	0.39
98-95-3	Nitrobenzene	0.17	U	0.087	0.17	0.29
78-59-1	Isophorone	0.17	U	0.086	0.17	0.39
88-75-5	2-Nitrophenol	0.21	U	0.1	0.21	0.39
105-67-9	2,4-Dimethylphenol	0.16	U	0.083	0.16	0.39
111-91-1	Bis(2-chloroethoxy)methane	0.16	U	0.083	0.16	0.39
120-83-2	2,4-Dichlorophenol	0.22	U	0.11	0.22	0.29
120-82-1	1,2,4-Trichlorobenzene	0.17	U	0.084	0.17	0.39
106-47-8	4-Chloroaniline	0.18	U	0.092	0.18	0.39
87-68-3	Hexachlorobutadiene	0.17	U	0.084	0.17	0.39
59-50-7	4-Chloro-3-methylphenol	0.16	U	0.081	0.16	0.39
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.058	0.12	0.97

45 - msl

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.2	U	0.099	0.2	0.39
95-95-4	2,4,5-Trichlorophenol	0.22	U	0.11	0.22	0.39
91-58-7	2-Chloronaphthalene	0.19	U	0.097	0.19	0.39
88-74-4	2-Nitroaniline	0.16	U	0.083	0.16	0.39
131-11-3	Dimethylphthalate	0.17	U	0.086	0.17	0.39
606-20-2	2,6-Dinitrotoluene	0.14	U	0.073	0.14	0.29
99-09-2	3-Nitroaniline	0.23	U	0.12	0.23	0.29
51-28-5	2,4-Dinitrophenol	0.64	U	0.32	0.64	1.4
132-64-9	Dibenzofuran	0.16	U	0.078	0.16	0.39
121-14-2	2,4-Dinitrotoluene	0.14	U	0.071	0.14	0.29
100-02-7	4-Nitrophenol	0.15	U	0.077	0.15	0.44
7005-72-3	4-Chlorophenyl-phenylether	0.15	U	0.074	0.15	0.39
84-66-2	Diethylphthalate	0.15	U	0.074	0.15	0.39
100-01-6	4-Nitroaniline	0.26	U	0.13	0.26	0.29
534-52-1	4,6-Dinitro-2-methylphenol	0.77	U	0.39	0.77	0.77
86-30-6	N-Nitrosodiphenylamine	0.18	U	0.092	0.18	0.39
101-55-3	4-Bromophenyl-phenylether	0.14	U	0.071	0.14	0.39
118-74-1	Hexachlorobenzene	0.15	U	0.077	0.15	0.39
87-86-5	Pentachlorophenol	0.39	U	0.19	0.39	0.73
84-74-2	Di-n-butylphthalate	0.13	U	0.064	0.13	0.39
85-68-7	Butylbenzylphthalate	0.18	U	0.092	0.18	0.39
91-94-1	3,3'-Dichlorobenzidine	0.17	U	0.086	0.17	0.29
117-81-7	Bis(2-ethylhexyl)phthalate	0.24	U	0.12	0.24	0.29
117-84-0	Di-n-octylphthalate	0.17	U	0.084	0.17	0.39
109-06-8	2-Picoline	0.14	U	0.073	0.14	0.39
10595-95-6	N-Nitrosomethylethylamine	0.16	U	0.078	0.16	0.29

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.15	U	0.077	0.15	0.73	UJ-BSL,MSL
66-27-3	Methylmethanesulfonate	0.16	U	0.083	0.16	0.39	UJ-BSL,MSL
62-50-0	Ethyl methanesulfonate	0.13	U	0.067	0.13	0.39	UJ-MSL
76-01-7	Pentachloroethane	0.14	U	0.068	0.14	0.39	
930-55-2	N-Nitrosopyrrolidine	0.14	U	0.071	0.14	0.39	UJ-MSL
98-86-2	Acetophenone	0.29	U	0.14	0.29	0.39	UJ-MSL
59-89-2	N-Nitrosomorpholine	0.19	U	0.093	0.19	0.39	UJ-MSL
95-53-4	o-Toluidine	0.2	U	0.1	0.2	0.39	UJ-BSL,MSL
122-09-8	a,a-Dimethylphenethylamine	1.3	U	0.64	1.3	1.9	UJ-BSL,MSL
87-65-0	2,6-Dichlorophenol	0.19	U	0.097	0.19	0.29	UJ-MSL
1888-71-7	Hexachloropropene	0.13	U	0.065	0.13	0.39	UJ-BSL,MSL
924-16-3	N-Nitrosodibutylamine	0.16	U	0.083	0.16	0.29	UJ-MSL
120-58-1	Isosafrole	0.16	U	0.083	0.16	0.39	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.068	0.14	0.39	
94-59-7	Safrole	0.19	U	0.097	0.19	0.39	
130-15-4	1,4-Naphthoquinone	0.12	U	0.062	0.12	0.39	UR-BSL,MSL
99-65-0	1,3-Dinitrobenzene	0.14	U	0.073	0.14	0.29	UJ-MSL
608-93-5	Pentachlorobenzene	0.14	U	0.073	0.14	0.39	↓
134-32-7	1-Naphthylamine	0.19	U	0.097	0.19	0.39	UJ-BSL
91-59-8	2-Naphthylamine	0.77	U	0.39	0.77	0.77	UJ-MSL
58-90-2	2,3,4,6-Tetrachlorophenol	0.2	U	0.1	0.2	0.39	
99-55-8	5-Nitro-o-toluidine	0.14	U	0.068	0.14	0.39	
106-50-3	p-Phenylenediamine	0.17	U	0.084	0.17	0.39	
62-44-2	Phenacetin	0.17	U	0.084	0.17	0.39	
92-67-1	4-Aminobiphenyl	0.78	U	0.39	0.78	0.97	
23950-58-5	Pronamide	0.11	U	0.054	0.11	0.39	↓

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-04

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	0.13	U	0.067	0.13	0.39	UJ-MSL.
88-85-7	Dinoseb	0.39	U	0.19	0.39	0.39	UJ-BSL,MSL
56-57-5	4-Nitroquinoline-1-oxide	0.29	U	0.14	0.29	1.9	UR-RF,BSL,MSL
91-80-5	Methapyriline	0.19	U	0.096	0.19	0.39	UR-RF,BSL
140-57-8	Aramite	0.58	U	0.29	0.58	0.58	UJ-MSL.
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.068	0.14	0.39	↓.
53-96-3	2-Acetylaminofluorene	0.18	U	0.089	0.18	0.39	↓.
57-97-6	7,12-Dimethylbenz(a)anthracene	0.1	U	0.051	0.1	0.39	↓.
56-49-5	3-Methylcholanthrene	0.11	U	0.057	0.11	0.39	↓.
100-75-4	N-Nitrosopiperidine	0.12	U	0.062	0.12	0.39	↓.
99-35-4	1,3,5-Trinitrobenzene	0.58	U	0.29	0.58	0.58	UJ-BSL,MSL
2303-16-4	Diallate (Avadex)	0.22	U	0.11	0.22	0.39	UJ-MSL.
465-73-6	Isodrin	0.14	U	0.071	0.14	0.39	↓.
510-15-6	Chlorobenzilate	0.081	U	0.041	0.081	0.39	↓.
143-50-0	Kepone	0.15	U	0.076	0.15	1.4	UJ-BSL,MSL
126-68-1	0,0,0-Triethylphosphorothioate	0.14	U	0.07	0.14	0.39	UJ-MSL.

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

TFS-SD-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.DSample wt/vol: 25.29 Units: G Date Received: 04/13/12Concentrated Extract Volume: 1 Date Extracted: 04/30/12Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617PercentSolids: 54 decanted: _____ Dilution Factor: 1Extraction: OTHER Station ID: _____ Method: 8270GPC Cleanup: (Y/N) N pH: _____Column(1): HPMS-5 ID: 0.25 (mm)CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.78	U	0.39	0.78	0.78
62-75-9	N-Nitrosodimethylamine	0.21	U	0.1	0.21	0.29
62-53-3	Aniline	0.22	U	0.11	0.22	0.4
111-44-4	Bis(2-chloroethyl)ether	0.2	U	0.098	0.2	0.29
108-95-2	Phenol	0.19	U	0.095	0.19	0.73
95-57-8	2-Chlorophenol	0.2	U	0.1	0.2	0.4
541-73-1	1,3-Dichlorobenzene	0.18	U	0.089	0.18	0.4
106-46-7	1,4-Dichlorobenzene	0.18	U	0.092	0.18	0.4
95-50-1	1,2-Dichlorobenzene	0.17	U	0.083	0.17	0.4
100-51-6	Benzyl alcohol	0.27	U	0.13	0.27	0.98
108-60-1	2,2'-Oxybis(1-chloropropane)	0.64	U	0.32	0.64	0.64
95-48-7	2-Methylphenol	0.28	U	0.14	0.28	0.39
67-72-1	Hexachloroethane	0.15	U	0.073	0.15	0.4
621-64-7	N-Nitroso-di-n-propylamine	0.18	U	0.089	0.18	0.29
106-44-5	4-Methylphenol	0.17	U	0.086	0.17	0.4
98-95-3	Nitrobenzene	0.18	U	0.088	0.18	0.29
78-59-1	Isophorone	0.17	U	0.086	0.17	0.4
88-75-5	2-Nitrophenol	0.21	U	0.1	0.21	0.4
105-67-9	2,4-Dimethylphenol	0.17	U	0.083	0.17	0.39
111-91-1	Bis(2-chloroethoxy)methane	0.17	U	0.083	0.17	0.39
120-83-2	2,4-Dichlorophenol	0.22	U	0.11	0.22	0.29
120-82-1	1,2,4-Trichlorobenzene	0.17	U	0.085	0.17	0.4
106-47-8	4-Chloroaniline	0.18	U	0.092	0.18	0.4
87-68-3	Hexachlorobutadiene	0.17	U	0.085	0.17	0.4
59-50-7	4-Chloro-3-methylphenol	0.16	U	0.082	0.16	0.4
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.058	0.12	0.98

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.2	U	0.1	0.2	0.39
95-95-4	2,4,5-Trichlorophenol	0.22	U	0.11	0.22	0.39
91-58-7	2-Chloronaphthalene	0.2	U	0.098	0.2	0.4
88-74-4	2-Nitroaniline	0.17	U	0.083	0.17	0.4
131-11-3	Dimethylphthalate	0.17	U	0.086	0.17	0.4
606-20-2	2,6-Dinitrotoluene	0.15	U	0.073	0.15	0.29
99-09-2	3-Nitroaniline	0.23	U	0.12	0.23	0.29
51-28-5	2,4-Dinitrophenol	0.64	U	0.32	0.64	1.5
132-64-9	Dibenzofuran	0.16	U	0.079	0.16	0.4
121-14-2	2,4-Dinitrotoluene	0.14	U	0.072	0.14	0.29
100-02-7	4-Nitrophenol	0.16	U	0.078	0.16	0.44
7005-72-3	4-Chlorophenyl-phenylether	0.15	U	0.075	0.15	0.4
84-66-2	Diethylphthalate	0.15	U	0.075	0.15	0.4
100-01-6	4-Nitroaniline	0.26	U	0.13	0.26	0.29
534-52-1	4,6-Dinitro-2-methylphenol	0.78	U	0.39	0.78	0.78
86-30-6	N-Nitrosodiphenylamine	0.18	U	0.092	0.18	0.39
101-55-3	4-Bromophenyl-phenylether	0.14	U	0.072	0.14	0.4
118-74-1	Hexachlorobenzene	0.16	U	0.078	0.16	0.39
87-86-5	Pentachlorophenol	0.39	U	0.19	0.39	0.73
84-74-2	Di-n-butylphthalate	0.13	U	0.064	0.13	0.4
85-68-7	Butylbenzylphthalate	0.18	U	0.092	0.18	0.4
91-94-1	3,3'-Dichlorobenzidine	0.17	U	0.086	0.17	0.29
117-81-7	Bis(2-ethylhexyl)phthalate	0.24	U	0.12	0.24	0.29
117-84-0	Di-n-octylphthalate	0.17	U	0.085	0.17	0.4
109-06-8	2-Picoline	0.15	U	0.073	0.15	0.4
10595-95-6	N-Nitrosomethylethylamine	0.16	U	0.079	0.16	0.29

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

TFS-SD-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.DSample wt/vol: 25.29 Units: G Date Received: 04/13/12Concentrated Extract Volume: 1 Date Extracted: 04/30/12Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617PercentSolids: 54 decanted : _____ Dilution Factor: 1Extraction: OTHER Station ID: _____ Method: 8270GPC Cleanup : (Y/N) N pH: _____Column(1): HPMS-5 ID: 0.25 (mm)CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.16	U	0.078	0.16	0.73
66-27-3	Methylmethanesulfonate	0.17	U	0.083	0.17	0.4
62-50-0	Ethyl methanesulfonate	0.13	U	0.067	0.13	0.4
76-01-7	Pentachloroethane	0.14	U	0.069	0.14	0.4
930-55-2	N-Nitrosopyrrolidine	0.14	U	0.072	0.14	0.4
98-86-2	Acetophenone	0.29	U	0.15	0.29	0.4
59-89-2	N-Nitrosomorpholine	0.19	U	0.094	0.19	0.4
95-53-4	o-Toluidine	0.2	U	0.1	0.2	0.4
122-09-8	a,a-Dimethylphenethylamine	1.3	U	0.64	1.3	2
87-65-0	2,6-Dichlorophenol	0.2	U	0.098	0.2	0.29
1888-71-7	Hexachloropropene	0.13	U	0.066	0.13	0.4
924-16-3	N-Nitrosodibutylamine	0.17	U	0.083	0.17	0.29
120-58-1	Isosafrole	0.17	U	0.083	0.17	0.4
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.069	0.14	0.4
94-59-7	Safrole	0.2	U	0.098	0.2	0.4
130-15-4	1,4-Naphthoquinone	0.12	U	0.063	0.12	0.4
99-65-0	1,3-Dinitrobenzene	0.15	U	0.073	0.15	0.29
608-93-5	Pentachlorobenzene	0.15	U	0.073	0.15	0.4
134-32-7	1-Naphthylamine	0.2	U	0.098	0.2	0.4
91-59-8	2-Naphthylamine	0.78	U	0.39	0.78	0.78
58-90-2	2,3,4,6-Tetrachlorophenol	0.2	U	0.1	0.2	0.4
99-55-8	5-Nitro-o-toluidine	0.14	U	0.069	0.14	0.4
106-50-3	p-Phenylenediamine	0.17	U	0.085	0.17	0.4
62-44-2	Phenacetin	0.17	U	0.085	0.17	0.4
92-67-1	4-Aminobiphenyl	0.78	U	0.39	0.78	0.98
23950-58-5	Pronamide	0.11	U	0.054	0.11	0.4

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-04RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.13	U	0.067	0.13	0.39
88-85-7	Dinoseb	0.39	U	0.19	0.39	0.4
56-57-5	4-Nitroquinoline-1-oxide	0.29	U	0.15	0.29	2
91-80-5	Methapyriline	0.19	U	0.097	0.19	0.4
140-57-8	Aramite	0.58	U	0.29	0.58	0.58
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.069	0.14	0.4
53-96-3	2-Acetylaminofluorene	0.18	U	0.089	0.18	0.4
57-97-6	7,12-Dimethylbenz(a)anthracene	0.1	U	0.051	0.1	0.39
56-49-5	3-Methylcholanthrene	0.11	U	0.057	0.11	0.39
100-75-4	N-Nitrosopiperidine	0.12	U	0.063	0.12	0.4
99-35-4	1,3,5-Trinitrobenzene	0.58	U	0.29	0.58	0.58
2303-16-4	Diallate (Avadex)	0.22	U	0.11	0.22	0.39
465-73-6	Isodrin	0.14	U	0.072	0.14	0.4
510-15-6	Chlorobenzilate	0.082	U	0.041	0.082	0.39
143-50-0	Kepone	0.15	U	0.076	0.15	1.5
126-68-1	0,0,0-Triethylphosphorothioate	0.14	U	0.07	0.14	0.4

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code: PEL Case No. SAS No: SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

UJ-BSL

UR-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

UR-RF
UR-RF

c.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SW-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE
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C.D.

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

R-RE
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c.t

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

12-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SW-04RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1	R-RE ↓
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2	
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2	
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5	
140-57-8	Aramite	8.2	U	4.1	8.2	8.2	
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1	
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1	
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1	
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5	
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7	
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1	
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1	
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3	
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1	
143-50-0	Kepone	32.6	U	16.3	32.6	32.6	
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.67	U	0.33	0.67	0.67
62-75-9	N-Nitrosodimethylamine	0.18	U	0.089	0.18	0.25
62-53-3	Aniline	0.19	U	0.096	0.19	0.34
111-44-4	Bis(2-chloroethyl)ether	0.17	U	0.084	0.17	0.25
108-95-2	Phenol	0.16	U	0.082	0.16	0.63
95-57-8	2-Chlorophenol	0.17	U	0.086	0.17	0.34
541-73-1	1,3-Dichlorobenzene	0.15	U	0.076	0.15	0.34
106-46-7	1,4-Dichlorobenzene	0.16	U	0.079	0.16	0.34
95-50-1	1,2-Dichlorobenzene	0.14	U	0.072	0.14	0.34
100-51-6	Benzyl alcohol	0.23	U	0.12	0.23	0.84
108-60-1	2,2'-Oxybis(1-chloropropane)	0.55	U	0.28	0.55	0.55
95-48-7	2-Methylphenol	0.24	U	0.12	0.24	0.33
67-72-1	Hexachloroethane	0.12	U	0.063	0.12	0.34
621-64-7	N-Nitroso-di-n-propylamine	0.15	U	0.076	0.15	0.25
106-44-5	4-Methylphenol	0.15	U	0.074	0.15	0.34
98-95-3	Nitrobenzene	0.15	U	0.075	0.15	0.25
78-59-1	Isophorone	0.15	U	0.074	0.15	0.34
88-75-5	2-Nitrophenol	0.18	U	0.09	0.18	0.34
105-67-9	2,4-Dimethylphenol	0.14	U	0.072	0.14	0.33
111-91-1	Bis(2-chloroethoxy)methane	0.14	U	0.072	0.14	0.33
120-83-2	2,4-Dichlorophenol	0.19	U	0.094	0.19	0.25
120-82-1	1,2,4-Trichlorobenzene	0.14	U	0.073	0.14	0.34
106-47-8	4-Chloroaniline	0.16	U	0.079	0.16	0.34
87-68-3	Hexachlorobutadiene	0.14	U	0.073	0.14	0.34
59-50-7	4-Chloro-3-methylphenol	0.14	U	0.07	0.14	0.34
77-47-4	Hexachlorocyclopentadiene	0.1	U	0.05	0.1	0.84

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.DSample wt/vol: 25.59 Units: G Date Received: 04/13/12Concentrated Extract Volume: 1 Date Extracted: 04/17/12Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601PercentSolids: 62.3 decanted: _____ Dilution Factor: 1Extraction: OTHER Station ID: _____ Method: 8270GPC Cleanup: (Y/N) N pH: _____Column(1): HPMS-5 ID: 0.25 (mm)CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.17	U	0.085	0.17	0.33
95-95-4	2,4,5-Trichlorophenol	0.18	U	0.093	0.18	0.33
91-58-7	2-Chloronaphthalene	0.17	U	0.084	0.17	0.34
88-74-4	2-Nitroaniline	0.14	U	0.072	0.14	0.34
131-11-3	Dimethylphthalate	0.15	U	0.074	0.15	0.34
606-20-2	2,6-Dinitrotoluene	0.12	U	0.063	0.12	0.25
99-09-2	3-Nitroaniline	0.2	U	0.1	0.2	0.25
51-28-5	2,4-Dinitrophenol	0.55	U	0.28	0.55	1.2
132-64-9	Dibenzofuran	0.14	U	0.068	0.14	0.34
121-14-2	2,4-Dinitrotoluene	0.12	U	0.061	0.12	0.25
100-02-7	4-Nitrophenol	0.13	U	0.066	0.13	0.38
7005-72-3	4-Chlorophenyl-phenylether	0.13	U	0.064	0.13	0.34
84-66-2	Diethylphthalate	0.13	U	0.064	0.13	0.34
100-01-6	4-Nitroaniline	0.22	U	0.11	0.22	0.25
534-52-1	4,6-Dinitro-2-methylphenol	0.67	U	0.33	0.67	0.67
86-30-6	N-Nitrosodiphenylamine	0.16	U	0.079	0.16	0.33
101-55-3	4-Bromophenyl-phenylether	0.12	U	0.061	0.12	0.34
118-74-1	Hexachlorobenzene	0.13	U	0.066	0.13	0.33
87-86-5	Pentachlorophenol	0.33	U	0.17	0.33	0.63
84-74-2	Di-n-butylphthalate	0.11	U	0.055	0.11	0.34
85-68-7	Butylbenzylphthalate	0.16	U	0.079	0.16	0.34
91-94-1	3,3'-Dichlorobenzidine	0.15	U	0.074	0.15	0.25
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	U	0.1	0.21	0.25
117-84-0	Di-n-octylphthalate	0.14	U	0.073	0.14	0.34
109-06-8	2-Picoline	0.12	U	0.063	0.12	0.34
10595-95-6	N-Nitrosomethylethylamine	0.14	U	0.068	0.14	0.25

UJ-SSL

UJ-SSL

UJ-SSL

UJ-SSL

UJ-BSL

UJ-BSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	0.13	U	0.066	0.13	0.63	UJ-BSL
66-27-3	Methylmethanesulfonate	0.14	U	0.072	0.14	0.34	UJ-BSL
62-50-0	Ethyl methanesulfonate	0.12	U	0.058	0.12	0.34	
76-01-7	Pentachloroethane	0.12	U	0.059	0.12	0.34	
930-55-2	N-Nitrosopyrrolidine	0.12	U	0.061	0.12	0.34	
98-86-2	Acetophenone	0.25	U	0.12	0.25	0.34	
59-89-2	N-Nitrosomorpholine	0.16	U	0.08	0.16	0.34	
95-53-4	o-Toluidine	0.18	U	0.088	0.18	0.34	UJ-BSL
122-09-8	a,a-Dimethylphenethylamine	1.1	U	0.55	1.1	1.7	UJ-BSL
87-65-0	2,6-Dichlorophenol	0.17	U	0.084	0.17	0.25	
1888-71-7	Hexachloropropene	0.11	U	0.056	0.11	0.34	UJ-BSL
924-16-3	N-Nitrosodibutylamine	0.14	U	0.072	0.14	0.25	
120-58-1	Isosafrole	0.14	U	0.072	0.14	0.34	
95-94-3	1,2,4,5-Tetrachlorobenzene	0.12	U	0.059	0.12	0.34	
94-59-7	Safrole	0.17	U	0.084	0.17	0.34	
130-15-4	1,4-Naphthoquinone	0.11	U	0.054	0.11	0.34	UR-BSL
99-65-0	1,3-Dinitrobenzene	0.12	U	0.063	0.12	0.25	
608-93-5	Pentachlorobenzene	0.12	U	0.063	0.12	0.34	
134-32-7	1-Naphthylamine	0.17	U	0.084	0.17	0.34	UJ-BSL
91-59-8	2-Naphthylamine	0.67	U	0.33	0.67	0.67	
58-90-2	2,3,4,6-Tetrachlorophenol	0.18	U	0.088	0.18	0.34	
99-55-8	5-Nitro-o-toluidine	0.12	U	0.059	0.12	0.34	
106-50-3	p-Phenylenediamine	0.14	U	0.073	0.14	0.34	
62-44-2	Phenacetin	0.14	U	0.073	0.14	0.34	
92-67-1	4-Aminobiphenyl	0.67	U	0.33	0.67	0.84	
23950-58-5	Pronamide	0.093	U	0.046	0.093	0.34	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.058	0.12	0.33
88-85-7	Dinoseb	0.33	U	0.17	0.33	0.34
56-57-5	4-Nitroquinoline-1-oxide	0.25	U	0.12	0.25	1.7
91-80-5	Methapyriline	0.16	U	0.083	0.16	0.34
140-57-8	Aramite	0.5	U	0.25	0.5	0.5
60-11-7	p-Dimethylaminoazobenzene	0.12	U	0.059	0.12	0.34
53-96-3	2-Acetylaminofluorene	0.15	U	0.076	0.15	0.34
57-97-6	7,12-Dimethylbenz(a)anthracene	0.088	U	0.044	0.088	0.33
56-49-5	3-Methylcholanthrene	0.098	U	0.049	0.098	0.33
100-75-4	N-Nitrosopiperidine	0.11	U	0.054	0.11	0.34
99-35-4	1,3,5-Trinitrobenzene	0.5	U	0.25	0.5	0.5
2303-16-4	Diallate (Avadex)	0.18	U	0.093	0.18	0.33
465-73-6	Isodrin	0.12	U	0.061	0.12	0.34
510-15-6	Chlorobenzilate	0.07	U	0.035	0.07	0.33
143-50-0	Kepone	0.13	U	0.065	0.13	1.2
126-68-1	0,0,0-Triethylphosphorothioate	0.12	U	0.06	0.12	0.34

UJ-BSL
UR-RF, BSL
UR-RF, BSL

UJ-BSL

UJ-BSL

c-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No.
TFS-SD-FDRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.66	U	0.33	0.66	0.66
62-75-9	N-Nitrosodimethylamine	0.18	U	0.088	0.18	0.25
62-53-3	Aniline	0.19	U	0.096	0.19	0.34
111-44-4	Bis(2-chloroethyl)ether	0.17	U	0.083	0.17	0.25
108-95-2	Phenol	0.16	U	0.081	0.16	0.62
95-57-8	2-Chlorophenol	0.17	U	0.086	0.17	0.34
541-73-1	1,3-Dichlorobenzene	0.15	U	0.076	0.15	0.34
106-46-7	1,4-Dichlorobenzene	0.16	U	0.078	0.16	0.34
95-50-1	1,2-Dichlorobenzene	0.14	U	0.071	0.14	0.34
100-51-6	Benzyl alcohol	0.23	U	0.11	0.23	0.83
108-60-1	2,2'-Oxybis(1-chloropropane)	0.55	U	0.27	0.55	0.55
95-48-7	2-Methylphenol	0.24	U	0.12	0.24	0.33
67-72-1	Hexachloroethane	0.12	U	0.062	0.12	0.34
621-64-7	N-Nitroso-di-n-propylamine	0.15	U	0.076	0.15	0.25
106-44-5	4-Methylphenol	0.15	U	0.073	0.15	0.34
98-95-3	Nitrobenzene	0.15	U	0.075	0.15	0.25
78-59-1	Isophorone	0.15	U	0.073	0.15	0.34
88-75-5	2-Nitrophenol	0.18	U	0.09	0.18	0.34
105-67-9	2,4-Dimethylphenol	0.14	U	0.071	0.14	0.33
111-91-1	Bis(2-chloroethoxy)methane	0.14	U	0.071	0.14	0.33
120-83-2	2,4-Dichlorophenol	0.19	U	0.093	0.19	0.25
120-82-1	1,2,4-Trichlorobenzene	0.14	U	0.072	0.14	0.34
106-47-8	4-Chloroaniline	0.16	U	0.078	0.16	0.34
87-68-3	Hexachlorobutadiene	0.14	U	0.072	0.14	0.34
59-50-7	4-Chloro-3-methylphenol	0.14	U	0.07	0.14	0.34
77-47-4	Hexachlorocyclopentadiene	0.1	U	0.05	0.1	0.83

R-RE



c-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

TFS-SD-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.17	U	0.085	0.17	0.33
95-95-4	2,4,5-Trichlorophenol	0.18	U	0.092	0.18	0.33
91-58-7	2-Chloronaphthalene	0.16	U	0.083	0.16	0.34
88-74-4	2-Nitroaniline	0.14	U	0.071	0.14	0.34
131-11-3	Dimethylphthalate	0.15	U	0.073	0.15	0.34
606-20-2	2,6-Dinitrotoluene	0.12	U	0.062	0.12	0.25
99-09-2	3-Nitroaniline	0.2	U	0.1	0.2	0.25
51-28-5	2,4-Dinitrophenol	0.55	U	0.27	0.55	1.2
132-64-9	Dibenzofuran	0.13	U	0.067	0.13	0.34
121-14-2	2,4-Dinitrotoluene	0.12	U	0.061	0.12	0.25
100-02-7	4-Nitrophenol	0.13	U	0.066	0.13	0.37
7005-72-3	4-Chlorophenyl-phenylether	0.13	U	0.063	0.13	0.34
84-66-2	Diethylphthalate	0.13	U	0.063	0.13	0.34
100-01-6	4-Nitroaniline	0.22	U	0.11	0.22	0.25
534-52-1	4,6-Dinitro-2-methylphenol	0.66	U	0.33	0.66	0.66
86-30-6	N-Nitrosodiphenylamine	0.16	U	0.078	0.16	0.33
101-55-3	4-Bromophenyl-phenylether	0.12	U	0.061	0.12	0.34
118-74-1	Hexachlorobenzene	0.13	U	0.066	0.13	0.33
87-86-5	Pentachlorophenol	0.33	U	0.16	0.33	0.62
84-74-2	Di-n-butylphthalate	0.11	U	0.055	0.11	0.34
85-68-7	Butylbenzylphthalate	0.16	U	0.078	0.16	0.34
91-94-1	3,3'-Dichlorobenzidine	0.15	U	0.073	0.15	0.25
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	U	0.1	0.21	0.25
117-84-0	Di-n-octylphthalate	0.14	U	0.072	0.14	0.34
109-06-8	2-Picoline	0.12	U	0.062	0.12	0.34
10595-95-6	N-Nitrosomethylethylamine	0.13	U	0.067	0.13	0.25

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FDRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.13	U	0.066	0.13	0.62
66-27-3	Methylmethanesulfonate	0.14	U	0.071	0.14	0.34
62-50-0	Ethyl methanesulfonate	0.11	U	0.057	0.11	0.34
76-01-7	Pentachloroethane	0.12	U	0.058	0.12	0.34
930-55-2	N-Nitrosopyrrolidine	0.12	U	0.061	0.12	0.34
98-86-2	Acetophenone	0.25	U	0.12	0.25	0.34
59-89-2	N-Nitrosomorpholine	0.16	U	0.08	0.16	0.34
95-53-4	o-Toluidine	0.17	U	0.087	0.17	0.34
122-09-8	a,a-Dimethylphenethylamine	1.1	U	0.55	1.1	1.7
87-65-0	2,6-Dichlorophenol	0.17	U	0.083	0.17	0.25
1888-71-7	Hexachloropropene	0.11	U	0.056	0.11	0.34
924-16-3	N-Nitrosodibutylamine	0.14	U	0.071	0.14	0.25
120-58-1	Isosafrole	0.14	U	0.071	0.14	0.34
95-94-3	1,2,4,5-Tetrachlorobenzene	0.12	U	0.058	0.12	0.34
94-59-7	Safrole	0.16	U	0.083	0.16	0.34
130-15-4	1,4-Naphthoquinone	0.11	U	0.054	0.11	0.34
99-65-0	1,3-Dinitrobenzene	0.12	U	0.062	0.12	0.25
608-93-5	Pentachlorobenzene	0.12	U	0.062	0.12	0.34
134-32-7	1-Naphthylamine	0.16	U	0.083	0.16	0.34
91-59-8	2-Naphthylamine	0.66	U	0.33	0.66	0.66
58-90-2	2,3,4,6-Tetrachlorophenol	0.17	U	0.087	0.17	0.34
99-55-8	5-Nitro-o-toluidine	0.12	U	0.058	0.12	0.34
106-50-3	p-Phenylenediamine	0.14	U	0.072	0.14	0.34
62-44-2	Phenacetin	0.14	U	0.072	0.14	0.34
92-67-1	4-Aminobiphenyl	0.66	U	0.33	0.66	0.83
23950-58-5	Pronamide	0.092	U	0.046	0.092	0.34

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

TFS-SD-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.11	U	0.057	0.11	0.33
88-85-7	Dinoseb	0.33	U	0.16	0.33	0.34
56-57-5	4-Nitroquinoline-1-oxide	0.25	U	0.12	0.25	1.6
91-80-5	Methapyriline	0.16	U	0.082	0.16	0.34
140-57-8	Aramite	0.5	U	0.25	0.5	0.5
60-11-7	p-Dimethylaminoazobenzene	0.12	U	0.058	0.12	0.34
53-96-3	2-Acetylaminofluorene	0.15	U	0.076	0.15	0.34
57-97-6	7,12-Dimethylbenz(a)anthracene	0.087	U	0.044	0.087	0.33
56-49-5	3-Methylcholanthrene	0.097	U	0.048	0.097	0.33
100-75-4	N-Nitrosopiperidine	0.11	U	0.054	0.11	0.34
99-35-4	1,3,5-Trinitrobenzene	0.5	U	0.25	0.5	0.5
2303-16-4	Diallate (Avadex)	0.18	U	0.092	0.18	0.33
465-73-6	Isodrin	0.12	U	0.061	0.12	0.34
510-15-6	Chlorobenzilate	0.07	U	0.035	0.07	0.33
143-50-0	Kepone	0.13	U	0.065	0.13	1.2
126-68-1	0,0,0-Triethylphosphorothioate	0.12	U	0.06	0.12	0.34

R-RE
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c.k.

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

UJ-SSL

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

UJ-55L



SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-FD

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3	UJ-SSL ↓ UJ-BSL, SSL UJ-SSL ↓ UR-BSL, SSL UJ-SSL ↓
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1	
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1	
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4	
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5	
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2	
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1	
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5	
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6	
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1	
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1	
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5	
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3	
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5	
94-59-7	Safrole	5.1	U	2.6	5.1	5.1	
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3	
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1	
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5	
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1	
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1	
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1	
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3	
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1	
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1	
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1	
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup: (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1	UJ-SSL
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2	↓
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2	UR-RF, SSL
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5	UR-RF, SSL
140-57-8	Aramite	8.2	U	4.1	8.2	8.2	UJ-SSL
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1	
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1	
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1	
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5	
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7	
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1	
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1	
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3	
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1	
143-50-0	Kepone	32.6	U	16.3	32.6	32.6	
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FDRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1	<i>RE</i>
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9	
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7	
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1	
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1	
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7	
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4	
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5	
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2	
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1	
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7	
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1	
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2	
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9	
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7	
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1	
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2	
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1	
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1	
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5	
117-81-7	Bis(2-ethylhexyl)phthalate	19.3		4.5	9	9	
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1	
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2	
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FDRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE
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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

c.k

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

c.t

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

c. R

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EBRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

R-RE

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EBRE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ	
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1	R-RE ↓
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9	
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7	
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1	
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1	
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7	
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4	
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5	
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7	
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2	
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1	
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7	
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1	
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2	
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9	
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7	
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1	
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2	
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1	
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1	
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5	
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9	
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1	
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2	
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5	

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-EBRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

R-RE
↓

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SD-EBRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyrilone	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

R-RE



c:l



PEL

A DIVISION OF SPECTRUM ANALYTICAL, INC. FEATURING HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 2 3505724
NJ

Special Handling:
 TAT- Indicate Date Needed: STD
 All TATs subject to laboratory approval.
 Min. 24-hour notification needed for rushes.
 Samples disposed of after 60 days unless otherwise instructed.

Report To: Greg Rowell
CH2M HILL Northpark 400
1000 Abernathy Rd. ste 1600
Atlanta, GA 30328
 Project Mgr.: Greg Rowell

Invoice To: Greg Rowell
 P.O. No.: _____ RQN: _____

Project No.: 426847.PP.FW.04
 Site Name: Boca Chica TFS
 Location: Key West NAS State: FL
 Sampler(s): Adrian Teal / N. Monroe
Jadri ze

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9=_____ 10=_____ 11=_____

List preservative code below:

4c						
----	----	----	----	----	----	----

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
 X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers:				Analyses:						
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260 Soil	8290, 8270 SIM, FL-PRO	8260 Water	8270	8270 SIM	FL-PRO	
-01	TFS-SD-01	4/12/12	1130	G	SO	3	1			3	1					
-02	TFS-SW-01		1138	G	GW		6					3	2	2	2	
-03	TFS-SD-02		1215	G	SO			1		3	1					
-04	TFS-SD-03		1305	G	SO			1		3	1					
-05	TFS-SW-02		1225	G	GW		6					3	2	2	2	
-06	TFS-SW-03		1316	G	GW		6					3	2	2	2	
-07	TFS-SD-04		1338	G	SO			1		3	1					
-08	TFS-SW-04		1405	G	GW		6					3	2	2	2	
-09	TFS-SD-FD		—	G	SO			1		3	1					
-10	TFS-SW-FD		—	G	SW		6					3	2	2	2	

Notes:
 QA/QC Reporting Level
 Level I Level II
 Level III Level IV
 Other _____
 State specific reporting standards:

E-mail to pHCA 8260, FL-PRO
 EDD Format P/W vials received

Relinquished by: Jadri ze Received by: MA
 Date: 4/12/12 Time: 1700
 Date: 4-13-12 Time: 1020

Condition upon receipt: Iced Ambient 3.0, 3.1, 4.0

3505724

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A DIVISION OF SPECTRUM ANALYTICAL, INC. featuring HANBAU TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 2 3505724
M

Special Handling:
 TAT- Indicate Date Needed: _____
 • All TATs subject to laboratory approval.
 • Min. 24-hour notification needed for rushes.
 • Samples disposed of after 60 days unless otherwise instructed.

Report To: _____ Invoice To: _____ Project No.: _____

 _____ *See page 1* _____ Site Name: _____
 _____ Location: _____ State: _____
 Project Mgr.: _____ P.O. No.: _____ RQN: _____

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8= NaHSO₄ 9= 10= 11=

List preservative code below:
 #1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
 X1= X2= X3=

Containers:

Analyses:

Notes:
 QA/QC Reporting Level
 Level I Level II
 Level III Level IV
 Other _____
 State specific reporting standards:

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260 Soil	8270, 8270-SIM, FL-PRO	8260 Water	8270	8270-SIM	FL-PRO
-11	TFS-SD-04MS	4/2/12	1330-1316	G	SO	3		1		3	1				
-12	TFS-SD-04MS		1338-1316	G	SO	3		1		3	1				
-13	TFS-SW-03MS		1316	G	GW		6					3	2	2	2
-14	TFS-SW-03MS		1316	G	GW		6					3	2	2	2
-15	TFS-SD-EB		1530	G	QC			1		3	1				
-16	TFS-TB01		1540	G	QC		2					2			

TFS-SD-04 Bowl & spoon

Condition upon receipt: Iced Ambient °C _____

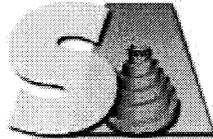
Relinquished by: _____ Received by: MJ Date: 4-3-12 Time: 1020

E-mail to _____
 EDD Format _____

3505724

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Date Reported:
11-May-12



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

- Final Report
- Re-Issued Report
- Revised Report

Laboratory Report

CH2M Hill
Northpark 400
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328

Project # 3505724
Project: Boca Chica TFS / 426847.PP.FW.04

Attn: Greg Rowell

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
350572401	TFS-SD-01	S	12-Apr-12 11:30	13-Apr-12 10:20
350572402	TFS-SW-01	W	12-Apr-12 11:38	13-Apr-12 10:20
350572403	TFS-SD-02	S	12-Apr-12 12:15	13-Apr-12 10:20
350572404	TFS-SD-03	S	12-Apr-12 13:05	13-Apr-12 10:20
350572405	TFS-SW-02	W	12-Apr-12 12:25	13-Apr-12 10:20
350572406	TFS-SW-03	W	12-Apr-12 13:16	13-Apr-12 10:20
350572407	TFS-SD-04	S	12-Apr-12 13:38	13-Apr-12 10:20
350572408	TFS-SW-04	W	12-Apr-12 14:05	13-Apr-12 10:20
350572409	TFS-SD-FD	S	12-Apr-12 0:00	13-Apr-12 10:20
350572410	TFS-SW-FD	W	12-Apr-12 0:00	13-Apr-12 10:20
350572411	TFS-SD-04 MS	S	12-Apr-12 13:38	13-Apr-12 10:20
350572412	TFS-SD-04 MSD	S	12-Apr-12 13:38	13-Apr-12 10:20
350572413	TFS-SW-03 MS	W	12-Apr-12 1:16	13-Apr-12 10:20
350572414	TFS-SW-03 MSD	W	12-Apr-12 1:16	13-Apr-12 10:20
350572415	TFS-SD-EB	W	12-Apr-12 15:30	13-Apr-12 10:20
350572416	TFS-TB01	W	12-Apr-12 15:40	13-Apr-12 10:20

The samples were analyzed for the methods listed on the attached table of contents. See the attached data tables for results.

Soil samples are reported on dry weight basis, unless otherwise noted.

Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis.

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met unless noted in the case narrative.

Spectrum Analytical is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Florida	E84207
Texas	T104704408-11
South Carolina	96011001
North Dakota	R-178
California	07253CA
Louisiana	02025
Kansas	E-10385
Arkansas	11-036-1



Certificate # L2259 Testing

Respectfully Submitted,

Brian Spann
Laboratory Director
Spectrum Analytical, Inc. Florida Division

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EXECUTIVE SUMMARY - Detection Highlights

3505724

SAMPLE ID: TFS-SD-01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0110 J	0.012	MG/KG	SW8260B
Acenaphthene	0.00220 J	0.0052	MG/KG	SW8270D-SIM
Acenaphthylene	0.00460 J	0.0052	MG/KG	SW8270D-SIM
Anthracene	0.00970	0.0052	MG/KG	SW8270D-SIM
Benzo(a)anthracene	0.120	0.0052	MG/KG	SW8270D-SIM
Benzo(a)pyrene	0.200	0.0056	MG/KG	SW8270D-SIM
Benzo(b)fluoranthene	0.320	0.0059	MG/KG	SW8270D-SIM
Benzo(g,h,i)perylene	0.130	0.0096	MG/KG	SW8270D-SIM
Benzo(k)fluoranthene	0.0740	0.0065	MG/KG	SW8270D-SIM
Chrysene	0.100	0.0052	MG/KG	SW8270D-SIM
Dibenzo(a,h)anthracene	0.0400	0.0081	MG/KG	SW8270D-SIM
Fluoranthene	0.150	0.0052	MG/KG	SW8270D-SIM
Fluorene	0.00240 J	0.0052	MG/KG	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.130	0.0093	MG/KG	SW8270D-SIM
Phenanthrene	0.0370	0.0052	MG/KG	SW8270D-SIM
Pyrene	0.110	0.0052	MG/KG	SW8270D-SIM
TPH	144	51	MG/KG	FL-PRO

SAMPLE ID: TFS-SD-01RE1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.00610 J	0.015	MG/KG	SW8260B

SAMPLE ID: TFS-SD-01RE2

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0261 J	0.030	MG/KG	SW8260B

EXECUTIVE SUMMARY - Detection Highlights

3505724

SAMPLE ID: TFS-SD-02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0238	0.016	MG/KG	SW8260B
1-Methylnaphthalene	0.0150	0.0060	MG/KG	SW8270D-SIM
2-Methylnaphthalene	0.0400	0.0060	MG/KG	SW8270D-SIM
Benzo(a)anthracene	0.0240	0.0060	MG/KG	SW8270D-SIM
Benzo(a)pyrene	0.0410	0.0065	MG/KG	SW8270D-SIM
Benzo(b)fluoranthene	0.0630	0.0069	MG/KG	SW8270D-SIM
Benzo(g,h,i)perylene	0.0260	0.011	MG/KG	SW8270D-SIM
Benzo(k)fluoranthene	0.0180	0.0076	MG/KG	SW8270D-SIM
Chrysene	0.0240	0.0060	MG/KG	SW8270D-SIM
Dibenzo(a,h)anthracene	0.00670 J	0.0094	MG/KG	SW8270D-SIM
Fluoranthene	0.0360	0.0060	MG/KG	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.0240	0.011	MG/KG	SW8270D-SIM
Naphthalene	0.0220	0.0060	MG/KG	SW8270D-SIM
Phenanthrene	0.00740	0.0060	MG/KG	SW8270D-SIM
Pyrene	0.0270	0.0060	MG/KG	SW8270D-SIM
TPH	103	58	MG/KG	FL-PRO

SAMPLE ID: TFS-SD-02RE1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0179 J	0.018	MG/KG	SW8260B

SAMPLE ID: TFS-SD-03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0282	0.011	MG/KG	SW8260B
2-Methylnaphthalene	0.00210 J	0.0044	MG/KG	SW8270D-SIM
Acenaphthene	0.00240 J	0.0044	MG/KG	SW8270D-SIM
Acenaphthylene	0.00220 J	0.0044	MG/KG	SW8270D-SIM
Anthracene	0.00520	0.0044	MG/KG	SW8270D-SIM
Benzo(a)anthracene	0.0290	0.0044	MG/KG	SW8270D-SIM
Benzo(a)pyrene	0.0510	0.0048	MG/KG	SW8270D-SIM

EXECUTIVE SUMMARY - Detection Highlights

3505724

Benzo(b)fluoranthene	0.0660	0.0050	MG/KG	SW8270D-SIM
Benzo(g,h,i)perylene	0.0370	0.0082	MG/KG	SW8270D-SIM
Benzo(k)fluoranthene	0.0210	0.0056	MG/KG	SW8270D-SIM
Chrysene	0.0280	0.0044	MG/KG	SW8270D-SIM
Dibenzo(a,h)anthracene	0.0100	0.0069	MG/KG	SW8270D-SIM
Fluoranthene	0.0400	0.0044	MG/KG	SW8270D-SIM
Fluorene	0.00240 J	0.0044	MG/KG	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.0300	0.0080	MG/KG	SW8270D-SIM
Phenanthrene	0.0130	0.0044	MG/KG	SW8270D-SIM
Pyrene	0.0320	0.0044	MG/KG	SW8270D-SIM
TPH	144	44	MG/KG	FL-PRO

SAMPLE ID: TFS-SD-04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0180	0.013	MG/KG	SW8260B
1-Methylnaphthalene	0.0220	0.0049	MG/KG	SW8270D-SIM
2-Methylnaphthalene	0.0670	0.0049	MG/KG	SW8270D-SIM
Acenaphthylene	0.00280 J	0.0049	MG/KG	SW8270D-SIM
Anthracene	0.00540	0.0049	MG/KG	SW8270D-SIM
Benzo(a)anthracene	0.0610	0.0049	MG/KG	SW8270D-SIM
Benzo(a)pyrene	0.100	0.0053	MG/KG	SW8270D-SIM
Benzo(b)fluoranthene	0.160	0.0056	MG/KG	SW8270D-SIM
Benzo(g,h,i)perylene	0.100	0.0092	MG/KG	SW8270D-SIM
Benzo(k)fluoranthene	0.0400	0.0062	MG/KG	SW8270D-SIM
Chrysene	0.0630	0.0049	MG/KG	SW8270D-SIM
Dibenzo(a,h)anthracene	0.0200	0.0077	MG/KG	SW8270D-SIM
Fluoranthene	0.110	0.0049	MG/KG	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.0820	0.0089	MG/KG	SW8270D-SIM
Naphthalene	0.0300	0.0049	MG/KG	SW8270D-SIM
Phenanthrene	0.0310	0.0049	MG/KG	SW8270D-SIM
Pyrene	0.0740	0.0049	MG/KG	SW8270D-SIM
TPH	91.1	48	MG/KG	FL-PRO

SAMPLE ID: TFS-SD-EB

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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EXECUTIVE SUMMARY - Detection Highlights

3505724

Acetone	1.80 J	10	UG/L	SW8260B
Toluene	0.390 J	1.0	UG/L	SW8260B

SAMPLE ID: TFS-SD-FD

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	0.0109	0.0097	MG/KG	SW8260B
Acenaphthene	0.00400 J	0.0042	MG/KG	SW8270D-SIM
Acenaphthylene	0.00370 J	0.0042	MG/KG	SW8270D-SIM
Anthracene	0.00920	0.0042	MG/KG	SW8270D-SIM
Benzo(a)anthracene	0.140	0.0042	MG/KG	SW8270D-SIM
Benzo(a)pyrene	0.180	0.0045	MG/KG	SW8270D-SIM
Benzo(b)fluoranthene	0.260	0.0048	MG/KG	SW8270D-SIM
Benzo(g,h,i)perylene	0.0980	0.0078	MG/KG	SW8270D-SIM
Benzo(k)fluoranthene	0.0710	0.0053	MG/KG	SW8270D-SIM
Chrysene	0.0960	0.0042	MG/KG	SW8270D-SIM
Dibenzo(a,h)anthracene	0.0310	0.0066	MG/KG	SW8270D-SIM
Fluoranthene	0.140	0.0042	MG/KG	SW8270D-SIM
Fluorene	0.00310 J	0.0042	MG/KG	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.0940	0.0076	MG/KG	SW8270D-SIM
Naphthalene	0.00210 J	0.0042	MG/KG	SW8270D-SIM
Phenanthrene	0.0410	0.0042	MG/KG	SW8270D-SIM
Pyrene	0.110	0.0042	MG/KG	SW8270D-SIM
TPH	95.7	41	MG/KG	FL-PRO

SAMPLE ID: TFS-SW-01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	5.40 J	10	UG/L	SW8260B
Bromoform	0.310 J	1.0	UG/L	SW8260B
Carbon disulfide	0.230 J	1.0	UG/L	SW8260B
TPH	2100	510	UG/L	FL-PRO

EXECUTIVE SUMMARY - Detection Highlights

3505724

SAMPLE ID: TFS-SW-02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	6.90 J	10	UG/L	SW8260B
Bromoform	2.20	1.0	UG/L	SW8260B
Carbon disulfide	0.530 J	1.0	UG/L	SW8260B
Chloroform	0.240 J	0.50	UG/L	SW8260B
Dibromochloromethane	0.250 J	0.50	UG/L	SW8260B
Benzo(a)pyrene	0.0250 J	0.051	UG/L	SW8270D-SIM
Benzo(b)fluoranthene	0.0420 J	0.051	UG/L	SW8270D-SIM
Benzo(g,h,i)perylene	0.0250 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.0270 J	0.051	UG/L	SW8270D-SIM
Pyrene	0.0210 J	0.051	UG/L	SW8270D-SIM
TPH	1100	510	UG/L	FL-PRO

SAMPLE ID: TFS-SW-03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	6.00 J	10	UG/L	SW8260B
Bromoform	0.340 J	1.0	UG/L	SW8260B
Carbon disulfide	0.340 J	1.0	UG/L	SW8260B
Benzo(a)anthracene	0.0560	0.051	UG/L	SW8270D-SIM
Benzo(a)pyrene	0.100	0.051	UG/L	SW8270D-SIM
Benzo(b)fluoranthene	0.180	0.051	UG/L	SW8270D-SIM
Benzo(g,h,i)perylene	0.0860	0.051	UG/L	SW8270D-SIM
Benzo(k)fluoranthene	0.0520	0.051	UG/L	SW8270D-SIM
Chrysene	0.0700	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.100	0.051	UG/L	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.0740	0.051	UG/L	SW8270D-SIM
Phenanthrene	0.0360 J	0.051	UG/L	SW8270D-SIM
Pyrene	0.0790	0.051	UG/L	SW8270D-SIM
TPH	1200	510	UG/L	FL-PRO

EXECUTIVE SUMMARY - Detection Highlights

3505724

SAMPLE ID: TFS-SW-04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	4.00 J	10	UG/L	SW8260B
Carbon disulfide	0.490 J	1.0	UG/L	SW8260B
Toluene	1.10	1.0	UG/L	SW8260B
Benzo(a)anthracene	0.100	0.051	UG/L	SW8270D-SIM
Benzo(a)pyrene	0.200	0.051	UG/L	SW8270D-SIM
Benzo(b)fluoranthene	0.300	0.051	UG/L	SW8270D-SIM
Benzo(g,h,i)perylene	0.170	0.051	UG/L	SW8270D-SIM
Benzo(k)fluoranthene	0.0920	0.051	UG/L	SW8270D-SIM
Chrysene	0.120	0.051	UG/L	SW8270D-SIM
Dibenzo(a,h)anthracene	0.0370 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.210	0.051	UG/L	SW8270D-SIM
Indeno(1,2,3-cd)pyrene	0.140	0.051	UG/L	SW8270D-SIM
Phenanthrene	0.0720	0.051	UG/L	SW8270D-SIM
Pyrene	0.150	0.051	UG/L	SW8270D-SIM
TPH	860	510	UG/L	FL-PRO

SAMPLE ID: TFS-SW-FD

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	6.00 J	10	UG/L	SW8260B
Bromodichloromethane	0.190 J	0.50	UG/L	SW8260B
Bromoform	1.60	1.0	UG/L	SW8260B
Carbon disulfide	0.640 J	1.0	UG/L	SW8260B
Chloroform	0.190 J	0.50	UG/L	SW8260B
Dibromochloromethane	0.260 J	0.50	UG/L	SW8260B
Dibromomethane	0.780 J	1.0	UG/L	SW8260B
1-Methylnaphthalene	0.0240 J	0.051	UG/L	SW8270D-SIM
2-Methylnaphthalene	0.0590	0.051	UG/L	SW8270D-SIM
Benzo(a)anthracene	0.0280 J	0.051	UG/L	SW8270D-SIM
Benzo(a)pyrene	0.0400 J	0.051	UG/L	SW8270D-SIM
Benzo(b)fluoranthene	0.0670	0.051	UG/L	SW8270D-SIM
Benzo(g,h,i)perylene	0.0360 J	0.051	UG/L	SW8270D-SIM
Benzo(k)fluoranthene	0.0220 J	0.051	UG/L	SW8270D-SIM
Chrysene	0.0280 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.0400 J	0.051	UG/L	SW8270D-SIM

EXECUTIVE SUMMARY - Detection Highlights

3505724

Indeno(1,2,3-cd)pyrene	0.0310 J	0.051	UG/L	SW8270D-SIM
Naphthalene	0.0380 J	0.051	UG/L	SW8270D-SIM
Phenanthrene	0.0220 J	0.051	UG/L	SW8270D-SIM
Pyrene	0.0310 J	0.051	UG/L	SW8270D-SIM
TPH	980	510	UG/L	FL-PRO

SAMPLE ID: TFS-SW-FDRE1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Bis(2-ethylhexyl)phthalat	19.3	9.0	UG/L	SW8270D

SAMPLE ID: TFS-TB01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	2.20 J	10	UG/L	SW8260B
Carbon disulfide	0.270 J	1.0	UG/L	SW8260B

Organics

Organic Data Qualifiers

- U** Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.
- J** Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.
- B** Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.
- E** Indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.
- D** Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C** The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.
- P** This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns.
- N** This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.
- A** This qualifier indicates that a TIC is a suspected aldol-condensation product.
- X** Data flagged as rejected by analyst utilizing analytical judgement.

Organic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

8260 Volatile Organics

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Soil samples were prepared by SW846/5035 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Soil samples were prepared by SW846/5035 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

A. Calibration:

All acceptance criteria were met. The low calibration standard is 0.005 mg/Kg for the following analyte(s): 1, 2, 3-Trichloropropane.

The ICAL on batch M2032312 did not meet the 15 %RSD for the following analytes: Acetone (21.7%), 2_Butanone (18.4%) and 2-Hexanone (19.8%).

The ICAL on batch M6041612 did not meet the 15%RSD for the following analytes: cis-1, 3-Dichloropropene (17.3%), trans-1, 3-Dichloropropene (15.4%) and Ethyl methacrylate (22.4%).

The CCV analyzed in batch M2042412 did not meet the 20 %D criteria for the following analytes: Dichlorodifluoromethane (27%), Ethyl methacrylate (20.6%), Isobutyl alcohol (28.8%), Methyl methacrylate (22.1%) and Propionitrile (24.5%)

The CCV analyzed in batch M6042512 did not meet the 20 %D criteria for the following analyte: 1, 4-Dichloro-2-butene (24.7%)

The average response factor criteria was met and analysis proceeded to meet holding times and requested turn around time.

B. Blanks:

All acceptance criteria were met .Please note that:

Blank 042512BLK62 was analyzed with the water samples on 04/25/12. The following analyte(s) were detected below RL: Acetone at 2.6 ug/L. No further action was taken, since hit detected was below the RL.

Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met .Please note that:

Sample TFS-SD-01 was recovered above criteria for the following surrogate(s): 4-Bromofluorobenzene at 122 % with criteria of (85-120). Sample was reanalyzed.

Sample TFS-SD-01RE2 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 68 % with criteria of (85-120), Toluene-d8 at 84 % with criteria of (85-115). Sample was reanalyzed, reporting both runs.

Sample TFS-SD-02 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 42 % with criteria of (85-120), Toluene-d8 at 70 % with criteria of (85-115). Sample was reanalyzed.

Sample TFS-SD-02RE1 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 78 % with criteria of (85-120). Sample was reanalyzed, reporting both runs.

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Sample TFS-SD-04 MSD was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 54 % with criteria of (85-120), Toluene-d8 at 70 % with criteria of (85-115). Sample was reanalyzed, obtaining similar results, only one run was reported.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met .Please note that:

LCS 042312LCS21D was analyzed with the soil samples on 04/23/12. The following analyte(s) were recovered above criteria: 1, 4-Dichloro-2-butene at 117 % with criteria of (68-115), Ethyl methacrylate at 122 % with criteria of (73-121), Isobutyl alcohol at 138 % with criteria of (70-130), Propionitrile at 135 % with criteria of (70-130). No further action was taken, since LCS21042312 sample met criteria.

LCS 042412LCS21 was analyzed with the soil samples on 04/24/12. The following analyte(s) were recovered above criteria: Vinyl chloride at 134 % with criteria of (60-125). No further action was taken, since LCSD21042412 sample met criteria.

LCS 042412LCS21D was analyzed with the soil samples on 04/24/12. All criteria were met. The following analyte(s) exceeded RPD criteria: Chloroethane at 36.4 % with criteria of (30), Dichlorodifluoromethane at 34.6 % with criteria of (30), and Trichlorofluoromethane at 31.7 % with criteria of (30). No further action was taken, since percent recovery criteria were met.

LCS 042512LCS61 was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 70 % with criteria of (75-152). No further action was taken, since LCSD621 042512 sample met criteria.

LCS 042512LCS61D was analyzed with the water samples on 04/25/12. All criteria were met. The following analyte(s) exceeded RPD criteria: 1,4-Dioxane at 22.2 % with criteria of (20), Methyl iodide at 33.3 % with criteria of (20). No further action was taken, since percent recovery criteria were met.

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

MS - TFS-SD-04 MS was analyzed with the soil samples on 04/24/12. The following analyte(s) were recovered below criteria: 1,1,1,2-Tetrachloroethane at 70.5 % with criteria of (75-125), Acrolein at 0 % with criteria of (31-148), Chlorobenzene at 69 % with criteria of (75-125), Ethyl methacrylate at 69 % with criteria of (73-121), Ethylbenzene at 65.1 % with criteria of (75-125), Styrene at 59.3 % with criteria of (75-125), Vinyl acetate at 67.4 % with criteria of (77-150), Xylene (total) at 66 % with criteria of (82-124).

SD - TFS-SD-04 MSD was analyzed with the soil samples on 04/24/12. The following analyte(s) were recovered below criteria: 1,1,1,2-Tetrachloroethane at 71.4 % with criteria of (75-125), Acrolein at 0 % with criteria of (31-148), Chlorobenzene at 72.6 % with criteria of (75-125), Ethyl methacrylate at 69.5 % with criteria of (73-121), Styrene at 59.5 % with criteria of (75-125), Vinyl acetate at 55.6 % with criteria of (77-150), Xylene (total) at 73.6 % with criteria of (82-124) and the following analyte(s) were recovered above criteria: Isobutyl alcohol at 133 % with criteria of (70-130). The following analyte(s) exceeded RPD criteria: 1,4-Dioxane at 34 % with criteria of (30), 2-Butanone at 37.1 % with criteria of (30), Acetone at 40.8 % with criteria of (30), Isobutyl alcohol at 50.9 % with criteria of (30), Methyl methacrylate at 30.4 % with criteria of (30), Propionitrile at 44.4 % with criteria of (30).

MS - TFS-SW-03 MS was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 68.5 % with criteria of (75-152).

SD - TFS-SW-03 MSD was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 51.5 % with criteria of (75-152). The following analyte(s) exceeded RPD criteria: Methyl iodide at 28.3 % with criteria of (20).

Samples coded accordingly.

E. Internal Standards:

All acceptance criteria were met .Please note that:

TFS-SD-01 did not meet criteria for the following internal standard(s): 1, 4-Dichlorobenzene-d4

TFS-SD-01RE1 did not meet criteria for the following internal standard(s): 1,4-Dichlorobenzene-d4 .

Sample was reanalyzed with similar results. Reporting both runs.

Samples coded accordingly.

F. Samples:

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Sample analysis proceeded normally.

Analytes were detected in Equipment Blank TFS-SD-EB. The following analyte(s) were detected below RL: Acetone at 1.8 ug/L, Toluene at 0.39 ug/L.

Analytes were detected in Trip Blank TFS-TB01. The following analyte(s) were detected below RL: Acetone at 2.2 ug/L, Carbon disulfide at 0.27 ug/L. Client specified reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/11/2012

VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.0
Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Method: 8260

EPA Sample No	Lab Sample ID
<u>TFS-SD-01</u>	<u>350572401</u>
<u>TFS-SD-01RE1</u>	<u>350572401RE1</u>
<u>TFS-SD-01RE2</u>	<u>350572401RE2</u>
<u>TFS-SW-01</u>	<u>350572402</u>
<u>TFS-SD-02</u>	<u>350572403</u>
<u>TFS-SD-02RE1</u>	<u>350572403RE1</u>
<u>TFS-SD-03</u>	<u>350572404</u>
<u>TFS-SW-02</u>	<u>350572405</u>
<u>TFS-SW-03</u>	<u>350572406</u>
<u>TFS-SD-04</u>	<u>350572407</u>
<u>TFS-SW-04</u>	<u>350572408</u>
<u>TFS-SD-FD</u>	<u>350572409</u>
<u>TFS-SW-FD</u>	<u>350572410</u>
<u>TFS-SD-EB</u>	<u>350572415</u>
<u>TFS-TB01</u>	<u>350572416</u>

8260 Sample Data

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00148	U	0.000738	0.00148	0.00246
74-87-3	Chloromethane	0.000934	U	0.000467	0.000934	0.00246
75-01-4	Vinyl chloride	0.00148	U	0.000738	0.00148	0.00246
74-83-9	Bromomethane	0.00295	U	0.00148	0.00295	0.00295
75-00-3	Chloroethane	0.00182	U	0.00091	0.00182	0.00246
75-69-4	Trichlorofluoromethane	0.00108	U	0.000541	0.00108	0.00246
75-35-4	1,1-Dichloroethene	0.000836	U	0.000418	0.000836	0.00246
107-02-8	Acrolein	0.00738	U	0.00369	0.00738	0.0123
74-88-4	Methyl iodide	0.00369	U	0.00184	0.00369	0.00369
75-15-0	Carbon disulfide	0.00369	U	0.00184	0.00369	0.00369
75-09-2	Methylene chloride	0.00295	U	0.00148	0.00295	0.00615
156-60-5	trans-1,2-Dichloroethene	0.000959	U	0.00048	0.000959	0.00246
107-13-1	Acrylonitrile	0.00467	U	0.00234	0.00467	0.00615
75-34-3	1,1-Dichloroethane	0.000836	U	0.000418	0.000836	0.00246
67-64-1	Acetone	0.011	J	0.0016	0.0032	0.0123
78-93-3	2-Butanone	0.00344	U	0.00172	0.00344	0.0123
67-66-3	Chloroform	0.00133	U	0.000664	0.00133	0.00246
71-55-6	1,1,1-Trichloroethane	0.00246	U	0.00123	0.00246	0.00246
56-23-5	Carbon tetrachloride	0.00148	U	0.000738	0.00148	0.00246
71-43-2	Benzene	0.00123	U	0.000615	0.00123	0.00246
107-06-2	1,2-Dichloroethane	0.00246	U	0.00123	0.00246	0.00246
79-01-6	Trichloroethene	0.00108	U	0.000541	0.00108	0.00246
108-05-4	Vinyl acetate	0.00369	U	0.00184	0.00369	0.00369
78-87-5	1,2-Dichloropropane	0.00155	U	0.000775	0.00155	0.00246
74-95-3	Dibromomethane	0.00162	U	0.000812	0.00162	0.00246
75-27-4	Bromodichloromethane	0.000787	U	0.000393	0.000787	0.00246

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00103	U	0.000516	0.00103	0.00246
108-10-1	4-Methyl-2-pentanone	0.00393	U	0.00197	0.00393	0.0123
108-88-3	Toluene	0.000713	U	0.000356	0.000713	0.00246
10061-02-6	trans-1,3-Dichloropropene	0.00246	U	0.00123	0.00246	0.00246
97-63-2	Ethyl methacrylate	0.00492	U	0.00246	0.00492	0.00615
79-00-5	1,1,2-Trichloroethane	0.00202	U	0.00101	0.00202	0.00246
127-18-4	Tetrachloroethene	0.00229	U	0.00114	0.00229	0.00246
591-78-6	2-Hexanone	0.0032	U	0.0016	0.0032	0.0123
124-48-1	Dibromochloromethane	0.00113	U	0.000566	0.00113	0.00246
106-93-4	1,2-Dibromoethane	0.00202	U	0.00101	0.00202	0.00246
108-90-7	Chlorobenzene	0.000861	U	0.00043	0.000861	0.00246
630-20-6	1,1,1,2-Tetrachloroethane	0.00182	U	0.00091	0.00182	0.00246
100-41-4	Ethylbenzene	0.0017	U	0.000848	0.0017	0.00246
100-42-5	Styrene	0.000688	U	0.000344	0.000688	0.00246
75-25-2	Bromoform	0.00113	U	0.000566	0.00113	0.00246
79-34-5	1,1,2,2-Tetrachloroethane	0.00145	U	0.000725	0.00145	0.00246
96-18-4	1,2,3-Trichloropropane	0.00295	U	0.00148	0.00295	0.00295
96-12-8	1,2-Dibromo-3-chloropropane	0.00688	U	0.00344	0.00688	0.00688
110-57-6	1,4-Dichloro-2-butene	0.00984	U	0.00492	0.00984	0.0123
75-05-8	Acetonitrile	0.0138	U	0.00688	0.0138	0.0246
107-05-1	Allyl chloride	0.00133	U	0.000664	0.00133	0.00246
123-91-1	1,4-Dioxane	0.24	U	0.12	0.24	0.24
78-83-1	Isobutyl alcohol	0.0393	U	0.0197	0.0393	0.12
126-98-7	Methacrylonitrile	0.014	U	0.00701	0.014	0.0246
80-62-6	Methyl methacrylate	0.0017	U	0.000848	0.0017	0.00246
107-12-0	Propionitrile	0.0492	U	0.0246	0.0492	0.0492

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 5724-01.D

Sample wt/vol: 8.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1557

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000984	U	0.000492	0.000984	0.00246
1330-20-7	Xylene (total)	0.00167	U	0.000836	0.00167	0.00492

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 5724-01R1.D

Sample wt/vol: 6.51 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00184	U	0.000918	0.00184	0.00306
74-87-3	Chloromethane	0.00116	U	0.000581	0.00116	0.00306
75-01-4	Vinyl chloride	0.00184	U	0.000918	0.00184	0.00306
74-83-9	Bromomethane	0.00367	U	0.00184	0.00367	0.00367
75-00-3	Chloroethane	0.00226	U	0.00113	0.00226	0.00306
75-69-4	Trichlorofluoromethane	0.00135	U	0.000673	0.00135	0.00306
75-35-4	1,1-Dichloroethene	0.00104	U	0.00052	0.00104	0.00306
107-02-8	Acrolein	0.00918	U	0.00459	0.00918	0.0153
74-88-4	Methyl iodide	0.00459	U	0.0023	0.00459	0.00459
75-15-0	Carbon disulfide	0.00459	U	0.0023	0.00459	0.00459
75-09-2	Methylene chloride	0.00367	U	0.00184	0.00367	0.00765
156-60-5	trans-1,2-Dichloroethene	0.00119	U	0.000597	0.00119	0.00306
107-13-1	Acrylonitrile	0.00581	U	0.00291	0.00581	0.00765
75-34-3	1,1-Dichloroethane	0.00104	U	0.00052	0.00104	0.00306
67-64-1	Acetone	0.0061	J	0.00199	0.00398	0.0153
78-93-3	2-Butanone	0.00428	U	0.00214	0.00428	0.0153
67-66-3	Chloroform	0.00165	U	0.000826	0.00165	0.00306
71-55-6	1,1,1-Trichloroethane	0.00306	U	0.00153	0.00306	0.00306
56-23-5	Carbon tetrachloride	0.00184	U	0.000918	0.00184	0.00306
71-43-2	Benzene	0.00153	U	0.000765	0.00153	0.00306
107-06-2	1,2-Dichloroethane	0.00306	U	0.00153	0.00306	0.00306
79-01-6	Trichloroethene	0.00135	U	0.000673	0.00135	0.00306
108-05-4	Vinyl acetate	0.00459	U	0.0023	0.00459	0.00459
78-87-5	1,2-Dichloropropane	0.00193	U	0.000964	0.00193	0.00306
74-95-3	Dibromomethane	0.00202	U	0.00101	0.00202	0.00306
75-27-4	Bromodichloromethane	0.000979	U	0.00049	0.000979	0.00306

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 5724-01R1.D

Sample wt/vol: 6.51 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00128	U	0.000643	0.00128	0.00306
108-10-1	4-Methyl-2-pentanone	0.0049	U	0.00245	0.0049	0.0153
108-88-3	Toluene	0.000887	U	0.000444	0.000887	0.00306
10061-02-6	trans-1,3-Dichloropropene	0.00306	U	0.00153	0.00306	0.00306
97-63-2	Ethyl methacrylate	0.00612	U	0.00306	0.00612	0.00765
79-00-5	1,1,2-Trichloroethane	0.00251	U	0.00125	0.00251	0.00306
127-18-4	Tetrachloroethene	0.00284	U	0.00142	0.00284	0.00306
591-78-6	2-Hexanone	0.00398	U	0.00199	0.00398	0.0153
124-48-1	Dibromochloromethane	0.00141	U	0.000704	0.00141	0.00306
106-93-4	1,2-Dibromoethane	0.00251	U	0.00125	0.00251	0.00306
108-90-7	Chlorobenzene	0.00107	U	0.000536	0.00107	0.00306
630-20-6	1,1,1,2-Tetrachloroethane	0.00226	U	0.00113	0.00226	0.00306
100-41-4	Ethylbenzene	0.00211	U	0.00106	0.00211	0.00306
100-42-5	Styrene	0.000857	U	0.000428	0.000857	0.00306
75-25-2	Bromoform	0.00141	U	0.000704	0.00141	0.00306
79-34-5	1,1,2,2-Tetrachloroethane	0.0018	U	0.000903	0.0018	0.00306
96-18-4	1,2,3-Trichloropropane	0.00367	U	0.00184	0.00367	0.00367
96-12-8	1,2-Dibromo-3-chloropropane	0.00857	U	0.00428	0.00857	0.00857
110-57-6	1,4-Dichloro-2-butene	0.0122	U	0.00612	0.0122	0.0153
75-05-8	Acetonitrile	0.0171	U	0.00857	0.0171	0.0306
107-05-1	Allyl chloride	0.00165	U	0.000826	0.00165	0.00306
123-91-1	1,4-Dioxane	0.31	U	0.15	0.31	0.31
78-83-1	Isobutyl alcohol	0.049	U	0.0245	0.049	0.15
126-98-7	Methacrylonitrile	0.0174	U	0.00872	0.0174	0.0306
80-62-6	Methyl methacrylate	0.00211	U	0.00106	0.00211	0.00306
107-12-0	Propionitrile	0.0612	U	0.0306	0.0612	0.0612

VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-01RE1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 5724-01R1.D
 Sample wt/vol: 6.51 Units: G Date Received: 04/13/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1455
 PercentSolids: 50.2 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: _____ Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00122	U	0.000612	0.00122	0.00306
1330-20-7	Xylene (total)	0.00208	U	0.00104	0.00208	0.00612

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE2

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00354	U	0.00177	0.00354	0.00589
74-87-3	Chloromethane	0.00224	U	0.00112	0.00224	0.00589
75-01-4	Vinyl chloride	0.00354	U	0.00177	0.00354	0.00589
74-83-9	Bromomethane	0.00707	U	0.00354	0.00707	0.00707
75-00-3	Chloroethane	0.00436	U	0.00218	0.00436	0.00589
75-69-4	Trichlorofluoromethane	0.00259	U	0.0013	0.00259	0.00589
75-35-4	1,1-Dichloroethene	0.002	U	0.001	0.002	0.00589
107-02-8	Acrolein	0.0177	U	0.00884	0.0177	0.0295
74-88-4	Methyl iodide	0.00884	U	0.00442	0.00884	0.00884
75-15-0	Carbon disulfide	0.00884	U	0.00442	0.00884	0.00884
75-09-2	Methylene chloride	0.00707	U	0.00354	0.00707	0.0147
156-60-5	trans-1,2-Dichloroethene	0.0023	U	0.00115	0.0023	0.00589
107-13-1	Acrylonitrile	0.0112	U	0.0056	0.0112	0.0147
75-34-3	1,1-Dichloroethane	0.002	U	0.001	0.002	0.00589
67-64-1	Acetone	0.0261	J	0.00383	0.00766	0.0295
78-93-3	2-Butanone	0.00825	U	0.00412	0.00825	0.0295
67-66-3	Chloroform	0.00318	U	0.00159	0.00318	0.00589
71-55-6	1,1,1-Trichloroethane	0.00589	U	0.00295	0.00589	0.00589
56-23-5	Carbon tetrachloride	0.00354	U	0.00177	0.00354	0.00589
71-43-2	Benzene	0.00295	U	0.00147	0.00295	0.00589
107-06-2	1,2-Dichloroethane	0.00589	U	0.00295	0.00589	0.00589
79-01-6	Trichloroethene	0.00259	U	0.0013	0.00259	0.00589
108-05-4	Vinyl acetate	0.00884	U	0.00442	0.00884	0.00884
78-87-5	1,2-Dichloropropane	0.00371	U	0.00186	0.00371	0.00589
74-95-3	Dibromomethane	0.00389	U	0.00194	0.00389	0.00589
75-27-4	Bromodichloromethane	0.00188	U	0.000943	0.00188	0.00589

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE2

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00248	U	0.00124	0.00248	0.00589
108-10-1	4-Methyl-2-pentanone	0.00943	U	0.00471	0.00943	0.0295
108-88-3	Toluene	0.00171	U	0.000854	0.00171	0.00589
10061-02-6	trans-1,3-Dichloropropene	0.00589	U	0.00295	0.00589	0.00589
97-63-2	Ethyl methacrylate	0.0118	U	0.00589	0.0118	0.0147
79-00-5	1,1,2-Trichloroethane	0.00483	U	0.00242	0.00483	0.00589
127-18-4	Tetrachloroethene	0.00548	U	0.00274	0.00548	0.00589
591-78-6	2-Hexanone	0.00766	U	0.00383	0.00766	0.0295
124-48-1	Dibromochloromethane	0.00271	U	0.00136	0.00271	0.00589
106-93-4	1,2-Dibromoethane	0.00483	U	0.00242	0.00483	0.00589
108-90-7	Chlorobenzene	0.00206	U	0.00103	0.00206	0.00589
630-20-6	1,1,1,2-Tetrachloroethane	0.00436	U	0.00218	0.00436	0.00589
100-41-4	Ethylbenzene	0.00407	U	0.00203	0.00407	0.00589
100-42-5	Styrene	0.00165	U	0.000825	0.00165	0.00589
75-25-2	Bromoform	0.00271	U	0.00136	0.00271	0.00589
79-34-5	1,1,2,2-Tetrachloroethane	0.00348	U	0.00174	0.00348	0.00589
96-18-4	1,2,3-Trichloropropane	0.00707	U	0.00354	0.00707	0.00707
96-12-8	1,2-Dibromo-3-chloropropane	0.0165	U	0.00825	0.0165	0.0165
110-57-6	1,4-Dichloro-2-butene	0.0236	U	0.0118	0.0236	0.0295
75-05-8	Acetonitrile	0.033	U	0.0165	0.033	0.0589
107-05-1	Allyl chloride	0.00318	U	0.00159	0.00318	0.00589
123-91-1	1,4-Dioxane	0.59	U	0.29	0.59	0.59
78-83-1	Isobutyl alcohol	0.0943	U	0.0471	0.0943	0.29
126-98-7	Methacrylonitrile	0.0336	U	0.0168	0.0336	0.0589
80-62-6	Methyl methacrylate	0.00407	U	0.00203	0.00407	0.00589
107-12-0	Propionitrile	0.12	U	0.0589	0.12	0.12

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE2

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE2 Lab File ID 5724-1R2.D

Sample wt/vol: 3.38 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1907

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00236	U	0.00118	0.00236	0.00589
1330-20-7	Xylene (total)	0.00401	U	0.002	0.00401	0.0118

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.23	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	5.4	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.31	J	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 572402.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1409

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00188	U	0.000939	0.00188	0.00313
74-87-3	Chloromethane	0.00119	U	0.000594	0.00119	0.00313
75-01-4	Vinyl chloride	0.00188	U	0.000939	0.00188	0.00313
74-83-9	Bromomethane	0.00375	U	0.00188	0.00375	0.00375
75-00-3	Chloroethane	0.00232	U	0.00116	0.00232	0.00313
75-69-4	Trichlorofluoromethane	0.00138	U	0.000688	0.00138	0.00313
75-35-4	1,1-Dichloroethene	0.00106	U	0.000532	0.00106	0.00313
107-02-8	Acrolein	0.00939	U	0.00469	0.00939	0.0156
74-88-4	Methyl iodide	0.00469	U	0.00235	0.00469	0.00469
75-15-0	Carbon disulfide	0.00469	U	0.00235	0.00469	0.00469
75-09-2	Methylene chloride	0.00375	U	0.00188	0.00375	0.00782
156-60-5	trans-1,2-Dichloroethene	0.00122	U	0.00061	0.00122	0.00313
107-13-1	Acrylonitrile	0.00594	U	0.00297	0.00594	0.00782
75-34-3	1,1-Dichloroethane	0.00106	U	0.000532	0.00106	0.00313
67-64-1	Acetone	0.0238		0.00203	0.00407	0.0156
78-93-3	2-Butanone	0.00438	U	0.00219	0.00438	0.0156
67-66-3	Chloroform	0.00169	U	0.000845	0.00169	0.00313
71-55-6	1,1,1-Trichloroethane	0.00313	U	0.00156	0.00313	0.00313
56-23-5	Carbon tetrachloride	0.00188	U	0.000939	0.00188	0.00313
71-43-2	Benzene	0.00156	U	0.000782	0.00156	0.00313
107-06-2	1,2-Dichloroethane	0.00313	U	0.00156	0.00313	0.00313
79-01-6	Trichloroethene	0.00138	U	0.000688	0.00138	0.00313
108-05-4	Vinyl acetate	0.00469	U	0.00235	0.00469	0.00469
78-87-5	1,2-Dichloropropane	0.00197	U	0.000986	0.00197	0.00313
74-95-3	Dibromomethane	0.00206	U	0.00103	0.00206	0.00313
75-27-4	Bromodichloromethane	0.001	U	0.000501	0.001	0.00313

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00131	U	0.000657	0.00131	0.00313
108-10-1	4-Methyl-2-pentanone	0.00501	U	0.0025	0.00501	0.0156
108-88-3	Toluene	0.000907	U	0.000454	0.000907	0.00313
10061-02-6	trans-1,3-Dichloropropene	0.00313	U	0.00156	0.00313	0.00313
97-63-2	Ethyl methacrylate	0.00626	U	0.00313	0.00626	0.00782
79-00-5	1,1,2-Trichloroethane	0.00256	U	0.00128	0.00256	0.00313
127-18-4	Tetrachloroethene	0.00291	U	0.00145	0.00291	0.00313
591-78-6	2-Hexanone	0.00407	U	0.00203	0.00407	0.0156
124-48-1	Dibromochloromethane	0.00144	U	0.00072	0.00144	0.00313
106-93-4	1,2-Dibromoethane	0.00256	U	0.00128	0.00256	0.00313
108-90-7	Chlorobenzene	0.0011	U	0.000548	0.0011	0.00313
630-20-6	1,1,1,2-Tetrachloroethane	0.00232	U	0.00116	0.00232	0.00313
100-41-4	Ethylbenzene	0.00216	U	0.00108	0.00216	0.00313
100-42-5	Styrene	0.000876	U	0.000438	0.000876	0.00313
75-25-2	Bromoform	0.00144	U	0.00072	0.00144	0.00313
79-34-5	1,1,2,2-Tetrachloroethane	0.00185	U	0.000923	0.00185	0.00313
96-18-4	1,2,3-Trichloropropane	0.00375	U	0.00188	0.00375	0.00375
96-12-8	1,2-Dibromo-3-chloropropane	0.00876	U	0.00438	0.00876	0.00876
110-57-6	1,4-Dichloro-2-butene	0.0125	U	0.00626	0.0125	0.0156
75-05-8	Acetonitrile	0.0175	U	0.00876	0.0175	0.0313
107-05-1	Allyl chloride	0.00169	U	0.000845	0.00169	0.00313
123-91-1	1,4-Dioxane	0.31	U	0.16	0.31	0.31
78-83-1	Isobutyl alcohol	0.0501	U	0.025	0.0501	0.16
126-98-7	Methacrylonitrile	0.0178	U	0.00892	0.0178	0.0313
80-62-6	Methyl methacrylate	0.00216	U	0.00108	0.00216	0.00313
107-12-0	Propionitrile	0.0626	U	0.0313	0.0626	0.0626

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 5724-03.D

Sample wt/vol: 7.33 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1625

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00125	U	0.000626	0.00125	0.00313
1330-20-7	Xylene (total)	0.00213	U	0.00106	0.00213	0.00626

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00221	U	0.0011	0.00221	0.00368
74-87-3	Chloromethane	0.0014	U	0.0007	0.0014	0.00368
75-01-4	Vinyl chloride	0.00221	U	0.0011	0.00221	0.00368
74-83-9	Bromomethane	0.00442	U	0.00221	0.00442	0.00442
75-00-3	Chloroethane	0.00272	U	0.00136	0.00272	0.00368
75-69-4	Trichlorofluoromethane	0.00162	U	0.00081	0.00162	0.00368
75-35-4	1,1-Dichloroethene	0.00125	U	0.000626	0.00125	0.00368
107-02-8	Acrolein	0.011	U	0.00552	0.011	0.0184
74-88-4	Methyl iodide	0.00552	U	0.00276	0.00552	0.00552
75-15-0	Carbon disulfide	0.00552	U	0.00276	0.00552	0.00552
75-09-2	Methylene chloride	0.00442	U	0.00221	0.00442	0.0092
156-60-5	trans-1,2-Dichloroethene	0.00144	U	0.000718	0.00144	0.00368
107-13-1	Acrylonitrile	0.007	U	0.0035	0.007	0.0092
75-34-3	1,1-Dichloroethane	0.00125	U	0.000626	0.00125	0.00368
67-64-1	Acetone	0.0179	J	0.00239	0.00479	0.0184
78-93-3	2-Butanone	0.00515	U	0.00258	0.00515	0.0184
67-66-3	Chloroform	0.00199	U	0.000994	0.00199	0.00368
71-55-6	1,1,1-Trichloroethane	0.00368	U	0.00184	0.00368	0.00368
56-23-5	Carbon tetrachloride	0.00221	U	0.0011	0.00221	0.00368
71-43-2	Benzene	0.00184	U	0.00092	0.00184	0.00368
107-06-2	1,2-Dichloroethane	0.00368	U	0.00184	0.00368	0.00368
79-01-6	Trichloroethene	0.00162	U	0.00081	0.00162	0.00368
108-05-4	Vinyl acetate	0.00552	U	0.00276	0.00552	0.00552
78-87-5	1,2-Dichloropropane	0.00232	U	0.00116	0.00232	0.00368
74-95-3	Dibromomethane	0.00243	U	0.00121	0.00243	0.00368
75-27-4	Bromodichloromethane	0.00118	U	0.000589	0.00118	0.00368

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00155	U	0.000773	0.00155	0.00368
108-10-1	4-Methyl-2-pentanone	0.00589	U	0.00294	0.00589	0.0184
108-88-3	Toluene	0.00107	U	0.000534	0.00107	0.00368
10061-02-6	trans-1,3-Dichloropropene	0.00368	U	0.00184	0.00368	0.00368
97-63-2	Ethyl methacrylate	0.00736	U	0.00368	0.00736	0.0092
79-00-5	1,1,2-Trichloroethane	0.00302	U	0.00151	0.00302	0.00368
127-18-4	Tetrachloroethene	0.00342	U	0.00171	0.00342	0.00368
591-78-6	2-Hexanone	0.00479	U	0.00239	0.00479	0.0184
124-48-1	Dibromochloromethane	0.00169	U	0.000847	0.00169	0.00368
106-93-4	1,2-Dibromoethane	0.00302	U	0.00151	0.00302	0.00368
108-90-7	Chlorobenzene	0.00129	U	0.000644	0.00129	0.00368
630-20-6	1,1,1,2-Tetrachloroethane	0.00272	U	0.00136	0.00272	0.00368
100-41-4	Ethylbenzene	0.00254	U	0.00127	0.00254	0.00368
100-42-5	Styrene	0.00103	U	0.000515	0.00103	0.00368
75-25-2	Bromoform	0.00169	U	0.000847	0.00169	0.00368
79-34-5	1,1,2,2-Tetrachloroethane	0.00217	U	0.00109	0.00217	0.00368
96-18-4	1,2,3-Trichloropropane	0.00442	U	0.00221	0.00442	0.00442
96-12-8	1,2-Dibromo-3-chloropropane	0.0103	U	0.00515	0.0103	0.0103
110-57-6	1,4-Dichloro-2-butene	0.0147	U	0.00736	0.0147	0.0184
75-05-8	Acetonitrile	0.0206	U	0.0103	0.0206	0.0368
107-05-1	Allyl chloride	0.00199	U	0.000994	0.00199	0.00368
123-91-1	1,4-Dioxane	0.37	U	0.18	0.37	0.37
78-83-1	Isobutyl alcohol	0.0589	U	0.0294	0.0589	0.18
126-98-7	Methacrylonitrile	0.021	U	0.0105	0.021	0.0368
80-62-6	Methyl methacrylate	0.00254	U	0.00127	0.00254	0.00368
107-12-0	Propionitrile	0.0736	U	0.0368	0.0736	0.0736

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 5724-03R.D

Sample wt/vol: 6.23 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1523

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00147	U	0.000736	0.00147	0.00368
1330-20-7	Xylene (total)	0.0025	U	0.00125	0.0025	0.00736

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D

Sample wt/vol: 7.92 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00129	U	0.000643	0.00129	0.00214
74-87-3	Chloromethane	0.000814	U	0.000407	0.000814	0.00214
75-01-4	Vinyl chloride	0.00129	U	0.000643	0.00129	0.00214
74-83-9	Bromomethane	0.00257	U	0.00129	0.00257	0.00257
75-00-3	Chloroethane	0.00159	U	0.000793	0.00159	0.00214
75-69-4	Trichlorofluoromethane	0.000943	U	0.000472	0.000943	0.00214
75-35-4	1,1-Dichloroethene	0.000729	U	0.000364	0.000729	0.00214
107-02-8	Acrolein	0.00643	U	0.00322	0.00643	0.0107
74-88-4	Methyl iodide	0.00322	U	0.00161	0.00322	0.00322
75-15-0	Carbon disulfide	0.00322	U	0.00161	0.00322	0.00322
75-09-2	Methylene chloride	0.00257	U	0.00129	0.00257	0.00536
156-60-5	trans-1,2-Dichloroethene	0.000836	U	0.000418	0.000836	0.00214
107-13-1	Acrylonitrile	0.00407	U	0.00204	0.00407	0.00536
75-34-3	1,1-Dichloroethane	0.000729	U	0.000364	0.000729	0.00214
67-64-1	Acetone	0.0282		0.00139	0.00279	0.0107
78-93-3	2-Butanone	0.003	U	0.0015	0.003	0.0107
67-66-3	Chloroform	0.00116	U	0.000579	0.00116	0.00214
71-55-6	1,1,1-Trichloroethane	0.00214	U	0.00107	0.00214	0.00214
56-23-5	Carbon tetrachloride	0.00129	U	0.000643	0.00129	0.00214
71-43-2	Benzene	0.00107	U	0.000536	0.00107	0.00214
107-06-2	1,2-Dichloroethane	0.00214	U	0.00107	0.00214	0.00214
79-01-6	Trichloroethene	0.000943	U	0.000472	0.000943	0.00214
108-05-4	Vinyl acetate	0.00322	U	0.00161	0.00322	0.00322
78-87-5	1,2-Dichloropropane	0.00135	U	0.000675	0.00135	0.00214
74-95-3	Dibromomethane	0.00141	U	0.000707	0.00141	0.00214
75-27-4	Bromodichloromethane	0.000686	U	0.000343	0.000686	0.00214

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D

Sample wt/vol: 7.92 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.0009	U	0.00045	0.0009	0.00214
108-10-1	4-Methyl-2-pentanone	0.00343	U	0.00171	0.00343	0.0107
108-88-3	Toluene	0.000622	U	0.000311	0.000622	0.00214
10061-02-6	trans-1,3-Dichloropropene	0.00214	U	0.00107	0.00214	0.00214
97-63-2	Ethyl methacrylate	0.00429	U	0.00214	0.00429	0.00536
79-00-5	1,1,2-Trichloroethane	0.00176	U	0.000879	0.00176	0.00214
127-18-4	Tetrachloroethene	0.00199	U	0.000997	0.00199	0.00214
591-78-6	2-Hexanone	0.00279	U	0.00139	0.00279	0.0107
124-48-1	Dibromochloromethane	0.000986	U	0.000493	0.000986	0.00214
106-93-4	1,2-Dibromoethane	0.00176	U	0.000879	0.00176	0.00214
108-90-7	Chlorobenzene	0.00075	U	0.000375	0.00075	0.00214
630-20-6	1,1,1,2-Tetrachloroethane	0.00159	U	0.000793	0.00159	0.00214
100-41-4	Ethylbenzene	0.00148	U	0.00074	0.00148	0.00214
100-42-5	Styrene	0.0006	U	0.0003	0.0006	0.00214
75-25-2	Bromoform	0.000986	U	0.000493	0.000986	0.00214
79-34-5	1,1,2,2-Tetrachloroethane	0.00126	U	0.000632	0.00126	0.00214
96-18-4	1,2,3-Trichloropropane	0.00257	U	0.00129	0.00257	0.00257
96-12-8	1,2-Dibromo-3-chloropropane	0.006	U	0.003	0.006	0.006
110-57-6	1,4-Dichloro-2-butene	0.00857	U	0.00429	0.00857	0.0107
75-05-8	Acetonitrile	0.012	U	0.006	0.012	0.0214
107-05-1	Allyl chloride	0.00116	U	0.000579	0.00116	0.00214
123-91-1	1,4-Dioxane	0.21	U	0.11	0.21	0.21
78-83-1	Isobutyl alcohol	0.0343	U	0.0171	0.0343	0.11
126-98-7	Methacrylonitrile	0.0122	U	0.00611	0.0122	0.0214
80-62-6	Methyl methacrylate	0.00148	U	0.00074	0.00148	0.00214
107-12-0	Propionitrile	0.0429	U	0.0214	0.0429	0.0429

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 5724-04.D

Sample wt/vol: 7.92 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1551

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000857	U	0.000429	0.000857	0.00214
1330-20-7	Xylene (total)	0.00146	U	0.000729	0.00146	0.00429

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.53	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6.9	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.24	J	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.25	J	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	2.2		0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 572405.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1435

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.34	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.34	J	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 572406.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1500

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00152	U	0.00076	0.00152	0.00253
74-87-3	Chloromethane	0.000963	U	0.000481	0.000963	0.00253
75-01-4	Vinyl chloride	0.00152	U	0.00076	0.00152	0.00253
74-83-9	Bromomethane	0.00304	U	0.00152	0.00304	0.00304
75-00-3	Chloroethane	0.00187	U	0.000937	0.00187	0.00253
75-69-4	Trichlorofluoromethane	0.00111	U	0.000557	0.00111	0.00253
75-35-4	1,1-Dichloroethene	0.000861	U	0.000431	0.000861	0.00253
107-02-8	Acrolein	0.0076	U	0.0038	0.0076	0.0127
74-88-4	Methyl iodide	0.0038	U	0.0019	0.0038	0.0038
75-15-0	Carbon disulfide	0.0038	U	0.0019	0.0038	0.0038
75-09-2	Methylene chloride	0.00304	U	0.00152	0.00304	0.00633
156-60-5	trans-1,2-Dichloroethene	0.000988	U	0.000494	0.000988	0.00253
107-13-1	Acrylonitrile	0.00481	U	0.00241	0.00481	0.00633
75-34-3	1,1-Dichloroethane	0.000861	U	0.000431	0.000861	0.00253
67-64-1	Acetone	0.018		0.00165	0.00329	0.0127
78-93-3	2-Butanone	0.00355	U	0.00177	0.00355	0.0127
67-66-3	Chloroform	0.00137	U	0.000684	0.00137	0.00253
71-55-6	1,1,1-Trichloroethane	0.00253	U	0.00127	0.00253	0.00253
56-23-5	Carbon tetrachloride	0.00152	U	0.00076	0.00152	0.00253
71-43-2	Benzene	0.00127	U	0.000633	0.00127	0.00253
107-06-2	1,2-Dichloroethane	0.00253	U	0.00127	0.00253	0.00253
79-01-6	Trichloroethene	0.00111	U	0.000557	0.00111	0.00253
108-05-4	Vinyl acetate	0.0038	U	0.0019	0.0038	0.0038
78-87-5	1,2-Dichloropropane	0.0016	U	0.000798	0.0016	0.00253
74-95-3	Dibromomethane	0.00167	U	0.000836	0.00167	0.00253
75-27-4	Bromodichloromethane	0.000811	U	0.000405	0.000811	0.00253

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.00106	U	0.000532	0.00106	0.00253
108-10-1	4-Methyl-2-pentanone	0.00405	U	0.00203	0.00405	0.0127
108-88-3	Toluene	0.000735	U	0.000367	0.000735	0.00253
10061-02-6	trans-1,3-Dichloropropene	0.00253	U	0.00127	0.00253	0.00253
97-63-2	Ethyl methacrylate	0.00507	U	0.00253	0.00507	0.00633
79-00-5	1,1,2-Trichloroethane	0.00208	U	0.00104	0.00208	0.00253
127-18-4	Tetrachloroethene	0.00236	U	0.00118	0.00236	0.00253
591-78-6	2-Hexanone	0.00329	U	0.00165	0.00329	0.0127
124-48-1	Dibromochloromethane	0.00116	U	0.000583	0.00116	0.00253
106-93-4	1,2-Dibromoethane	0.00208	U	0.00104	0.00208	0.00253
108-90-7	Chlorobenzene	0.000887	U	0.000443	0.000887	0.00253
630-20-6	1,1,1,2-Tetrachloroethane	0.00187	U	0.000937	0.00187	0.00253
100-41-4	Ethylbenzene	0.00175	U	0.000874	0.00175	0.00253
100-42-5	Styrene	0.000709	U	0.000355	0.000709	0.00253
75-25-2	Bromoform	0.00116	U	0.000583	0.00116	0.00253
79-34-5	1,1,2,2-Tetrachloroethane	0.00149	U	0.000747	0.00149	0.00253
96-18-4	1,2,3-Trichloropropane	0.00304	U	0.00152	0.00304	0.00304
96-12-8	1,2-Dibromo-3-chloropropane	0.00709	U	0.00355	0.00709	0.00709
110-57-6	1,4-Dichloro-2-butene	0.0101	U	0.00507	0.0101	0.0127
75-05-8	Acetonitrile	0.0142	U	0.00709	0.0142	0.0253
107-05-1	Allyl chloride	0.00137	U	0.000684	0.00137	0.00253
123-91-1	1,4-Dioxane	0.25	U	0.13	0.25	0.25
78-83-1	Isobutyl alcohol	0.0405	U	0.0203	0.0405	0.13
126-98-7	Methacrylonitrile	0.0144	U	0.00722	0.0144	0.0253
80-62-6	Methyl methacrylate	0.00175	U	0.000874	0.00175	0.00253
107-12-0	Propionitrile	0.0507	U	0.0253	0.0507	0.0507

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 5724-07.D

Sample wt/vol: 7.31 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1428

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.00101	U	0.000507	0.00101	0.00253
1330-20-7	Xylene (total)	0.00172	U	0.000861	0.00172	0.00507

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.49	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	4	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	1.1		0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 572408.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1344

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.00117	U	0.000584	0.00117	0.00194
74-87-3	Chloromethane	0.000739	U	0.00037	0.000739	0.00194
75-01-4	Vinyl chloride	0.00117	U	0.000584	0.00117	0.00194
74-83-9	Bromomethane	0.00233	U	0.00117	0.00233	0.00233
75-00-3	Chloroethane	0.00144	U	0.00072	0.00144	0.00194
75-69-4	Trichlorofluoromethane	0.000856	U	0.000428	0.000856	0.00194
75-35-4	1,1-Dichloroethene	0.000662	U	0.000331	0.000662	0.00194
107-02-8	Acrolein	0.00584	U	0.00292	0.00584	0.00973
74-88-4	Methyl iodide	0.00292	U	0.00146	0.00292	0.00292
75-15-0	Carbon disulfide	0.00292	U	0.00146	0.00292	0.00292
75-09-2	Methylene chloride	0.00233	U	0.00117	0.00233	0.00486
156-60-5	trans-1,2-Dichloroethene	0.000759	U	0.000379	0.000759	0.00194
107-13-1	Acrylonitrile	0.0037	U	0.00185	0.0037	0.00486
75-34-3	1,1-Dichloroethane	0.000662	U	0.000331	0.000662	0.00194
67-64-1	Acetone	0.0109		0.00126	0.00253	0.00973
78-93-3	2-Butanone	0.00272	U	0.00136	0.00272	0.00973
67-66-3	Chloroform	0.00105	U	0.000525	0.00105	0.00194
71-55-6	1,1,1-Trichloroethane	0.00194	U	0.000973	0.00194	0.00194
56-23-5	Carbon tetrachloride	0.00117	U	0.000584	0.00117	0.00194
71-43-2	Benzene	0.000973	U	0.000486	0.000973	0.00194
107-06-2	1,2-Dichloroethane	0.00194	U	0.000973	0.00194	0.00194
79-01-6	Trichloroethene	0.000856	U	0.000428	0.000856	0.00194
108-05-4	Vinyl acetate	0.00292	U	0.00146	0.00292	0.00292
78-87-5	1,2-Dichloropropane	0.00122	U	0.000613	0.00122	0.00194
74-95-3	Dibromomethane	0.00128	U	0.000642	0.00128	0.00194
75-27-4	Bromodichloromethane	0.000622	U	0.000311	0.000622	0.00194

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.000817	U	0.000408	0.000817	0.00194
108-10-1	4-Methyl-2-pentanone	0.00311	U	0.00156	0.00311	0.00973
108-88-3	Toluene	0.000564	U	0.000282	0.000564	0.00194
10061-02-6	trans-1,3-Dichloropropene	0.00194	U	0.000973	0.00194	0.00194
97-63-2	Ethyl methacrylate	0.00389	U	0.00194	0.00389	0.00486
79-00-5	1,1,2-Trichloroethane	0.0016	U	0.000798	0.0016	0.00194
127-18-4	Tetrachloroethene	0.00181	U	0.000905	0.00181	0.00194
591-78-6	2-Hexanone	0.00253	U	0.00126	0.00253	0.00973
124-48-1	Dibromochloromethane	0.000895	U	0.000447	0.000895	0.00194
106-93-4	1,2-Dibromoethane	0.0016	U	0.000798	0.0016	0.00194
108-90-7	Chlorobenzene	0.000681	U	0.00034	0.000681	0.00194
630-20-6	1,1,1,2-Tetrachloroethane	0.00144	U	0.00072	0.00144	0.00194
100-41-4	Ethylbenzene	0.00134	U	0.000671	0.00134	0.00194
100-42-5	Styrene	0.000545	U	0.000272	0.000545	0.00194
75-25-2	Bromoform	0.000895	U	0.000447	0.000895	0.00194
79-34-5	1,1,2,2-Tetrachloroethane	0.00115	U	0.000574	0.00115	0.00194
96-18-4	1,2,3-Trichloropropane	0.00233	U	0.00117	0.00233	0.00233
96-12-8	1,2-Dibromo-3-chloropropane	0.00545	U	0.00272	0.00545	0.00545
110-57-6	1,4-Dichloro-2-butene	0.00778	U	0.00389	0.00778	0.00973
75-05-8	Acetonitrile	0.0109	U	0.00545	0.0109	0.0194
107-05-1	Allyl chloride	0.00105	U	0.000525	0.00105	0.00194
123-91-1	1,4-Dioxane	0.19	U	0.0973	0.19	0.19
78-83-1	Isobutyl alcohol	0.0311	U	0.0156	0.0311	0.0973
126-98-7	Methacrylonitrile	0.0111	U	0.00554	0.0111	0.0194
80-62-6	Methyl methacrylate	0.00134	U	0.000671	0.00134	0.00194
107-12-0	Propionitrile	0.0389	U	0.0194	0.0389	0.0389

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 5724-09.D

Sample wt/vol: 8.25 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1400

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.000778	U	0.000389	0.000778	0.00194
1330-20-7	Xylene (total)	0.00132	U	0.000662	0.00132	0.00389

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.64	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	6	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.19	J	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.78	J	0.4	0.8	1
75-27-4	Bromodichloromethane	0.19	J	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	J	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	1.6		0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 572410.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1525

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	1.8	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.39	J	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 572415.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1550

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-TB01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.27	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.2	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-TB01

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-TB01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572416 Lab File ID 572416.D

Sample wt/vol: 5 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1641

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

8260 QC Summary

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
042312BLK21

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 042312BLK21 Lab File ID: BLK21.D

Sample wt/vol: 5 Units: G Date Received: 04/23/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1407

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.0012	U	0.0006	0.0012	0.002
74-87-3	Chloromethane	0.00076	U	0.00038	0.00076	0.002
75-01-4	Vinyl chloride	0.0012	U	0.0006	0.0012	0.002
74-83-9	Bromomethane	0.0024	U	0.0012	0.0024	0.0024
75-00-3	Chloroethane	0.00148	U	0.00074	0.00148	0.002
75-69-4	Trichlorofluoromethane	0.00088	U	0.00044	0.00088	0.002
75-35-4	1,1-Dichloroethene	0.00068	U	0.00034	0.00068	0.002
107-02-8	Acrolein	0.006	U	0.003	0.006	0.01
74-88-4	Methyl iodide	0.003	U	0.0015	0.003	0.003
75-15-0	Carbon disulfide	0.003	U	0.0015	0.003	0.003
75-09-2	Methylene chloride	0.0024	U	0.0012	0.0024	0.005
156-60-5	trans-1,2-Dichloroethene	0.00078	U	0.00039	0.00078	0.002
107-13-1	Acrylonitrile	0.0038	U	0.0019	0.0038	0.005
75-34-3	1,1-Dichloroethane	0.00068	U	0.00034	0.00068	0.002
67-64-1	Acetone	0.0026	U	0.0013	0.0026	0.01
78-93-3	2-Butanone	0.0028	U	0.0014	0.0028	0.01
67-66-3	Chloroform	0.00108	U	0.00054	0.00108	0.002
71-55-6	1,1,1-Trichloroethane	0.002	U	0.001	0.002	0.002
56-23-5	Carbon tetrachloride	0.0012	U	0.0006	0.0012	0.002
71-43-2	Benzene	0.001	U	0.0005	0.001	0.002
107-06-2	1,2-Dichloroethane	0.002	U	0.001	0.002	0.002
79-01-6	Trichloroethene	0.00088	U	0.00044	0.00088	0.002
108-05-4	Vinyl acetate	0.003	U	0.0015	0.003	0.003
78-87-5	1,2-Dichloropropane	0.00126	U	0.00063	0.00126	0.002
74-95-3	Dibromomethane	0.00132	U	0.00066	0.00132	0.002
75-27-4	Bromodichloromethane	0.00064	U	0.00032	0.00064	0.002
10061-01-5	cis-1,3-Dichloropropene	0.00084	U	0.00042	0.00084	0.002

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
042312BLK21

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 042312BLK21 Lab File ID: BLK21.D

Sample wt/vol: 5 Units: G Date Received: 04/23/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 1407

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
108-10-1	4-Methyl-2-pentanone	0.0032	U	0.0016	0.0032	0.01
108-88-3	Toluene	0.00058	U	0.00029	0.00058	0.002
10061-02-6	trans-1,3-Dichloropropene	0.002	U	0.001	0.002	0.002
97-63-2	Ethyl methacrylate	0.004	U	0.002	0.004	0.005
79-00-5	1,1,2-Trichloroethane	0.00164	U	0.00082	0.00164	0.002
127-18-4	Tetrachloroethene	0.00186	U	0.00093	0.00186	0.002
591-78-6	2-Hexanone	0.0026	U	0.0013	0.0026	0.01
124-48-1	Dibromochloromethane	0.00092	U	0.00046	0.00092	0.002
106-93-4	1,2-Dibromoethane	0.00164	U	0.00082	0.00164	0.002
108-90-7	Chlorobenzene	0.0007	U	0.00035	0.0007	0.002
630-20-6	1,1,1,2-Tetrachloroethane	0.00148	U	0.00074	0.00148	0.002
100-41-4	Ethylbenzene	0.00138	U	0.00069	0.00138	0.002
100-42-5	Styrene	0.00056	U	0.00028	0.00056	0.002
75-25-2	Bromoform	0.00092	U	0.00046	0.00092	0.002
79-34-5	1,1,2,2-Tetrachloroethane	0.00118	U	0.00059	0.00118	0.002
96-18-4	1,2,3-Trichloropropane	0.0024	U	0.0012	0.0024	0.0024
96-12-8	1,2-Dibromo-3-chloropropane	0.0056	U	0.0028	0.0056	0.0056
110-57-6	1,4-Dichloro-2-butene	0.008	U	0.004	0.008	0.01
75-05-8	Acetonitrile	0.0112	U	0.0056	0.0112	0.02
107-05-1	Allyl chloride	0.00108	U	0.00054	0.00108	0.002
123-91-1	1,4-Dioxane	0.2	U	0.1	0.2	0.2
78-83-1	Isobutyl alcohol	0.032	U	0.016	0.032	0.1
126-98-7	Methacrylonitrile	0.0114	U	0.0057	0.0114	0.02
80-62-6	Methyl methacrylate	0.00138	U	0.00069	0.00138	0.002
107-12-0	Propionitrile	0.04	U	0.02	0.04	0.04
126-99-8	Chloroprene	0.0008	U	0.0004	0.0008	0.002
1330-20-7	Xylene (total)	0.00136	U	0.00068	0.00136	0.004

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
042412BLK21

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 042412BLK21 Lab File ID: BLK21.D

Sample wt/vol: 5 Units: G Date Received: 04/24/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1305

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.0012	U	0.0006	0.0012	0.002
74-87-3	Chloromethane	0.00076	U	0.00038	0.00076	0.002
75-01-4	Vinyl chloride	0.0012	U	0.0006	0.0012	0.002
74-83-9	Bromomethane	0.0024	U	0.0012	0.0024	0.0024
75-00-3	Chloroethane	0.00148	U	0.00074	0.00148	0.002
75-69-4	Trichlorofluoromethane	0.00088	U	0.00044	0.00088	0.002
75-35-4	1,1-Dichloroethene	0.00068	U	0.00034	0.00068	0.002
107-02-8	Acrolein	0.006	U	0.003	0.006	0.01
74-88-4	Methyl iodide	0.003	U	0.0015	0.003	0.003
75-15-0	Carbon disulfide	0.003	U	0.0015	0.003	0.003
75-09-2	Methylene chloride	0.0024	U	0.0012	0.0024	0.005
156-60-5	trans-1,2-Dichloroethene	0.00078	U	0.00039	0.00078	0.002
107-13-1	Acrylonitrile	0.0038	U	0.0019	0.0038	0.005
75-34-3	1,1-Dichloroethane	0.00068	U	0.00034	0.00068	0.002
67-64-1	Acetone	0.0026	U	0.0013	0.0026	0.01
78-93-3	2-Butanone	0.0028	U	0.0014	0.0028	0.01
67-66-3	Chloroform	0.00108	U	0.00054	0.00108	0.002
71-55-6	1,1,1-Trichloroethane	0.002	U	0.001	0.002	0.002
56-23-5	Carbon tetrachloride	0.0012	U	0.0006	0.0012	0.002
71-43-2	Benzene	0.001	U	0.0005	0.001	0.002
107-06-2	1,2-Dichloroethane	0.002	U	0.001	0.002	0.002
79-01-6	Trichloroethene	0.00088	U	0.00044	0.00088	0.002
108-05-4	Vinyl acetate	0.003	U	0.0015	0.003	0.003
78-87-5	1,2-Dichloropropane	0.00126	U	0.00063	0.00126	0.002
74-95-3	Dibromomethane	0.00132	U	0.00066	0.00132	0.002
75-27-4	Bromodichloromethane	0.00064	U	0.00032	0.00064	0.002
10061-01-5	cis-1,3-Dichloropropene	0.00084	U	0.00042	0.00084	0.002

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
042412BLK21

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 042412BLK21 Lab File ID: BLK21.D

Sample wt/vol: 5 Units: G Date Received: 04/24/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1305

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
108-10-1	4-Methyl-2-pentanone	0.0032	U	0.0016	0.0032	0.01
108-88-3	Toluene	0.00058	U	0.00029	0.00058	0.002
10061-02-6	trans-1,3-Dichloropropene	0.002	U	0.001	0.002	0.002
97-63-2	Ethyl methacrylate	0.004	U	0.002	0.004	0.005
79-00-5	1,1,2-Trichloroethane	0.00164	U	0.00082	0.00164	0.002
127-18-4	Tetrachloroethene	0.00186	U	0.00093	0.00186	0.002
591-78-6	2-Hexanone	0.0026	U	0.0013	0.0026	0.01
124-48-1	Dibromochloromethane	0.00092	U	0.00046	0.00092	0.002
106-93-4	1,2-Dibromoethane	0.00164	U	0.00082	0.00164	0.002
108-90-7	Chlorobenzene	0.0007	U	0.00035	0.0007	0.002
630-20-6	1,1,1,2-Tetrachloroethane	0.00148	U	0.00074	0.00148	0.002
100-41-4	Ethylbenzene	0.00138	U	0.00069	0.00138	0.002
100-42-5	Styrene	0.00056	U	0.00028	0.00056	0.002
75-25-2	Bromoform	0.00092	U	0.00046	0.00092	0.002
79-34-5	1,1,2,2-Tetrachloroethane	0.00118	U	0.00059	0.00118	0.002
96-18-4	1,2,3-Trichloropropane	0.0024	U	0.0012	0.0024	0.0024
96-12-8	1,2-Dibromo-3-chloropropane	0.0056	U	0.0028	0.0056	0.0056
110-57-6	1,4-Dichloro-2-butene	0.008	U	0.004	0.008	0.01
75-05-8	Acetonitrile	0.0112	U	0.0056	0.0112	0.02
107-05-1	Allyl chloride	0.00108	U	0.00054	0.00108	0.002
123-91-1	1,4-Dioxane	0.2	U	0.1	0.2	0.2
78-83-1	Isobutyl alcohol	0.032	U	0.016	0.032	0.1
126-98-7	Methacrylonitrile	0.0114	U	0.0057	0.0114	0.02
80-62-6	Methyl methacrylate	0.00138	U	0.00069	0.00138	0.002
107-12-0	Propionitrile	0.04	U	0.02	0.04	0.04
126-99-8	Chloroprene	0.0008	U	0.0004	0.0008	0.002
1330-20-7	Xylene (total)	0.00136	U	0.00068	0.00136	0.004

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 042512BLK62Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724Matrix: WATER Lab Sample ID: 042512BLK62 Lab File ID: BLK62.DSample wt/vol: 5 Units: ML Date Received: 04/25/12Concentrated Extract Volume: 5 Date Extracted: _____Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1318PercentSolids: 0 decanted: _____ Dilution Factor: 1Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 042512BLK62

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 042512BLK62 Lab File ID: BLK62.D

Sample wt/vol: 5 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1318

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	1
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 042312BLK21

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: BLK21.D Lab Sample ID: 042312BLK21

Instrument ID: VMS02 Date Extracted: _____

Matrix: SOIL Date Analyzed: 04/23/12

Level:(low/med) LOW Time Analyzed: 1407

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	042312LCS21	042312LCS21	LCS21.D	04/23/12	1141
2	042312LCS21D	042312LCS21D	LCS21D.D	04/23/12	1209
3	TFS-SD-01	350572401	5724-01.D	04/23/12	1557
4	TFS-SD-02	350572403	5724-03.D	04/23/12	1625

COMMENTS:

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 042412BLK21

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: BLK21.D Lab Sample ID: 042412BLK21

Instrument ID: VMS02 Date Extracted: _____

Matrix: SOIL Date Analyzed: 04/24/12

Level:(low/med) LOW Time Analyzed: 1305

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	042412LCS21	042412LCS21	LCS21.D	04/24/12	1057
2	042412LCS21D	042412LCS21D	LCS21D.D	04/24/12	1125
3	TFS-SD-04 MS	350572411	724-11MS.D	04/24/12	1210
4	TFS-SD-04 MSD	350572412	724-12SD.D	04/24/12	1237
5	TFS-SD-FD	350572409	5724-09.D	04/24/12	1400
6	TFS-SD-04	350572407	5724-07.D	04/24/12	1428
7	TFS-SD-01RE1	350572401RE1	5724-01R1.D	04/24/12	1455
8	TFS-SD-02RE1	350572403RE1	5724-03R.D	04/24/12	1523
9	TFS-SD-03	350572404	5724-04.D	04/24/12	1551
10	TFS-SD-01RE2	350572401RE2	5724-1R2.D	04/24/12	1907

COMMENTS:

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 042512BLK62

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: BLK62.D Lab Sample ID: 042512BLK62

Instrument ID: VMS06 Date Extracted: _____

Matrix: WATER Date Analyzed: 04/25/12

Level:(low/med) LOW Time Analyzed: 1318

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	042512LCS61	042512LCS61	LCS61.D	04/25/12	1112
2	042512LCS61D	042512LCS61D	LCS61D.D	04/25/12	1137
3	TFS-SW-03 MS	350572413	572413MS.D	04/25/12	1203
4	TFS-SW-03 MSD	350572414	572414SD.D	04/25/12	1228
5	TFS-SW-04	350572408	572408.D	04/25/12	1344
6	TFS-SW-01	350572402	572402.D	04/25/12	1409
7	TFS-SW-02	350572405	572405.D	04/25/12	1435
8	TFS-SW-03	350572406	572406.D	04/25/12	1500
9	TFS-SW-FD	350572410	572410.D	04/25/12	1525
10	TFS-SD-EB	350572415	572415.D	04/25/12	1550
11	TFS-TB01	350572416	572416.D	04/25/12	1641

COMMENTS:

2A

WATER VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. SAS No: SDG NO.: 3505724

Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
042512BLK62	98.4	99.2	104.0	106.0			0
042512LCS61	101.0	102.0	98.6	103.0			0
042512LCS61D	97.2	99.4	101.0	98.2			0
TFS-SD-EB	98.0	96.6	101.0	99.0			0
TFS-SW-01	94.8	94.0	100.0	96.6			0
TFS-SW-02	101.0	100.0	108.0	105.0			0
TFS-SW-03	101.0	98.6	106.0	102.0			0
TFS-SW-03 MS	96.4	96.6	99.6	99.2			0
TFS-SW-03 MSD	96.8	99.0	99.4	101.0			0
TFS-SW-04	100.0	102.0	107.0	109.0			0
TFS-SW-FD	99.4	99.0	106.0	104.0			0
TFS-TB01	100.0	94.4	104.0	106.0			0

Control Limits

- S1 = Dibromofluoromethane 85 - 115
- S2 = Toluene-d8 85 - 120
- S3 = 4-Bromofluorobenzene 75 - 120
- S4 = 1,2-Dichloroethane-d4 70 - 120

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out
 Control limit source: (lab/method) METHOD

Form II

2A

SOIL VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.Lab Code: PEL Case No. SAS No: SDG NO.: 3505724Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
042312BLK21	116.0	116.0 *	100.0	118.0			1
042312LCS21	96.0	100.0	84.0 *	98.0			1
042312LCS21D	88.0	88.0	82.0 *	92.0			1
042412BLK21	112.0	106.0	94.0	118.0			0
042412LCS21	112.0	110.0	98.0	114.0			0
042412LCS21D	100.0	102.0	92.0	112.0			0
TFS-SD-01	112.0	108.0	122.0 *	114.0			1
TFS-SD-01RE1	108.0	100.0	108.0	110.0			0
TFS-SD-01RE2	88.0	84.0 *	68.0 *	96.0			2
TFS-SD-02	86.0	70.0 *	42.0 *	92.0			2
TFS-SD-02RE1	104.0	100.0	78.0 *	110.0			1
TFS-SD-03	104.0	100.0	98.0	104.0			0
TFS-SD-04	94.0	92.0	88.0	102.0			0
TFS-SD-04 MS	94.0	86.0	92.0	100.0			0
TFS-SD-04 MSD	84.0	70.0 *	54.0 *	86.0			2
TFS-SD-FD	104.0	106.0	114.0	112.0			0

Control Limits

S1 = Dibromofluoromethane 68 - 119
S2 = Toluene-d8 85 - 115
S3 = 4-Bromofluorobenzene 85 - 120
S4 = 1,2-Dichloroethane-d4 71 - 124

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

110512 1717

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: BFB22.D BFB Injection Date: 03/23/12
 Instrument ID: VMS02 BFB Injection Time: 1356
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.8
75	30.0 - 60.0% of mass 95	54.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0 (0)1
174	50.0 - 100.0% of mass 95	74.8
175	5.0 - 9.0% of mass 174	5.4 (7.27)1
176	Greater than 95.0%, but less than 101.0% of mass 174	72.7 (97.19)1
177	5.0 - 9.0% of mass 176	5.3 (7.35)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1063878	1PPB	1PPB.D	03/23/12	1445
2	STD1063880	2PPB	2PPB.D	03/23/12	1512
3	STD1063883	5PPB	5PPB.D	03/23/12	1540
4	STD1063877	10PPB	10PPB.D	03/23/12	1607
5	STD1063879	20PPB	20PPB.D	03/23/12	1634
6	STD1063882	50PPB	50PPB.D	03/23/12	1702
7	STD1063884	60PPB	60PPB.D	03/23/12	1729
8	STD1063885	80PPB	80PPB.D	03/23/12	1757
9	SSC1063886	SEC21	SEC21.D	03/23/12	1824

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Lab File ID: BFB61.D BFB Injection Date: 04/16/12
 Instrument ID: VMS06 BFB Injection Time: 0604
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.5
75	30.0 - 60.0% of mass 95	51
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.7 (1.04)1
174	50.0 - 100.0% of mass 95	68.7
175	5.0 - 9.0% of mass 174	4.5 (6.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	66.5 (96.81)1
177	5.0 - 9.0% of mass 176	4.7 (7.1)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1070754	80PPB	80PPB.D	04/16/12	0729
2	STD1070753	60PPB	60PPB.D	04/16/12	0754
3	STD1070751	50PPB	50PPB.D	04/16/12	0819
4	STD1070746	20PPB	20PPB.D	04/16/12	0845
5	STD1070743	10PPB	10PPB.D	04/16/12	0910
6	STD1070752	5PPB	5PPB.D	04/16/12	0935
7	STD1070747	2PPB	2PPB.D	04/16/12	1001
8	STD1070744	1PPB	1PPB.D	04/16/12	1026
9	STD1070750	500PPT	500PPT.D	04/16/12	1051
10	STD1070745	200PPT	200PPT.D	04/16/12	1117
11	SSC1070755	SEC62	SEC62.D	04/16/12	1405

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Lab File ID: BFB22.D BFB Injection Date: 04/23/12
 Instrument ID: VMS02 BFB Injection Time: 0955
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	31.3
75	30.0 - 60.0% of mass 95	54.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.6
173	Less than 2.0% of mass 174	0 (0)1
174	50.0 - 100.0% of mass 95	74.9
175	5.0 - 9.0% of mass 174	4.8 (6.45)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.2 (95.09)1
177	5.0 - 9.0% of mass 176	3.6 (5.1)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073274	042312CCV21	CCV21.D	04/23/12	1046
2	042312LCS21	042312LCS21	LCS21.D	04/23/12	1141
3	042312LCS21D	042312LCS21D	LCS21D.D	04/23/12	1209
4	042312BLK21	042312BLK21	BLK21.D	04/23/12	1407
5	TFS-SD-01	350572401	5724-01.D	04/23/12	1557
6	TFS-SD-02	350572403	5724-03.D	04/23/12	1625

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: BFB22.D BFB Injection Date: 04/24/12
 Instrument ID: VMS02 BFB Injection Time: 0850
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	28.8
75	30.0 - 60.0% of mass 95	49.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.1
173	Less than 2.0% of mass 174	0 (0)1
174	50.0 - 100.0% of mass 95	81.2
175	5.0 - 9.0% of mass 174	4.2 (5.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	77.8 (95.85)1
177	5.0 - 9.0% of mass 176	5.6 (7.19)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073279	042412CCV22	CCV22.D	04/24/12	1012
2	042412LCS21	042412LCS21	LCS21.D	04/24/12	1057
3	042412LCS21D	042412LCS21D	LCS21D.D	04/24/12	1125
4	TFS-SD-04 MS	350572411	724-11MS.D	04/24/12	1210
5	TFS-SD-04 MSD	350572412	724-12SD.D	04/24/12	1237
6	042412BLK21	042412BLK21	BLK21.D	04/24/12	1305
7	TFS-SD-FD	350572409	5724-09.D	04/24/12	1400
8	TFS-SD-04	350572407	5724-07.D	04/24/12	1428
9	TFS-SD-01RE1	350572401RE1	5724-01R1.D	04/24/12	1455
10	TFS-SD-02RE1	350572403RE1	5724-03R.D	04/24/12	1523
11	TFS-SD-03	350572404	5724-04.D	04/24/12	1551
12	TFS-SD-01RE2	350572401RE2	5724-1R2.D	04/24/12	1907

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: BFB61.D BFB Injection Date: 04/25/12
 Instrument ID: VMS06 BFB Injection Time: 0948
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.5
75	30.0 - 60.0% of mass 95	52
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.3 (0.35)1
174	50.0 - 100.0% of mass 95	79.2
175	5.0 - 9.0% of mass 174	6 (7.62)1
176	Greater than 95.0%, but less than 101.0% of mass 174	77.5 (97.91)1
177	5.0 - 9.0% of mass 176	4.9 (6.34)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073284	042512CCV61	50CCV61.D	04/25/12	1021
2	042512LCS61	042512LCS61	LCS61.D	04/25/12	1112
3	042512LCS61D	042512LCS61D	LCS61D.D	04/25/12	1137
4	TFS-SW-03 MS	350572413	572413MS.D	04/25/12	1203
5	TFS-SW-03 MSD	350572414	572414SD.D	04/25/12	1228
6	042512BLK62	042512BLK62	BLK62.D	04/25/12	1318
7	TFS-SW-04	350572408	572408.D	04/25/12	1344
8	TFS-SW-01	350572402	572402.D	04/25/12	1409
9	TFS-SW-02	350572405	572405.D	04/25/12	1435
10	TFS-SW-03	350572406	572406.D	04/25/12	1500
11	TFS-SW-FD	350572410	572410.D	04/25/12	1525
12	TFS-SD-EB	350572415	572415.D	04/25/12	1550
13	TFS-TB01	350572416	572416.D	04/25/12	1641

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 50PPB.D Date Analyzed: 3/23/2012
 Instrument ID: VMS02 Time Analyzed: 17:02
 GC Column: DB-624 ID: 0.18 (mm)
 Matrix: (soil/water) S Heated Purge: (Y/N) Yes

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	171880	6.44	120305	10.28	55802	13.14
UPPER LIMIT	343760	6.94	240610	10.78	111604	13.64
LOWER LIMIT	85940	5.94	60152.5	9.78	27901	12.64
EPA SAMPLE NO.						
1 042312LCS21	147089	6.43	106316	10.28	49434	13.14
2 042312LCS21D	144209	6.51	103333	10.31	47975	13.15
3 042312BLK21	147944	6.59	110242	10.33	50780	13.15
4 TFS-SD-01	131428	6.58	83100	10.33	26644 *	13.15
5 TFS-SD-02	137684	6.52	103269	10.31	45702	13.15
6 042412LCS21	148335	6.58	107413	10.32	49627	13.15
7 042412LCS21D	149038	6.54	109154	10.31	51026	13.14
8 TFS-SD-04 MS	138286	6.58	90481	10.32	31341	13.15
9 TFS-SD-04 MSD	127544	6.55	86749	10.31	33812	13.14
10 042412BLK21	132978	6.49	98402	10.29	47779	13.14
11 TFS-SD-FD	129925	6.55	87095	10.31	31312	13.14
12 TFS-SD-04	132876	6.55	93118	10.31	37735	13.14
13 TFS-SD-01RE1	115770	6.52	72136	10.30	24657 *	13.14
14 TFS-SD-02RE1	129928	6.55	95857	10.31	42377	13.14
15 TFS-SD-03	127130	6.52	84202	10.30	32332	13.14
16 TFS-SD-01RE2	124325	6.53	89630	10.31	36731	13.14

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 50PPB.D Date Analyzed: 4/16/2012
 Instrument ID: VMS06 Time Analyzed: 8:19
 GC Column: DB-624 ID: 0.18 (mm)
 Matrix: (soil/water) W Heated Purge: (Y/N) No

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	1907258	6.75	1310460	9.98	817371	12.32
UPPER LIMIT	3814516	7.25	2620920	10.48	1634742	12.82
LOWER LIMIT	953629	6.25	655230	9.48	408685.5	11.82
EPA SAMPLE NO.						
1 042512LCS61	1675480	6.75	1439215	9.98	839988	12.32
2 042512LCS61D	1790683	6.75	1494511	9.98	853194	12.32
3 TFS-SW-03 MS	1863772	6.75	1533485	9.98	892678	12.32
4 TFS-SW-03 MSD	1992846	6.75	1685400	9.98	947247	12.32
5 042512BLK62	1626499	6.75	1344553	9.98	702962	12.32
6 TFS-SW-04	1817368	6.75	1502513	9.98	764414	12.32
7 TFS-SW-01	1832281	6.75	1518726	9.98	774930	12.32
8 TFS-SW-02	1681069	6.75	1392491	9.98	700096	12.32
9 TFS-SW-03	1747618	6.75	1419318	9.98	710847	12.32
10 TFS-SW-FD	1727006	6.75	1444274	9.98	728818	12.32
11 TFS-SD-EB	1690627	6.75	1390760	9.98	710200	12.32
12 TFS-TB01	1673207	6.75	1376934	9.98	692709	12.32

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 03/23/12
 Instrument ID: VMS02

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 5.51			S2: 8.51				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	032312BFB22	032312BFB22	BFB22.D	03/23/12	1356		
2	STD1063878	1PPB	1PPB.D	03/23/12	1445		8.58
3	STD1063880	2PPB	2PPB.D	03/23/12	1512	5.59	8.55
4	STD1063883	5PPB	5PPB.D	03/23/12	1540	5.52	8.52
5	STD1063877	10PPB	10PPB.D	03/23/12	1607	5.55	8.53
6	STD1063879	20PPB	20PPB.D	03/23/12	1634	5.42	8.48
7	STD1063882	50PPB	50PPB.D	03/23/12	1702	5.51	8.51
8	STD1063884	60PPB	60PPB.D	03/23/12	1729	5.51	8.51
9	STD1063885	80PPB	80PPB.D	03/23/12	1757	5.5	8.51
10	SSC1063886	SEC21	SEC21.D	03/23/12	1824	5.55	8.53
11	042312BFB22	042312BFB22	BFB22.D	04/23/12	0955		
12	CCV1073274	042312CCV21	CCV21.D	04/23/12	1046	5.71	8.6
13	042312LCS21	042312LCS21	LCS21.D	04/23/12	1141	5.5	8.51
14	042312LCS21D	042312LCS21D	LCS21D.D	04/23/12	1209	5.6	8.55
15	042312BLK21	042312BLK21	BLK21.D	04/23/12	1407	5.7	8.6
16	TFS-SD-01	350572401	5724-01.D	04/23/12	1557	5.68	8.59
17	TFS-SD-02	350572403	5724-03.D	04/23/12	1625	5.62	8.56
18	042412BFB22	042412BFB22	BFB22.D	04/24/12	0850		
19	CCV1073279	042412CCV22	CCV22.D	04/24/12	1012	5.69	8.58
20	042412LCS21	042412LCS21	LCS21.D	04/24/12	1057	5.69	8.58
21	042412LCS21D	042412LCS21D	LCS21D.D	04/24/12	1125	5.63	8.56
22	TFS-SD-04 MS	350572411	724-11MS.D	04/24/12	1210	5.7	8.59
23	TFS-SD-04 MSD	350572412	724-12SD.D	04/24/12	1237	5.66	8.57
24	042412BLK21	042412BLK21	BLK21.D	04/24/12	1305	5.58	8.54
25	TFS-SD-FD	350572409	5724-09.D	04/24/12	1400	5.66	8.57
26	TFS-SD-04	350572407	5724-07.D	04/24/12	1428	5.65	8.57

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.39 MINUTES)
 S2 = Toluene-d8 (+/- 0.39 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.79 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.39 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 03/23/12
 Instrument ID: VMS02

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 5.51				S2 : 8.51			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
27	TFS-SD-01RE1	350572401RE1	5724-01R1.D	04/24/12	1455	5.61	8.55
28	TFS-SD-02RE1	350572403RE1	5724-03R.D	04/24/12	1523	5.65	8.57
29	TFS-SD-03	350572404	5724-04.D	04/24/12	1551	5.62	8.56
30	TFS-SD-01RE2	350572401RE2	5724-1R2.D	04/24/12	1907	5.63	8.56

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.39 MINUTES)
 S2 = Toluene-d8 (+/- 0.39 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.79 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.39 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/16/12
 Instrument ID: VMS06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 5.92			S2 : 8.51				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	041612BFB61	041612BFB61	BFB61.D	04/16/12	0604		
2	STD1070754	80PPB	80PPB.D	04/16/12	0729	5.92	8.51
3	STD1070753	60PPB	60PPB.D	04/16/12	0754	5.92	8.51
4	STD1070751	50PPB	50PPB.D	04/16/12	0819	5.92	8.51
5	STD1070746	20PPB	20PPB.D	04/16/12	0845	5.92	8.51
6	STD1070743	10PPB	10PPB.D	04/16/12	0910	5.92	8.51
7	STD1070752	5PPB	5PPB.D	04/16/12	0935	5.93	8.51
8	STD1070747	2PPB	2PPB.D	04/16/12	1001		
9	STD1070744	1PPB	1PPB.D	04/16/12	1026		
10	STD1070750	500PPT	500PPT.D	04/16/12	1051		
11	STD1070745	200PPT	200PPT.D	04/16/12	1117		
12	SSC1070755	SEC62	SEC62.D	04/16/12	1405	5.92	8.51
13	042512BFB61	042512BFB61	BFB61.D	04/25/12	0948		
14	CCV1073284	042512CCV61	50CCV61.D	04/25/12	1021	5.92	8.51
15	042512LCS61	042512LCS61	LCS61.D	04/25/12	1112	5.92	8.51
16	042512LCS61D	042512LCS61D	LCS61D.D	04/25/12	1137	5.92	8.51
17	TFS-SW-03 MS	350572413	572413MS.D	04/25/12	1203	5.92	8.51
18	TFS-SW-03 MSD	350572414	572414SD.D	04/25/12	1228	5.92	8.51
19	042512BLK62	042512BLK62	BLK62.D	04/25/12	1318	5.92	8.51
20	TFS-SW-04	350572408	572408.D	04/25/12	1344	5.92	8.51
21	TFS-SW-01	350572402	572402.D	04/25/12	1409	5.92	8.51
22	TFS-SW-02	350572405	572405.D	04/25/12	1435	5.92	8.51
23	TFS-SW-03	350572406	572406.D	04/25/12	1500	5.92	8.51
24	TFS-SW-FD	350572410	572410.D	04/25/12	1525	5.92	8.51
25	TFS-SD-EB	350572415	572415.D	04/25/12	1550	5.92	8.51
26	TFS-TB01	350572416	572416.D	04/25/12	1641	5.91	8.51

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.41 MINUTES)
 S2 = Toluene-d8 (+/- 0.41 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.74 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.41 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042312LCS21

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0193	96.5			35 - 135
Chloromethane	0.02	0.0203	102.0			50 - 130
Vinyl chloride	0.02	0.0212	106.0			60 - 125
Bromomethane	0.02	0.0196	98.0			30 - 160
Chloroethane	0.02	0.022	110.0			40 - 155
Trichlorofluoromethane	0.02	0.0224	112.0			25 - 185
1,1-Dichloroethene	0.02	0.019	95.0			65 - 135
Acrolein	0.04	0.0401	100.0			31 - 148
Methyl iodide	0.02	0.0185	92.5			75 - 152
Carbon disulfide	0.02	0.0171	85.5			45 - 160
Methylene chloride	0.02	0.0176	88.0			55 - 140
trans-1,2-Dichloroethene	0.02	0.0197	98.5			65 - 135
Acrylonitrile	0.04	0.0432	108.0			55 - 126
1,1-Dichloroethane	0.02	0.0204	102.0			75 - 125
Acetone	0.04	0.0417	104.0			20 - 160
2-Butanone	0.04	0.0386	96.5			30 - 160
Chloroform	0.02	0.0205	102.0			70 - 125
1,1,1-Trichloroethane	0.02	0.02	100.0			70 - 135
Carbon tetrachloride	0.02	0.0211	106.0			65 - 135
Benzene	0.02	0.0204	102.0			75 - 125
1,2-Dichloroethane	0.02	0.0209	104.0			70 - 135
Trichloroethene	0.02	0.0211	106.0			75 - 125
Vinyl acetate	0.02	0.021	105.0			77 - 150
1,2-Dichloropropane	0.02	0.0213	106.0			70 - 120
Dibromomethane	0.02	0.0198	99.0			75 - 130
Bromodichloromethane	0.02	0.0207	104.0			70 - 130
cis-1,3-Dichloropropene	0.02	0.021	105.0			70 - 125
4-Methyl-2-pentanone	0.04	0.0394	98.5			45 - 145
Toluene	0.02	0.0205	102.0			70 - 125
trans-1,3-Dichloropropene	0.02	0.0203	102.0			65 - 125
Ethyl methacrylate	0.02	0.0218	109.0			73 - 121
1,1,2-Trichloroethane	0.02	0.0212	106.0			60 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042312LCS21

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	0.02	0.0192	96.0			65 - 140
2-Hexanone	0.04	0.0378	94.5			45 - 145
Dibromochloromethane	0.02	0.0191	95.5			65 - 130
1,2-Dibromoethane	0.02	0.0195	97.5			70 - 125
Chlorobenzene	0.02	0.0191	95.5			75 - 125
1,1,1,2-Tetrachloroethane	0.02	0.0179	89.5			75 - 125
Ethylbenzene	0.02	0.0195	97.5			75 - 125
Styrene	0.02	0.0191	95.5			75 - 125
Bromoform	0.02	0.0187	93.5			55 - 135
1,1,2,2-Tetrachloroethane	0.02	0.0192	96.0			55 - 130
1,2,3-Trichloropropane	0.02	0.0187	93.5			65 - 130
1,2-Dibromo-3-chloropropane	0.02	0.0194	97.0			40 - 135
1,4-Dichloro-2-butene	0.04	0.043	108.0			68 - 115
Acetonitrile	0.2	0.21	105.0			37 - 122
Allyl chloride	0.02	0.0211	106.0			70 - 130
1,4-Dioxane	0.4	0.43	108.0			0 - 167
Isobutyl alcohol	0.4	0.48	120.0			70 - 130
Methacrylonitrile	0.2	0.22	110.0			70 - 130
Methyl methacrylate	0.02	0.0218	109.0			33 - 172
Propionitrile	0.2	0.22	110.0			70 - 130
Chloroprene	0.02	0.0208	104.0			70 - 130
Xylene (total)	0.06	0.0568	94.7			82 - 124

Spike Recovery: 0 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042312LCS21D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0191	95.5	1.0	30	35 - 135
Chloromethane	0.02	0.0205	102.0	1.0	30	50 - 130
Vinyl chloride	0.02	0.0214	107.0	0.9	30	60 - 125
Bromomethane	0.02	0.0215	108.0	9.2	30	30 - 160
Chloroethane	0.02	0.0244	122.0	10.3	30	40 - 155
Trichlorofluoromethane	0.02	0.0226	113.0	0.9	30	25 - 185
1,1-Dichloroethene	0.02	0.0213	106.0	11.4	30	65 - 135
Acrolein	0.04	0.0412	103.0	2.7	30	31 - 148
Methyl iodide	0.02	0.0203	102.0	9.3	30	75 - 152
Carbon disulfide	0.02	0.0191	95.5	11.0	30	45 - 160
Methylene chloride	0.02	0.0203	102.0	14.2	30	55 - 140
trans-1,2-Dichloroethene	0.02	0.0225	112.0	13.3	30	65 - 135
Acrylonitrile	0.04	0.0467	117.0	7.8	30	55 - 126
1,1-Dichloroethane	0.02	0.023	115.0	12.0	30	75 - 125
Acetone	0.04	0.0475	119.0	13.0	30	20 - 160
2-Butanone	0.04	0.0463	116.0	18.1	30	30 - 160
Chloroform	0.02	0.0235	118.0	13.6	30	70 - 125
1,1,1-Trichloroethane	0.02	0.0218	109.0	8.6	30	70 - 135
Carbon tetrachloride	0.02	0.0225	112.0	6.4	30	65 - 135
Benzene	0.02	0.0234	117.0	13.7	30	75 - 125
1,2-Dichloroethane	0.02	0.0236	118.0	12.1	30	70 - 135
Trichloroethene	0.02	0.0234	117.0	10.3	30	75 - 125
Vinyl acetate	0.02	0.0231	116.0	9.5	30	77 - 150
1,2-Dichloropropane	0.02	0.0236	118.0	10.2	30	70 - 120
Dibromomethane	0.02	0.0232	116.0	15.8	30	75 - 130
Bromodichloromethane	0.02	0.0232	116.0	11.4	30	70 - 130
cis-1,3-Dichloropropene	0.02	0.0242	121.0	14.2	30	70 - 125
4-Methyl-2-pentanone	0.04	0.047	118.0	17.6	30	45 - 145
Toluene	0.02	0.0235	118.0	13.6	30	70 - 125
trans-1,3-Dichloropropene	0.02	0.024	120.0	16.7	30	65 - 125
Ethyl methacrylate	0.02	0.0243	122.0 *	10.8	30	73 - 121
1,1,2-Trichloroethane	0.02	0.0243	122.0	13.6	30	60 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042312LCS21D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	0.02	0.022	110.0	13.6	30	65 - 140
2-Hexanone	0.04	0.0456	114.0	18.7	30	45 - 145
Dibromochloromethane	0.02	0.0213	106.0	10.9	30	65 - 130
1,2-Dibromoethane	0.02	0.023	115.0	16.5	30	70 - 125
Chlorobenzene	0.02	0.0214	107.0	11.4	30	75 - 125
1,1,1,2-Tetrachloroethane	0.02	0.0212	106.0	16.9	30	75 - 125
Ethylbenzene	0.02	0.0219	110.0	11.6	30	75 - 125
Styrene	0.02	0.0212	106.0	10.4	30	75 - 125
Bromoform	0.02	0.0217	108.0	14.9	30	55 - 135
1,1,2,2-Tetrachloroethane	0.02	0.0227	114.0	16.7	30	55 - 130
1,2,3-Trichloropropane	0.02	0.0222	111.0	17.1	30	65 - 130
1,2-Dibromo-3-chloropropane	0.02	0.0238	119.0	20.4	30	40 - 135
1,4-Dichloro-2-butene	0.04	0.0468	117.0 *	8.5	30	68 - 115
Acetonitrile	0.2	0.24	120.0	13.3	30	37 - 122
Allyl chloride	0.02	0.0242	121.0	13.7	30	70 - 130
1,4-Dioxane	0.4	0.45	112.0	4.5	30	0 - 167
Isobutyl alcohol	0.4	0.55	138.0 *	13.6	30	70 - 130
Methacrylonitrile	0.2	0.25	125.0	12.8	30	70 - 130
Methyl methacrylate	0.02	0.024	120.0	9.6	30	33 - 172
Propionitrile	0.2	0.27	135.0 *	20.4	30	70 - 130
Chloroprene	0.02	0.0231	116.0	10.5	30	70 - 130
Xylene (total)	0.06	0.0645	108.0	12.7	30	82 - 124

Spike Recovery: 4 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042412LCS21

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0234	117.0			35 - 135
Chloromethane	0.02	0.0246	123.0			50 - 130
Vinyl chloride	0.02	0.0267	134.0 *			60 - 125
Bromomethane	0.02	0.0257	128.0			30 - 160
Chloroethane	0.02	0.0292	146.0			40 - 155
Trichlorofluoromethane	0.02	0.0296	148.0			25 - 185
1,1-Dichloroethene	0.02	0.0226	113.0			65 - 135
Acrolein	0.04	0.0405	101.0			31 - 148
Methyl iodide	0.02	0.0216	108.0			75 - 152
Carbon disulfide	0.02	0.0192	96.0			45 - 160
Methylene chloride	0.02	0.0209	104.0			55 - 140
trans-1,2-Dichloroethene	0.02	0.023	115.0			65 - 135
Acrylonitrile	0.04	0.0482	120.0			55 - 126
1,1-Dichloroethane	0.02	0.0234	117.0			75 - 125
Acetone	0.04	0.0449	112.0			20 - 160
2-Butanone	0.04	0.0418	104.0			30 - 160
Chloroform	0.02	0.0232	116.0			70 - 125
1,1,1-Trichloroethane	0.02	0.0245	122.0			70 - 135
Carbon tetrachloride	0.02	0.0242	121.0			65 - 135
Benzene	0.02	0.0233	116.0			75 - 125
1,2-Dichloroethane	0.02	0.0223	112.0			70 - 135
Trichloroethene	0.02	0.0231	116.0			75 - 125
Vinyl acetate	0.02	0.023	115.0			77 - 150
1,2-Dichloropropane	0.02	0.0227	114.0			70 - 120
Dibromomethane	0.02	0.0225	112.0			75 - 130
Bromodichloromethane	0.02	0.0227	114.0			70 - 130
cis-1,3-Dichloropropene	0.02	0.0232	116.0			70 - 125
4-Methyl-2-pentanone	0.04	0.0424	106.0			45 - 145
Toluene	0.02	0.0235	118.0			70 - 125
trans-1,3-Dichloropropene	0.02	0.0222	111.0			65 - 125
Ethyl methacrylate	0.02	0.0237	118.0			73 - 121
1,1,2-Trichloroethane	0.02	0.0226	113.0			60 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042412LCS21

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	0.02	0.0221	110.0			65 - 140
2-Hexanone	0.04	0.0403	101.0			45 - 145
Dibromochloromethane	0.02	0.0203	102.0			65 - 130
1,2-Dibromoethane	0.02	0.0211	106.0			70 - 125
Chlorobenzene	0.02	0.021	105.0			75 - 125
1,1,1,2-Tetrachloroethane	0.02	0.0214	107.0			75 - 125
Ethylbenzene	0.02	0.022	110.0			75 - 125
Styrene	0.02	0.0206	103.0			75 - 125
Bromoform	0.02	0.0226	113.0			55 - 135
1,1,2,2-Tetrachloroethane	0.02	0.0217	108.0			55 - 130
1,2,3-Trichloropropane	0.02	0.0201	100.0			65 - 130
1,2-Dibromo-3-chloropropane	0.02	0.0208	104.0			40 - 135
1,4-Dichloro-2-butene	0.04	0.044	110.0			68 - 115
Acetonitrile	0.2	0.23	115.0			37 - 122
Allyl chloride	0.02	0.0231	116.0			70 - 130
1,4-Dioxane	0.4	0.42	105.0			0 - 167
Isobutyl alcohol	0.4	0.48	120.0			70 - 130
Methacrylonitrile	0.2	0.22	110.0			70 - 130
Methyl methacrylate	0.02	0.0236	118.0			33 - 172
Propionitrile	0.2	0.25	125.0			70 - 130
Chloroprene	0.02	0.025	125.0			70 - 130
Xylene (total)	0.06	0.062	103.0			82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042412LCS21D

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0165	82.5	34.6 *	30	35 - 135
Chloromethane	0.02	0.0186	93.0	27.8	30	50 - 130
Vinyl chloride	0.02	0.02	100.0	28.7	30	60 - 125
Bromomethane	0.02	0.0195	97.5	27.4	30	30 - 160
Chloroethane	0.02	0.0202	101.0	36.4 *	30	40 - 155
Trichlorofluoromethane	0.02	0.0215	108.0	31.7 *	30	25 - 185
1,1-Dichloroethene	0.02	0.0185	92.5	20.0	30	65 - 135
Acrolein	0.04	0.0347	86.8	15.4	30	31 - 148
Methyl iodide	0.02	0.0183	91.5	16.5	30	75 - 152
Carbon disulfide	0.02	0.0162	81.0	16.9	30	45 - 160
Methylene chloride	0.02	0.0184	92.0	12.7	30	55 - 140
trans-1,2-Dichloroethene	0.02	0.0194	97.0	17.0	30	65 - 135
Acrylonitrile	0.04	0.0441	110.0	8.9	30	55 - 126
1,1-Dichloroethane	0.02	0.0204	102.0	13.7	30	75 - 125
Acetone	0.04	0.0389	97.2	14.3	30	20 - 160
2-Butanone	0.04	0.0398	99.5	4.9	30	30 - 160
Chloroform	0.02	0.0201	100.0	14.3	30	70 - 125
1,1,1-Trichloroethane	0.02	0.0198	99.0	21.2	30	70 - 135
Carbon tetrachloride	0.02	0.02	100.0	19.0	30	65 - 135
Benzene	0.02	0.0209	104.0	10.9	30	75 - 125
1,2-Dichloroethane	0.02	0.0215	108.0	3.7	30	70 - 135
Trichloroethene	0.02	0.0205	102.0	11.9	30	75 - 125
Vinyl acetate	0.02	0.0206	103.0	11.0	30	77 - 150
1,2-Dichloropropane	0.02	0.0211	106.0	7.3	30	70 - 120
Dibromomethane	0.02	0.0216	108.0	4.1	30	75 - 130
Bromodichloromethane	0.02	0.0217	108.0	4.5	30	70 - 130
cis-1,3-Dichloropropene	0.02	0.0214	107.0	8.1	30	70 - 125
4-Methyl-2-pentanone	0.04	0.0395	98.8	7.1	30	45 - 145
Toluene	0.02	0.0204	102.0	14.1	30	70 - 125
trans-1,3-Dichloropropene	0.02	0.0213	106.0	4.1	30	65 - 125
Ethyl methacrylate	0.02	0.0221	110.0	7.0	30	73 - 121
1,1,2-Trichloroethane	0.02	0.0211	106.0	6.9	30	60 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042412LCS21D

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	0.02	0.0182	91.0	19.4	30	65 - 140
2-Hexanone	0.04	0.0371	92.8	8.3	30	45 - 145
Dibromochloromethane	0.02	0.0201	100.0	1.0	30	65 - 130
1,2-Dibromoethane	0.02	0.0204	102.0	3.4	30	70 - 125
Chlorobenzene	0.02	0.0194	97.0	7.9	30	75 - 125
1,1,1,2-Tetrachloroethane	0.02	0.0188	94.0	12.9	30	75 - 125
Ethylbenzene	0.02	0.0184	92.0	17.8	30	75 - 125
Styrene	0.02	0.0192	96.0	7.0	30	75 - 125
Bromoform	0.02	0.0195	97.5	14.7	30	55 - 135
1,1,2,2-Tetrachloroethane	0.02	0.0195	97.5	10.7	30	55 - 130
1,2,3-Trichloropropane	0.02	0.0191	95.5	5.1	30	65 - 130
1,2-Dibromo-3-chloropropane	0.02	0.02	100.0	3.9	30	40 - 135
1,4-Dichloro-2-butene	0.04	0.0409	102.0	7.3	30	68 - 115
Acetonitrile	0.2	0.21	105.0	9.1	30	37 - 122
Allyl chloride	0.02	0.0213	106.0	8.1	30	70 - 130
1,4-Dioxane	0.4	0.42	105.0	0.0	30	0 - 167
Isobutyl alcohol	0.4	0.45	112.0	6.5	30	70 - 130
Methacrylonitrile	0.2	0.21	105.0	4.7	30	70 - 130
Methyl methacrylate	0.02	0.0216	108.0	8.8	30	33 - 172
Propionitrile	0.2	0.23	115.0	8.3	30	70 - 130
Chloroprene	0.02	0.0209	104.0	17.9	30	70 - 130
Xylene (total)	0.06	0.0553	92.2	11.4	30	82 - 124

Spike Recovery: 0 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042512LCS61

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	21.3	106.0			30 - 155
Chloromethane	20	20.9	104.0			40 - 125
Vinyl chloride	20	18.6	93.0			50 - 145
Bromomethane	20	20.2	101.0			30 - 145
Chloroethane	20	18.2	91.0			60 - 135
Trichlorofluoromethane	20	20.3	102.0			60 - 145
1,1-Dichloroethene	20	18.4	92.0			70 - 130
Acrolein	40	42.4	106.0			31 - 148
Methyl iodide	20	14	70.0*			75 - 152
Carbon disulfide	20	18.4	92.0			35 - 160
Methylene chloride	20	23.2	116.0			55 - 140
trans-1,2-Dichloroethene	20	20.7	104.0			60 - 140
Acrylonitrile	40	49	122.0			55 - 126
1,1-Dichloroethane	20	21.3	106.0			70 - 135
Acetone	40	31.7	79.2			40 - 140
2-Butanone	40	34.8	87.0			30 - 150
Chloroform	20	20	100.0			65 - 135
1,1,1-Trichloroethane	20	20.6	103.0			65 - 130
Carbon tetrachloride	20	21.1	106.0			65 - 140
Benzene	20	21.8	109.0			80 - 120
1,2-Dichloroethane	20	19.4	97.0			70 - 130
Trichloroethene	20	22.2	111.0			70 - 125
Vinyl acetate	20	20.5	102.0			77 - 150
1,2-Dichloropropane	20	21.5	108.0			75 - 125
Dibromomethane	20	20.9	104.0			75 - 125
Bromodichloromethane	20	20.3	102.0			75 - 120
cis-1,3-Dichloropropene	20	21.4	107.0			70 - 130
4-Methyl-2-pentanone	40	39.7	99.2			60 - 135
Toluene	20	23.7	118.0			75 - 120
trans-1,3-Dichloropropene	20	20.1	100.0			55 - 140
Ethyl methacrylate	20	21.7	108.0			73 - 121
1,1,2-Trichloroethane	20	21.3	106.0			75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042512LCS61

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	19.6	98.0			45 - 150
2-Hexanone	40	32.2	80.5			55 - 130
Dibromochloromethane	20	19.9	99.5			60 - 135
1,2-Dibromoethane	20	19.6	98.0			80 - 120
Chlorobenzene	20	20.2	101.0			80 - 120
1,1,1,2-Tetrachloroethane	20	19.6	98.0			80 - 130
Ethylbenzene	20	20.9	104.0			75 - 125
Styrene	20	21.2	106.0			65 - 135
Bromoform	20	18.6	93.0			70 - 130
1,1,2,2-Tetrachloroethane	20	18.8	94.0			65 - 130
1,2,3-Trichloropropane	20	18.7	93.5			75 - 125
1,2-Dibromo-3-chloropropane	20	17.6	88.0			50 - 130
1,4-Dichloro-2-butene	40	32.8	82.0			68 - 115
Acetonitrile	200	143	71.5			37 - 122
Allyl chloride	20	18.7	93.5			70 - 130
1,4-Dioxane	400	416	104.0			0 - 167
Isobutyl alcohol	400	361	90.2			70 - 130
Methacrylonitrile	200	216	108.0			70 - 130
Methyl methacrylate	20	21.5	108.0			33 - 172
Propionitrile	200	208	104.0			70 - 130
Chloroprene	20	19.4	97.0			70 - 130
Xylene (total)	60	63.1	105.0			82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042512LCS61D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	19.6	98.0	8.3	20	30 - 155
Chloromethane	20	19.4	97.0	7.4	20	40 - 125
Vinyl chloride	20	17	85.0	9.0	20	50 - 145
Bromomethane	20	18.2	91.0	10.4	20	30 - 145
Chloroethane	20	16.8	84.0	8.0	20	60 - 135
Trichlorofluoromethane	20	18.9	94.5	7.1	20	60 - 145
1,1-Dichloroethene	20	16.8	84.0	9.1	20	70 - 130
Acrolein	40	35.8	89.5	16.9	20	31 - 148
Methyl iodide	20	19.6	98.0	33.3*	20	75 - 152
Carbon disulfide	20	17	85.0	7.9	20	35 - 160
Methylene chloride	20	22.1	110.0	4.9	20	55 - 140
trans-1,2-Dichloroethene	20	19.8	99.0	4.4	20	60 - 140
Acrylonitrile	40	42.6	106.0	14.0	20	55 - 126
1,1-Dichloroethane	20	19.8	99.0	7.3	20	70 - 135
Acetone	40	31.9	79.8	0.6	20	40 - 140
2-Butanone	40	34.5	86.2	0.9	20	30 - 150
Chloroform	20	18.8	94.0	6.2	20	65 - 135
1,1,1-Trichloroethane	20	19.8	99.0	4.0	20	65 - 130
Carbon tetrachloride	20	20.4	102.0	3.4	20	65 - 140
Benzene	20	21.2	106.0	2.8	20	80 - 120
1,2-Dichloroethane	20	18	90.0	7.5	20	70 - 130
Trichloroethene	20	20.6	103.0	7.5	20	70 - 125
Vinyl acetate	20	19.5	97.5	5.0	20	77 - 150
1,2-Dichloropropane	20	20.8	104.0	3.3	20	75 - 125
Dibromomethane	20	19.4	97.0	7.4	20	75 - 125
Bromodichloromethane	20	19.8	99.0	2.5	20	75 - 120
cis-1,3-Dichloropropene	20	20.3	102.0	5.3	20	70 - 130
4-Methyl-2-pentanone	40	36.4	91.0	8.7	20	60 - 135
Toluene	20	22.4	112.0	5.6	20	75 - 120
trans-1,3-Dichloropropene	20	19.6	98.0	2.5	20	55 - 140
Ethyl methacrylate	20	20.2	101.0	7.2	20	73 - 121
1,1,2-Trichloroethane	20	20.6	103.0	3.3	20	75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

042512LCS61D

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	18.9	94.5	3.6	20	45 - 150
2-Hexanone	40	32.6	81.5	1.2	20	55 - 130
Dibromochloromethane	20	19.4	97.0	2.5	20	60 - 135
1,2-Dibromoethane	20	19.1	95.5	2.6	20	80 - 120
Chlorobenzene	20	19.9	99.5	1.5	20	80 - 120
1,1,1,2-Tetrachloroethane	20	20.5	102.0	4.5	20	80 - 130
Ethylbenzene	20	20.2	101.0	3.4	20	75 - 125
Styrene	20	20.4	102.0	3.8	20	65 - 135
Bromoform	20	18.1	90.5	2.7	20	70 - 130
1,1,2,2-Tetrachloroethane	20	17.8	89.0	5.5	20	65 - 130
1,2,3-Trichloropropane	20	18.1	90.5	3.3	20	75 - 125
1,2-Dibromo-3-chloropropane	20	16.2	81.0	8.3	20	50 - 130
1,4-Dichloro-2-butene	40	32.8	82.0	0.0	20	68 - 115
Acetonitrile	200	142	71.0	0.7	20	37 - 122
Allyl chloride	20	16.3	81.5	13.7	20	70 - 130
1,4-Dioxane	400	333	83.2	22.2 *	20	0 - 167
Isobutyl alcohol	400	358	89.5	0.8	20	70 - 130
Methacrylonitrile	200	203	102.0	6.2	20	70 - 130
Methyl methacrylate	20	19.4	97.0	10.3	20	33 - 172
Propionitrile	200	184	92.0	12.2	20	70 - 130
Chloroprene	20	18.2	91.0	6.4	20	70 - 130
Xylene (total)	60	61.8	103.0	2.1	20	82 - 124

Spike Recovery: 0 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Dichlorodifluoromethane	0.026	0	0.023	88.4	35 - 135
Chloromethane	0.026	0	0.023	90.3	50 - 130
Vinyl chloride	0.026	0	0.025	97.7	60 - 125
Bromomethane	0.026	0	0.026	99.2	30 - 160
Chloroethane	0.026	0	0.028	108.0	40 - 155
Trichlorofluoromethane	0.026	0	0.027	105.0	25 - 185
1,1-Dichloroethene	0.026	0	0.025	97.7	65 - 135
Acrolein	0.052	0	0	0.0 *	31 - 148
Methyl iodide	0.026	0	0.022	86.4	75 - 152
Carbon disulfide	0.026	0	0.020	79.1	45 - 160
Methylene chloride	0.026	0	0.022	84.5	55 - 140
trans-1,2-Dichloroethene	0.026	0	0.024	94.6	65 - 135
Acrylonitrile	0.052	0	0.042	81.0	55 - 126
1,1-Dichloroethane	0.026	0	0.025	97.7	75 - 125
Acetone	0.052	0.018	0.048	57.4	20 - 160
2-Butanone	0.052	0	0.038	74.0	30 - 160
Chloroform	0.026	0	0.024	93.4	70 - 125
1,1,1-Trichloroethane	0.026	0	0.023	88.4	70 - 135
Carbon tetrachloride	0.026	0	0.022	85.3	65 - 135
Benzene	0.026	0	0.023	87.6	75 - 125
1,2-Dichloroethane	0.026	0	0.022	85.3	70 - 135
Trichloroethene	0.026	0	0.022	84.5	75 - 125
Vinyl acetate	0.026	0	0.017	67.4 *	77 - 150
1,2-Dichloropropane	0.026	0	0.022	85.7	70 - 120
Dibromomethane	0.026	0	0.021	80.6	75 - 130
Bromodichloromethane	0.026	0	0.021	82.9	70 - 130
cis-1,3-Dichloropropene	0.026	0	0.022	83.7	70 - 125
4-Methyl-2-pentanone	0.052	0	0.052	102.0	45 - 145
Toluene	0.026	0	0.021	82.2	70 - 125
trans-1,3-Dichloropropene	0.026	0	0.020	76.7	65 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Ethyl methacrylate	0.026	0	0.018	69.0 *	73 - 121
1,1,2-Trichloroethane	0.026	0	0.020	77.9	60 - 125
Tetrachloroethene	0.026	0	0.019	73.3	65 - 140
2-Hexanone	0.052	0	0.036	70.0	45 - 145
Dibromochloromethane	0.026	0	0.017	67.1	65 - 130
1,2-Dibromoethane	0.026	0	0.020	75.6	70 - 125
Chlorobenzene	0.026	0	0.018	69.0 *	75 - 125
1,1,1,2-Tetrachloroethane	0.026	0	0.018	70.5 *	75 - 125
Ethylbenzene	0.026	0	0.017	65.1 *	75 - 125
Styrene	0.026	0	0.015	59.3 *	75 - 125
Bromoform	0.026	0	0.015	57.8	55 - 135
1,1,1,2-Tetrachloroethane	0.026	0	0.019	73.6	55 - 130
1,2,3-Trichloropropane	0.026	0	0.021	82.9	65 - 130
1,2-Dibromo-3-chloropropane	0.026	0	0.012	46.9	40 - 135
1,4-Dichloro-2-butene	0.052	0	0.041	79.5	68 - 115
Acetonitrile	0.26	0	0.23	88.5	37 - 122
Allyl chloride	0.026	0	0.023	90.3	70 - 130
1,4-Dioxane	0.52	0	0.44	84.6	0 - 167
Isobutyl alcohol	0.52	0	0.41	78.8	70 - 130
Methacrylonitrile	0.26	0	0.21	80.8	70 - 130
Methyl methacrylate	0.026	0	0.022	83.3	33 - 172
Propionitrile	0.26	0	0.21	80.8	70 - 130
Chloroprene	0.026	0	0.018	70.9	70 - 130
Xylene (total)	0.077	0	0.051	66.0 *	82 - 124

Spike Recovery: 8 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.026	0.023	87.6	0.4	30	35 - 135
Chloromethane	0.026	0.024	93.8	4.2	30	50 - 130
Vinyl chloride	0.026	0.025	97.7	0.4	30	60 - 125
Bromomethane	0.026	0.025	97.7	1.2	30	30 - 160
Chloroethane	0.026	0.027	105.0	1.8	30	40 - 155
Trichlorofluoromethane	0.026	0.026	99.6	4.5	30	25 - 185
1,1-Dichloroethene	0.026	0.026	98.5	1.2	30	65 - 135
Acrolein	0.052	0	0.0 *		30	31 - 148
Methyl iodide	0.026	0.022	85.7	0.4	30	75 - 152
Carbon disulfide	0.026	0.020	79.2	0.5	30	45 - 160
Methylene chloride	0.026	0.023	88.8	5.4	30	55 - 140
trans-1,2-Dichloroethene	0.026	0.026	100.0	6.3	30	65 - 135
Acrylonitrile	0.052	0.048	91.9	13.0	30	55 - 126
1,1-Dichloroethane	0.026	0.026	101.0	3.9	30	75 - 125
Acetone	0.052	0.072	104.0	40.8 *	30	20 - 160
2-Butanone	0.052	0.056	107.0	37.1 *	30	30 - 160
Chloroform	0.026	0.026	99.6	6.8	30	70 - 125
1,1,1-Trichloroethane	0.026	0.025	96.9	9.6	30	70 - 135
Carbon tetrachloride	0.026	0.024	93.4	9.5	30	65 - 135
Benzene	0.026	0.025	97.7	11.3	30	75 - 125
1,2-Dichloroethane	0.026	0.026	99.6	15.9	30	70 - 135
Trichloroethene	0.026	0.024	92.7	9.6	30	75 - 125
Vinyl acetate	0.026	0.014	55.6 *	18.9	30	77 - 150
1,2-Dichloropropane	0.026	0.025	96.1	11.9	30	70 - 120
Dibromomethane	0.026	0.023	88.8	10.0	30	75 - 130
Bromodichloromethane	0.026	0.024	91.1	9.8	30	70 - 130
cis-1,3-Dichloropropene	0.026	0.022	83.4	0.0	30	70 - 125
4-Methyl-2-pentanone	0.052	0.061	118.0	15.3	30	45 - 145
Toluene	0.026	0.024	91.9	11.6	30	70 - 125
trans-1,3-Dichloropropene	0.026	0.021	80.3	4.9	30	65 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Ethyl methacrylate	0.026	0.018	69.5 *	1.1	30	73 - 121
1,1,2-Trichloroethane	0.026	0.023	88.8	13.5	30	60 - 125
Tetrachloroethene	0.026	0.022	83.8	13.8	30	65 - 140
2-Hexanone	0.052	0.046	89.4	24.8	30	45 - 145
Dibromochloromethane	0.026	0.019	72.6	8.3	30	65 - 130
1,2-Dibromoethane	0.026	0.021	81.9	8.4	30	70 - 125
Chlorobenzene	0.026	0.019	72.6 *	5.5	30	75 - 125
1,1,1,2-Tetrachloroethane	0.026	0.018	71.4 *	1.6	30	75 - 125
Ethylbenzene	0.026	0.020	78.0	18.4	30	75 - 125
Styrene	0.026	0.015	59.5 *	0.7	30	75 - 125
Bromoform	0.026	0.016	62.2	7.7	30	55 - 135
1,1,2,2-Tetrachloroethane	0.026	0.020	76.8	4.6	30	55 - 130
1,2,3-Trichloropropane	0.026	0.020	78.8	4.8	30	65 - 130
1,2-Dibromo-3-chloropropane	0.026	0.013	48.6	4.0	30	40 - 135
1,4-Dichloro-2-butene	0.052	0.038	72.6	8.7	30	68 - 115
Acetonitrile	0.26	0.29	112.0	23.1	30	37 - 122
Allyl chloride	0.026	0.029	111.0	21.1	30	70 - 130
1,4-Dioxane	0.52	0.62	119.0	34.0 *	30	0 - 167
Isobutyl alcohol	0.52	0.69	133.0 *	50.9 *	30	70 - 130
Methacrylonitrile	0.26	0.26	100.0	21.3	30	70 - 130
Methyl methacrylate	0.026	0.029	113.0	30.4 *	30	33 - 172
Propionitrile	0.26	0.33	127.0	44.4 *	30	70 - 130
Chloroprene	0.026	0.018	70.3	0.5	30	70 - 130
Xylene (total)	0.078	0.057	73.6 *	11.5	30	82 - 124

RPD: 6 out of 54 outside limits

Spike Recovery: 8 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Dichlorodifluoromethane	20	0	20	99.0	30 - 155
Chloromethane	20	0	19	96.0	40 - 125
Vinyl chloride	20	0	17	87.0	50 - 145
Bromomethane	20	0	18	88.5	30 - 145
Chloroethane	20	0	17	86.5	60 - 135
Trichlorofluoromethane	20	0	20	97.5	60 - 145
1,1-Dichloroethene	20	0	16	82.5	70 - 130
Acrolein	40	0	38	94.0	31 - 148
Methyl iodide	20	0	14	68.5 *	75 - 152
Carbon disulfide	20	0.49	17	84.3	35 - 160
Methylene chloride	20	0	21	105.0	55 - 140
trans-1,2-Dichloroethene	20	0	19	96.5	60 - 140
Acrylonitrile	40	0	46	114.0	55 - 126
1,1-Dichloroethane	20	0	19	94.5	70 - 135
Acetone	40	4.0	26	49.8	40 - 140
2-Butanone	40	0	28	70.2	30 - 150
Chloroform	20	0	18	90.5	65 - 135
1,1,1-Trichloroethane	20	0	19	93.5	65 - 130
Carbon tetrachloride	20	0	20	98.0	65 - 140
Benzene	20	0	20	102.0	80 - 120
1,2-Dichloroethane	20	0	18	89.0	70 - 130
Trichloroethene	20	0	20	102.0	70 - 125
Vinyl acetate	20	0	29	144.0	77 - 150
1,2-Dichloropropane	20	0	20	102.0	75 - 125
Dibromomethane	20	0	19	96.0	75 - 125
Bromodichloromethane	20	0	19	94.5	75 - 120
cis-1,3-Dichloropropene	20	0	20	101.0	70 - 130
4-Methyl-2-pentanone	40	0	36	89.5	60 - 135
Toluene	20	1.1	22	108.0	75 - 120
trans-1,3-Dichloropropene	20	0	19	95.0	55 - 140

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Ethyl methacrylate	20	0	20	100.0	73 - 121
1,1,2-Trichloroethane	20	0	19	96.0	75 - 125
Tetrachloroethene	20	0	20	99.0	45 - 150
2-Hexanone	40	0	30	75.0	55 - 130
Dibromochloromethane	20	0	19	93.5	60 - 135
1,2-Dibromoethane	20	0	18	92.5	80 - 120
Chlorobenzene	20	0	20	98.5	80 - 120
1,1,1,2-Tetrachloroethane	20	0	19	95.5	80 - 130
Ethylbenzene	20	0	20	100.0	75 - 125
Styrene	20	0	20	102.0	65 - 135
Bromoform	20	0	18	86.8	70 - 130
1,1,1,2,2-Tetrachloroethane	20	0	18	88.0	65 - 130
1,2,3-Trichloropropane	20	0	17	86.0	75 - 125
1,2-Dibromo-3-chloropropane	20	0	15	75.0	50 - 130
1,4-Dichloro-2-butene	40	0	28	69.8	68 - 115
Acetonitrile	200	0	130	65.0	37 - 122
Allyl chloride	20	0	17	83.0	70 - 130
1,4-Dioxane	400	0	310	76.5	0 - 167
Isobutyl alcohol	400	0	360	89.8	70 - 130
Methacrylonitrile	200	0	190	96.0	70 - 130
Methyl methacrylate	20	0	19	95.0	33 - 172
Propionitrile	200	0	180	88.5	70 - 130
Chloroprene	20	0	18	90.0	70 - 130
Xylene (total)	60	0	61	102.0	82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	19	93.5	5.7	20	30 - 155
Chloromethane	20	18	90.5	5.9	20	40 - 125
Vinyl chloride	20	17	83.5	4.1	20	50 - 145
Bromomethane	20	16	81.5	8.2	20	30 - 145
Chloroethane	20	16	81.0	6.6	20	60 - 135
Trichlorofluoromethane	20	19	94.0	3.7	20	60 - 145
1,1-Dichloroethene	20	16	79.0	4.3	20	70 - 130
Acrolein	40	38	95.0	1.1	20	31 - 148
Methyl iodide	20	10	51.5 *	28.3 *	20	75 - 152
Carbon disulfide	20	16	76.6	8.5	20	35 - 160
Methylene chloride	20	20	102.0	2.4	20	55 - 140
trans-1,2-Dichloroethene	20	19	95.5	1.0	20	60 - 140
Acrylonitrile	40	45	114.0	0.7	20	55 - 126
1,1-Dichloroethane	20	19	94.0	0.5	20	70 - 135
Acetone	40	27	56.8	3.0	20	40 - 140
2-Butanone	40	29	71.5	1.8	20	30 - 150
Chloroform	20	18	91.5	1.1	20	65 - 135
1,1,1-Trichloroethane	20	19	96.0	2.6	20	65 - 130
Carbon tetrachloride	20	19	95.5	2.6	20	65 - 140
Benzene	20	20	102.0	0.5	20	80 - 120
1,2-Dichloroethane	20	17	85.5	4.0	20	70 - 130
Trichloroethene	20	20	100.0	1.5	20	70 - 125
Vinyl acetate	20	27	135.0	6.8	20	77 - 150
1,2-Dichloropropane	20	20	102.0	1.0	20	75 - 125
Dibromomethane	20	19	93.0	3.2	20	75 - 125
Bromodichloromethane	20	19	94.5	0.0	20	75 - 120
cis-1,3-Dichloropropene	20	20	101.0	0.0	20	70 - 130
4-Methyl-2-pentanone	40	38	93.8	4.6	20	60 - 135
Toluene	20	22	106.0	2.3	20	75 - 120
trans-1,3-Dichloropropene	20	19	93.0	2.1	20	55 - 140

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Ethyl methacrylate	20	21	105.0	4.4	20	73 - 121
1,1,2-Trichloroethane	20	19	94.0	2.1	20	75 - 125
Tetrachloroethene	20	18	92.0	7.3	20	45 - 150
2-Hexanone	40	28	70.5	6.2	20	55 - 130
Dibromochloromethane	20	19	93.0	0.5	20	60 - 135
1,2-Dibromoethane	20	18	90.0	2.7	20	80 - 120
Chlorobenzene	20	19	93.5	5.2	20	80 - 120
1,1,1,2-Tetrachloroethane	20	18	91.5	4.3	20	80 - 130
Ethylbenzene	20	19	96.5	3.6	20	75 - 125
Styrene	20	20	99.5	3.0	20	65 - 135
Bromoform	20	18	89.0	0.6	20	70 - 130
1,1,1,2,2-Tetrachloroethane	20	17	86.5	1.7	20	65 - 130
1,2,3-Trichloropropane	20	18	89.5	4.0	20	75 - 125
1,2-Dibromo-3-chloropropane	20	14	72.5	3.4	20	50 - 130
1,4-Dichloro-2-butene	40	28	71.2	2.1	20	68 - 115
Acetonitrile	200	130	64.0	1.6	20	37 - 122
Allyl chloride	20	16	81.5	1.8	20	70 - 130
1,4-Dioxane	400	300	76.0	0.7	20	0 - 167
Isobutyl alcohol	400	340	84.2	6.3	20	70 - 130
Methacrylonitrile	200	200	98.0	2.1	20	70 - 130
Methyl methacrylate	20	21	103.0	8.1	20	33 - 172
Propionitrile	200	170	86.0	2.9	20	70 - 130
Chloroprene	20	18	89.0	1.1	20	70 - 130
Xylene (total)	60	60	99.7	2.6	20	82 - 124

RPD: 1 out of 54 outside limits

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8260 Standards Data

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1445 End: 1757
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF2 =2PPB.D		RRF5 =5PPB.D			
RRF10 =10PPB.D		RRF20 =20PPB.D		RRF50 =50PPB.D			
COMPOUND	RRF2	RRF5	RRF10	RRF20	RRF50	RRF	%RSD OR R^2
Dichlorodifluoromethane	0.198	0.225	0.236	0.239	0.256		
Chloromethane	# 0.470	0.494	0.486	0.490	0.508		#
Vinyl chloride	* 0.356	0.363	0.352	0.381	0.407		*
Bromomethane	0.185	0.195	0.198	0.226	0.248		
Chloroethane	0.181	0.219	0.206	0.239	0.252		
Trichlorofluoromethane	0.323	0.345	0.348	0.388	0.416		
1,1-Dichloroethene	* 0.575	0.562	0.559	0.583	0.570		*
Acrolein	0.045	0.067	0.058	0.065	0.075		
Methyl iodide	0.379	0.421	0.421	0.450	0.444		
Carbon disulfide	1.014	0.966	0.940	0.963	0.943		
Methylene chloride	1.868	1.298	0.980	0.771	0.717		
trans-1,2-Dichloroethene	0.560	0.565	0.588	0.613	0.590		
Acrylonitrile	0.137	0.159	0.172	0.166	0.187		
1,1-Dichloroethane	# 0.688	0.673	0.721	0.754	0.739		#
Acetone	0.422	0.438	0.415	0.255	0.407		
2-Butanone	0.308	0.441	0.429	0.295	0.459		
Chloroform	* 0.565	0.617	0.604	0.630	0.638		*
1,1,1-Trichloroethane	0.419	0.431	0.406	0.430	0.429		
Carbon tetrachloride	0.301	0.309	0.293	0.305	0.328		
Benzene	1.430	1.435	1.418	1.448	1.438		
1,2-Dichloroethane	0.526	0.590	0.640	0.645	0.649		
Trichloroethene	0.258	0.260	0.264	0.286	0.278		
Vinyl acetate	1.927	2.038	1.951	2.066	2.134		
1,2-Dichloropropane	* 0.384	0.360	0.425	0.423	0.426		*
Dibromomethane	0.120	0.193	0.205	0.209	0.216		
Bromodichloromethane	0.365	0.463	0.469	0.482	0.511		
cis-1,3-Dichloropropene	0.504	0.530	0.545	0.590	0.592		
4-Methyl-2-pentanone	1.649	1.801	1.896	1.745	1.768		
Toluene	* 0.799	0.786	0.819	0.857	0.818		*
trans-1,3-Dichloropropene	0.509	0.544	0.577	0.576	0.601		
Ethyl methacrylate	0.375	0.404	0.428	0.449	0.474		
1,1,2-Trichloroethane	0.242	0.254	0.288	0.293	0.294		
Tetrachloroethene	0.347	0.309	0.344	0.337	0.337		
2-Hexanone	0.533	0.905	0.860	0.584	0.845		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1445 End: 1757
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF2 =2PPB.D		RRF5 =5PPB.D			
RRF10 =10PPB.D		RRF20 =20PPB.D		RRF50 =50PPB.D			
COMPOUND	RRF2	RRF5	RRF10	RRF20	RRF50	RRF	%RSD OR R^2
Dibromochloromethane	0.327	0.396	0.390	0.406	0.411		
1,2-Dibromoethane	0.350	0.374	0.421	0.402	0.427		
Chlorobenzene	# 1.247	1.241	1.311	1.267	1.258		#
1,1,1,2-Tetrachloroethane	0.400	0.409	0.399	0.414	0.417		
Ethylbenzene	* 0.623	0.659	0.638	0.668	0.647		*
Styrene	1.306	1.264	1.374	1.338	1.358		
Bromoform	# 0.201	0.238	0.242	0.264	0.287		#
1,1,2,2-Tetrachloroethane	# 1.059	1.201	1.351	1.227	1.229		#
1,2,3-Trichloropropane		0.275	0.316	0.330	0.313		
1,2-Dibromo-3-chloropropane		0.047	0.125	0.133	0.163		
1,4-Dichloro-2-butene	0.254	0.386	0.382	0.339	0.374		
Acetonitrile	0.141	0.156	0.156	0.154	0.154		
Allyl chloride	1.407	1.561	1.560	1.540	1.543		
1,4-Dioxane		0.003	0.003	0.003	0.004		
Isobutyl alcohol	0.020	0.022	0.026	0.024	0.027		
Methacrylonitrile	0.138	0.135	0.146	0.147	0.150		
Methyl methacrylate	0.193	0.188	0.243	0.233	0.241		
Propionitrile	0.050	0.057	0.061	0.063	0.067		
Chloroprene	0.656	0.627	0.664	0.727	0.713		
o-Xylene	1.901	1.835	1.917	1.868	1.828		
p,m-Xylene	0.883	0.871	0.872	0.839	0.830		
=====							
Dibromofluoromethane(SURR)	0.285	0.305	0.309	0.312	0.341		
Toluene-d8(SURR)		1.121	1.136	1.095	1.169		
4-Bromofluorobenzene(SURR)	1.508	1.403	1.570	1.491	1.498		
1,2-Dichloroethane-d4(SURR)		0.065	0.066	0.077	0.087		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1445 End: 1757
 Min RRF for SPCC(%) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF60 =60PPB.D	RRF80 =80PPB.D				
RRF1 =1PPB.D							
COMPOUND	RRF60	RRF80	RRF1			RRF	%RSD OR R^2
Dichlorodifluoromethane	0.235	0.249				0.23402	8
Chloromethane	# 0.440	0.454				0.47754	5 #
Vinyl chloride	* 0.351	0.358				0.36682	5.5 *
Bromomethane	0.215	0.227				0.21349	10.4
Chloroethane	0.217	0.227				0.22001	10.4
Trichlorofluoromethane	0.364	0.388				0.36754	8.7
1,1-Dichloroethene	* 0.547	0.560				0.56507	2.1 *
Acrolein	0.065	0.064				0.06244	14.7
Methyl iodide	0.407	0.418				0.42007	5.6
Carbon disulfide	0.876	0.879				0.94003	5.2
Methylene chloride	0.676	0.668				0.99674	0.99899
trans-1,2-Dichloroethene	0.569	0.576				0.58004	3.2
Acrylonitrile	0.163	0.162				0.1636	9.2
1,1-Dichloroethane	# 0.691	0.720				0.71244	4.1 #
Acetone	0.268	0.314				0.35986	21.7 <-
2-Butanone	0.320	0.362				0.37341	18.4 <-
Chloroform	* 0.590	0.619				0.60885	4.1 *
1,1,1-Trichloroethane	0.401	0.420				0.41936	2.9
Carbon tetrachloride	0.303	0.326				0.30924	4.2
Benzene	1.371	1.384				1.41758	2.1
1,2-Dichloroethane	0.606	0.625				0.61155	7.1
Trichloroethene	0.261	0.275				0.26879	4
Vinyl acetate	1.968	1.911				1.99937	4.1
1,2-Dichloropropane	* 0.394	0.400				0.40177	6.2 *
Dibromomethane	0.202	0.206				0.19292	0.99869
Bromodichloromethane	0.461	0.485				0.46218	10
cis-1,3-Dichloropropene	0.556	0.585				0.55747	6
4-Methyl-2-pentanone	1.769	1.737				1.76658	4.2
Toluene	* 0.778	0.809				0.80914	3.2 *
trans-1,3-Dichloropropene	0.566	0.591				0.56642	5.5
Ethyl methacrylate	0.432	0.438				0.42846	7.4
1,1,2-Trichloroethane	0.274	0.285				0.27561	7.4
Tetrachloroethene	0.345	0.342				0.33746	3.9
2-Hexanone	0.662	0.721				0.72994	19.8 <-

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1445 End: 1757
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF60 =60PPB.D	RRF80 =80PPB.D				
RRF1 =1PPB.D							
COMPOUND	RRF60	RRF80	RRF1			RRF	%RSD OR R^2
Dibromochloromethane	0.417	0.421				0.39544	8.1
1,2-Dibromoethane	0.426	0.429				0.40426	7.7
Chlorobenzene	# 1.246	1.262				1.26169	1.9 #
1,1,1,2-Tetrachloroethane	0.432	0.421				0.41299	2.9
Ethylbenzene	* 0.675	0.668				0.6537	2.9 *
Styrene	1.335	1.355				1.33302	2.8
Bromoform	# 0.295	0.285				0.25886	13.1 #
1,1,2,2-Tetrachloroethane	# 1.239	1.224				1.21845	7 #
1,2,3-Trichloropropane	0.324	0.317				0.31248	6.2
1,2-Dibromo-3-chloropropane	0.158	0.153				0.12968	0.99644
1,4-Dichloro-2-butene	0.378	0.372				0.35498	13.2
Acetonitrile	0.143	0.143				0.14958	4.7
Allyl chloride	1.426	1.433				1.49578	4.7
1,4-Dioxane	0.003	0.003				0.0032	11.3
Isobutyl alcohol	0.025	0.024				0.02426	10.5
Methacrylonitrile	0.141	0.139				0.14236	3.9
Methyl methacrylate	0.223	0.220				0.22004	10
Propionitrile	0.063	0.060				0.06024	8.8
Chloroprene	0.661	0.672				0.67424	5.1
o-Xylene	1.861	1.870				1.86851	1.7
p,m-Xylene	0.845	0.846	1.365			0.91901	0.99983
=====							
Dibromofluoromethane(SURR)	0.332	0.347				0.31856	6.9
Toluene-d8(SURR)	1.138	1.178				1.13968	2.7
4-Bromofluorobenzene(SURR)	1.571	1.615				1.52222	4.6
1,2-Dichloroethane-d4(SURR)	0.088	0.090				0.07896	14.2

Average Used: 6.7

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(%) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND	RRF0.2	RRF0.5	RRF1	RRF2	RRF5	RRF	%RSD OR R^2
Dichlorodifluoromethane			0.645	0.723	0.714		
Chloromethane	#	1.420	0.870	0.904	0.801		#
Vinyl chloride	*	1.033	0.828	0.878	0.795		*
Bromomethane			0.391	0.400	0.413		
Chloroethane			0.485	0.587	0.517		
Trichlorofluoromethane			1.019	1.036	1.048		
1,1-Dichloroethene	*	1.373	1.039	1.105	0.988		*
Acrolein				0.101	0.077		
Methyl iodide			0.341	0.334	0.557		
Carbon disulfide			1.772	1.788	1.596		
Methylene chloride			1.381	1.230	0.975		
trans-1,2-Dichloroethene		1.405	0.922	0.977	0.851		
Acrylonitrile			0.179	0.199	0.178		
1,1-Dichloroethane	#		0.708	1.283	1.074		#
Acetone				0.294	0.258		
2-Butanone				0.233	0.223		
Chloroform	* 1.581	1.204	1.074	1.292	1.123		*
1,1,1-Trichloroethane			0.891	1.029	0.963		
Carbon tetrachloride		0.828	0.753	0.943	0.789		
Benzene	2.498	2.337	2.444	2.823	2.710		
1,2-Dichloroethane		1.022	0.884	0.958	0.842		
Trichloroethene		0.768	0.638	0.761	0.644		
Vinyl acetate			0.577	0.654	0.566		
1,2-Dichloropropane	*	0.577	0.590	0.703	0.642		*
Dibromomethane			0.390	0.388	0.356		
Bromodichloromethane	0.811	0.738	0.829	0.830	0.808		
cis-1,3-Dichloropropene		0.593	0.652	0.713	0.763		
4-Methyl-2-pentanone				0.155	0.154		
Toluene	*	1.264	1.458	1.491	1.586		*
trans-1,3-Dichloropropene		0.792	0.698	0.613	0.670		
Ethyl methacrylate			0.341	0.390	0.494		
1,1,2-Trichloroethane			0.533	0.453	0.502		
Tetrachloroethene		0.695	0.741	0.765	0.734		
2-Hexanone				0.319	0.383		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND	RRF0.2	RRF0.5	RRF1	RRF2	RRF5	RRF	%RSD OR R^2
Dibromochloromethane	0.741	0.532	0.626	0.691	0.639		
1,2-Dibromoethane			0.648	0.698	0.662		
Chlorobenzene	#	2.461	2.478	2.597	2.483		#
1,1,1,2-Tetrachloroethane		0.708	0.766	0.900	0.753		
Ethylbenzene	*	1.230	1.234	1.341	1.300		*
Styrene			1.908	2.129	2.290		
Bromoform	#		0.248	0.351	0.370		#
1,1,2,2-Tetrachloroethane	# 1.565	1.383	1.730	1.443	1.570		#
1,2,3-Trichloropropane			0.458	0.483	0.553		
1,2-Dibromo-3-chloropropane			0.251	0.240	0.205		
1,4-Dichloro-2-butene			0.237	0.248	0.227		
Acetonitrile				0.070	0.073		
Allyl chloride			1.108	1.148	1.008		
1,4-Dioxane				0.006	0.006		
Isobutyl alcohol			0.010	0.009	0.009		
Methacrylonitrile			0.155	0.181	0.192		
Methyl methacrylate			0.248	0.239	0.289		
Propionitrile			0.055	0.069	0.066		
Chloroprene			0.930	0.988	0.921		
o-Xylene		2.308	2.723	3.234	3.237		
p,m-Xylene	1.612	1.309	1.304	1.675	1.682		
=====							
Dibromofluoromethane(SURR)					0.495		
Toluene-d8(SURR)					2.090		
4-Bromofluorobenzene(SURR)					1.780		
1,2-Dichloroethane-d4(SURR)							

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D			
RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D			
COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dichlorodifluoromethane	0.890	0.685	0.823	1.001	0.952	0.80412	0.99305
Chloromethane	# 0.951	0.771	0.784	1.001	0.963	0.94057	0.99289 #
Vinyl chloride	* 0.917	0.790	0.813	0.985	1.022	0.89579	10.9 *
Bromomethane	0.461	0.463	0.528	0.666	0.730	0.50648	0.99609
Chloroethane	0.556	0.489	0.512	0.615	0.630	0.54896	10.3
Trichlorofluoromethane	1.196	1.047	1.136	1.374	1.455	1.1637	14.3
1,1-Dichloroethene	* 1.197	1.013	0.962	1.182	1.165	1.11396	11.7 *
Acrolein	0.091	0.076	0.071	0.089	0.085	0.08447	12.2
Methyl iodide	0.295	0.506	0.557	0.645	0.687	0.49028	0.99653
Carbon disulfide	1.880	1.652	1.622	2.018	1.961	1.78628	8.8
Methylene chloride	0.992	0.801	0.750	0.743	0.969	0.98005	0.9958
trans-1,2-Dichloroethene	1.033	0.896	0.831	0.852	0.845	0.9567	0.99926
Acrylonitrile	0.198	0.151	0.152	0.153	0.169	0.17218	11.5
1,1-Dichloroethane	# 1.311	1.144	1.078	1.096	1.078	1.09655	0.99924 #
Acetone	0.285	0.200	0.206	0.284	0.256	0.2547	14.9
2-Butanone	0.245	0.209	0.214	0.235	0.218	0.22528	5.7
Chloroform	* 1.189	1.119	1.104	1.163	1.140	1.19914	12.3 *
1,1,1-Trichloroethane	1.029	0.971	0.970	1.083	1.075	1.0015	6.5
Carbon tetrachloride	0.898	0.837	0.844	0.964	0.988	0.87167	9.3
Benzene	2.545	2.727	2.505	2.566	2.508	2.56646	5.7
1,2-Dichloroethane	0.896	0.815	0.796	0.870	0.872	0.8838	8
Trichloroethene	0.678	0.693	0.650	0.701	0.685	0.69097	6.8
Vinyl acetate	0.711	0.635	0.696	0.730	0.731	0.66222	0.99877
1,2-Dichloropropane	* 0.620	0.675	0.629	0.632	0.614	0.63137	6.2 *
Dibromomethane	0.344	0.324	0.322	0.341	0.331	0.3494	7.7
Bromodichloromethane	0.866	0.799	0.789	0.913	0.863	0.8246	5.8
cis-1,3-Dichloropropene	0.832	0.830	0.738	1.060	0.854	0.78168	17.3 <-
4-Methyl-2-pentanone	0.154	0.154	0.131	0.196	0.153	0.15674	12.4
Toluene	* 1.711	1.719	1.410	1.882	1.671	1.57688	12 *
trans-1,3-Dichloropropene	0.744	0.718	0.670	0.991	0.856	0.75031	15.4 <-
Ethyl methacrylate	0.523	0.516	0.473	0.707	0.589	0.50402	22.4 <-
1,1,2-Trichloroethane	0.539	0.490	0.414	0.596	0.522	0.50611	11
Tetrachloroethene	0.752	0.705	0.684	0.700	0.685	0.71787	4.2
2-Hexanone	0.448	0.362	0.356	0.422	0.352	0.37734	11.8

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D			
RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D			
COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dibromochloromethane	0.691	0.653	0.705	0.710	0.690	0.66774	8.8
1,2-Dibromoethane	0.626	0.626	0.596	0.629	0.581	0.63308	5.8
Chlorobenzene	# 2.418	2.393	2.270	2.341	2.235	2.40837	4.7 #
1,1,1,2-Tetrachloroethane	0.816	0.758	0.785	0.786	0.786	0.78405	6.7
Ethylbenzene	* 1.367	1.405	1.303	1.391	1.312	1.32018	4.7 *
Styrene	2.400	2.393	2.377	2.473	2.316	2.28572	8
Bromoform	# 0.401	0.358	0.386	0.399	0.390	0.36296	13.7 #
1,1,2,2-Tetrachloroethane	# 1.151	1.365	1.087	1.285	1.284	1.38629	14.3 #
1,2,3-Trichloropropane	0.424	0.465	0.393	0.421	0.418	0.45188	11.1
1,2-Dibromo-3-chloropropane	0.191	0.209	0.175	0.203	0.231	0.21317	12
1,4-Dichloro-2-butene	0.206	0.230	0.207	0.241	0.220	0.22707	6.8
Acetonitrile	0.078	0.056	0.056	0.068	0.065	0.06658	12.5
Allyl chloride	1.153	1.091	1.023	1.195	1.191	1.11475	6.4
1,4-Dioxane	0.005	0.006	0.005	0.005	0.005	0.00534	12.4
Isobutyl alcohol	0.009	0.008	0.008	0.008	0.008	0.0086	6.8
Methacrylonitrile	0.178	0.191	0.178	0.181	0.172	0.17842	6.4
Methyl methacrylate	0.290	0.288	0.276	0.303	0.285	0.2772	8
Propionitrile	0.058	0.068	0.065	0.064	0.061	0.06331	7.8
Chloroprene	1.109	1.003	0.968	1.028	1.010	0.99464	6
o-Xylene	3.392	3.353	3.197	3.395	3.136	3.10837	11.7
p,m-Xylene	1.677	1.696	1.645	1.692	1.588	1.58802	9.6
=====							
Dibromofluoromethane(SURR)	0.526	0.566	0.506	0.512	0.503	0.51792	5
Toluene-d8(SURR)	2.149	2.346	1.804	2.500	2.023	2.15182	11.4
4-Bromofluorobenzene(SURR)	1.456	1.813	1.486	1.591	1.511	1.60608	9.6
1,2-Dichloroethane-d4(SURR)	0.131	0.122	0.115	0.113	0.108	0.11784	7.6

Average Used: 8.5

7SSC
VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date: 03/23/12 Time: 1824
 CCV ID: SSC1063886 Lab File ID: SEC21.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.23402	0.2219	5.2	AVRG
Chloromethane	# 0.47754	0.43167	9.6	AVRG #
Vinyl chloride	* 0.36682	0.32783	10.6	AVRG *
Bromomethane	0.21349	0.20593	3.5	AVRG
Chloroethane	0.22001	0.20656	6.1	AVRG
Trichlorofluoromethane	0.36754	0.34329	6.6	AVRG
1,1-Dichloroethene	* 0.56507	0.52202	7.6	AVRG *
Acrolein	0.06244	0.06648	6.5	AVRG
Methyl iodide	0.42007	0.4112	2.1	AVRG
Carbon disulfide	0.94003	0.84944	9.6	AVRG
Methylene chloride	50	51.8	3.6	LINR
trans-1,2-Dichloroethene	0.58004	0.55195	4.8	AVRG
Acrylonitrile	0.1636	0.17436	6.6	AVRG
1,1-Dichloroethane	# 0.71244	0.67973	4.6	AVRG #
Acetone	0.35986	0.33932	5.7	AVRG
2-Butanone	0.37341	0.38725	3.7	AVRG
Chloroform	* 0.60885	0.5911	2.9	AVRG *
1,1,1-Trichloroethane	0.41936	0.40316	3.9	AVRG
Carbon tetrachloride	0.30924	0.30096	2.7	AVRG
Benzene	1.41758	1.361	4.0	AVRG
1,2-Dichloroethane	0.61155	0.62583	2.3	AVRG
Trichloroethene	0.26879	0.26803	0.3	AVRG
Vinyl acetate	1.99937	1.988	0.6	AVRG
1,2-Dichloropropane	* 0.40177	0.40876	1.7	AVRG *
Dibromomethane	50	49	2.0	LINR
Bromodichloromethane	0.46218	0.47113	1.9	AVRG
cis-1,3-Dichloropropene	0.55747	0.57731	3.6	AVRG
4-Methyl-2-pentanone	1.76658	1.768	0.1	AVRG
Toluene	* 0.80914	0.77499	4.2	AVRG *
trans-1,3-Dichloropropene	0.56642	0.58478	3.2	AVRG
Ethyl methacrylate	0.42846	0.44726	4.4	AVRG
1,1,2-Trichloroethane	0.27561	0.27835	1.0	AVRG
Tetrachloroethene	0.33746	0.34165	1.2	AVRG
2-Hexanone	0.72994	0.79601	9.1	AVRG
Dibromochloromethane	0.39544	0.43402	9.8	AVRG
1,2-Dibromoethane	0.40426	0.43942	8.7	AVRG

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 Calibration Date: 03/23/12 Time: 1824
 CCV ID: SSC1063886 Lab File ID: SEC21.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.26169	1.274	1.0	AVRG #
1,1,1,2-Tetrachloroethane	0.41299	0.42247	2.3	AVRG
Ethylbenzene	* 0.6537	0.65877	0.8	AVRG *
Styrene	1.33302	1.355	1.6	AVRG
Bromoform	# 0.25886	0.29347	13.4	AVRG #
1,1,2,2-Tetrachloroethane	# 1.21845	1.236	1.4	AVRG #
1,2,3-Trichloropropane	0.31248	0.31061	0.6	AVRG
1,2-Dibromo-3-chloropropane	50	49.1	1.8	LINR
1,4-Dichloro-2-butene	0.35498	0.3801	7.1	AVRG
Acetonitrile	0.14958	0.14363	4.0	AVRG
Allyl chloride	1.49578	1.436	4.0	AVRG
1,4-Dioxane	0.0032	0.00333	4.1	AVRG
Isobutyl alcohol	0.02426	0.02517	3.8	AVRG
Methacrylonitrile	0.14236	0.14693	3.2	AVRG
Methyl methacrylate	0.22004	0.22838	3.8	AVRG
Propionitrile	0.06024	0.06326	5.0	AVRG
Chloroprene	0.67424	0.63815	5.4	AVRG
o-Xylene	1.86851	1.863	0.3	AVRG
p,m-Xylene	100	98.9	1.1	LINR
=====				
Dibromofluoromethane(SURR)	0.31856	0.32855	3.1	AVRG
Toluene-d8(SURR)	1.13968	1.11	2.6	AVRG
4-Bromofluorobenzene(SURR)	1.52222	1.499	1.5	AVRG
1,2-Dichloroethane-d4(SURR)	0.07896	0.08496	7.6	AVRG

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date: 04/16/12 Time: 1405
 CCV ID: SSC1070755 Lab File ID: SEC62.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	50	40.2	19.6	2ORD
Chloromethane	# 50	49.2	1.6	2ORD #
Vinyl chloride	* 0.89579	0.89696	0.1	AVRG *
Bromomethane	50	49.9	0.2	2ORD
Chloroethane	0.54896	0.57559	4.9	AVRG
Trichlorofluoromethane	1.1637	1.255	7.8	AVRG
1,1-Dichloroethene	* 1.11396	1.088	2.3	AVRG *
Acrolein	0.08447	0.08548	1.2	AVRG
Methyl iodide	50	52.3	4.6	2ORD
Carbon disulfide	1.78628	1.818	1.8	AVRG
Methylene chloride	50	56.1	12.2	2ORD
trans-1,2-Dichloroethene	50	54.5	9.0	LINR
Acrylonitrile	0.17218	0.17729	3.0	AVRG
1,1-Dichloroethane	# 50	55.6	11.2	LINR #
Acetone	0.2547	0.24751	2.8	AVRG
2-Butanone	0.22528	0.23073	2.4	AVRG
Chloroform	* 1.19914	1.201	0.2	AVRG *
1,1,1-Trichloroethane	1.0015	1.09	8.8	AVRG
Carbon tetrachloride	0.87167	0.93892	7.7	AVRG
Benzene	2.56646	2.739	6.7	AVRG
1,2-Dichloroethane	0.8838	0.88117	0.3	AVRG
Trichloroethene	0.69097	0.64264	7.0	AVRG
Vinyl acetate	50	59.6	19.2	LINR
1,2-Dichloropropane	* 0.63137	0.56507	10.5	AVRG *
Dibromomethane	0.3494	0.30261	13.4	AVRG
Bromodichloromethane	0.8246	0.76765	6.9	AVRG
cis-1,3-Dichloropropene	0.78168	0.75883	2.9	AVRG
4-Methyl-2-pentanone	0.15674	0.13664	12.8	AVRG
Toluene	* 1.57688	1.504	4.6	AVRG *
trans-1,3-Dichloropropene	0.75031	0.71522	4.7	AVRG
Ethyl methacrylate	0.50402	0.53551	6.2	AVRG
1,1,2-Trichloroethane	0.50611	0.45257	10.6	AVRG
Tetrachloroethene	0.71787	0.65869	8.2	AVRG
2-Hexanone	0.37734	0.34391	8.9	AVRG
Dibromochloromethane	0.66774	0.65904	1.3	AVRG
1,2-Dibromoethane	0.63308	0.57418	9.3	AVRG

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date: 04/16/12 Time: 1405
 CCV ID: SSC1070755 Lab File ID: SEC62.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 2.40837	2.267	5.9	AVRG #
1,1,1,2-Tetrachloroethane	0.78405	0.83713	6.8	AVRG
Ethylbenzene	* 1.32018	1.355	2.6	AVRG *
Styrene	2.28572	2.659	16.3	AVRG
Bromoform	# 0.36296	0.41139	13.3	AVRG #
1,1,2,2-Tetrachloroethane	# 1.38629	1.206	13.0	AVRG #
1,2,3-Trichloropropane	0.45188	0.38862	14.0	AVRG
1,2-Dibromo-3-chloropropane	0.21317	0.21668	1.6	AVRG
1,4-Dichloro-2-butene	0.22707	0.22499	0.9	AVRG
Acetonitrile	0.06658	0.05384	19.1	AVRG
Allyl chloride	1.11475	1.139	2.2	AVRG
1,4-Dioxane	0.00534	0.00435	18.5	AVRG
Isobutyl alcohol	0.0086	0.00878	2.1	AVRG
Methacrylonitrile	0.17842	0.20047	12.4	AVRG
Methyl methacrylate	0.2772	0.25758	7.1	AVRG
Propionitrile	0.06331	0.07026	11.0	AVRG
Chloroprene	0.99464	1.067	7.3	AVRG
o-Xylene	3.10837	3.63	16.8	AVRG
p,m-Xylene	1.58802	1.653	4.1	AVRG
=====				
Dibromofluoromethane(SURR)	0.51792	0.61045	17.9	AVRG
Toluene-d8(SURR)	2.15182	2.136	0.7	AVRG
4-Bromofluorobenzene(SURR)	1.60608	1.778	10.7	AVRG
1,2-Dichloroethane-d4(SURR)	0.11784	0.14027	19.0	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 CalibrationDate: 04/23/12 Time: 1046
 CCV ID: CCV1073274 Lab File ID: CCV21.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.23402	0.19457	16.9	AVRG
Chloromethane	# 0.47754	0.4748	0.6	AVRG #
Vinyl chloride	* 0.36682	0.38686	5.5	AVRG *
Bromomethane	0.21349	0.22787	6.7	AVRG
Chloroethane	0.22001	0.25178	14.4	AVRG
Trichlorofluoromethane	0.36754	0.39429	7.3	AVRG
1,1-Dichloroethene	* 0.56507	0.61736	9.3	AVRG *
Acrolein	0.06244	0.05996	4.0	AVRG
Methyl iodide	0.42007	0.42785	1.9	AVRG
Carbon disulfide	0.94003	0.90175	4.1	AVRG
Methylene chloride	50	53.4	6.8	LINR
trans-1,2-Dichloroethene	0.58004	0.66667	14.9	AVRG
Acrylonitrile	0.1636	0.1814	10.9	AVRG
1,1-Dichloroethane	# 0.71244	0.79126	11.1	AVRG #
Acetone	0.35986	0.36895	2.5	AVRG
2-Butanone	0.37341	0.36866	1.3	AVRG
Chloroform	* 0.60885	0.66459	9.2	AVRG *
1,1,1-Trichloroethane	0.41936	0.46689	11.3	AVRG
Carbon tetrachloride	0.30924	0.35379	14.4	AVRG
Benzene	1.41758	1.539	8.6	AVRG
1,2-Dichloroethane	0.61155	0.66401	8.6	AVRG
Trichloroethene	0.26879	0.31302	16.5	AVRG
Vinyl acetate	1.99937	2.206	10.3	AVRG
1,2-Dichloropropane	* 0.40177	0.4389	9.2	AVRG *
Dibromomethane	50	51.8	3.6	LINR
Bromodichloromethane	0.46218	0.51496	11.4	AVRG
cis-1,3-Dichloropropene	0.55747	0.61176	9.7	AVRG
4-Methyl-2-pentanone	1.76658	1.756	0.6	AVRG
Toluene	* 0.80914	0.88685	9.6	AVRG *
trans-1,3-Dichloropropene	0.56642	0.63261	11.7	AVRG
Ethyl methacrylate	0.42846	0.4715	10.0	AVRG
1,1,2-Trichloroethane	0.27561	0.294	6.7	AVRG
Tetrachloroethene	0.33746	0.35369	4.8	AVRG
2-Hexanone	0.72994	0.73138	0.2	AVRG
Dibromochloromethane	0.39544	0.41196	4.2	AVRG
1,2-Dibromoethane	0.40426	0.42355	4.8	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 CalibrationDate: 04/23/12 Time: 1046
 CCV ID: CCV1073274 Lab File ID: CCV21.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.26169	1.283	1.7	AVRG #
1,1,1,2-Tetrachloroethane	0.41299	0.41523	0.5	AVRG
Ethylbenzene	* 0.6537	0.69401	6.2	AVRG *
Styrene	1.33302	1.407	5.5	AVRG
Bromoform	# 0.25886	0.27979	8.1	AVRG #
1,1,2,2-Tetrachloroethane	# 1.21845	1.195	1.9	AVRG #
1,2,3-Trichloropropane	0.31248	0.30262	3.2	AVRG
1,2-Dibromo-3-chloropropane	50	44.8	10.4	LINR
1,4-Dichloro-2-butene	0.35498	0.37005	4.2	AVRG
Acetonitrile	0.14958	0.16347	9.3	AVRG
Allyl chloride	1.49578	1.635	9.3	AVRG
1,4-Dioxane	0.0032	0.00321	0.3	AVRG
Isobutyl alcohol	0.02426	0.02674	10.2	AVRG
Methacrylonitrile	0.14236	0.15199	6.8	AVRG
Methyl methacrylate	0.22004	0.24621	11.9	AVRG
Propionitrile	0.06024	0.06829	13.4	AVRG
Chloroprene	0.67424	0.77813	15.4	AVRG
o-Xylene	1.86851	1.958	4.8	AVRG
p,m-Xylene	100	104	4.0	LINR
=====				
Dibromofluoromethane(SURR)	0.31856	0.32013	0.5	AVRG
Toluene-d8(SURR)	1.13968	1.139	0.1	AVRG
4-Bromofluorobenzene(SURR)	1.52222	1.368	10.1	AVRG
1,2-Dichloroethane-d4(SURR)	0.07896	0.07766	1.6	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 CalibrationDate: 04/24/12 Time: 1012
 CCV ID: CCV1073279 Lab File ID: CCV22.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.23402	0.17081	27.0	AVRG
Chloromethane	# 0.47754	0.43816	8.2	AVRG #
Vinyl chloride	* 0.36682	0.37182	1.4	AVRG *
Bromomethane	0.21349	0.22418	5.0	AVRG
Chloroethane	0.22001	0.24668	12.1	AVRG
Trichlorofluoromethane	0.36754	0.38858	5.7	AVRG
1,1-Dichloroethene	* 0.56507	0.58063	2.8	AVRG *
Acrolein	0.06244	0.06119	2.0	AVRG
Methyl iodide	0.42007	0.42176	0.4	AVRG
Carbon disulfide	0.94003	0.81735	13.1	AVRG
Methylene chloride	50	55.5	11.0	LINR
trans-1,2-Dichloroethene	0.58004	0.62931	8.5	AVRG
Acrylonitrile	0.1636	0.18502	13.1	AVRG
1,1-Dichloroethane	# 0.71244	0.78558	10.3	AVRG #
Acetone	0.35986	0.3278	8.9	AVRG
2-Butanone	0.37341	0.35825	4.1	AVRG
Chloroform	* 0.60885	0.6911	13.5	AVRG *
1,1,1-Trichloroethane	0.41936	0.46862	11.7	AVRG
Carbon tetrachloride	0.30924	0.34517	11.6	AVRG
Benzene	1.41758	1.558	9.9	AVRG
1,2-Dichloroethane	0.61155	0.70954	16.0	AVRG
Trichloroethene	0.26879	0.29979	11.5	AVRG
Vinyl acetate	1.99937	2.249	12.5	AVRG
1,2-Dichloropropane	* 0.40177	0.46067	14.7	AVRG *
Dibromomethane	50	57.3	14.6	LINR
Bromodichloromethane	0.46218	0.52934	14.5	AVRG
cis-1,3-Dichloropropene	0.55747	0.63681	14.2	AVRG
4-Methyl-2-pentanone	1.76658	1.848	4.6	AVRG
Toluene	* 0.80914	0.8977	10.9	AVRG *
trans-1,3-Dichloropropene	0.56642	0.66087	16.7	AVRG
Ethyl methacrylate	0.42846	0.51658	20.6	AVRG
1,1,2-Trichloroethane	0.27561	0.32095	16.5	AVRG
Tetrachloroethene	0.33746	0.33408	1.0	AVRG
2-Hexanone	0.72994	0.68417	6.3	AVRG
Dibromochloromethane	0.39544	0.42032	6.3	AVRG
1,2-Dibromoethane	0.40426	0.4418	9.3	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS02 CalibrationDate: 04/24/12 Time: 1012
 CCV ID: CCV1073279 Lab File ID: CCV22.D Init. Calib. Date Begin: 03/23/12 End: 03/23/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) YES
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.26169	1.301	3.1	AVRG #
1,1,1,2-Tetrachloroethane	0.41299	0.41524	0.5	AVRG
Ethylbenzene	* 0.6537	0.64614	1.2	AVRG *
Styrene	1.33302	1.351	1.3	AVRG
Bromoform	# 0.25886	0.29428	13.7	AVRG #
1,1,2,2-Tetrachloroethane	# 1.21845	1.273	4.5	AVRG #
1,2,3-Trichloropropane	0.31248	0.323	3.4	AVRG
1,2-Dibromo-3-chloropropane	50	50.7	1.4	LINR
1,4-Dichloro-2-butene	0.35498	0.39864	12.3	AVRG
Acetonitrile	0.14958	0.16749	12.0	AVRG
Allyl chloride	1.49578	1.675	12.0	AVRG
1,4-Dioxane	0.0032	0.00376	17.5	AVRG
Isobutyl alcohol	0.02426	0.03125	28.8	AVRG <-
Methacrylonitrile	0.14236	0.17069	19.9	AVRG
Methyl methacrylate	0.22004	0.26872	22.1	AVRG <-
Propionitrile	0.06024	0.07498	24.5	AVRG <-
Chloroprene	0.67424	0.73929	9.6	AVRG
o-Xylene	1.86851	1.828	2.2	AVRG
p,m-Xylene	100	101	1.0	LINR
=====				
Dibromofluoromethane(SURR)	0.31856	0.33488	5.1	AVRG
Toluene-d8(SURR)	1.13968	1.108	2.8	AVRG
4-Bromofluorobenzene(SURR)	1.52222	1.371	9.9	AVRG
1,2-Dichloroethane-d4(SURR)	0.07896	0.09012	14.1	AVRG

Average Used: 10.1

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS06 Calibration Date: 04/25/12 Time: 1021
 CCV ID: CCV1073284 Lab File ID: 50CCV61.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	50	47.8	4.4	2ORD
Chloromethane	# 50	44.1	11.8	2ORD #
Vinyl chloride	* 0.89579	0.78971	11.8	AVRG *
Bromomethane	50	48.3	3.4	2ORD
Chloroethane	0.54896	0.47702	13.1	AVRG
Trichlorofluoromethane	1.1637	1.182	1.6	AVRG
1,1-Dichloroethene	* 1.11396	0.94823	14.9	AVRG *
Acrolein	0.08447	0.0729	13.7	AVRG
Methyl iodide	50	49.2	1.6	2ORD
Carbon disulfide	1.78628	1.589	11.0	AVRG
Methylene chloride	50	50.4	0.8	2ORD
trans-1,2-Dichloroethene	50	49.5	1.0	LINR
Acrylonitrile	0.17218	0.17841	3.6	AVRG
1,1-Dichloroethane	# 50	50.2	0.4	LINR #
Acetone	0.2547	0.2084	18.2	AVRG
2-Butanone	0.22528	0.21823	3.1	AVRG
Chloroform	* 1.19914	1.12	6.6	AVRG *
1,1,1-Trichloroethane	1.0015	1.003	0.1	AVRG
Carbon tetrachloride	0.87167	0.91432	4.9	AVRG
Benzene	2.56646	2.667	3.9	AVRG
1,2-Dichloroethane	0.8838	0.80761	8.6	AVRG
Trichloroethene	0.69097	0.70771	2.4	AVRG
Vinyl acetate	50	47.5	5.0	LINR
1,2-Dichloropropane	* 0.63137	0.64982	2.9	AVRG *
Dibromomethane	0.3494	0.33792	3.3	AVRG
Bromodichloromethane	0.8246	0.82677	0.3	AVRG
cis-1,3-Dichloropropene	0.78168	0.81409	4.1	AVRG
4-Methyl-2-pentanone	0.15674	0.15099	3.7	AVRG
Toluene	* 1.57688	1.726	9.5	AVRG *
trans-1,3-Dichloropropene	0.75031	0.7537	0.5	AVRG
Ethyl methacrylate	0.50402	0.54592	8.3	AVRG
1,1,2-Trichloroethane	0.50611	0.50757	0.3	AVRG
Tetrachloroethene	0.71787	0.68644	4.4	AVRG
2-Hexanone	0.37734	0.33366	11.6	AVRG
Dibromochloromethane	0.66774	0.66167	0.9	AVRG
1,2-Dibromoethane	0.63308	0.59447	6.1	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: VMS06 CalibrationDate: 04/25/12 Time: 1021
 CCV ID: CCV1073284 Lab File ID: 50CCV61.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 2.40837	2.343	2.7	AVRG #
1,1,1,2-Tetrachloroethane	0.78405	0.77023	1.8	AVRG
Ethylbenzene	* 1.32018	1.344	1.8	AVRG *
Styrene	2.28572	2.415	5.7	AVRG
Bromoform	# 0.36296	0.34728	4.3	AVRG #
1,1,2,2-Tetrachloroethane	# 1.38629	1.174	15.3	AVRG #
1,2,3-Trichloropropane	0.45188	0.38274	15.3	AVRG
1,2-Dibromo-3-chloropropane	0.21317	0.17694	17.0	AVRG
1,4-Dichloro-2-butene	0.22707	0.17101	24.7	AVRG
Acetonitrile	0.06658	0.05655	15.1	AVRG
Allyl chloride	1.11475	0.98592	11.6	AVRG
1,4-Dioxane	0.00534	0.00451	15.5	AVRG
Isobutyl alcohol	0.0086	0.00794	7.7	AVRG
Methacrylonitrile	0.17842	0.18825	5.5	AVRG
Methyl methacrylate	0.2772	0.28869	4.1	AVRG
Propionitrile	0.06331	0.06553	3.5	AVRG
Chloroprene	0.99464	0.9316	6.3	AVRG
o-Xylene	3.10837	3.173	2.1	AVRG
p,m-Xylene	1.58802	1.649	3.8	AVRG
=====				
Dibromofluoromethane(SURR)	0.51792	0.50551	2.4	AVRG
Toluene-d8(SURR)	2.15182	2.1	2.4	AVRG
4-Bromofluorobenzene(SURR)	1.60608	1.45	9.7	AVRG
1,2-Dichloroethane-d4(SURR)	0.11784	0.1139	3.3	AVRG

Average Used: 6.5

8270 SIM Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D.

IV. PREPARATION

Soil samples were prepared by SW846 EPA 3545 for 8270 semi-volatile analysis.
Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met with the exception of:

Blank 126839MB was analyzed with the soil samples extracted on 04/23/12. The following analytes were detected below RL: 2-Methylnaphthalene at 0.0014 mg/Kg, Naphthalene at 0.0016 mg/Kg. Since these compounds were detected below the RL, no further action was taken.

Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met with the exception of:

Sample 125753MB was recovered above criteria for the following surrogate: 2-Fluorobiphenyl at 160 % with criteria of (43-145). No further action was taken, since all target analytes were ND.

Sample 125754LCS was recovered above criteria for the following surrogate: 2-Fluorobiphenyl at 171 % with criteria of (43-145). No further action was taken, since all LCS criteria were met.

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Sample TFS-SD-02 was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 42.2 % with criteria of (43-145), p-Terphenyl-d14 at 37.8 % with criteria of (43-145). The sample was re-extracted and re-analyzed with similar surrogate failures. Only the original analysis is reported.

Sample TFS-SD-03 was recovered below criteria for the following surrogate: p-Terphenyl-d14 at 30.3 % with criteria of (43-145). The sample was re-extracted and re-analyzed and also failed surrogate criteria. Only the original analysis is reported.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed for water and soil samples.

It should be noted that there were analytical differences between the parent, MS and MSD in the soil samples. These were confirmed upon re-extraction. Only the original extraction of the parent, MS and MSD are reported, however the MSD required re-analysis at a 2X dilution. The full MSD run had several compounds over calibration range and is not reported. These results are not uncommon in soil samples, where there can be an uneven pattern of soil contamination.

All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-SD-04 MS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Methylnaphthalene at 0 % with criteria of (71-132), 2-Methylnaphthalene at 0 % with criteria of (54-145), Acenaphthylene at 22.8 % with criteria of (54-115), Naphthalene at 0 % with criteria of (59-111) and the following analytes were recovered above criteria: Benzo(a)anthracene at 442 % with criteria of (53-119), Benzo(a)pyrene at 500 % with criteria of (20-120), Benzo(b)fluoranthene at 639 % with criteria of (50-171), Benzo(g,h,i)perylene at 222 % with criteria of (50-150), Benzo(k)fluoranthene at 222 % with criteria of (32-158), Chrysene at 325 % with criteria of (34-140), Dibenzo(a,h)anthracene at 117 % with criteria of (41-114), Fluoranthene at 750 % with criteria of (55-132), Indeno(1,2,3-cd)pyrene at 244 % with criteria of (19-122), Phenanthrene at 414 % with criteria of (54-112), Pyrene at 517 % with criteria of (55-123).

SD - TFS-SD-04 MSD was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Methylnaphthalene at 40.5 % with criteria of (71-132), 2-

CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Methylnaphthalene at 0 % with criteria of (54-145), Acenaphthylene at 0 % with criteria of (54-115) and the following analytes were recovered above criteria: Acenaphthene at 249 % with criteria of (57-119), Anthracene at 337 % with criteria of (40-138), Benzo(a)anthracene at 5240 % with criteria of (53-119), Benzo(a)pyrene at 5676 % with criteria of (20-120), Benzo(b)fluoranthene at 7405 % with criteria of (50-171), Benzo(g,h,i)perylene at 2405 % with criteria of (50-150), Benzo(k)fluoranthene at 2297 % with criteria of (32-158), Chrysene at 3343 % with criteria of (34-140), Dibenzo(a,h)anthracene at 811 % with criteria of (41-114), Fluoranthene at 4838 % with criteria of (55-132), Fluorene at 151 % with criteria of (59-118), Indeno(1,2,3-cd)pyrene at 2238 % with criteria of (19-122), Naphthalene at 189 % with criteria of (59-111), Phenanthrene at 1132 % with criteria of (54-112), Pyrene at 3854 % with criteria of (55-123). The following analytes exceeded RPD criteria: 1-Methylnaphthalene at 79.2 % with criteria of (30), 2-Methylnaphthalene at 76.1 % with criteria of (30), Acenaphthene at 109.2 % with criteria of (30), Acenaphthylene at 200 % with criteria of (30), Anthracene at 93.8 % with criteria of (30), Benzo(a)anthracene at 160.4 % with criteria of (30), Benzo(a)pyrene at 154.8 % with criteria of (30), Benzo(b)fluoranthene at 152.6 % with criteria of (30), Benzo(g,h,i)perylene at 138.5 % with criteria of (30), Benzo(k)fluoranthene at 152.5 % with criteria of (30), Chrysene at 151.4 % with criteria of (30), Dibenzo(a,h)anthracene at 135.1 % with criteria of (30), Fluoranthene at 133.3 % with criteria of (30), Fluorene at 69.9 % with criteria of (30), Indeno(1,2,3-cd)pyrene at 137 % with criteria of (30), Naphthalene at 136.1 % with criteria of (30), Phenanthrene at 85.7 % with criteria of (30), Pyrene at 140.9 % with criteria of (30).

MS - TFS-SW-03 MS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: Benzo(b)fluoranthene at 52.9 % with criteria of (56-173), Benzo(k)fluoranthene at 52.5 % with criteria of (56-158), Chrysene at 45.1 % with criteria of (55-128).

SD - TFS-SW-03 MSD was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: Benzo(b)fluoranthene at 21.6 % with criteria of (56-173), Benzo(k)fluoranthene at 48.6 % with criteria of (56-158), Chrysene at 35.3 % with criteria of (55-128), Fluoranthene at 43.1 % with criteria of (55-155).

Samples coded accordingly.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:
04/27/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.0
Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Method: 8270 SIM

EPA Sample No	Lab Sample ID
<u>TFS-SD-01</u>	<u>350572401</u>
<u>TFS-SW-01</u>	<u>350572402</u>
<u>TFS-SD-02</u>	<u>350572403</u>
<u>TFS-SD-03</u>	<u>350572404</u>
<u>TFS-SW-02</u>	<u>350572405</u>
<u>TFS-SW-03</u>	<u>350572406</u>
<u>TFS-SD-04</u>	<u>350572407</u>
<u>TFS-SW-04</u>	<u>350572408</u>
<u>TFS-SD-FD</u>	<u>350572409</u>
<u>TFS-SW-FD</u>	<u>350572410</u>
<u>TFS-SD-EB</u>	<u>350572415</u>

8270 SIM Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.7 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/23/12

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 2010

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0041	U	0.0021	0.0041	0.0052
91-57-6	2-Methylnaphthalene	0.0041	U	0.0021	0.0041	0.0052
83-32-9	Acenaphthene	0.0022	J	0.0021	0.0041	0.0052
208-96-8	Acenaphthylene	0.0046	J	0.0021	0.0041	0.0052
120-12-7	Anthracene	0.0097		0.0021	0.0041	0.0052
56-55-3	Benzo(a)anthracene	0.12		0.0022	0.0043	0.0052
50-32-8	Benzo(a)pyrene	0.2		0.0028	0.0056	0.0056
205-99-2	Benzo(b)fluoranthene	0.32		0.0029	0.0059	0.0059
191-24-2	Benzo(g,h,i)perylene	0.13		0.0048	0.0096	0.0096
207-08-9	Benzo(k)fluoranthene	0.074		0.0032	0.0065	0.0065
218-01-9	Chrysene	0.1		0.002	0.004	0.0052
53-70-3	Dibenzo(a,h)anthracene	0.04		0.004	0.0081	0.0081
206-44-0	Fluoranthene	0.15		0.0021	0.0041	0.0052
86-73-7	Fluorene	0.0024	J	0.0021	0.0041	0.0052
193-39-5	Indeno(1,2,3-cd)pyrene	0.13		0.0046	0.0093	0.0093
91-20-3	Naphthalene	0.0043	U	0.0022	0.0043	0.0052
85-01-8	Phenanthrene	0.037		0.0021	0.0041	0.0052
129-00-0	Pyrene	0.11		0.0021	0.0041	0.0052

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.35 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1045

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.015		0.0024	0.0048	0.006
91-57-6	2-Methylnaphthalene	0.04		0.0024	0.0048	0.006
83-32-9	Acenaphthene	0.0048	U	0.0024	0.0048	0.006
208-96-8	Acenaphthylene	0.0048	U	0.0024	0.0048	0.006
120-12-7	Anthracene	0.0048	U	0.0024	0.0048	0.006
56-55-3	Benzo(a)anthracene	0.024		0.0025	0.0051	0.006
50-32-8	Benzo(a)pyrene	0.041		0.0032	0.0065	0.0065
205-99-2	Benzo(b)fluoranthene	0.063		0.0034	0.0069	0.0069
191-24-2	Benzo(g,h,i)perylene	0.026		0.0056	0.011	0.011
207-08-9	Benzo(k)fluoranthene	0.018		0.0038	0.0076	0.0076
218-01-9	Chrysene	0.024		0.0024	0.0047	0.006
53-70-3	Dibenzo(a,h)anthracene	0.0067	J	0.0047	0.0094	0.0094
206-44-0	Fluoranthene	0.036		0.0024	0.0048	0.006
86-73-7	Fluorene	0.0048	U	0.0024	0.0048	0.006
193-39-5	Indeno(1,2,3-cd)pyrene	0.024		0.0054	0.011	0.011
91-20-3	Naphthalene	0.022		0.0025	0.0051	0.006
85-01-8	Phenanthrene	0.0074		0.0024	0.0048	0.006
129-00-0	Pyrene	0.027		0.0024	0.0048	0.006

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.62 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1109

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0035	U	0.0018	0.0035	0.0044
91-57-6	2-Methylnaphthalene	0.0021	J	0.0018	0.0035	0.0044
83-32-9	Acenaphthene	0.0024	J	0.0018	0.0035	0.0044
208-96-8	Acenaphthylene	0.0022	J	0.0018	0.0035	0.0044
120-12-7	Anthracene	0.0052		0.0018	0.0035	0.0044
56-55-3	Benzo(a)anthracene	0.029		0.0018	0.0037	0.0044
50-32-8	Benzo(a)pyrene	0.051		0.0024	0.0048	0.0048
205-99-2	Benzo(b)fluoranthene	0.066		0.0025	0.005	0.005
191-24-2	Benzo(g,h,i)perylene	0.037		0.0041	0.0082	0.0082
207-08-9	Benzo(k)fluoranthene	0.021		0.0028	0.0056	0.0056
218-01-9	Chrysene	0.028		0.0017	0.0034	0.0044
53-70-3	Dibenzo(a,h)anthracene	0.01		0.0034	0.0069	0.0069
206-44-0	Fluoranthene	0.04		0.0018	0.0035	0.0044
86-73-7	Fluorene	0.0024	J	0.0018	0.0035	0.0044
193-39-5	Indeno(1,2,3-cd)pyrene	0.03		0.004	0.008	0.008
91-20-3	Naphthalene	0.0037	U	0.0018	0.0037	0.0044
85-01-8	Phenanthrene	0.013		0.0018	0.0035	0.0044
129-00-0	Pyrene	0.032		0.0018	0.0035	0.0044

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1316

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.025	J	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.042	J	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.025	J	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.027	J	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.021	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1052

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.056		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.1		0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.18		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.086		0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.052		0.02	0.041	0.051
218-01-9	Chrysene	0.07		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.1		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.074		0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.036	J	0.02	0.041	0.051
129-00-0	Pyrene	0.079		0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.04 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1132

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.022		0.002	0.0039	0.0049
91-57-6	2-Methylnaphthalene	0.067		0.002	0.0039	0.0049
83-32-9	Acenaphthene	0.0039	U	0.002	0.0039	0.0049
208-96-8	Acenaphthylene	0.0028	J	0.002	0.0039	0.0049
120-12-7	Anthracene	0.0054		0.002	0.0039	0.0049
56-55-3	Benzo(a)anthracene	0.061		0.0021	0.0041	0.0049
50-32-8	Benzo(a)pyrene	0.1		0.0027	0.0053	0.0053
205-99-2	Benzo(b)fluoranthene	0.16		0.0028	0.0056	0.0056
191-24-2	Benzo(g,h,i)perylene	0.1		0.0046	0.0092	0.0092
207-08-9	Benzo(k)fluoranthene	0.04		0.0031	0.0062	0.0062
218-01-9	Chrysene	0.063		0.0019	0.0038	0.0049
53-70-3	Dibenzo(a,h)anthracene	0.02		0.0038	0.0077	0.0077
206-44-0	Fluoranthene	0.11		0.002	0.0039	0.0049
86-73-7	Fluorene	0.0039	U	0.002	0.0039	0.0049
193-39-5	Indeno(1,2,3-cd)pyrene	0.082		0.0044	0.0089	0.0089
91-20-3	Naphthalene	0.03		0.0021	0.0041	0.0049
85-01-8	Phenanthrene	0.031		0.002	0.0039	0.0049
129-00-0	Pyrene	0.074		0.002	0.0039	0.0049

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.1		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.2		0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.3		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.17		0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.092		0.02	0.041	0.051
218-01-9	Chrysene	0.12		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.037	J	0.02	0.041	0.051
206-44-0	Fluoranthene	0.21		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.14		0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.072		0.02	0.041	0.051
129-00-0	Pyrene	0.15		0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.43 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/23/12

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 2146

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0034	U	0.0017	0.0034	0.0042
91-57-6	2-Methylnaphthalene	0.0034	U	0.0017	0.0034	0.0042
83-32-9	Acenaphthene	0.004	J	0.0017	0.0034	0.0042
208-96-8	Acenaphthylene	0.0037	J	0.0017	0.0034	0.0042
120-12-7	Anthracene	0.0092		0.0017	0.0034	0.0042
56-55-3	Benzo(a)anthracene	0.14		0.0018	0.0035	0.0042
50-32-8	Benzo(a)pyrene	0.18		0.0023	0.0045	0.0045
205-99-2	Benzo(b)fluoranthene	0.26		0.0024	0.0048	0.0048
191-24-2	Benzo(g,h,i)perylene	0.098		0.0039	0.0078	0.0078
207-08-9	Benzo(k)fluoranthene	0.071		0.0026	0.0053	0.0053
218-01-9	Chrysene	0.096		0.0016	0.0033	0.0042
53-70-3	Dibenzo(a,h)anthracene	0.031		0.0033	0.0066	0.0066
206-44-0	Fluoranthene	0.14		0.0017	0.0034	0.0042
86-73-7	Fluorene	0.0031	J	0.0017	0.0034	0.0042
193-39-5	Indeno(1,2,3-cd)pyrene	0.094		0.0038	0.0076	0.0076
91-20-3	Naphthalene	0.0021	J	0.0018	0.0035	0.0042
85-01-8	Phenanthrene	0.041		0.0017	0.0034	0.0042
129-00-0	Pyrene	0.11		0.0017	0.0034	0.0042

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1340

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.024	J	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.059		0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.028	J	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.04	J	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.067		0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.036	J	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.022	J	0.02	0.041	0.051
218-01-9	Chrysene	0.028	J	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.04	J	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.031	J	0.02	0.041	0.051
91-20-3	Naphthalene	0.038	J	0.02	0.041	0.051
85-01-8	Phenanthrene	0.022	J	0.02	0.041	0.051
129-00-0	Pyrene	0.031	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.051
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

8270 SIM QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125753MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125753MB Lab File ID: 9079MBR.D

Sample wt/vol: 20.21 Units: G Date Received: 04/17/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1738

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0026	U	0.0013	0.0026	0.0033
91-57-6	2-Methylnaphthalene	0.0026	U	0.0013	0.0026	0.0033
83-32-9	Acenaphthene	0.0026	U	0.0013	0.0026	0.0033
208-96-8	Acenaphthylene	0.0026	U	0.0013	0.0026	0.0033
120-12-7	Anthracene	0.0026	U	0.0013	0.0026	0.0033
56-55-3	Benzo(a)anthracene	0.0028	U	0.0014	0.0028	0.0033
50-32-8	Benzo(a)pyrene	0.0036	U	0.0018	0.0036	0.0036
205-99-2	Benzo(b)fluoranthene	0.0038	U	0.0019	0.0038	0.0038
191-24-2	Benzo(g,h,i)perylene	0.0061	U	0.0031	0.0061	0.0061
207-08-9	Benzo(k)fluoranthene	0.0042	U	0.0021	0.0042	0.0042
218-01-9	Chrysene	0.0026	U	0.0013	0.0026	0.0033
53-70-3	Dibenzo(a,h)anthracene	0.0051	U	0.0026	0.0051	0.0051
206-44-0	Fluoranthene	0.0026	U	0.0013	0.0026	0.0033
86-73-7	Fluorene	0.0026	U	0.0013	0.0026	0.0033
193-39-5	Indeno(1,2,3-cd)pyrene	0.0059	U	0.003	0.0059	0.0059
91-20-3	Naphthalene	0.0028	U	0.0014	0.0028	0.0033
85-01-8	Phenanthrene	0.0026	U	0.0013	0.0026	0.0033
129-00-0	Pyrene	0.0026	U	0.0013	0.0026	0.0033

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 126278MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 126278MB Lab File ID: 9119MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/19/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/20/12 Time: 0844

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.04	U	0.02	0.04	0.05
91-57-6	2-Methylnaphthalene	0.04	U	0.02	0.04	0.05
83-32-9	Acenaphthene	0.04	U	0.02	0.04	0.05
208-96-8	Acenaphthylene	0.04	U	0.02	0.04	0.05
120-12-7	Anthracene	0.04	U	0.02	0.04	0.05
56-55-3	Benzo(a)anthracene	0.04	U	0.02	0.04	0.05
50-32-8	Benzo(a)pyrene	0.04	U	0.02	0.04	0.05
205-99-2	Benzo(b)fluoranthene	0.04	U	0.02	0.04	0.05
191-24-2	Benzo(g,h,i)perylene	0.04	U	0.02	0.04	0.05
207-08-9	Benzo(k)fluoranthene	0.04	U	0.02	0.04	0.05
218-01-9	Chrysene	0.04	U	0.02	0.04	0.05
53-70-3	Dibenzo(a,h)anthracene	0.04	U	0.02	0.04	0.05
206-44-0	Fluoranthene	0.04	U	0.02	0.04	0.05
86-73-7	Fluorene	0.04	U	0.02	0.04	0.05
193-39-5	Indeno(1,2,3-cd)pyrene	0.04	U	0.02	0.04	0.05
91-20-3	Naphthalene	0.04	U	0.02	0.04	0.05
85-01-8	Phenanthrene	0.04	U	0.02	0.04	0.05
129-00-0	Pyrene	0.04	U	0.02	0.04	0.05

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 126839MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 126839MB Lab File ID: 9153RE2.D

Sample wt/vol: 20.21 Units: G Date Received: 04/23/12

Concentrated Extract Volume: 1 Date Extracted: 04/23/12

Level:(low/med) LOW Date Analyzed: 04/23/12 Time: 2322

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.0026	U	0.0013	0.0026	0.0033
91-57-6	2-Methylnaphthalene	0.0014	J	0.0013	0.0026	0.0033
83-32-9	Acenaphthene	0.0026	U	0.0013	0.0026	0.0033
208-96-8	Acenaphthylene	0.0026	U	0.0013	0.0026	0.0033
120-12-7	Anthracene	0.0026	U	0.0013	0.0026	0.0033
56-55-3	Benzo(a)anthracene	0.0028	U	0.0014	0.0028	0.0033
50-32-8	Benzo(a)pyrene	0.0036	U	0.0018	0.0036	0.0036
205-99-2	Benzo(b)fluoranthene	0.0038	U	0.0019	0.0038	0.0038
191-24-2	Benzo(g,h,i)perylene	0.0061	U	0.0031	0.0061	0.0061
207-08-9	Benzo(k)fluoranthene	0.0042	U	0.0021	0.0042	0.0042
218-01-9	Chrysene	0.0026	U	0.0013	0.0026	0.0033
53-70-3	Dibenzo(a,h)anthracene	0.0051	U	0.0026	0.0051	0.0051
206-44-0	Fluoranthene	0.0026	U	0.0013	0.0026	0.0033
86-73-7	Fluorene	0.0026	U	0.0013	0.0026	0.0033
193-39-5	Indeno(1,2,3-cd)pyrene	0.0059	U	0.003	0.0059	0.0059
91-20-3	Naphthalene	0.0016	J	0.0014	0.0028	0.0033
85-01-8	Phenanthrene	0.0026	U	0.0013	0.0026	0.0033
129-00-0	Pyrene	0.0026	U	0.0013	0.0026	0.0033

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 125753MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9079MBR.D Lab Sample ID: 125753MB

Instrument ID: SMSD01 Date Extracted: 04/17/12

Matrix: SOIL Date Analyzed: 04/17/12

Level:(low/med) LOW Time Analyzed: 1738

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	125754LCS	125754LCS	9079LCSR.D	04/17/12	1802
2	TFS-SD-02	350572403	72403.D	04/18/12	1045
3	TFS-SD-03	350572404	72404.D	04/18/12	1109
4	TFS-SD-04	350572407	72407.D	04/18/12	1132
5	TFS-SD-04 MS	350572411	72411.D	04/18/12	1220
6	TFS-SD-04 MSD	350572412	72412D10.D	04/26/12	2043

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 126278MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9119MB.D Lab Sample ID: 126278MB

Instrument ID: SMSD01 Date Extracted: 04/19/12

Matrix: WATER Date Analyzed: 04/20/12

Level:(low/med) LOW Time Analyzed: 0844

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	126279LCS	126279LCS	9119LCSR.D	04/20/12	0935
2	TFS-SW-03	350572406	72406.D	04/20/12	1052
3	TFS-SW-03 MS	350572413	72413.D	04/20/12	1116
4	TFS-SW-03 MSD	350572414	72414.D	04/20/12	1140
5	TFS-SD-EB	350572415	72415.D	04/20/12	1204
6	TFS-SW-04	350572408	72408.D	04/20/12	1228
7	TFS-SW-01	350572402	72402.D	04/20/12	1252
8	TFS-SW-02	350572405	72405.D	04/20/12	1316
9	TFS-SW-FD	350572410	72410.D	04/20/12	1340

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 126839MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID: 9153RE2.D Lab Sample ID: 126839MB
 Instrument ID: SMSD01 Date Extracted: 04/23/12
 Matrix: SOIL Date Analyzed: 04/23/12
 Level:(low/med) LOW Time Analyzed: 2322

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	126840LCS	126840LCS	9153LCS.D	04/23/12	1723
2	TFS-SD-01	350572401	72401.D	04/23/12	2010
3	TFS-SD-FD	350572409	72409.D	04/23/12	2146

COMMENTS:

2A

SOIL SEMI-VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. SAS No: SDG NO.: 3505724

Column(1): HPMS-5 ID: 0.25 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
125753MB	80.0	160.0 *					1
125754LCS	83.3	171.0 *					1
126839MB	92.0	112.0					0
126840LCS	84.0	88.0					0
TFS-SD-01	43.6	53.8					0
TFS-SD-02	37.8 *	42.2 *					2
TFS-SD-03	30.3 *	106.0					1
TFS-SD-04	48.6	48.6					0
TFS-SD-04 MS	55.6	61.1					0
TFS-SD-04 MSD	59.5	70.3					0
TFS-SD-FD	46.9	56.2					0

Control Limits

S1 = p-Terphenyl-d14 43 - 145

S2 = 2-Fluorobiphenyl 43 - 145

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

110512 1717

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/10/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0708
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.8
68	Less than 2.0% of mass 69	0.7 (1.64)1
69	Mass 69 relative abundance	44
70	Less than 2.0% of mass 69	0.3 (0.69)1
127	10.0 - 80.0% of mass 198	50.5
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.2
365	Greater than 1.0% of mass 198	3.2
441	0.0 - 24.0% of mass 442	8.7 (14.62)2
442	Greater than 50.0% of mass 198	59.6
443	15.0 - 24.0% of mass 442	11.4 (19.16)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1068090	45403	SIMCAL1.D	04/10/12	0755
2	STD1068089	45402	SIMCAL2.D	04/10/12	0819
3	STD1068088	45401	SIMCAL3.D	04/10/12	0843
4	STD1068087	45400	SIMCAL4.D	04/10/12	0906
5	STD1068086	45399	SIMCAL5.D	04/10/12	0930
6	STD1068091	45772	SIMCAL6.D	04/10/12	0954
7	STD1068085	45397	SIMCAL7.D	04/10/12	1017
8	STD1068084	45396	SIMCAL8.D	04/10/12	1041
9	STD1068094	45779	SIMCAL9R.D	04/10/12	1153
10	STD1068095	45782	SIMCAL10R.	04/10/12	1216
11	SSC1068079	44830	SIMSECA.D	04/10/12	1240

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP3.D DFTPP Injection Date: 04/17/12
 Instrument ID: SMSD01 DFTPP Injection Time: 1542
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.1
68	Less than 2.0% of mass 69	0.7 (1.62)1
69	Mass 69 relative abundance	44.1
70	Less than 2.0% of mass 69	0.2 (0.49)1
127	10.0 - 80.0% of mass 198	50.3
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	26.1
365	Greater than 1.0% of mass 198	3.5
441	0.0 - 24.0% of mass 442	9.2 (14.1)2
442	Greater than 50.0% of mass 198	65.4
443	15.0 - 24.0% of mass 442	12.1 (18.49)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1070618	45772	SIMCCV2.D	04/17/12	1602
2	125753MB	125753MB	9079MBR.D	04/17/12	1738
3	125754LCS	125754LCS	9079LCSR.D	04/17/12	1802

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/18/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0706
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	35.7
68	Less than 2.0% of mass 69	0.7 (1.62)1
69	Mass 69 relative abundance	42.9
70	Less than 2.0% of mass 69	0.2 (0.47)1
127	10.0 - 80.0% of mass 198	49.8
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	3.5
441	0.0 - 24.0% of mass 442	9.6 (14.1)2
442	Greater than 50.0% of mass 198	68
443	15.0 - 24.0% of mass 442	12.9 (18.93)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1070619	45772	SIMCCV1.D	04/18/12	0749
2	TFS-SD-02	350572403	72403.D	04/18/12	1045
3	TFS-SD-03	350572404	72404.D	04/18/12	1109
4	TFS-SD-04	350572407	72407.D	04/18/12	1132
5	TFS-SD-04 MS	350572411	72411.D	04/18/12	1220

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/20/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0711
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.2
68	Less than 2.0% of mass 69	0.8 (1.86)1
69	Mass 69 relative abundance	43.8
70	Less than 2.0% of mass 69	0.5 (1.08)1
127	10.0 - 80.0% of mass 198	50.3
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	26.3
365	Greater than 1.0% of mass 198	3.4
441	0.0 - 24.0% of mass 442	9.4 (14.84)2
442	Greater than 50.0% of mass 198	63.1
443	15.0 - 24.0% of mass 442	12.1 (19.22)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1071285	45886	SIMCCV3.D	04/20/12	0819
2	126278MB	126278MB	9119MB.D	04/20/12	0844
3	126279LCS	126279LCS	9119LCSR.D	04/20/12	0935
4	TFS-SW-03	350572406	72406.D	04/20/12	1052
5	TFS-SW-03 MS	350572413	72413.D	04/20/12	1116
6	TFS-SW-03 MSD	350572414	72414.D	04/20/12	1140
7	TFS-SD-EB	350572415	72415.D	04/20/12	1204
8	TFS-SW-04	350572408	72408.D	04/20/12	1228
9	TFS-SW-01	350572402	72402.D	04/20/12	1252
10	TFS-SW-02	350572405	72405.D	04/20/12	1316
11	TFS-SW-FD	350572410	72410.D	04/20/12	1340

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD01 DFTPP Injection Time: 1429
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.6 (1.19)1
69	Mass 69 relative abundance	46.6
70	Less than 2.0% of mass 69	0 (0)1
127	10.0 - 80.0% of mass 198	52.1
197	Less than 2.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	24.2
365	Greater than 1.0% of mass 198	2.9
441	0.0 - 24.0% of mass 442	7.8 (14.36)2
442	Greater than 50.0% of mass 198	54.1
443	15.0 - 24.0% of mass 442	10.4 (19.3)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1072836	45886	SIMCCV2.D	04/23/12	1537
2	126840LCS	126840LCS	9153LCS.D	04/23/12	1723
3	TFS-SD-01	350572401	72401.D	04/23/12	2010
4	TFS-SD-FD	350572409	72409.D	04/23/12	2146
5	126839MB	126839MB	9153RE2.D	04/23/12	2322

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/26/12
 Instrument ID: SMSD01 DFTPP Injection Time: 1043
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.4
68	Less than 2.0% of mass 69	0.6 (1.38)1
69	Mass 69 relative abundance	43.8
70	Less than 2.0% of mass 69	0.2 (0.43)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	28.1
365	Greater than 1.0% of mass 198	3.7
441	0.0 - 24.0% of mass 442	10.5 (14.56)2
442	Greater than 50.0% of mass 198	72.1
443	15.0 - 24.0% of mass 442	13.8 (19.07)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073972	45886	SIMCCV2.D	04/26/12	1127
2	TFS-SD-04 MSD	350572412	72412D10.D	04/26/12	2043

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT	
MID CAL STD	21723	4.34	83567	5.48	49021	7.18	
UPPER LIMIT	43446	4.84	167134	5.98	98042	7.68	
LOWER LIMIT	10861.5	3.84	41783.5	4.98	24510.5	6.68	
EPA SAMPLE NO.							
1	125753MB	24077	4.34	89125	5.49	53671	7.18
2	125754LCS	23950	4.34	92402	5.48	55553	7.18
3	TFS-SD-02	23180	4.33	89393	5.48	53860	7.18
4	TFS-SD-03	22380	4.33	86817	5.48	54770	7.18
5	TFS-SD-04	24707	4.33	96234	5.48	60619	7.17
6	TFS-SD-04 MS	24560	4.33	94844	5.48	58977	7.17
7	126278MB	23444	4.31	88487	5.47	55624	7.16
8	126279LCS	28446	4.31	111547	5.47	70281	7.16
9	TFS-SW-03	28429	4.31	106315	5.47	66124	7.16
10	TFS-SW-03 MS	27615	4.31	104092	5.46	65950	7.16
11	TFS-SW-03 MSD	26278	4.31	100509	5.46	62800	7.16
12	TFS-SD-EB	27288	4.31	104028	5.47	66257	7.16
13	TFS-SW-04	30088	4.31	116503	5.47	72058	7.16
14	TFS-SW-01	28514	4.31	108098	5.47	66223	7.16
15	TFS-SW-02	28012	4.31	104763	5.47	65757	7.16
16	TFS-SW-FD	27501	4.31	104606	5.47	65873	7.16
17	126840LCS	23499	4.31	89816	5.47	56283	7.16
18	TFS-SD-01	26799	4.31	105432	5.46	63817	7.16
19	TFS-SD-FD	24738	4.31	99807	5.47	61745	7.16
20	126839MB	23214	4.31	92108	5.47	57728	7.16
21	TFS-SD-04 MSD	19439	4.28	71484	5.44	45488	7.12

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%

of internal standard area.

LOWER LIMIT = -50%

of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT	
MID CAL STD	83459	8.63	88087	11.22	84480	12.53	
UPPER LIMIT	166918	9.13	176174	11.72	168960	13.03	
LOWER LIMIT	41729.5	8.13	44043.5	10.72	42240	12.03	
EPA SAMPLE NO.							
1	125753MB	97176	8.63	109064	11.22	96663	12.53
2	125754LCS	101760	8.63	117024	11.22	102967	12.53
3	TFS-SD-02	100257	8.63	119856	11.22	117575	12.53
4	TFS-SD-03	102050	8.63	117924	11.22	116385	12.53
5	TFS-SD-04	110696	8.62	133641	11.22	130410	12.53
6	TFS-SD-04 MS	109243	8.62	136797	11.22	137558	12.53
7	126278MB	101877	8.61	115644	11.20	99946	12.51
8	126279LCS	128555	8.61	146416	11.20	132508	12.51
9	TFS-SW-03	125290	8.61	149380	11.20	142125	12.51
10	TFS-SW-03 MS	123616	8.61	145798	11.20	137300	12.51
11	TFS-SW-03 MSD	117461	8.61	137299	11.20	128432	12.51
12	TFS-SD-EB	115366	8.61	137588	11.20	123715	12.51
13	TFS-SW-04	132465	8.61	157538	11.20	145876	12.51
14	TFS-SW-01	125565	8.61	156089	11.20	138901	12.51
15	TFS-SW-02	122658	8.61	147128	11.20	135882	12.51
16	TFS-SW-FD	122079	8.61	147564	11.20	138205	12.51
17	126840LCS	98133	8.61	112005	11.20	100010	12.51
18	TFS-SD-01	122759	8.61	147372	11.20	137643	12.51
19	TFS-SD-FD	119244	8.61	141021	11.20	138007	12.51
20	126839MB	106634	8.61	121109	11.20	112132	12.51
21	TFS-SD-04 MSD	85555	8.58	104932	11.17	99681	12.47

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP1	44847	DFTPP1.D	04/10/12	0708	
2	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	0732	
3	STD1068090	45403	SIMCAL1.D	04/10/12	0755	10.22 6.57
4	STD1068089	45402	SIMCAL2.D	04/10/12	0819	10.21 6.55
5	STD1068088	45401	SIMCAL3.D	04/10/12	0843	10.21 6.55
6	STD1068087	45400	SIMCAL4.D	04/10/12	0906	10.21 6.56
7	STD1068086	45399	SIMCAL5.D	04/10/12	0930	10.2 6.54
8	STD1068091	45772	SIMCAL6.D	04/10/12	0954	10.19 6.52
9	STD1068085	45397	SIMCAL7.D	04/10/12	1017	10.19 6.52
10	STD1068084	45396	SIMCAL8.D	04/10/12	1041	10.19 6.52
11	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1105	
12	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1129	
13	STD1068094	45779	SIMCAL9R.D	04/10/12	1153	10.19 6.51
14	STD1068095	45782	SIMCAL10R.D	04/10/12	1216	10.19 6.51
15	SSC1068079	44830	SIMSECA.D	04/10/12	1240	10.19 6.52
16	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1304	
17	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1036	
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1056	
19	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1130	
20	DFTPP3	45777	DFTPP3.D	04/17/12	1542	
21	CCV1070618	45772	SIMCCV2.D	04/17/12	1602	10.19 6.52
22	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1626	
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1651	
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/17/12	1714	
25	125753MB	125753MB	9079MBR.D	04/17/12	1738	10.19 6.52
26	125754LCS	125754LCS	9079LCSR.D	04/17/12	1802	10.19 6.52

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	04/17/12	1943		
28	ZZZZZZ	ZZZZZZ	04/17/12	2007		
29	ZZZZZZ	ZZZZZZ	04/17/12	2030		
30	ZZZZZZ	ZZZZZZ	04/17/12	2054		
31	ZZZZZZ	ZZZZZZ	04/17/12	2118		
32	ZZZZZZ	ZZZZZZ	04/17/12	2142		
33	ZZZZZZ	ZZZZZZ	04/17/12	2206		
34	ZZZZZZ	ZZZZZZ	04/17/12	2230		
35	ZZZZZZ	ZZZZZZ	04/17/12	2253		
36	ZZZZZZ	ZZZZZZ	04/17/12	2317		
37	ZZZZZZ	ZZZZZZ	04/17/12	2341		
38	ZZZZZZ	ZZZZZZ	04/18/12	0005		
39	ZZZZZZ	ZZZZZZ	04/18/12	0028		
40	ZZZZZZ	ZZZZZZ	04/18/12	0052		
41	ZZZZZZ	ZZZZZZ	04/18/12	0116		
42	ZZZZZZ	ZZZZZZ	04/18/12	0140		
43	ZZZZZZ	ZZZZZZ	04/18/12	0203		
44	ZZZZZZ	ZZZZZZ	04/18/12	0227		
45	DFTPP1	45777	DFTPP1.D	04/18/12	0706	
46	CCV1070619	45772	SIMCCV1.D	04/18/12	0749	10.19 6.52
47	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/18/12	0833	
48	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/18/12	0857	
49	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/18/12	0920	
50	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/18/12	0944	
51	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/18/12	1021	
52	TFS-SD-02	350572403	72403.D	04/18/12	1045	10.19 6.52

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 10.19			S2: 6.52				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
53	TFS-SD-03	350572404	72404.D	04/18/12	1109	10.19	6.52
54	TFS-SD-04	350572407	72407.D	04/18/12	1132	10.19	6.51
55	ZZZZZ	ZZZZZ	ZZZZZ	04/18/12	1156		
56	TFS-SD-04 MS	350572411	72411.D	04/18/12	1220	10.19	6.51
57	ZZZZZ	ZZZZZ	ZZZZZ	04/18/12	1244		
58	DFTPP1	45777	DFTPP1.D	04/20/12	0711		
59	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	0731		
60	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	0755		
61	CCV1071285	45886	SIMCCV3.D	04/20/12	0819	10.17	6.5
62	126278MB	126278MB	9119MB.D	04/20/12	0844	10.17	6.51
63	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	0908		
64	126279LCS	126279LCS	9119LCSR.D	04/20/12	0935	10.17	6.51
65	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	0959		
66	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	1029		
67	TFS-SW-03	350572406	72406.D	04/20/12	1052	10.17	6.5
68	TFS-SW-03 MS	350572413	72413.D	04/20/12	1116	10.17	6.5
69	TFS-SW-03 MSD	350572414	72414.D	04/20/12	1140	10.17	6.5
70	TFS-SD-EB	350572415	72415.D	04/20/12	1204	10.17	6.5
71	TFS-SW-04	350572408	72408.D	04/20/12	1228	10.17	6.5
72	TFS-SW-01	350572402	72402.D	04/20/12	1252	10.17	6.5
73	TFS-SW-02	350572405	72405.D	04/20/12	1316	10.17	6.5
74	TFS-SW-FD	350572410	72410.D	04/20/12	1340	10.17	6.5
75	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	1725		
76	ZZZZZ	ZZZZZ	ZZZZZ	04/20/12	1749		
77	DFTPP1	45777	DFTPP1.D	04/23/12	1429		
78	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1449		

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
79	CCV1072836	45886	SIMCCV2.D	04/23/12	1537	10.17 6.5
80	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1607	
81	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1632	
82	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1659	
83	126840LCS	126840LCS	9153LCS.D	04/23/12	1723	10.17 6.5
84	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1747	
85	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1811	
86	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1835	
87	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1859	
88	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1923	
89	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1947	
90	TFS-SD-01	350572401	72401.D	04/23/12	2010	10.17 6.5
91	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2034	
92	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2058	
93	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2122	
94	TFS-SD-FD	350572409	72409.D	04/23/12	2146	10.17 6.5
95	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2210	
96	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2234	
97	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	2258	
98	126839MB	126839MB	9153RE2.D	04/23/12	2322	10.17 6.5
99	DFTPP1	45777	DFTPP1.D	04/26/12	1043	
100	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1104	
101	CCV1073972	45886	SIMCCV2.D	04/26/12	1127	10.14 6.47
102	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1157	
103	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1221	
104	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1244	

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
105	ZZZZZZ	ZZZZZZ	04/26/12	1308		
106	ZZZZZZ	ZZZZZZ	04/26/12	1332		
107	ZZZZZZ	ZZZZZZ	04/26/12	1356		
108	ZZZZZZ	ZZZZZZ	04/26/12	1420		
109	ZZZZZZ	ZZZZZZ	04/26/12	1444		
110	ZZZZZZ	ZZZZZZ	04/26/12	1508		
111	ZZZZZZ	ZZZZZZ	04/26/12	1532		
112	ZZZZZZ	ZZZZZZ	04/26/12	1556		
113	ZZZZZZ	ZZZZZZ	04/26/12	1620		
114	ZZZZZZ	ZZZZZZ	04/26/12	1644		
115	ZZZZZZ	ZZZZZZ	04/26/12	1708		
116	ZZZZZZ	ZZZZZZ	04/26/12	1732		
117	ZZZZZZ	ZZZZZZ	04/26/12	1756		
118	ZZZZZZ	ZZZZZZ	04/26/12	1820		
119	ZZZZZZ	ZZZZZZ	04/26/12	1844		
120	ZZZZZZ	ZZZZZZ	04/26/12	1908		
121	ZZZZZZ	ZZZZZZ	04/26/12	1932		
122	ZZZZZZ	ZZZZZZ	04/26/12	1956		
123	ZZZZZZ	ZZZZZZ	04/26/12	2020		
124	TFS-SD-04 MSD	350572412	72412D10.D	04/26/12	2043	10.14 6.48
125	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2107	
126	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2131	
127	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2155	
128	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2219	
129	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2243	
130	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	2306	

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

125754LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.024	0.015	62.5			49 - 127
2-Methylnaphthalene	0.024	0.019	79.2			31 - 149
Acenaphthene	0.024	0.018	75.0			47 - 127
Acenaphthylene	0.024	0.019	79.2			45 - 129
Anthracene	0.024	0.022	91.7			56 - 123
Benzo(a)anthracene	0.024	0.023	95.8			39 - 140
Benzo(a)pyrene	0.024	0.023	95.8			52 - 130
Benzo(b)fluoranthene	0.024	0.022	91.7			40 - 143
Benzo(g,h,i)perylene	0.024	0.019	79.2			48 - 133
Benzo(k)fluoranthene	0.024	0.02	83.3			49 - 131
Chrysene	0.024	0.02	83.3			50 - 132
Dibenzo(a,h)anthracene	0.024	0.021	87.5			51 - 130
Fluoranthene	0.024	0.02	83.3			46 - 135
Fluorene	0.024	0.019	79.2			52 - 125
Indeno(1,2,3-cd)pyrene	0.024	0.02	83.3			48 - 135
Naphthalene	0.024	0.018	75.0			44 - 140
Phenanthrene	0.024	0.019	79.2			48 - 131
Pyrene	0.024	0.018	75.0			45 - 133

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

126279LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.5	0.37	74.0			68 - 115
2-Methylnaphthalene	0.5	0.49	98.0			47 - 121
Acenaphthene	0.5	0.44	88.0			64 - 110
Acenaphthylene	0.5	0.45	90.0			45 - 115
Anthracene	0.5	0.53	106.0			61 - 108
Benzo(a)anthracene	0.5	0.51	102.0			53 - 110
Benzo(a)pyrene	0.5	0.52	104.0			55 - 109
Benzo(b)fluoranthene	0.5	0.47	94.0			65 - 110
Benzo(g,h,i)perylene	0.5	0.42	84.0			68 - 115
Benzo(k)fluoranthene	0.5	0.42	84.0			70 - 111
Chrysene	0.5	0.38	76.0			71 - 115
Dibenzo(a,h)anthracene	0.5	0.43	86.0			60 - 104
Fluoranthene	0.5	0.46	92.0			63 - 114
Fluorene	0.5	0.45	90.0			59 - 120
Indeno(1,2,3-cd)pyrene	0.5	0.42	84.0			66 - 110
Naphthalene	0.5	0.44	88.0			68 - 125
Phenanthrene	0.5	0.44	88.0			31 - 147
Pyrene	0.5	0.41	82.0			59 - 120

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

126840LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.025	0.018	72.0			49 - 127
2-Methylnaphthalene	0.025	0.025	100.0			31 - 149
Acenaphthene	0.025	0.022	88.0			47 - 127
Acenaphthylene	0.025	0.023	92.0			45 - 129
Anthracene	0.025	0.028	112.0			56 - 123
Benzo(a)anthracene	0.025	0.029	116.0			39 - 140
Benzo(a)pyrene	0.025	0.027	108.0			52 - 130
Benzo(b)fluoranthene	0.025	0.027	108.0			40 - 143
Benzo(g,h,i)perylene	0.025	0.022	88.0			48 - 133
Benzo(k)fluoranthene	0.025	0.022	88.0			49 - 131
Chrysene	0.025	0.022	88.0			50 - 132
Dibenzo(a,h)anthracene	0.025	0.024	96.0			51 - 130
Fluoranthene	0.025	0.025	100.0			46 - 135
Fluorene	0.025	0.023	92.0			52 - 125
Indeno(1,2,3-cd)pyrene	0.025	0.023	92.0			48 - 135
Naphthalene	0.025	0.022	88.0			44 - 140
Phenanthrene	0.025	0.025	100.0			48 - 131
Pyrene	0.025	0.023	92.0			45 - 133

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
1-Methylnaphthalene	0.036	0.022	0.016	0.0 *	71 - 132
2-Methylnaphthalene	0.036	0.067	0.022	0.0 *	54 - 145
Acenaphthene	0.036	0	0.027	75.0	57 - 119
Acenaphthylene	0.036	0.0028	0.011	22.8 *	54 - 115
Anthracene	0.036	0.0054	0.047	116.0	40 - 138
Benzo(a)anthracene	0.036	0.061	0.22	442.0 *	53 - 119
Benzo(a)pyrene	0.036	0.10	0.28	500.0 *	20 - 120
Benzo(b)fluoranthene	0.036	0.16	0.39	639.0 *	50 - 171
Benzo(g,h,i)perylene	0.036	0.10	0.18	222.0 *	50 - 150
Benzo(k)fluoranthene	0.036	0.040	0.12	222.0 *	32 - 158
Chrysene	0.036	0.063	0.18	325.0 *	34 - 140
Dibenzo(a,h)anthracene	0.036	0.020	0.062	117.0 *	41 - 114
Fluoranthene	0.036	0.11	0.38	750.0 *	55 - 132
Fluorene	0.036	0	0.027	75.0	59 - 118
Indeno(1,2,3-cd)pyrene	0.036	0.082	0.17	244.0 *	19 - 122
Naphthalene	0.036	0.030	0.019	0.0 *	59 - 111
Phenanthrene	0.036	0.031	0.18	414.0 *	54 - 112
Pyrene	0.036	0.074	0.26	517.0 *	55 - 123

Spike Recovery: 15 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.037	0.037	40.5 *	79.2 *	30	71 - 132
2-Methylnaphthalene	0.037	0.049	0.0 *	76.1 *	30	54 - 145
Acenaphthene	0.037	0.092	249.0 *	109.2 *	30	57 - 119
Acenaphthylene	0.037	0	0.0 *	200.0 *	30	54 - 115
Anthracene	0.037	0.13	337.0 *	93.8 *	30	40 - 138
Benzo(a)anthracene	0.037	2.0	5240.0 *	160.4 *	30	53 - 119
Benzo(a)pyrene	0.037	2.2	5676.0 *	154.8 *	30	20 - 120
Benzo(b)fluoranthene	0.037	2.9	7405.0 *	152.6 *	30	50 - 171
Benzo(g,h,i)perylene	0.037	0.99	2405.0 *	138.5 *	30	50 - 150
Benzo(k)fluoranthene	0.037	0.89	2297.0 *	152.5 *	30	32 - 158
Chrysene	0.037	1.3	3343.0 *	151.4 *	30	34 - 140
Dibenzo(a,h)anthracene	0.037	0.32	811.0 *	135.1 *	30	41 - 114
Fluoranthene	0.037	1.9	4838.0 *	133.3 *	30	55 - 132
Fluorene	0.037	0.056	151.0 *	69.9 *	30	59 - 118
Indeno(1,2,3-cd)pyrene	0.037	0.91	2238.0 *	137.0 *	30	19 - 122
Naphthalene	0.037	0.10	189.0 *	136.1 *	30	59 - 111
Phenanthrene	0.037	0.45	1132.0 *	85.7 *	30	54 - 112
Pyrene	0.037	1.5	3854.0 *	140.9 *	30	55 - 123

RPD: 18 out of 18 outside limits

Spike Recovery: 18 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
1-Methylnaphthalene	0.51	0	0.28	54.9	36 - 138
2-Methylnaphthalene	0.51	0	0.41	80.4	34 - 141
Acenaphthene	0.51	0	0.35	68.6	47 - 128
Acenaphthylene	0.51	0	0.40	78.4	32 - 153
Anthracene	0.51	0	0.49	96.1	53 - 128
Benzo(a)anthracene	0.51	0.10	0.54	94.9	59 - 166
Benzo(a)pyrene	0.51	0.20	0.47	72.5	43 - 146
Benzo(b)fluoranthene	0.51	0.30	0.45	52.9 *	56 - 173
Benzo(g,h,i)perylene	0.51	0.17	0.34	49.8	25 - 174
Benzo(k)fluoranthene	0.51	0.092	0.32	52.5 *	56 - 158
Chrysene	0.51	0.12	0.30	45.1 *	55 - 128
Dibenzo(a,h)anthracene	0.51	0.037	0.36	70.6	21 - 207
Fluoranthene	0.51	0.21	0.44	66.7	55 - 155
Fluorene	0.51	0	0.42	82.4	40 - 151
Indeno(1,2,3-cd)pyrene	0.51	0.14	0.36	56.1	19 - 166
Naphthalene	0.51	0	0.34	66.7	38 - 139
Phenanthrene	0.51	0.072	0.42	75.3	65 - 120
Pyrene	0.51	0.15	0.37	57.1	49 - 158

Spike Recovery: 3 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.51	0.30	58.8	6.9	20	36 - 138
2-Methylnaphthalene	0.51	0.46	90.2	11.5	20	34 - 141
Acenaphthene	0.51	0.36	70.6	2.8	20	47 - 128
Acenaphthylene	0.51	0.42	82.4	4.9	20	32 - 153
Anthracene	0.51	0.49	96.1	0.0	20	53 - 128
Benzo(a)anthracene	0.51	0.54	86.3	0.0	20	59 - 166
Benzo(a)pyrene	0.51	0.47	52.9	0.0	20	43 - 146
Benzo(b)fluoranthene	0.51	0.41	21.6 *	9.3	20	56 - 173
Benzo(g,h,i)perylene	0.51	0.33	31.4	3.0	20	25 - 174
Benzo(k)fluoranthene	0.51	0.34	48.6 *	6.1	20	56 - 158
Chrysene	0.51	0.30	35.3 *	0.0	20	55 - 128
Dibenzo(a,h)anthracene	0.51	0.35	61.4	2.8	20	21 - 207
Fluoranthene	0.51	0.43	43.1 *	2.3	20	55 - 155
Fluorene	0.51	0.42	82.4	0.0	20	40 - 151
Indeno(1,2,3-cd)pyrene	0.51	0.35	41.2	2.8	20	19 - 166
Naphthalene	0.51	0.37	72.5	8.5	20	38 - 139
Phenanthrene	0.51	0.41	66.3	2.4	19	65 - 120
Pyrene	0.51	0.37	43.1 *	0.0	17	49 - 158

RPD: 0 out of 18 outside limits

Spike Recovery: 5 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8270 SIM Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

LAB FILE ID: RRF0.02 =SIMCAL1.D RRF0.05 =SIMCAL2.D							
RRF0.07 =SIMCAL3.D RRF0.1 =SIMCAL4.D RRF0.2 =SIMCAL5.D							
COMPOUND	RRF0.02	RRF0.05	RRF0.07	RRF0.1	RRF0.2	RRF	%RSD OR R^2
1-Methylnaphthalene	0.864	0.846	0.799	0.826	0.808		
2-Methylnaphthalene	0.537	0.553	0.533	0.544	0.571		
Acenaphthene	* 1.238	1.225	1.247	1.233	1.191		*
Acenaphthylene	1.591	1.614	1.557	1.570	1.552		
Anthracene	0.746	0.662	0.721	0.740	0.785		
Benzo(a)anthracene	0.640	0.622	0.639	0.638	0.653		
Benzo(a)pyrene	* 0.667	0.675	0.669	0.714	0.751		*
Benzo(b)fluoranthene	0.764	0.771	0.805	0.800	0.799		
Benzo(g,h,i)perylene	1.041	1.020	1.048	1.042	1.040		
Benzo(k)fluoranthene	1.573	1.459	1.428	1.459	1.476		
Chrysene	1.470	1.350	1.429	1.387	1.351		
Dibenzo(a,h)anthracene	0.755	0.832	0.847	0.915	0.877		
Fluoranthene	* 1.120	0.981	0.947	0.961	1.068		*
Fluorene	1.119	1.220	1.125	1.166	1.129		
Indeno(1,2,3-cd)pyrene	0.996	1.113	1.128	1.135	1.142		
Naphthalene	1.077	1.034	1.028	1.050	1.046		
Phenanthrene	0.943	0.901	0.902	0.902	0.971		
Pyrene	1.197	1.121	1.178	1.149	1.093		
=====							
p-Terphenyl-d14(SURR)	0.765	0.729	0.765	0.765	0.757		
2-Fluorobiphenyl(SURR)	1.341	1.337	1.289	1.421	1.345		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

LAB FILE ID:		RRF0.5 =SIMCAL6.D		RRF0.7 =SIMCAL7.D			
RRF1 =SIMCAL8.D		RRF5 =SIMCAL9R.D		RRF10 =SIMCAL10R.D			
COMPOUND	RRF0.5	RRF0.7	RRF1	RRF5	RRF10	RRF	%RSD OR R^2
1-Methylnaphthalene	0.800	0.742	0.787	0.715	0.731	0.79195	6.2
2-Methylnaphthalene	0.650	0.652	0.714	0.760	0.752	0.62663	14.5
Acenaphthene	* 1.232	1.222	1.214	1.308	1.268	1.2378	2.6 *
Acenaphthylene	1.663	1.645	1.670	1.883	1.894	1.66378	7.5
Anthracene	0.797	0.796	0.810	0.898	0.910	0.78632	9.7
Benzo(a)anthracene	0.742	0.791	0.737	0.907		0.70768	13.5
Benzo(a)pyrene	* 0.837	0.849	0.899	0.994		0.78373	14.9 *
Benzo(b)fluoranthene	0.938	0.894	0.927	1.118	1.107	0.89235	14.8
Benzo(g,h,i)perylene	1.199	1.138	1.195	1.431	1.235	1.13896	11.4
Benzo(k)fluoranthene	1.523	1.532	1.568	1.564	1.580	1.51612	3.7
Chrysene	1.485	1.415	1.390	1.209	1.153	1.3637	7.8
Dibenzo(a,h)anthracene	0.995	1.022	1.061	1.209		0.94593	14.7
Fluoranthene	* 1.124	1.100	1.164	1.272	1.291	1.10271	10.8 *
Fluorene	1.190	1.156	1.240	1.392	1.377	1.21143	8.2
Indeno(1,2,3-cd)pyrene	1.233	1.230	1.271	1.422	1.453	1.21234	11.7
Naphthalene	1.071	1.044	1.120	1.037	1.055	1.05605	2.6
Phenanthrene	1.013	1.007	1.062	1.135	1.137	0.99734	9.1
Pyrene	1.103	1.132	1.070	1.075	1.065	1.11802	4.1
=====							
p-Terphenyl-d14(SURR)	0.795	0.769	0.736	0.744	0.746	0.75703	2.5
2-Fluorobiphenyl(SURR)	1.290	1.301	1.321	1.480	1.458	1.35833	5.1

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/10/12 Time: 1240
 CCV ID: SSC1068079 Lab File ID: SIMSECA.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.63707	19.6	AVRG
2-Methylnaphthalene	0.62663	0.62039	1.0	AVRG
Acenaphthene	* 1.2378	1.09	11.9	AVRG *
Acenaphthylene	1.66378	1.598	4.0	AVRG
Anthracene	0.78632	0.88909	13.1	AVRG
Benzo(a)anthracene	0.70768	0.80755	14.1	AVRG
Benzo(a)pyrene	* 0.78373	0.80289	2.4	AVRG *
Benzo(b)fluoranthene	0.89235	0.89937	0.8	AVRG
Benzo(g,h,i)perylene	1.13896	0.98912	13.2	AVRG
Benzo(k)fluoranthene	1.51612	1.348	11.1	AVRG
Chrysene	1.3637	1.125	17.5	AVRG
Dibenzo(a,h)anthracene	0.94593	0.89933	4.9	AVRG
Fluoranthene	* 1.10271	0.99771	9.5	AVRG *
Fluorene	1.21143	1.161	4.2	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.095	9.7	AVRG
Naphthalene	1.05605	0.96598	8.5	AVRG
Phenanthrene	0.99734	0.96523	3.2	AVRG
Pyrene	1.11802	1.064	4.8	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.72078	4.8	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.276	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/17/12 Time: 1602
 CCV ID: CCV1070618 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.76393	3.5	AVRG
2-Methylnaphthalene	0.62663	0.67935	8.4	AVRG
Acenaphthene	* 1.2378	1.239	0.1	AVRG *
Acenaphthylene	1.66378	1.743	4.8	AVRG
Anthracene	0.78632	0.76844	2.3	AVRG
Benzo(a)anthracene	0.70768	0.74066	4.7	AVRG
Benzo(a)pyrene	* 0.78373	0.87195	11.3	AVRG *
Benzo(b)fluoranthene	0.89235	0.9554	7.1	AVRG
Benzo(g,h,i)perylene	1.13896	1.079	5.3	AVRG
Benzo(k)fluoranthene	1.51612	1.486	2.0	AVRG
Chrysene	1.3637	1.265	7.2	AVRG
Dibenzo(a,h)anthracene	0.94593	0.98917	4.6	AVRG
Fluoranthene	* 1.10271	1.054	4.4	AVRG *
Fluorene	1.21143	1.227	1.3	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.203	0.8	AVRG
Naphthalene	1.05605	1.093	3.5	AVRG
Phenanthrene	0.99734	0.98157	1.6	AVRG
Pyrene	1.11802	1.088	2.7	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.71255	5.9	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.434	5.6	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/18/12 Time: 0749
 CCV ID: CCV1070619 Lab File ID: SIMCCV1.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.7737	2.3	AVRG
2-Methylnaphthalene	0.62663	0.67443	7.6	AVRG
Acenaphthene	* 1.2378	1.204	2.7	AVRG *
Acenaphthylene	1.66378	1.701	2.2	AVRG
Anthracene	0.78632	0.77053	2.0	AVRG
Benzo(a)anthracene	0.70768	0.66855	5.5	AVRG
Benzo(a)pyrene	* 0.78373	0.86665	10.6	AVRG *
Benzo(b)fluoranthene	0.89235	0.90207	1.1	AVRG
Benzo(g,h,i)perylene	1.13896	1.096	3.8	AVRG
Benzo(k)fluoranthene	1.51612	1.518	0.1	AVRG
Chrysene	1.3637	1.339	1.8	AVRG
Dibenzo(a,h)anthracene	0.94593	0.98056	3.7	AVRG
Fluoranthene	* 1.10271	1.092	1.0	AVRG *
Fluorene	1.21143	1.206	0.4	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.197	1.3	AVRG
Naphthalene	1.05605	1.069	1.2	AVRG
Phenanthrene	0.99734	0.96233	3.5	AVRG
Pyrene	1.11802	1.062	5.0	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.71381	5.7	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.438	5.9	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/20/12 Time: 0819
 CCV ID: CCV1071285 Lab File ID: SIMCCV3.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.74225	6.3	AVRG
2-Methylnaphthalene	0.62663	0.69753	11.3	AVRG
Acenaphthene	* 1.2378	1.238	0.0	AVRG *
Acenaphthylene	1.66378	1.738	4.5	AVRG
Anthracene	0.78632	0.76608	2.6	AVRG
Benzo(a)anthracene	0.70768	0.8373	18.3	AVRG
Benzo(a)pyrene	* 0.78373	0.90645	15.7	AVRG *
Benzo(b)fluoranthene	0.89235	1.037	16.2	AVRG
Benzo(g,h,i)perylene	1.13896	1.051	7.7	AVRG
Benzo(k)fluoranthene	1.51612	1.42	6.3	AVRG
Chrysene	1.3637	1.104	19.0	AVRG
Dibenzo(a,h)anthracene	0.94593	0.93779	0.9	AVRG
Fluoranthene	* 1.10271	1.095	0.7	AVRG *
Fluorene	1.21143	1.268	4.7	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.162	4.2	AVRG
Naphthalene	1.05605	1.058	0.2	AVRG
Phenanthrene	0.99734	1.01	1.3	AVRG
Pyrene	1.11802	1.088	2.7	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.71615	5.4	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.441	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/23/12 Time: 1537
 CCV ID: CCV1072836 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.75522	4.6	AVRG
2-Methylnaphthalene	0.62663	0.69978	11.7	AVRG
Acenaphthene	* 1.2378	1.231	0.5	AVRG *
Acenaphthylene	1.66378	1.621	2.6	AVRG
Anthracene	0.78632	0.78288	0.4	AVRG
Benzo(a)anthracene	0.70768	0.82215	16.2	AVRG
Benzo(a)pyrene	* 0.78373	0.91787	17.1	AVRG *
Benzo(b)fluoranthene	0.89235	1.023	14.6	AVRG
Benzo(g,h,i)perylene	1.13896	1.085	4.7	AVRG
Benzo(k)fluoranthene	1.51612	1.441	5.0	AVRG
Chrysene	1.3637	1.242	8.9	AVRG
Dibenzo(a,h)anthracene	0.94593	0.93391	1.3	AVRG
Fluoranthene	* 1.10271	1.122	1.7	AVRG *
Fluorene	1.21143	1.275	5.2	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.161	4.2	AVRG
Naphthalene	1.05605	1.046	1.0	AVRG
Phenanthrene	0.99734	1.004	0.7	AVRG
Pyrene	1.11802	1.095	2.1	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.73039	3.5	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.447	6.5	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD01 CalibrationDate: 04/26/12 Time: 1127
 CCV ID: CCV1073972 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.70076	11.5	AVRG
2-Methylnaphthalene	0.62663	0.69265	10.5	AVRG
Acenaphthene	* 1.2378	1.205	2.6	AVRG *
Acenaphthylene	1.66378	1.82	9.4	AVRG
Anthracene	0.78632	0.77535	1.4	AVRG
Benzo(a)anthracene	0.70768	0.82897	17.1	AVRG
Benzo(a)pyrene	* 0.78373	0.87726	11.9	AVRG *
Benzo(b)fluoranthene	0.89235	0.92508	3.7	AVRG
Benzo(g,h,i)perylene	1.13896	1.081	5.1	AVRG
Benzo(k)fluoranthene	1.51612	1.44	5.0	AVRG
Chrysene	1.3637	1.114	18.3	AVRG
Dibenzo(a,h)anthracene	0.94593	0.94737	0.2	AVRG
Fluoranthene	* 1.10271	1.163	5.5	AVRG *
Fluorene	1.21143	1.291	6.6	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.172	3.3	AVRG
Naphthalene	1.05605	1.029	2.6	AVRG
Phenanthrene	0.99734	1.035	3.8	AVRG
Pyrene	1.11802	1.011	9.6	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.68614	9.4	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.486	9.4	AVRG

8270 Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: The following samples were re-prepped out of hold: TFS-SD-01RE1, TFS-SD-02RE1, TFS-SD-03RE1, TFS-SD-04 MSDRE1, TFS-SD-04 MSRE1, TFS-SD-04RE1, TFS-SD-EBRE1, TFS-SD-FDRE1, TFS-SW-01RE1, TFS-SW-02RE1, TFS-SW-03 MSDRE1, TFS-SW-03 MSRE1, TFS-SW-03RE1, TFS-SW-04RE1, TFS-SW-FDRE1. All samples were originally extracted within hold, but were re-extracted due to LCS failures. Both the original and re-extracted samples are reported.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D

IV. PREPARATION

Soil samples were prepared by SW846 EPA 3545 for 8270 semi-volatile analysis.
Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyrilone (+1425%), 1,3,5-Trinitrobenzene (-43.6%). These failures were a result of a discrepancy between the primary and secondary standards. No further action was taken, since these compounds were not detected in any samples. The secondary standard is also used to spike the LCS and MS/MSD. Because of this difference, Methapyrilone exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since Methapyrilone was recovered on the high side and was not detected in any samples.

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepona (-37.4%). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

A. Blanks:

All acceptance criteria were met with the exception of:

Blank 126265MB was analyzed with the water samples extracted on 04/19/12. The following analyte was detected below RL: Di-n-butylphthalate at 0.98 ug/L. The following analyte was detected above RL: Bis(2-ethylhexyl)phthalate at 14 ug/L. No further action was taken, since these compounds were not detected in the associated samples.

Samples coded accordingly.

B. Surrogates:

All acceptance criteria were met with the exception of:

Sample TFS-SD-01 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 44.7 % with criteria of (45-105). The sample was re-extracted (TFS-SD-01RE1) and was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 17.4 % with criteria of (45-105), 2-Fluorophenol at 16.7 % with criteria of (35-105), Nitrobenzene-d5 at 20.5 % with criteria of (35-100), Phenol-d5 at 21.8 % with criteria of (40-100).

Sample TFS-SD-02 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 16.6 % with criteria of (45-105). The sample was re-extracted (TFS-SD-02RE1) and was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 14.3 % with criteria of (45-105), Nitrobenzene-d5 at 34.8 % with criteria of (35-100), Phenol-d5 at 38.5 % with criteria of (40-100).

Sample TFS-SD-03 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 35.3 % with criteria of (45-105). The sample was re-extracted (TFS-SD-03RE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 20.6 % with criteria of (45-105).

Sample TFS-SD-04 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 33.3 % with criteria of (45-105). The sample was re-extracted (TFS-SD-04RE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 40.5 % with criteria of (45-105).

Sample TFS-SD-04 MSD was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 37.8 % with criteria of (45-105).

Sample TFS-SD-FD was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 27.4 % with criteria of (45-105). The sample was re-extracted (TFS-

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

SD-FDRE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 29.4 % with criteria of (45-105).

Sample TFS-SW-01 was recovered below criteria for the following surrogates: 2,4,6-Tribromophenol at 31.3 % with criteria of (40-125), 2-Fluorophenol at 14.8 % with criteria of (20-110).

Sample TFS-SW-FD was recovered below criteria for the following surrogates: 2,4,6-Tribromophenol at 38.7 % with criteria of (40-125), 2-Fluorobiphenyl at 34.3 % with criteria of (50-110), Nitrobenzene-d5 at 35.9 % with criteria of (40-110), p-Terphenyl-d14 at 42.2 % with criteria of (50-135).

All the above samples contained low levels of late eluting, non-target compounds that may have interfered with surrogate recovery, especially 2-Fluorobiphenyl. Since all the samples were re-extracted, no further action was taken.

Samples coded accordingly.

C. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:

LCS 125744LCS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Naphthylamine at 65 % with criteria of (70-130), 4-Nitroquinoline-1-oxide at 65 % with criteria of (70-130), Dinoseb at 65 % with criteria of (70-130), Methylmethanesulfonate at 60 % with criteria of (70-130), N-Nitrosodiethylamine at 65 % with criteria of (70-130), N-Nitrosomethylethylamine at 60 % with criteria of (70-130), o-Toluidine at 65 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 1,3,5-Trinitrobenzene at 42 % with criteria of (60-140), 1,4-Naphthoquinone at 5.5 % with criteria of (60-140), 2-Picoline at 55 % with criteria of (60-140), a,a-Dimethylphenethylamine at 31.5 % with criteria of (60-140), Hexachloropropene at 55 % with criteria of (60-140), Kepone at 55 % with criteria of (60-140), Methapyriline at 0 % with criteria of (60-140).

LCS 126266LCS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered above criteria: 1-Naphthylamine at 96.5 % with criteria of (38-91), 4-Aminobiphenyl at 105 % with criteria of (49-103), Pentachloronitrobenzene(PCNB) at 105 % with criteria of (60-104), Safrole at 101 % with criteria of (52-100). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 0 % with criteria of (8.83-162.2), a,a-Dimethylphenethylamine at 53.8 % with criteria of (60-140), Methapyriline at 1275 % with criteria of (0-105).

LCS 128107LCS was analyzed with the water samples extracted on 04/30/12. The following analyte was recovered above criteria: 4-

CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

Aminobiphenyl at 105 % with criteria of (49-103). The following analytes had marginal exceedance limit failures: 1-Naphthylamine at 104 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Methapyriline at 320 % with criteria of (0-105).

LCS 128131LCS was analyzed with the soil samples extracted on 04/30/12. The following analytes were recovered below criteria: 1,2,4,5-Tetrachlorobenzene at 60 % with criteria of (70-130), 1,4-Naphthoquinone at 60 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 60 % with criteria of (70-130), 2,6-Dichlorophenol at 65 % with criteria of (70-130), 2-Naphthylamine at 65 % with criteria of (70-130), 4-Aminobiphenyl at 65 % with criteria of (70-130), 5-Nitro-o-toluidine at 60 % with criteria of (70-130), Acetophenone at 66.7 % with criteria of (70-130), Diallate (Avadex) at 60 % with criteria of (70-130), Ethyl methanesulfonate at 65 % with criteria of (70-130), Isosafrole at 60 % with criteria of (70-130), Methylmethanesulfonate at 60 % with criteria of (70-130), N-Nitrosopyrrolidine at 60 % with criteria of (70-130), p-Dimethylaminoazobenzene at 60 % with criteria of (70-130), Pentachlorobenzene at 65 % with criteria of (70-130), Phenacetin at 60 % with criteria of (70-130), p-Phenylenediamine at 65 % with criteria of (70-130), Pronamide at 65 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 0,0,0-Triethylphosphorothioate at 55 % with criteria of (60-140), 1,3,5-Trinitrobenzene at 39.5 % with criteria of (60-140), 1-Naphthylamine at 33.5 % with criteria of (60-140), 2-Acetylaminofluorene at 50 % with criteria of (60-140), 2-Picoline at 44 % with criteria of (60-140), 4-Nitroquinoline-1-oxide at 44.5 % with criteria of (60-140), a,a-Dimethylphenethylamine at 34 % with criteria of (60-140), Aramite at 55 % with criteria of (60-140), Chlorobenzilate at 55 % with criteria of (60-140), Hexachloropropene at 55 % with criteria of (60-140), Kepone at 6.5 % with criteria of (60-140), Methapyriline at 0 % with criteria of (60-140), N-Nitrosodibutylamine at 55 % with criteria of (60-140), N-Nitrosodiethylamine at 50 % with criteria of (60-140), N-Nitrosomethylethylamine at 50 % with criteria of (60-140), N-Nitrosopiperidine at 55 % with criteria of (60-140), o-Toluidine at 49.5 % with criteria of (60-140).

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

Client requested MS/SD sets were analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-SD-04 MS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 48.3 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 48.3 % with criteria of (70-130), 1,3,5-Trinitrobenzene at 27.2 % with criteria of (70-130), 1,3-Dinitrobenzene at 62.1 % with criteria of (70-130), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 58.6 % with criteria of (70-130), 2,3,4,6-

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Tetrachlorophenol at 48.3 % with criteria of (70-130), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,6-Dichlorophenol at 58.6 % with criteria of (70-130), 2-Acetylaminofluorene at 48.3 % with criteria of (70-130), 2-Naphthylamine at 41.4 % with criteria of (70-130), 2-Picoline at 48.3 % with criteria of (70-130), 3-Methylcholanthrene at 41.4 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 23.1 % with criteria of (30-135), 4-Aminobiphenyl at 51.7 % with criteria of (70-130), 4-Nitroquinoline-1-oxide at 25.2 % with criteria of (70-130), 5-Nitro-*o*-toluidine at 48.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 44.8 % with criteria of (56-122), *a,a*-Dimethylphenethylamine at 41.4 % with criteria of (70-130), Acetophenone at 60.3 % with criteria of (70-130), Aramite at 41.4 % with criteria of (70-130), Chlorobenzilate at 41.4 % with criteria of (70-130), Diallate (Avadex) at 44.8 % with criteria of (70-130), Di-*n*-butylphthalate at 48.3 % with criteria of (55-110), Dinoseb at 55.2 % with criteria of (70-130), Ethyl methanesulfonate at 58.6 % with criteria of (70-130), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 19.3 % with criteria of (70-130), Isodrin at 44.8 % with criteria of (70-130), Isosafrole at 55.2 % with criteria of (70-130), Kepone at 25.2 % with criteria of (70-130), Methylmethanesulfonate at 37.9 % with criteria of (70-130), N-Nitrosodibutylamine at 62.1 % with criteria of (70-130), N-Nitrosodiethylamine at 51.7 % with criteria of (70-130), N-Nitrosomethylethylamine at 51.7 % with criteria of (70-130), N-Nitrosomorpholine at 62.1 % with criteria of (70-130), N-Nitrosopiperidine at 58.6 % with criteria of (70-130), N-Nitrosopyrrolidine at 55.2 % with criteria of (70-130), *o*-Toluidine at 44.8 % with criteria of (70-130), *p*-Dimethylaminoazobenzene at 44.8 % with criteria of (70-130), Pentachlorobenzene at 48.3 % with criteria of (70-130), Pentachloronitrobenzene(PCNB) at 55.2 % with criteria of (70-130), Phenacetin at 58.6 % with criteria of (70-130), *p*-Phenylenediamine at 62.1 % with criteria of (70-130), Pronamide at 55.2 % with criteria of (70-130), Safrole at 58.6 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 731 % with criteria of (70-130).

SD - TFS-SD-04 MSD was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 33.3 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 40 % with criteria of (70-130), 1,2,4-Trichlorobenzene at 36.7 % with criteria of (45-110), 1,2-Dichlorobenzene at 36.7 % with criteria of (45-95), 1,3,5-Trinitrobenzene at 22.7 % with criteria of (70-130), 1,3-Dichlorobenzene at 33 % with criteria of (40-100), 1,3-Dinitrobenzene at 50 % with criteria of (70-130), 1,4-Dichlorobenzene at 33.3 % with criteria of (35-105), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 46.7 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 36.7 % with criteria of (70-130), 2,4,5-Trichlorophenol at 40 % with criteria of (50-110), 2,4,6-Trichlorophenol at 40 % with criteria of (45-110), 2,4-Dichlorophenol at 40 % with criteria of (45-110), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,4-Dinitrotoluene at 40 % with criteria of (50-115), 2,6-Dichlorophenol at 46.7 % with criteria of (70-130), 2,6-

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Dinitrotoluene at 40 % with criteria of (50-110), 2-Acetylaminofluorene at 36.7 % with criteria of (70-130), 2-Chloronaphthalene at 40 % with criteria of (45-105), 2-Chlorophenol at 40 % with criteria of (45-105), 2-Naphthylamine at 30.7 % with criteria of (70-130), 2-Picoline at 36.7 % with criteria of (70-130), 3-Methylcholanthrene at 36.7 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 16 % with criteria of (30-135), 4-Aminobiphenyl at 40 % with criteria of (70-130), 4-Bromophenylphenylether at 36.7 % with criteria of (45-115), 4-Chloro-3-methylphenol at 40 % with criteria of (45-115), 4-Chlorophenylphenylether at 33.3 % with criteria of (45-110), 4-Nitroquinoline-1-oxide at 13 % with criteria of (70-130), 5-Nitro-o-toluidine at 43.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 33.3 % with criteria of (56-122), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Acetophenone at 45.8 % with criteria of (70-130), Aniline at 36.7 % with criteria of (38-111), Aramite at 33.3 % with criteria of (70-130), Bis(2-chloroethoxy)methane at 43.3 % with criteria of (45-110), Bis(2-ethylhexyl)phthalate at 36.7 % with criteria of (45-125), Butylbenzylphthalate at 40 % with criteria of (50-125), Chlorobenzilate at 33.3 % with criteria of (70-130), Diallylate (Avadex) at 33.3 % with criteria of (70-130), Dibenzofuran at 40 % with criteria of (50-105), Diethylphthalate at 43.3 % with criteria of (50-115), Dimethylphthalate at 43.3 % with criteria of (50-110), Di-n-butylphthalate at 33.3 % with criteria of (55-110), Di-n-octylphthalate at 36.7 % with criteria of (40-130), Dinoseb at 40 % with criteria of (70-130), Ethyl methanesulfonate at 46.7 % with criteria of (70-130), Hexachlorobenzene at 36.7 % with criteria of (45-120), Hexachlorobutadiene at 36.7 % with criteria of (40-115), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloroethane at 31.3 % with criteria of (35-110), Hexachloropropene at 13.7 % with criteria of (70-130), Isodrin at 36.7 % with criteria of (70-130), Isosafrole at 40 % with criteria of (70-130), Kepone at 20.7 % with criteria of (70-130), Methylmethanesulfonate at 31 % with criteria of (70-130), N-Nitrosodibutylamine at 46.7 % with criteria of (70-130), N-Nitrosodiethylamine at 43.3 % with criteria of (70-130), N-Nitrosodiphenylamine at 43.3 % with criteria of (50-115), N-Nitrosomethylethylamine at 40 % with criteria of (70-130), N-Nitrosomorpholine at 46.7 % with criteria of (70-130), N-Nitrosopiperidine at 46.7 % with criteria of (70-130), N-Nitrosopyrrolidine at 46.7 % with criteria of (70-130), o-Toluidine at 36.7 % with criteria of (70-130), p-Dimethylaminoazobenzene at 36.7 % with criteria of (70-130), Pentachlorobenzene at 36.7 % with criteria of (70-130), Pentachloroethane at 28 % with criteria of (30-130), Pentachloronitrobenzene(PCNB) at 43.3 % with criteria of (70-130), Pentachlorophenol at 21.3 % with criteria of (25-120), Phenacetin at 46.7 % with criteria of (70-130), p-Phenylenediamine at 46.7 % with criteria of (70-130), Pronamide at 43.3 % with criteria of (70-130), Safrole at 46.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 253 % with criteria of (70-130). The following analytes exceeded RPD criteria: 0,0,0-Triethylphosphorothioate at 33.3 % with criteria of (30), 1,2,4-Trichlorobenzene at 30.8 % with criteria of (30), 1,2-Dichlorobenzene at 30.8 % with criteria of (30), 1,3-Dichlorobenzene at 34.3 % with criteria of (30), 1,4-Dichlorobenzene at

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33.3 % with criteria of (30), 2,2'-Oxybis(1-chloropropane) at 30.8 % with criteria of (30), 2,4,5-Trichlorophenol at 34.5 % with criteria of (30), 2-Chlorophenol at 34.5 % with criteria of (30), 2-Nitrophenol at 34.5 % with criteria of (30), 3,3'-Dichlorobenzidine at 33.3 % with criteria of (30), 4,6-Dinitro-2-methylphenol at 33 % with criteria of (30), 4-Bromophenyl-phenylether at 30.8 % with criteria of (30), 4-Chloro-3-methylphenol at 34.5 % with criteria of (30), 4-Chloroaniline at 32.3 % with criteria of (30), 4-Chlorophenyl-phenylether at 33.3 % with criteria of (30), 4-Methylphenol at 37.5 % with criteria of (30), 4-Nitrophenol at 37 % with criteria of (30), 4-Nitroquinoline-1-oxide at 60.7 % with criteria of (30), a,a-Dimethylphenethylamine at 200 % with criteria of (30), Aniline at 30.8 % with criteria of (30), Di-n-butylphthalate at 33.3 % with criteria of (30), Hexachlorobutadiene at 30.8 % with criteria of (30), Hexachloroethane at 39.3 % with criteria of (30), Hexachloropropene at 30.9 % with criteria of (30), Methapyriline at 94.4 % with criteria of (30), N-Nitrosodimethylamine at 32.3 % with criteria of (30), N-Nitroso-di-n-propylamine at 30.3 % with criteria of (30), Pentachlorophenol at 68 % with criteria of (30), Pyridine at 37 % with criteria of (30).

MS - TFS-SD-04 MSRE1 was analyzed with the soil samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 50 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 50 % with criteria of (70-130), 1,3,5-Trinitrobenzene at 33.3 % with criteria of (70-130), 1,4-Naphthoquinone at 2.9 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 60 % with criteria of (70-130), 2,4-Dinitrophenol at 9.2 % with criteria of (15-130), 2,6-Dichlorophenol at 66.7 % with criteria of (70-130), 2-Acetylaminofluorene at 53.3 % with criteria of (70-130), 2-Naphthylamine at 60 % with criteria of (70-130), 2-Picoline at 46.7 % with criteria of (70-130), 3-Methylcholanthrene at 50 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 26.7 % with criteria of (30-135), 4-Nitroquinoline-1-oxide at 26.7 % with criteria of (70-130), 5-Nitro-*o*-toluidine at 63.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 50 % with criteria of (56-122), a,a-Dimethylphenethylamine at 50 % with criteria of (70-130), Acetophenone at 62.7 % with criteria of (70-130), Aramite at 23 % with criteria of (70-130), Chlorobenzilate at 46.7 % with criteria of (70-130), Di-*n*-butylphthalate at 46.7 % with criteria of (55-110), Dinoseb at 63.3 % with criteria of (70-130), Ethyl methanesulfonate at 60 % with criteria of (70-130), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 5 % with criteria of (70-130), Isodrin at 53.3 % with criteria of (70-130), Isosafrole at 56.7 % with criteria of (70-130), Kepone at 13.3 % with criteria of (70-130), Methylmethanesulfonate at 43.3 % with criteria of (70-130), N-Nitrosodiethylamine at 53.3 % with criteria of (70-130), N-Nitrosomethylethylamine at 50 % with criteria of (70-130), N-Nitrosomorpholine at 66.7 % with criteria of (70-130), N-Nitrosopiperidine at 60 % with criteria of (70-130), N-Nitrosopyrrolidine at 63.3 % with criteria of (70-130), *o*-Toluidine at 50 % with criteria of

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(70-130), p-Dimethylaminoazobenzene at 46.7 % with criteria of (70-130), Pentachlorobenzene at 53.3 % with criteria of (70-130), Pentachloronitrobenzene(PCNB) at 63.3 % with criteria of (70-130), Phenacetin at 66.7 % with criteria of (70-130), p-Phenylenediamine at 66.7 % with criteria of (70-130), Pronamide at 60 % with criteria of (70-130), Safrole at 66.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyrilone at 1013 % with criteria of (70-130).

SD - TFS-SD-04 MSDRE1 was analyzed with the soil samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 48.3 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 48.3 % with criteria of (70-130), 1,2,4-Trichlorobenzene at 44.8 % with criteria of (45-110), 1,2-Dichlorobenzene at 44.8 % with criteria of (45-95), 1,3,5-Trinitrobenzene at 31 % with criteria of (70-130), 1,3-Dinitrobenzene at 65.5 % with criteria of (70-130), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 65.5 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 51.7 % with criteria of (70-130), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,6-Dichlorophenol at 65.5 % with criteria of (70-130), 2-Acetylaminofluorene at 51.7 % with criteria of (70-130), 2-Naphthylamine at 51.7 % with criteria of (70-130), 2-Picoline at 48.3 % with criteria of (70-130), 3-Methylcholanthrene at 44.8 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 25.5 % with criteria of (30-135), 4-Aminobiphenyl at 58.6 % with criteria of (70-130), 4-Bromophenyl-phenylether at 44.8 % with criteria of (45-115), 4-Chlorophenyl-phenylether at 44.8 % with criteria of (45-110), 4-Nitroquinoline-1-oxide at 23.1 % with criteria of (70-130), 5-Nitro-o-toluidine at 62.1 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 44.8 % with criteria of (56-122), a,a-Dimethylphenethylamine at 62.1 % with criteria of (70-130), Acetophenone at 63.2 % with criteria of (70-130), Aramite at 41.4 % with criteria of (70-130), Chlorobenzilate at 41.4 % with criteria of (70-130), Di-allyl phthalate (Avadex) at 41.4 % with criteria of (70-130), Di-n-butylphthalate at 41.4 % with criteria of (55-110), Dinoseb at 58.6 % with criteria of (70-130), Ethyl methanesulfonate at 62.1 % with criteria of (70-130), Hexachlorobenzene at 44.8 % with criteria of (45-120), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 2.3 % with criteria of (70-130), Isodrin at 44.8 % with criteria of (70-130), Isosafrole at 55.2 % with criteria of (70-130), Kepone at 11.7 % with criteria of (70-130), Methylmethanesulfonate at 44.8 % with criteria of (70-130), N-Nitrosodibutylamine at 65.5 % with criteria of (70-130), N-Nitrosodiethylamine at 55.2 % with criteria of (70-130), N-Nitrosomethylethylamine at 51.7 % with criteria of (70-130), N-Nitrosomorpholine at 69 % with criteria of (70-130), N-Nitrosopiperidine at 62.1 % with criteria of (70-130), N-Nitrosopyrrolidine at 69 % with criteria of (70-130), o-Toluidine at 51.7 % with criteria of (70-130), p-Dimethylaminoazobenzene at 44.8 % with criteria of (70-130), Pentachlorobenzene at 48.3 % with criteria of (70-130), Pentachloronitrobenzene(PCNB) at 58.6 % with criteria of (70-130), Phenacetin at 62.1 % with criteria of (70-130), p-Phenylenediamine at

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65.5 % with criteria of (70-130), Pronamide at 55.2 % with criteria of (70-130), Safrole at 62.1 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 897 % with criteria of (70-130). The following analytes exceeded RPD criteria: 1,4-Naphthoquinone at 200 % with criteria of (30), 2,4-Dinitrophenol at 200 % with criteria of (30), Aramite at 54 % with criteria of (30), Hexachloropropene at 76.5 % with criteria of (30).

MS - TFS-SW-03 MS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), a,a-Dimethylphenethylamine at 40.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 924 % with criteria of (0-90).

SD - TFS-SW-03 MSD was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), a,a-Dimethylphenethylamine at 46.8 % with criteria of (70-130), p-Dimethylaminoazobenzene at 68.9 % with criteria of (70-130) and the following analytes were recovered above criteria: 1-Naphthylamine at 99.5 % with criteria of (38-91), Methapyriline at 1115 % with criteria of (0-90). The following analytes exceeded RPD criteria: 2,4-Dinitrophenol at 69.4 % with criteria of (20), 4,6-Dinitro-2-methylphenol at 35.2 % with criteria of (20), 4-Chloroaniline at 25.5 % with criteria of (20), Aniline at 21 % with criteria of (20), Pyridine at 21.5 % with criteria of (20).

MS - TFS-SW-03 MSRE1 was analyzed with the water samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 2-Acetylaminofluorene at 50.2 % with criteria of (63-103), 2-Naphthylamine at 28.7 % with criteria of (70-130), 3,3'-Dichlorobenzidine at 15.4 % with criteria of (20-110), 4-Aminobiphenyl at 27.5 % with criteria of (49-103), 5-Nitro-o-toluidine at 57.6 % with criteria of (70-130), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Chlorobenzilate at 54.9 % with criteria of (58-101), Isosafrole at 65 % with criteria of (70-130), o-Toluidine at 45.3 % with criteria of (49-97), p-Dimethylaminoazobenzene at 48.5 % with criteria of (70-130).

SD - TFS-SW-03 MSDRE1 was analyzed with the water samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 2-Acetylaminofluorene at 54.4 % with criteria of (63-103), 2-Naphthylamine at 48.5 % with criteria of (70-130), 4-Aminobiphenyl at 44.6 % with criteria of (49-103), 5-Nitro-o-toluidine at 64.5 % with criteria of (70-130), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Isosafrole at 65.9 % with criteria of (70-130), p-Dimethylaminoazobenzene at 55.9 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 105 % with criteria of (0-90). The following analytes exceeded RPD criteria: 1-Naphthylamine at 36.7 % with criteria of (20), 2-Naphthylamine at 51.4 % with criteria of (20), 3,3'-Dichlorobenzidine at 93.9 % with criteria of

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(20), 4-Aminobiphenyl at 47.6 % with criteria of (20), 4-Chloroaniline at 31.8 % with criteria of (20), Aniline at 29.7 % with criteria of (20), Methapyriline at 98.4 % with criteria of (20), o-Toluidine at 34.8 % with criteria of (20).

None of the compounds that failed LCS recoveries were detected in any samples. Samples coded accordingly.

D. Internal Standards:

All acceptance criteria were met.

E. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:
05/07/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.0
Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Method: 8270

EPA Sample No	Lab Sample ID
TFS-SD-01	350572401
TFS-SD-01RE1	350572401RE1
TFS-SW-01	350572402
TFS-SW-01RE1	350572402RE1
TFS-SD-02	350572403
TFS-SD-02RE1	350572403RE1
TFS-SD-03	350572404
TFS-SD-03RE1	350572404RE1
TFS-SW-02	350572405
TFS-SW-02RE1	350572405RE1
TFS-SW-03	350572406
TFS-SW-03RE1	350572406RE1
TFS-SD-04	350572407
TFS-SD-04RE1	350572407RE1
TFS-SW-04	350572408
TFS-SW-04RE1	350572408RE1
TFS-SD-FD	350572409
TFS-SD-FDRE1	350572409RE1
TFS-SW-FD	350572410
TFS-SW-FDRE1	350572410RE1
TFS-SD-EB	350572415
TFS-SD-EBRE1	350572415RE1

8270 Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.82	U	0.41	0.82	0.82
62-75-9	N-Nitrosodimethylamine	0.22	U	0.11	0.22	0.31
62-53-3	Aniline	0.24	U	0.12	0.24	0.42
111-44-4	Bis(2-chloroethyl)ether	0.21	U	0.1	0.21	0.31
108-95-2	Phenol	0.2	U	0.1	0.2	0.77
95-57-8	2-Chlorophenol	0.21	U	0.11	0.21	0.42
541-73-1	1,3-Dichlorobenzene	0.19	U	0.094	0.19	0.42
106-46-7	1,4-Dichlorobenzene	0.19	U	0.097	0.19	0.42
95-50-1	1,2-Dichlorobenzene	0.18	U	0.088	0.18	0.42
100-51-6	Benzyl alcohol	0.28	U	0.14	0.28	1
108-60-1	2,2'-Oxybis(1-chloropropane)	0.68	U	0.34	0.68	0.68
95-48-7	2-Methylphenol	0.3	U	0.15	0.3	0.41
67-72-1	Hexachloroethane	0.15	U	0.077	0.15	0.42
621-64-7	N-Nitroso-di-n-propylamine	0.19	U	0.094	0.19	0.31
106-44-5	4-Methylphenol	0.18	U	0.091	0.18	0.42
98-95-3	Nitrobenzene	0.18	U	0.092	0.18	0.31
78-59-1	Isophorone	0.18	U	0.091	0.18	0.42
88-75-5	2-Nitrophenol	0.22	U	0.11	0.22	0.42
105-67-9	2,4-Dimethylphenol	0.18	U	0.088	0.18	0.41
111-91-1	Bis(2-chloroethoxy)methane	0.18	U	0.088	0.18	0.41
120-83-2	2,4-Dichlorophenol	0.23	U	0.12	0.23	0.31
120-82-1	1,2,4-Trichlorobenzene	0.18	U	0.089	0.18	0.42
106-47-8	4-Chloroaniline	0.19	U	0.097	0.19	0.42
87-68-3	Hexachlorobutadiene	0.18	U	0.089	0.18	0.42
59-50-7	4-Chloro-3-methylphenol	0.17	U	0.086	0.17	0.42
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.062	0.12	1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.21	U	0.1	0.21	0.41
95-95-4	2,4,5-Trichlorophenol	0.23	U	0.11	0.23	0.41
91-58-7	2-Chloronaphthalene	0.2	U	0.1	0.2	0.42
88-74-4	2-Nitroaniline	0.18	U	0.088	0.18	0.42
131-11-3	Dimethylphthalate	0.18	U	0.091	0.18	0.42
606-20-2	2,6-Dinitrotoluene	0.15	U	0.077	0.15	0.31
99-09-2	3-Nitroaniline	0.25	U	0.12	0.25	0.31
51-28-5	2,4-Dinitrophenol	0.68	U	0.34	0.68	1.5
132-64-9	Dibenzofuran	0.17	U	0.083	0.17	0.42
121-14-2	2,4-Dinitrotoluene	0.15	U	0.076	0.15	0.31
100-02-7	4-Nitrophenol	0.16	U	0.082	0.16	0.46
7005-72-3	4-Chlorophenyl-phenylether	0.16	U	0.079	0.16	0.42
84-66-2	Diethylphthalate	0.16	U	0.079	0.16	0.42
100-01-6	4-Nitroaniline	0.27	U	0.14	0.27	0.31
534-52-1	4,6-Dinitro-2-methylphenol	0.82	U	0.41	0.82	0.82
86-30-6	N-Nitrosodiphenylamine	0.19	U	0.097	0.19	0.41
101-55-3	4-Bromophenyl-phenylether	0.15	U	0.076	0.15	0.42
118-74-1	Hexachlorobenzene	0.16	U	0.082	0.16	0.41
87-86-5	Pentachlorophenol	0.41	U	0.2	0.41	0.77
84-74-2	Di-n-butylphthalate	0.14	U	0.068	0.14	0.42
85-68-7	Butylbenzylphthalate	0.19	U	0.097	0.19	0.42
91-94-1	3,3'-Dichlorobenzidine	0.18	U	0.091	0.18	0.31
117-81-7	Bis(2-ethylhexyl)phthalate	0.26	U	0.13	0.26	0.31
117-84-0	Di-n-octylphthalate	0.18	U	0.089	0.18	0.42
109-06-8	2-Picoline	0.15	U	0.077	0.15	0.42
10595-95-6	N-Nitrosomethylethylamine	0.17	U	0.083	0.17	0.31

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.16	U	0.082	0.16	0.77
66-27-3	Methylmethanesulfonate	0.18	U	0.088	0.18	0.42
62-50-0	Ethyl methanesulfonate	0.14	U	0.071	0.14	0.42
76-01-7	Pentachloroethane	0.14	U	0.072	0.14	0.42
930-55-2	N-Nitrosopyrrolidine	0.15	U	0.076	0.15	0.42
98-86-2	Acetophenone	0.31	U	0.15	0.31	0.42
59-89-2	N-Nitrosomorpholine	0.2	U	0.099	0.2	0.42
95-53-4	o-Toluidine	0.22	U	0.11	0.22	0.42
122-09-8	a,a-Dimethylphenethylamine	1.4	U	0.68	1.4	2.1
87-65-0	2,6-Dichlorophenol	0.21	U	0.1	0.21	0.31
1888-71-7	Hexachloropropene	0.14	U	0.069	0.14	0.42
924-16-3	N-Nitrosodibutylamine	0.18	U	0.088	0.18	0.31
120-58-1	Isosafrole	0.18	U	0.088	0.18	0.42
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.072	0.14	0.42
94-59-7	Safrole	0.2	U	0.1	0.2	0.42
130-15-4	1,4-Naphthoquinone	0.13	U	0.066	0.13	0.42
99-65-0	1,3-Dinitrobenzene	0.15	U	0.077	0.15	0.31
608-93-5	Pentachlorobenzene	0.15	U	0.077	0.15	0.42
134-32-7	1-Naphthylamine	0.2	U	0.1	0.2	0.42
91-59-8	2-Naphthylamine	0.82	U	0.41	0.82	0.82
58-90-2	2,3,4,6-Tetrachlorophenol	0.22	U	0.11	0.22	0.42
99-55-8	5-Nitro-o-toluidine	0.14	U	0.072	0.14	0.42
106-50-3	p-Phenylenediamine	0.18	U	0.089	0.18	0.42
62-44-2	Phenacetin	0.18	U	0.089	0.18	0.42
92-67-1	4-Aminobiphenyl	0.82	U	0.41	0.82	1
23950-58-5	Pronamide	0.11	U	0.057	0.11	0.42

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 72401.D

Sample wt/vol: 25.83 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1537

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.14	U	0.071	0.14	0.41
88-85-7	Dinoseb	0.41	U	0.2	0.41	0.42
56-57-5	4-Nitroquinoline-1-oxide	0.31	U	0.15	0.31	2
91-80-5	Methapyriline	0.2	U	0.1	0.2	0.42
140-57-8	Aramite	0.62	U	0.31	0.62	0.62
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.072	0.14	0.42
53-96-3	2-Acetylaminofluorene	0.19	U	0.094	0.19	0.42
57-97-6	7,12-Dimethylbenz(a)anthracene	0.11	U	0.054	0.11	0.41
56-49-5	3-Methylcholanthrene	0.12	U	0.06	0.12	0.41
100-75-4	N-Nitrosopiperidine	0.13	U	0.066	0.13	0.42
99-35-4	1,3,5-Trinitrobenzene	0.62	U	0.31	0.62	0.62
2303-16-4	Diallate (Avadex)	0.23	U	0.11	0.23	0.41
465-73-6	Isodrin	0.15	U	0.076	0.15	0.42
510-15-6	Chlorobenzilate	0.086	U	0.043	0.086	0.41
143-50-0	Kepone	0.16	U	0.08	0.16	1.5
126-68-1	0,0,0-Triethylphosphorothioate	0.15	U	0.074	0.15	0.42

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.83	U	0.42	0.83	0.83
62-75-9	N-Nitrosodimethylamine	0.22	U	0.11	0.22	0.31
62-53-3	Aniline	0.24	U	0.12	0.24	0.42
111-44-4	Bis(2-chloroethyl)ether	0.21	U	0.1	0.21	0.31
108-95-2	Phenol	0.2	U	0.1	0.2	0.78
95-57-8	2-Chlorophenol	0.22	U	0.11	0.22	0.42
541-73-1	1,3-Dichlorobenzene	0.19	U	0.095	0.19	0.42
106-46-7	1,4-Dichlorobenzene	0.2	U	0.098	0.2	0.42
95-50-1	1,2-Dichlorobenzene	0.18	U	0.089	0.18	0.42
100-51-6	Benzyl alcohol	0.29	U	0.14	0.29	1
108-60-1	2,2'-Oxybis(1-chloropropane)	0.69	U	0.34	0.69	0.69
95-48-7	2-Methylphenol	0.3	U	0.15	0.3	0.42
67-72-1	Hexachloroethane	0.16	U	0.078	0.16	0.42
621-64-7	N-Nitroso-di-n-propylamine	0.19	U	0.095	0.19	0.31
106-44-5	4-Methylphenol	0.18	U	0.092	0.18	0.42
98-95-3	Nitrobenzene	0.19	U	0.094	0.19	0.31
78-59-1	Isophorone	0.18	U	0.092	0.18	0.42
88-75-5	2-Nitrophenol	0.22	U	0.11	0.22	0.42
105-67-9	2,4-Dimethylphenol	0.18	U	0.089	0.18	0.42
111-91-1	Bis(2-chloroethoxy)methane	0.18	U	0.089	0.18	0.42
120-83-2	2,4-Dichlorophenol	0.23	U	0.12	0.23	0.31
120-82-1	1,2,4-Trichlorobenzene	0.18	U	0.09	0.18	0.42
106-47-8	4-Chloroaniline	0.2	U	0.098	0.2	0.42
87-68-3	Hexachlorobutadiene	0.18	U	0.09	0.18	0.42
59-50-7	4-Chloro-3-methylphenol	0.17	U	0.087	0.17	0.42
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.062	0.12	1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.21	U	0.11	0.21	0.42
95-95-4	2,4,5-Trichlorophenol	0.23	U	0.12	0.23	0.42
91-58-7	2-Chloronaphthalene	0.21	U	0.1	0.21	0.42
88-74-4	2-Nitroaniline	0.18	U	0.089	0.18	0.42
131-11-3	Dimethylphthalate	0.18	U	0.092	0.18	0.42
606-20-2	2,6-Dinitrotoluene	0.16	U	0.078	0.16	0.31
99-09-2	3-Nitroaniline	0.25	U	0.12	0.25	0.31
51-28-5	2,4-Dinitrophenol	0.69	U	0.34	0.69	1.6
132-64-9	Dibenzofuran	0.17	U	0.084	0.17	0.42
121-14-2	2,4-Dinitrotoluene	0.15	U	0.076	0.15	0.31
100-02-7	4-Nitrophenol	0.16	U	0.083	0.16	0.47
7005-72-3	4-Chlorophenyl-phenylether	0.16	U	0.08	0.16	0.42
84-66-2	Diethylphthalate	0.16	U	0.08	0.16	0.42
100-01-6	4-Nitroaniline	0.27	U	0.14	0.27	0.31
534-52-1	4,6-Dinitro-2-methylphenol	0.83	U	0.42	0.83	0.83
86-30-6	N-Nitrosodiphenylamine	0.2	U	0.098	0.2	0.42
101-55-3	4-Bromophenyl-phenylether	0.15	U	0.076	0.15	0.42
118-74-1	Hexachlorobenzene	0.16	U	0.083	0.16	0.42
87-86-5	Pentachlorophenol	0.42	U	0.21	0.42	0.78
84-74-2	Di-n-butylphthalate	0.14	U	0.069	0.14	0.42
85-68-7	Butylbenzylphthalate	0.2	U	0.098	0.2	0.42
91-94-1	3,3'-Dichlorobenzidine	0.18	U	0.092	0.18	0.31
117-81-7	Bis(2-ethylhexyl)phthalate	0.26	U	0.13	0.26	0.31
117-84-0	Di-n-octylphthalate	0.18	U	0.09	0.18	0.42
109-06-8	2-Picoline	0.16	U	0.078	0.16	0.42
10595-95-6	N-Nitrosomethylethylamine	0.17	U	0.084	0.17	0.31

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.16	U	0.083	0.16	0.78
66-27-3	Methylmethanesulfonate	0.18	U	0.089	0.18	0.42
62-50-0	Ethyl methanesulfonate	0.14	U	0.072	0.14	0.42
76-01-7	Pentachloroethane	0.15	U	0.073	0.15	0.42
930-55-2	N-Nitrosopyrrolidine	0.15	U	0.076	0.15	0.42
98-86-2	Acetophenone	0.31	U	0.16	0.31	0.42
59-89-2	N-Nitrosomorpholine	0.2	U	0.1	0.2	0.42
95-53-4	o-Toluidine	0.22	U	0.11	0.22	0.42
122-09-8	a,a-Dimethylphenethylamine	1.4	U	0.69	1.4	2.1
87-65-0	2,6-Dichlorophenol	0.21	U	0.1	0.21	0.31
1888-71-7	Hexachloropropene	0.14	U	0.07	0.14	0.42
924-16-3	N-Nitrosodibutylamine	0.18	U	0.089	0.18	0.31
120-58-1	Isosafrole	0.18	U	0.089	0.18	0.42
95-94-3	1,2,4,5-Tetrachlorobenzene	0.15	U	0.073	0.15	0.42
94-59-7	Safrole	0.21	U	0.1	0.21	0.42
130-15-4	1,4-Naphthoquinone	0.13	U	0.067	0.13	0.42
99-65-0	1,3-Dinitrobenzene	0.16	U	0.078	0.16	0.31
608-93-5	Pentachlorobenzene	0.16	U	0.078	0.16	0.42
134-32-7	1-Naphthylamine	0.21	U	0.1	0.21	0.42
91-59-8	2-Naphthylamine	0.83	U	0.42	0.83	0.83
58-90-2	2,3,4,6-Tetrachlorophenol	0.22	U	0.11	0.22	0.42
99-55-8	5-Nitro-o-toluidine	0.15	U	0.073	0.15	0.42
106-50-3	p-Phenylenediamine	0.18	U	0.09	0.18	0.42
62-44-2	Phenacetin	0.18	U	0.09	0.18	0.42
92-67-1	4-Aminobiphenyl	0.83	U	0.42	0.83	1
23950-58-5	Pronamide	0.12	U	0.058	0.12	0.42

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401RE1 Lab File ID 72401.D

Sample wt/vol: 25.52 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1505

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.14	U	0.072	0.14	0.42
88-85-7	Dinoseb	0.42	U	0.21	0.42	0.42
56-57-5	4-Nitroquinoline-1-oxide	0.31	U	0.16	0.31	2.1
91-80-5	Methapyriline	0.21	U	0.1	0.21	0.42
140-57-8	Aramite	0.62	U	0.31	0.62	0.62
60-11-7	p-Dimethylaminoazobenzene	0.15	U	0.073	0.15	0.42
53-96-3	2-Acetylaminofluorene	0.19	U	0.095	0.19	0.42
57-97-6	7,12-Dimethylbenz(a)anthracene	0.11	U	0.055	0.11	0.42
56-49-5	3-Methylcholanthrene	0.12	U	0.061	0.12	0.42
100-75-4	N-Nitrosopiperidine	0.13	U	0.067	0.13	0.42
99-35-4	1,3,5-Trinitrobenzene	0.62	U	0.31	0.62	0.62
2303-16-4	Diallate (Avadex)	0.23	U	0.12	0.23	0.42
465-73-6	Isodrin	0.15	U	0.076	0.15	0.42
510-15-6	Chlorobenzilate	0.087	U	0.044	0.087	0.42
143-50-0	Kepone	0.16	U	0.081	0.16	1.6
126-68-1	0,0,0-Triethylphosphorothioate	0.15	U	0.075	0.15	0.42

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1030

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. TFS-SW-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-01RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402RE1 Lab File ID 72402.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1152

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.94	U	0.47	0.94	0.94
62-75-9	N-Nitrosodimethylamine	0.25	U	0.12	0.25	0.35
62-53-3	Aniline	0.27	U	0.14	0.27	0.48
111-44-4	Bis(2-chloroethyl)ether	0.24	U	0.12	0.24	0.35
108-95-2	Phenol	0.23	U	0.11	0.23	0.88
95-57-8	2-Chlorophenol	0.24	U	0.12	0.24	0.48
541-73-1	1,3-Dichlorobenzene	0.22	U	0.11	0.22	0.48
106-46-7	1,4-Dichlorobenzene	0.22	U	0.11	0.22	0.48
95-50-1	1,2-Dichlorobenzene	0.2	U	0.1	0.2	0.48
100-51-6	Benzyl alcohol	0.32	U	0.16	0.32	1.2
108-60-1	2,2'-Oxybis(1-chloropropane)	0.78	U	0.39	0.78	0.78
95-48-7	2-Methylphenol	0.34	U	0.17	0.34	0.47
67-72-1	Hexachloroethane	0.18	U	0.088	0.18	0.48
621-64-7	N-Nitroso-di-n-propylamine	0.22	U	0.11	0.22	0.35
106-44-5	4-Methylphenol	0.21	U	0.1	0.21	0.48
98-95-3	Nitrobenzene	0.21	U	0.11	0.21	0.35
78-59-1	Isophorone	0.21	U	0.1	0.21	0.48
88-75-5	2-Nitrophenol	0.25	U	0.13	0.25	0.48
105-67-9	2,4-Dimethylphenol	0.2	U	0.1	0.2	0.47
111-91-1	Bis(2-chloroethoxy)methane	0.2	U	0.1	0.2	0.47
120-83-2	2,4-Dichlorophenol	0.26	U	0.13	0.26	0.35
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.1	0.2	0.48
106-47-8	4-Chloroaniline	0.22	U	0.11	0.22	0.48
87-68-3	Hexachlorobutadiene	0.2	U	0.1	0.2	0.48
59-50-7	4-Chloro-3-methylphenol	0.2	U	0.099	0.2	0.48
77-47-4	Hexachlorocyclopentadiene	0.14	U	0.071	0.14	1.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.24	U	0.12	0.24	0.47
95-95-4	2,4,5-Trichlorophenol	0.26	U	0.13	0.26	0.47
91-58-7	2-Chloronaphthalene	0.24	U	0.12	0.24	0.48
88-74-4	2-Nitroaniline	0.2	U	0.1	0.2	0.48
131-11-3	Dimethylphthalate	0.21	U	0.1	0.21	0.48
606-20-2	2,6-Dinitrotoluene	0.18	U	0.088	0.18	0.35
99-09-2	3-Nitroaniline	0.28	U	0.14	0.28	0.35
51-28-5	2,4-Dinitrophenol	0.78	U	0.39	0.78	1.8
132-64-9	Dibenzofuran	0.19	U	0.095	0.19	0.48
121-14-2	2,4-Dinitrotoluene	0.17	U	0.087	0.17	0.35
100-02-7	4-Nitrophenol	0.19	U	0.094	0.19	0.53
7005-72-3	4-Chlorophenyl-phenylether	0.18	U	0.09	0.18	0.48
84-66-2	Diethylphthalate	0.18	U	0.09	0.18	0.48
100-01-6	4-Nitroaniline	0.31	U	0.16	0.31	0.35
534-52-1	4,6-Dinitro-2-methylphenol	0.94	U	0.47	0.94	0.94
86-30-6	N-Nitrosodiphenylamine	0.22	U	0.11	0.22	0.47
101-55-3	4-Bromophenyl-phenylether	0.17	U	0.087	0.17	0.48
118-74-1	Hexachlorobenzene	0.19	U	0.094	0.19	0.47
87-86-5	Pentachlorophenol	0.47	U	0.24	0.47	0.88
84-74-2	Di-n-butylphthalate	0.16	U	0.078	0.16	0.48
85-68-7	Butylbenzylphthalate	0.22	U	0.11	0.22	0.48
91-94-1	3,3'-Dichlorobenzidine	0.21	U	0.1	0.21	0.35
117-81-7	Bis(2-ethylhexyl)phthalate	0.29	U	0.15	0.29	0.35
117-84-0	Di-n-octylphthalate	0.2	U	0.1	0.2	0.48
109-06-8	2-Picoline	0.18	U	0.088	0.18	0.48
10595-95-6	N-Nitrosomethylethylamine	0.19	U	0.095	0.19	0.35

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.19	U	0.094	0.19	0.88
66-27-3	Methylmethanesulfonate	0.2	U	0.1	0.2	0.48
62-50-0	Ethyl methanesulfonate	0.16	U	0.081	0.16	0.48
76-01-7	Pentachloroethane	0.17	U	0.083	0.17	0.48
930-55-2	N-Nitrosopyrrolidine	0.17	U	0.087	0.17	0.48
98-86-2	Acetophenone	0.35	U	0.18	0.35	0.48
59-89-2	N-Nitrosomorpholine	0.23	U	0.11	0.23	0.48
95-53-4	o-Toluidine	0.25	U	0.12	0.25	0.48
122-09-8	a,a-Dimethylphenethylamine	1.6	U	0.78	1.6	2.4
87-65-0	2,6-Dichlorophenol	0.24	U	0.12	0.24	0.35
1888-71-7	Hexachloropropene	0.16	U	0.08	0.16	0.48
924-16-3	N-Nitrosodibutylamine	0.2	U	0.1	0.2	0.35
120-58-1	Isosafrole	0.2	U	0.1	0.2	0.48
95-94-3	1,2,4,5-Tetrachlorobenzene	0.17	U	0.083	0.17	0.48
94-59-7	Safrole	0.24	U	0.12	0.24	0.48
130-15-4	1,4-Naphthoquinone	0.15	U	0.076	0.15	0.48
99-65-0	1,3-Dinitrobenzene	0.18	U	0.088	0.18	0.35
608-93-5	Pentachlorobenzene	0.18	U	0.088	0.18	0.48
134-32-7	1-Naphthylamine	0.24	U	0.12	0.24	0.48
91-59-8	2-Naphthylamine	0.94	U	0.47	0.94	0.94
58-90-2	2,3,4,6-Tetrachlorophenol	0.25	U	0.12	0.25	0.48
99-55-8	5-Nitro-o-toluidine	0.17	U	0.083	0.17	0.48
106-50-3	p-Phenylenediamine	0.2	U	0.1	0.2	0.48
62-44-2	Phenacetin	0.2	U	0.1	0.2	0.48
92-67-1	4-Aminobiphenyl	0.94	U	0.47	0.94	1.2
23950-58-5	Pronamide	0.13	U	0.065	0.13	0.48

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 72403.D

Sample wt/vol: 25.94 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1822

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.16	U	0.081	0.16	0.47
88-85-7	Dinoseb	0.47	U	0.24	0.47	0.48
56-57-5	4-Nitroquinoline-1-oxide	0.35	U	0.18	0.35	2.4
91-80-5	Methapyriline	0.23	U	0.12	0.23	0.48
140-57-8	Aramite	0.71	U	0.35	0.71	0.71
60-11-7	p-Dimethylaminoazobenzene	0.17	U	0.083	0.17	0.48
53-96-3	2-Acetylaminofluorene	0.22	U	0.11	0.22	0.48
57-97-6	7,12-Dimethylbenz(a)anthracene	0.12	U	0.062	0.12	0.47
56-49-5	3-Methylcholanthrene	0.14	U	0.069	0.14	0.47
100-75-4	N-Nitrosopiperidine	0.15	U	0.076	0.15	0.48
99-35-4	1,3,5-Trinitrobenzene	0.71	U	0.35	0.71	0.71
2303-16-4	Diallate (Avadex)	0.26	U	0.13	0.26	0.47
465-73-6	Isodrin	0.17	U	0.087	0.17	0.48
510-15-6	Chlorobenzilate	0.099	U	0.05	0.099	0.47
143-50-0	Kepone	0.18	U	0.092	0.18	1.8
126-68-1	0,0,0-Triethylphosphorothioate	0.17	U	0.085	0.17	0.48

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.97	U	0.49	0.97	0.97
62-75-9	N-Nitrosodimethylamine	0.26	U	0.13	0.26	0.36
62-53-3	Aniline	0.28	U	0.14	0.28	0.49
111-44-4	Bis(2-chloroethyl)ether	0.24	U	0.12	0.24	0.36
108-95-2	Phenol	0.24	U	0.12	0.24	0.91
95-57-8	2-Chlorophenol	0.25	U	0.13	0.25	0.49
541-73-1	1,3-Dichlorobenzene	0.22	U	0.11	0.22	0.49
106-46-7	1,4-Dichlorobenzene	0.23	U	0.12	0.23	0.49
95-50-1	1,2-Dichlorobenzene	0.21	U	0.1	0.21	0.49
100-51-6	Benzyl alcohol	0.34	U	0.17	0.34	1.2
108-60-1	2,2'-Oxybis(1-chloropropane)	0.8	U	0.4	0.8	0.8
95-48-7	2-Methylphenol	0.35	U	0.18	0.35	0.49
67-72-1	Hexachloroethane	0.18	U	0.091	0.18	0.49
621-64-7	N-Nitroso-di-n-propylamine	0.22	U	0.11	0.22	0.36
106-44-5	4-Methylphenol	0.22	U	0.11	0.22	0.49
98-95-3	Nitrobenzene	0.22	U	0.11	0.22	0.36
78-59-1	Isophorone	0.22	U	0.11	0.22	0.49
88-75-5	2-Nitrophenol	0.26	U	0.13	0.26	0.49
105-67-9	2,4-Dimethylphenol	0.21	U	0.1	0.21	0.49
111-91-1	Bis(2-chloroethoxy)methane	0.21	U	0.1	0.21	0.49
120-83-2	2,4-Dichlorophenol	0.27	U	0.14	0.27	0.36
120-82-1	1,2,4-Trichlorobenzene	0.21	U	0.11	0.21	0.49
106-47-8	4-Chloroaniline	0.23	U	0.12	0.23	0.49
87-68-3	Hexachlorobutadiene	0.21	U	0.11	0.21	0.49
59-50-7	4-Chloro-3-methylphenol	0.2	U	0.1	0.2	0.49
77-47-4	Hexachlorocyclopentadiene	0.15	U	0.073	0.15	1.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.25	U	0.12	0.25	0.49
95-95-4	2,4,5-Trichlorophenol	0.27	U	0.14	0.27	0.49
91-58-7	2-Chloronaphthalene	0.24	U	0.12	0.24	0.49
88-74-4	2-Nitroaniline	0.21	U	0.1	0.21	0.49
131-11-3	Dimethylphthalate	0.22	U	0.11	0.22	0.49
606-20-2	2,6-Dinitrotoluene	0.18	U	0.091	0.18	0.36
99-09-2	3-Nitroaniline	0.29	U	0.15	0.29	0.36
51-28-5	2,4-Dinitrophenol	0.8	U	0.4	0.8	1.8
132-64-9	Dibenzofuran	0.2	U	0.099	0.2	0.49
121-14-2	2,4-Dinitrotoluene	0.18	U	0.09	0.18	0.36
100-02-7	4-Nitrophenol	0.19	U	0.097	0.19	0.55
7005-72-3	4-Chlorophenyl-phenylether	0.19	U	0.093	0.19	0.49
84-66-2	Diethylphthalate	0.19	U	0.093	0.19	0.49
100-01-6	4-Nitroaniline	0.32	U	0.16	0.32	0.36
534-52-1	4,6-Dinitro-2-methylphenol	0.97	U	0.49	0.97	0.97
86-30-6	N-Nitrosodiphenylamine	0.23	U	0.12	0.23	0.49
101-55-3	4-Bromophenyl-phenylether	0.18	U	0.09	0.18	0.49
118-74-1	Hexachlorobenzene	0.19	U	0.097	0.19	0.49
87-86-5	Pentachlorophenol	0.49	U	0.24	0.49	0.91
84-74-2	Di-n-butylphthalate	0.16	U	0.08	0.16	0.49
85-68-7	Butylbenzylphthalate	0.23	U	0.12	0.23	0.49
91-94-1	3,3'-Dichlorobenzidine	0.22	U	0.11	0.22	0.36
117-81-7	Bis(2-ethylhexyl)phthalate	0.3	U	0.15	0.3	0.36
117-84-0	Di-n-octylphthalate	0.21	U	0.11	0.21	0.49
109-06-8	2-Picoline	0.18	U	0.091	0.18	0.49
10595-95-6	N-Nitrosomethylethylamine	0.2	U	0.099	0.2	0.36

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.19	U	0.097	0.19	0.91
66-27-3	Methylmethanesulfonate	0.21	U	0.1	0.21	0.49
62-50-0	Ethyl methanesulfonate	0.17	U	0.084	0.17	0.49
76-01-7	Pentachloroethane	0.17	U	0.086	0.17	0.49
930-55-2	N-Nitrosopyrrolidine	0.18	U	0.09	0.18	0.49
98-86-2	Acetophenone	0.36	U	0.18	0.36	0.49
59-89-2	N-Nitrosomorpholine	0.23	U	0.12	0.23	0.49
95-53-4	o-Toluidine	0.26	U	0.13	0.26	0.49
122-09-8	a,a-Dimethylphenethylamine	1.6	U	0.8	1.6	2.4
87-65-0	2,6-Dichlorophenol	0.24	U	0.12	0.24	0.36
1888-71-7	Hexachloropropene	0.16	U	0.082	0.16	0.49
924-16-3	N-Nitrosodibutylamine	0.21	U	0.1	0.21	0.36
120-58-1	Isosafrole	0.21	U	0.1	0.21	0.49
95-94-3	1,2,4,5-Tetrachlorobenzene	0.17	U	0.086	0.17	0.49
94-59-7	Safrole	0.24	U	0.12	0.24	0.49
130-15-4	1,4-Naphthoquinone	0.16	U	0.079	0.16	0.49
99-65-0	1,3-Dinitrobenzene	0.18	U	0.091	0.18	0.36
608-93-5	Pentachlorobenzene	0.18	U	0.091	0.18	0.49
134-32-7	1-Naphthylamine	0.24	U	0.12	0.24	0.49
91-59-8	2-Naphthylamine	0.97	U	0.49	0.97	0.97
58-90-2	2,3,4,6-Tetrachlorophenol	0.26	U	0.13	0.26	0.49
99-55-8	5-Nitro-o-toluidine	0.17	U	0.086	0.17	0.49
106-50-3	p-Phenylenediamine	0.21	U	0.11	0.21	0.49
62-44-2	Phenacetin	0.21	U	0.11	0.21	0.49
92-67-1	4-Aminobiphenyl	0.98	U	0.49	0.98	1.2
23950-58-5	Pronamide	0.14	U	0.068	0.14	0.49

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-02RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403RE1 Lab File ID 72403.D

Sample wt/vol: 25.08 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1529

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.17	U	0.084	0.17	0.49
88-85-7	Dinoseb	0.49	U	0.24	0.49	0.49
56-57-5	4-Nitroquinoline-1-oxide	0.36	U	0.18	0.36	2.4
91-80-5	Methapyriline	0.24	U	0.12	0.24	0.49
140-57-8	Aramite	0.73	U	0.36	0.73	0.73
60-11-7	p-Dimethylaminoazobenzene	0.17	U	0.086	0.17	0.49
53-96-3	2-Acetylaminofluorene	0.22	U	0.11	0.22	0.49
57-97-6	7,12-Dimethylbenz(a)anthracene	0.13	U	0.064	0.13	0.49
56-49-5	3-Methylcholanthrene	0.14	U	0.071	0.14	0.49
100-75-4	N-Nitrosopiperidine	0.16	U	0.079	0.16	0.49
99-35-4	1,3,5-Trinitrobenzene	0.73	U	0.36	0.73	0.73
2303-16-4	Diallate (Avadex)	0.27	U	0.14	0.27	0.49
465-73-6	Isodrin	0.18	U	0.09	0.18	0.49
510-15-6	Chlorobenzilate	0.1	U	0.051	0.1	0.49
143-50-0	Kepone	0.19	U	0.095	0.19	1.8
126-68-1	0,0,0-Triethylphosphorothioate	0.18	U	0.088	0.18	0.49

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.72	U	0.36	0.72	0.72
62-75-9	N-Nitrosodimethylamine	0.19	U	0.096	0.19	0.27
62-53-3	Aniline	0.21	U	0.1	0.21	0.36
111-44-4	Bis(2-chloroethyl)ether	0.18	U	0.091	0.18	0.27
108-95-2	Phenol	0.18	U	0.088	0.18	0.68
95-57-8	2-Chlorophenol	0.19	U	0.093	0.19	0.36
541-73-1	1,3-Dichlorobenzene	0.16	U	0.083	0.16	0.36
106-46-7	1,4-Dichlorobenzene	0.17	U	0.085	0.17	0.36
95-50-1	1,2-Dichlorobenzene	0.15	U	0.077	0.15	0.36
100-51-6	Benzyl alcohol	0.25	U	0.12	0.25	0.9
108-60-1	2,2'-Oxybis(1-chloropropane)	0.6	U	0.3	0.6	0.6
95-48-7	2-Methylphenol	0.26	U	0.13	0.26	0.36
67-72-1	Hexachloroethane	0.14	U	0.068	0.14	0.36
621-64-7	N-Nitroso-di-n-propylamine	0.16	U	0.083	0.16	0.27
106-44-5	4-Methylphenol	0.16	U	0.08	0.16	0.36
98-95-3	Nitrobenzene	0.16	U	0.081	0.16	0.27
78-59-1	Isophorone	0.16	U	0.08	0.16	0.36
88-75-5	2-Nitrophenol	0.2	U	0.098	0.2	0.36
105-67-9	2,4-Dimethylphenol	0.15	U	0.077	0.15	0.36
111-91-1	Bis(2-chloroethoxy)methane	0.15	U	0.077	0.15	0.36
120-83-2	2,4-Dichlorophenol	0.2	U	0.1	0.2	0.27
120-82-1	1,2,4-Trichlorobenzene	0.16	U	0.078	0.16	0.36
106-47-8	4-Chloroaniline	0.17	U	0.085	0.17	0.36
87-68-3	Hexachlorobutadiene	0.16	U	0.078	0.16	0.36
59-50-7	4-Chloro-3-methylphenol	0.15	U	0.076	0.15	0.36
77-47-4	Hexachlorocyclopentadiene	0.11	U	0.054	0.11	0.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.18	U	0.092	0.18	0.36
95-95-4	2,4,5-Trichlorophenol	0.2	U	0.1	0.2	0.36
91-58-7	2-Chloronaphthalene	0.18	U	0.09	0.18	0.36
88-74-4	2-Nitroaniline	0.15	U	0.077	0.15	0.36
131-11-3	Dimethylphthalate	0.16	U	0.08	0.16	0.36
606-20-2	2,6-Dinitrotoluene	0.14	U	0.068	0.14	0.27
99-09-2	3-Nitroaniline	0.22	U	0.11	0.22	0.27
51-28-5	2,4-Dinitrophenol	0.6	U	0.3	0.6	1.4
132-64-9	Dibenzofuran	0.15	U	0.073	0.15	0.36
121-14-2	2,4-Dinitrotoluene	0.13	U	0.066	0.13	0.27
100-02-7	4-Nitrophenol	0.14	U	0.072	0.14	0.41
7005-72-3	4-Chlorophenyl-phenylether	0.14	U	0.069	0.14	0.36
84-66-2	Diethylphthalate	0.14	U	0.069	0.14	0.36
100-01-6	4-Nitroaniline	0.24	U	0.12	0.24	0.27
534-52-1	4,6-Dinitro-2-methylphenol	0.72	U	0.36	0.72	0.72
86-30-6	N-Nitrosodiphenylamine	0.17	U	0.085	0.17	0.36
101-55-3	4-Bromophenyl-phenylether	0.13	U	0.066	0.13	0.36
118-74-1	Hexachlorobenzene	0.14	U	0.072	0.14	0.36
87-86-5	Pentachlorophenol	0.36	U	0.18	0.36	0.68
84-74-2	Di-n-butylphthalate	0.12	U	0.06	0.12	0.36
85-68-7	Butylbenzylphthalate	0.17	U	0.085	0.17	0.36
91-94-1	3,3'-Dichlorobenzidine	0.16	U	0.08	0.16	0.27
117-81-7	Bis(2-ethylhexyl)phthalate	0.22	U	0.11	0.22	0.27
117-84-0	Di-n-octylphthalate	0.16	U	0.078	0.16	0.36
109-06-8	2-Picoline	0.14	U	0.068	0.14	0.36
10595-95-6	N-Nitrosomethylethylamine	0.15	U	0.073	0.15	0.27

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.14	U	0.072	0.14	0.68
66-27-3	Methylmethanesulfonate	0.15	U	0.077	0.15	0.36
62-50-0	Ethyl methanesulfonate	0.12	U	0.062	0.12	0.36
76-01-7	Pentachloroethane	0.13	U	0.064	0.13	0.36
930-55-2	N-Nitrosopyrrolidine	0.13	U	0.066	0.13	0.36
98-86-2	Acetophenone	0.27	U	0.14	0.27	0.36
59-89-2	N-Nitrosomorpholine	0.17	U	0.087	0.17	0.36
95-53-4	o-Toluidine	0.19	U	0.095	0.19	0.36
122-09-8	a,a-Dimethylphenethylamine	1.2	U	0.6	1.2	1.8
87-65-0	2,6-Dichlorophenol	0.18	U	0.091	0.18	0.27
1888-71-7	Hexachloropropene	0.12	U	0.061	0.12	0.36
924-16-3	N-Nitrosodibutylamine	0.15	U	0.077	0.15	0.27
120-58-1	Isosafrole	0.15	U	0.077	0.15	0.36
95-94-3	1,2,4,5-Tetrachlorobenzene	0.13	U	0.064	0.13	0.36
94-59-7	Safrole	0.18	U	0.09	0.18	0.36
130-15-4	1,4-Naphthoquinone	0.12	U	0.058	0.12	0.36
99-65-0	1,3-Dinitrobenzene	0.14	U	0.068	0.14	0.27
608-93-5	Pentachlorobenzene	0.14	U	0.068	0.14	0.36
134-32-7	1-Naphthylamine	0.18	U	0.09	0.18	0.36
91-59-8	2-Naphthylamine	0.72	U	0.36	0.72	0.72
58-90-2	2,3,4,6-Tetrachlorophenol	0.19	U	0.095	0.19	0.36
99-55-8	5-Nitro-o-toluidine	0.13	U	0.064	0.13	0.36
106-50-3	p-Phenylenediamine	0.16	U	0.078	0.16	0.36
62-44-2	Phenacetin	0.16	U	0.078	0.16	0.36
92-67-1	4-Aminobiphenyl	0.72	U	0.36	0.72	0.91
23950-58-5	Pronamide	0.1	U	0.05	0.1	0.36

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 72404.D

Sample wt/vol: 25.06 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1846

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.062	0.12	0.36
88-85-7	Dinoseb	0.36	U	0.18	0.36	0.36
56-57-5	4-Nitroquinoline-1-oxide	0.27	U	0.14	0.27	1.8
91-80-5	Methapyriline	0.18	U	0.089	0.18	0.36
140-57-8	Aramite	0.54	U	0.27	0.54	0.54
60-11-7	p-Dimethylaminoazobenzene	0.13	U	0.064	0.13	0.36
53-96-3	2-Acetylaminofluorene	0.16	U	0.083	0.16	0.36
57-97-6	7,12-Dimethylbenz(a)anthracene	0.095	U	0.047	0.095	0.36
56-49-5	3-Methylcholanthrene	0.1	U	0.053	0.1	0.36
100-75-4	N-Nitrosopiperidine	0.12	U	0.058	0.12	0.36
99-35-4	1,3,5-Trinitrobenzene	0.54	U	0.27	0.54	0.54
2303-16-4	Diallate (Avadex)	0.2	U	0.1	0.2	0.36
465-73-6	Isodrin	0.13	U	0.066	0.13	0.36
510-15-6	Chlorobenzilate	0.076	U	0.038	0.076	0.36
143-50-0	Kepone	0.14	U	0.07	0.14	1.4
126-68-1	0,0,0-Triethylphosphorothioate	0.13	U	0.065	0.13	0.36

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.72	U	0.36	0.72	0.72
62-75-9	N-Nitrosodimethylamine	0.19	U	0.096	0.19	0.27
62-53-3	Aniline	0.21	U	0.1	0.21	0.36
111-44-4	Bis(2-chloroethyl)ether	0.18	U	0.091	0.18	0.27
108-95-2	Phenol	0.18	U	0.088	0.18	0.68
95-57-8	2-Chlorophenol	0.19	U	0.093	0.19	0.36
541-73-1	1,3-Dichlorobenzene	0.16	U	0.082	0.16	0.36
106-46-7	1,4-Dichlorobenzene	0.17	U	0.085	0.17	0.36
95-50-1	1,2-Dichlorobenzene	0.15	U	0.077	0.15	0.36
100-51-6	Benzyl alcohol	0.25	U	0.12	0.25	0.9
108-60-1	2,2'-Oxybis(1-chloropropane)	0.6	U	0.3	0.6	0.6
95-48-7	2-Methylphenol	0.26	U	0.13	0.26	0.36
67-72-1	Hexachloroethane	0.14	U	0.068	0.14	0.36
621-64-7	N-Nitroso-di-n-propylamine	0.16	U	0.082	0.16	0.27
106-44-5	4-Methylphenol	0.16	U	0.08	0.16	0.36
98-95-3	Nitrobenzene	0.16	U	0.081	0.16	0.27
78-59-1	Isophorone	0.16	U	0.08	0.16	0.36
88-75-5	2-Nitrophenol	0.19	U	0.097	0.19	0.36
105-67-9	2,4-Dimethylphenol	0.15	U	0.077	0.15	0.36
111-91-1	Bis(2-chloroethoxy)methane	0.15	U	0.077	0.15	0.36
120-83-2	2,4-Dichlorophenol	0.2	U	0.1	0.2	0.27
120-82-1	1,2,4-Trichlorobenzene	0.16	U	0.078	0.16	0.36
106-47-8	4-Chloroaniline	0.17	U	0.085	0.17	0.36
87-68-3	Hexachlorobutadiene	0.16	U	0.078	0.16	0.36
59-50-7	4-Chloro-3-methylphenol	0.15	U	0.076	0.15	0.36
77-47-4	Hexachlorocyclopentadiene	0.11	U	0.054	0.11	0.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.18	U	0.092	0.18	0.36
95-95-4	2,4,5-Trichlorophenol	0.2	U	0.1	0.2	0.36
91-58-7	2-Chloronaphthalene	0.18	U	0.09	0.18	0.36
88-74-4	2-Nitroaniline	0.15	U	0.077	0.15	0.36
131-11-3	Dimethylphthalate	0.16	U	0.08	0.16	0.36
606-20-2	2,6-Dinitrotoluene	0.14	U	0.068	0.14	0.27
99-09-2	3-Nitroaniline	0.22	U	0.11	0.22	0.27
51-28-5	2,4-Dinitrophenol	0.6	U	0.3	0.6	1.4
132-64-9	Dibenzofuran	0.15	U	0.073	0.15	0.36
121-14-2	2,4-Dinitrotoluene	0.13	U	0.066	0.13	0.27
100-02-7	4-Nitrophenol	0.14	U	0.072	0.14	0.4
7005-72-3	4-Chlorophenyl-phenylether	0.14	U	0.069	0.14	0.36
84-66-2	Diethylphthalate	0.14	U	0.069	0.14	0.36
100-01-6	4-Nitroaniline	0.24	U	0.12	0.24	0.27
534-52-1	4,6-Dinitro-2-methylphenol	0.72	U	0.36	0.72	0.72
86-30-6	N-Nitrosodiphenylamine	0.17	U	0.085	0.17	0.36
101-55-3	4-Bromophenyl-phenylether	0.13	U	0.066	0.13	0.36
118-74-1	Hexachlorobenzene	0.14	U	0.072	0.14	0.36
87-86-5	Pentachlorophenol	0.36	U	0.18	0.36	0.68
84-74-2	Di-n-butylphthalate	0.12	U	0.06	0.12	0.36
85-68-7	Butylbenzylphthalate	0.17	U	0.085	0.17	0.36
91-94-1	3,3'-Dichlorobenzidine	0.16	U	0.08	0.16	0.27
117-81-7	Bis(2-ethylhexyl)phthalate	0.22	U	0.11	0.22	0.27
117-84-0	Di-n-octylphthalate	0.16	U	0.078	0.16	0.36
109-06-8	2-Picoline	0.14	U	0.068	0.14	0.36
10595-95-6	N-Nitrosomethylethylamine	0.15	U	0.073	0.15	0.27

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.14	U	0.072	0.14	0.68
66-27-3	Methylmethanesulfonate	0.15	U	0.077	0.15	0.36
62-50-0	Ethyl methanesulfonate	0.12	U	0.062	0.12	0.36
76-01-7	Pentachloroethane	0.13	U	0.064	0.13	0.36
930-55-2	N-Nitrosopyrrolidine	0.13	U	0.066	0.13	0.36
98-86-2	Acetophenone	0.27	U	0.14	0.27	0.36
59-89-2	N-Nitrosomorpholine	0.17	U	0.086	0.17	0.36
95-53-4	o-Toluidine	0.19	U	0.095	0.19	0.36
122-09-8	a,a-Dimethylphenethylamine	1.2	U	0.6	1.2	1.8
87-65-0	2,6-Dichlorophenol	0.18	U	0.091	0.18	0.27
1888-71-7	Hexachloropropene	0.12	U	0.061	0.12	0.36
924-16-3	N-Nitrosodibutylamine	0.15	U	0.077	0.15	0.27
120-58-1	Isosafrole	0.15	U	0.077	0.15	0.36
95-94-3	1,2,4,5-Tetrachlorobenzene	0.13	U	0.064	0.13	0.36
94-59-7	Safrole	0.18	U	0.09	0.18	0.36
130-15-4	1,4-Naphthoquinone	0.12	U	0.058	0.12	0.36
99-65-0	1,3-Dinitrobenzene	0.14	U	0.068	0.14	0.27
608-93-5	Pentachlorobenzene	0.14	U	0.068	0.14	0.36
134-32-7	1-Naphthylamine	0.18	U	0.09	0.18	0.36
91-59-8	2-Naphthylamine	0.72	U	0.36	0.72	0.72
58-90-2	2,3,4,6-Tetrachlorophenol	0.19	U	0.095	0.19	0.36
99-55-8	5-Nitro-o-toluidine	0.13	U	0.064	0.13	0.36
106-50-3	p-Phenylenediamine	0.16	U	0.078	0.16	0.36
62-44-2	Phenacetin	0.16	U	0.078	0.16	0.36
92-67-1	4-Aminobiphenyl	0.72	U	0.36	0.72	0.91
23950-58-5	Pronamide	0.1	U	0.05	0.1	0.36

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404RE1 Lab File ID 72404.D

Sample wt/vol: 25.1 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1553

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.062	0.12	0.36
88-85-7	Dinoseb	0.36	U	0.18	0.36	0.36
56-57-5	4-Nitroquinoline-1-oxide	0.27	U	0.14	0.27	1.8
91-80-5	Methapyriline	0.18	U	0.089	0.18	0.36
140-57-8	Aramite	0.54	U	0.27	0.54	0.54
60-11-7	p-Dimethylaminoazobenzene	0.13	U	0.064	0.13	0.36
53-96-3	2-Acetylaminofluorene	0.16	U	0.082	0.16	0.36
57-97-6	7,12-Dimethylbenz(a)anthracene	0.095	U	0.047	0.095	0.36
56-49-5	3-Methylcholanthrene	0.1	U	0.053	0.1	0.36
100-75-4	N-Nitrosopiperidine	0.12	U	0.058	0.12	0.36
99-35-4	1,3,5-Trinitrobenzene	0.54	U	0.27	0.54	0.54
2303-16-4	Diallate (Avadex)	0.2	U	0.1	0.2	0.36
465-73-6	Isodrin	0.13	U	0.066	0.13	0.36
510-15-6	Chlorobenzilate	0.076	U	0.038	0.076	0.36
143-50-0	Kepone	0.14	U	0.07	0.14	1.4
126-68-1	0,0,0-Triethylphosphorothioate	0.13	U	0.065	0.13	0.36

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1053

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-02RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405RE1 Lab File ID 72405.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1117

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406RE1 Lab File ID 72406.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1240

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.77	U	0.39	0.77	0.77
62-75-9	N-Nitrosodimethylamine	0.21	U	0.1	0.21	0.29
62-53-3	Aniline	0.22	U	0.11	0.22	0.39
111-44-4	Bis(2-chloroethyl)ether	0.19	U	0.097	0.19	0.29
108-95-2	Phenol	0.19	U	0.094	0.19	0.73
95-57-8	2-Chlorophenol	0.2	U	0.1	0.2	0.39
541-73-1	1,3-Dichlorobenzene	0.18	U	0.089	0.18	0.39
106-46-7	1,4-Dichlorobenzene	0.18	U	0.092	0.18	0.39
95-50-1	1,2-Dichlorobenzene	0.16	U	0.083	0.16	0.39
100-51-6	Benzyl alcohol	0.27	U	0.13	0.27	0.97
108-60-1	2,2'-Oxybis(1-chloropropane)	0.64	U	0.32	0.64	0.64
95-48-7	2-Methylphenol	0.28	U	0.14	0.28	0.39
67-72-1	Hexachloroethane	0.14	U	0.073	0.14	0.39
621-64-7	N-Nitroso-di-n-propylamine	0.18	U	0.089	0.18	0.29
106-44-5	4-Methylphenol	0.17	U	0.086	0.17	0.39
98-95-3	Nitrobenzene	0.17	U	0.087	0.17	0.29
78-59-1	Isophorone	0.17	U	0.086	0.17	0.39
88-75-5	2-Nitrophenol	0.21	U	0.1	0.21	0.39
105-67-9	2,4-Dimethylphenol	0.16	U	0.083	0.16	0.39
111-91-1	Bis(2-chloroethoxy)methane	0.16	U	0.083	0.16	0.39
120-83-2	2,4-Dichlorophenol	0.22	U	0.11	0.22	0.29
120-82-1	1,2,4-Trichlorobenzene	0.17	U	0.084	0.17	0.39
106-47-8	4-Chloroaniline	0.18	U	0.092	0.18	0.39
87-68-3	Hexachlorobutadiene	0.17	U	0.084	0.17	0.39
59-50-7	4-Chloro-3-methylphenol	0.16	U	0.081	0.16	0.39
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.058	0.12	0.97

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.2	U	0.099	0.2	0.39
95-95-4	2,4,5-Trichlorophenol	0.22	U	0.11	0.22	0.39
91-58-7	2-Chloronaphthalene	0.19	U	0.097	0.19	0.39
88-74-4	2-Nitroaniline	0.16	U	0.083	0.16	0.39
131-11-3	Dimethylphthalate	0.17	U	0.086	0.17	0.39
606-20-2	2,6-Dinitrotoluene	0.14	U	0.073	0.14	0.29
99-09-2	3-Nitroaniline	0.23	U	0.12	0.23	0.29
51-28-5	2,4-Dinitrophenol	0.64	U	0.32	0.64	1.4
132-64-9	Dibenzofuran	0.16	U	0.078	0.16	0.39
121-14-2	2,4-Dinitrotoluene	0.14	U	0.071	0.14	0.29
100-02-7	4-Nitrophenol	0.15	U	0.077	0.15	0.44
7005-72-3	4-Chlorophenyl-phenylether	0.15	U	0.074	0.15	0.39
84-66-2	Diethylphthalate	0.15	U	0.074	0.15	0.39
100-01-6	4-Nitroaniline	0.26	U	0.13	0.26	0.29
534-52-1	4,6-Dinitro-2-methylphenol	0.77	U	0.39	0.77	0.77
86-30-6	N-Nitrosodiphenylamine	0.18	U	0.092	0.18	0.39
101-55-3	4-Bromophenyl-phenylether	0.14	U	0.071	0.14	0.39
118-74-1	Hexachlorobenzene	0.15	U	0.077	0.15	0.39
87-86-5	Pentachlorophenol	0.39	U	0.19	0.39	0.73
84-74-2	Di-n-butylphthalate	0.13	U	0.064	0.13	0.39
85-68-7	Butylbenzylphthalate	0.18	U	0.092	0.18	0.39
91-94-1	3,3'-Dichlorobenzidine	0.17	U	0.086	0.17	0.29
117-81-7	Bis(2-ethylhexyl)phthalate	0.24	U	0.12	0.24	0.29
117-84-0	Di-n-octylphthalate	0.17	U	0.084	0.17	0.39
109-06-8	2-Picoline	0.14	U	0.073	0.14	0.39
10595-95-6	N-Nitrosomethylethylamine	0.16	U	0.078	0.16	0.29

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.15	U	0.077	0.15	0.73
66-27-3	Methylmethanesulfonate	0.16	U	0.083	0.16	0.39
62-50-0	Ethyl methanesulfonate	0.13	U	0.067	0.13	0.39
76-01-7	Pentachloroethane	0.14	U	0.068	0.14	0.39
930-55-2	N-Nitrosopyrrolidine	0.14	U	0.071	0.14	0.39
98-86-2	Acetophenone	0.29	U	0.14	0.29	0.39
59-89-2	N-Nitrosomorpholine	0.19	U	0.093	0.19	0.39
95-53-4	o-Toluidine	0.2	U	0.1	0.2	0.39
122-09-8	a,a-Dimethylphenethylamine	1.3	U	0.64	1.3	1.9
87-65-0	2,6-Dichlorophenol	0.19	U	0.097	0.19	0.29
1888-71-7	Hexachloropropene	0.13	U	0.065	0.13	0.39
924-16-3	N-Nitrosodibutylamine	0.16	U	0.083	0.16	0.29
120-58-1	Isosafrole	0.16	U	0.083	0.16	0.39
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.068	0.14	0.39
94-59-7	Safrole	0.19	U	0.097	0.19	0.39
130-15-4	1,4-Naphthoquinone	0.12	U	0.062	0.12	0.39
99-65-0	1,3-Dinitrobenzene	0.14	U	0.073	0.14	0.29
608-93-5	Pentachlorobenzene	0.14	U	0.073	0.14	0.39
134-32-7	1-Naphthylamine	0.19	U	0.097	0.19	0.39
91-59-8	2-Naphthylamine	0.77	U	0.39	0.77	0.77
58-90-2	2,3,4,6-Tetrachlorophenol	0.2	U	0.1	0.2	0.39
99-55-8	5-Nitro-o-toluidine	0.14	U	0.068	0.14	0.39
106-50-3	p-Phenylenediamine	0.17	U	0.084	0.17	0.39
62-44-2	Phenacetin	0.17	U	0.084	0.17	0.39
92-67-1	4-Aminobiphenyl	0.78	U	0.39	0.78	0.97
23950-58-5	Pronamide	0.11	U	0.054	0.11	0.39

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 72407.D

Sample wt/vol: 25.48 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1426

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.13	U	0.067	0.13	0.39
88-85-7	Dinoseb	0.39	U	0.19	0.39	0.39
56-57-5	4-Nitroquinoline-1-oxide	0.29	U	0.14	0.29	1.9
91-80-5	Methapyriline	0.19	U	0.096	0.19	0.39
140-57-8	Aramite	0.58	U	0.29	0.58	0.58
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.068	0.14	0.39
53-96-3	2-Acetylaminofluorene	0.18	U	0.089	0.18	0.39
57-97-6	7,12-Dimethylbenz(a)anthracene	0.1	U	0.051	0.1	0.39
56-49-5	3-Methylcholanthrene	0.11	U	0.057	0.11	0.39
100-75-4	N-Nitrosopiperidine	0.12	U	0.062	0.12	0.39
99-35-4	1,3,5-Trinitrobenzene	0.58	U	0.29	0.58	0.58
2303-16-4	Diallate (Avadex)	0.22	U	0.11	0.22	0.39
465-73-6	Isodrin	0.14	U	0.071	0.14	0.39
510-15-6	Chlorobenzilate	0.081	U	0.041	0.081	0.39
143-50-0	Kepone	0.15	U	0.076	0.15	1.4
126-68-1	0,0,0-Triethylphosphorothioate	0.14	U	0.07	0.14	0.39

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.78	U	0.39	0.78	0.78
62-75-9	N-Nitrosodimethylamine	0.21	U	0.1	0.21	0.29
62-53-3	Aniline	0.22	U	0.11	0.22	0.4
111-44-4	Bis(2-chloroethyl)ether	0.2	U	0.098	0.2	0.29
108-95-2	Phenol	0.19	U	0.095	0.19	0.73
95-57-8	2-Chlorophenol	0.2	U	0.1	0.2	0.4
541-73-1	1,3-Dichlorobenzene	0.18	U	0.089	0.18	0.4
106-46-7	1,4-Dichlorobenzene	0.18	U	0.092	0.18	0.4
95-50-1	1,2-Dichlorobenzene	0.17	U	0.083	0.17	0.4
100-51-6	Benzyl alcohol	0.27	U	0.13	0.27	0.98
108-60-1	2,2'-Oxybis(1-chloropropane)	0.64	U	0.32	0.64	0.64
95-48-7	2-Methylphenol	0.28	U	0.14	0.28	0.39
67-72-1	Hexachloroethane	0.15	U	0.073	0.15	0.4
621-64-7	N-Nitroso-di-n-propylamine	0.18	U	0.089	0.18	0.29
106-44-5	4-Methylphenol	0.17	U	0.086	0.17	0.4
98-95-3	Nitrobenzene	0.18	U	0.088	0.18	0.29
78-59-1	Isophorone	0.17	U	0.086	0.17	0.4
88-75-5	2-Nitrophenol	0.21	U	0.1	0.21	0.4
105-67-9	2,4-Dimethylphenol	0.17	U	0.083	0.17	0.39
111-91-1	Bis(2-chloroethoxy)methane	0.17	U	0.083	0.17	0.39
120-83-2	2,4-Dichlorophenol	0.22	U	0.11	0.22	0.29
120-82-1	1,2,4-Trichlorobenzene	0.17	U	0.085	0.17	0.4
106-47-8	4-Chloroaniline	0.18	U	0.092	0.18	0.4
87-68-3	Hexachlorobutadiene	0.17	U	0.085	0.17	0.4
59-50-7	4-Chloro-3-methylphenol	0.16	U	0.082	0.16	0.4
77-47-4	Hexachlorocyclopentadiene	0.12	U	0.058	0.12	0.98

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.2	U	0.1	0.2	0.39
95-95-4	2,4,5-Trichlorophenol	0.22	U	0.11	0.22	0.39
91-58-7	2-Chloronaphthalene	0.2	U	0.098	0.2	0.4
88-74-4	2-Nitroaniline	0.17	U	0.083	0.17	0.4
131-11-3	Dimethylphthalate	0.17	U	0.086	0.17	0.4
606-20-2	2,6-Dinitrotoluene	0.15	U	0.073	0.15	0.29
99-09-2	3-Nitroaniline	0.23	U	0.12	0.23	0.29
51-28-5	2,4-Dinitrophenol	0.64	U	0.32	0.64	1.5
132-64-9	Dibenzofuran	0.16	U	0.079	0.16	0.4
121-14-2	2,4-Dinitrotoluene	0.14	U	0.072	0.14	0.29
100-02-7	4-Nitrophenol	0.16	U	0.078	0.16	0.44
7005-72-3	4-Chlorophenyl-phenylether	0.15	U	0.075	0.15	0.4
84-66-2	Diethylphthalate	0.15	U	0.075	0.15	0.4
100-01-6	4-Nitroaniline	0.26	U	0.13	0.26	0.29
534-52-1	4,6-Dinitro-2-methylphenol	0.78	U	0.39	0.78	0.78
86-30-6	N-Nitrosodiphenylamine	0.18	U	0.092	0.18	0.39
101-55-3	4-Bromophenyl-phenylether	0.14	U	0.072	0.14	0.4
118-74-1	Hexachlorobenzene	0.16	U	0.078	0.16	0.39
87-86-5	Pentachlorophenol	0.39	U	0.19	0.39	0.73
84-74-2	Di-n-butylphthalate	0.13	U	0.064	0.13	0.4
85-68-7	Butylbenzylphthalate	0.18	U	0.092	0.18	0.4
91-94-1	3,3'-Dichlorobenzidine	0.17	U	0.086	0.17	0.29
117-81-7	Bis(2-ethylhexyl)phthalate	0.24	U	0.12	0.24	0.29
117-84-0	Di-n-octylphthalate	0.17	U	0.085	0.17	0.4
109-06-8	2-Picoline	0.15	U	0.073	0.15	0.4
10595-95-6	N-Nitrosomethylethylamine	0.16	U	0.079	0.16	0.29

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.16	U	0.078	0.16	0.73
66-27-3	Methylmethanesulfonate	0.17	U	0.083	0.17	0.4
62-50-0	Ethyl methanesulfonate	0.13	U	0.067	0.13	0.4
76-01-7	Pentachloroethane	0.14	U	0.069	0.14	0.4
930-55-2	N-Nitrosopyrrolidine	0.14	U	0.072	0.14	0.4
98-86-2	Acetophenone	0.29	U	0.15	0.29	0.4
59-89-2	N-Nitrosomorpholine	0.19	U	0.094	0.19	0.4
95-53-4	o-Toluidine	0.2	U	0.1	0.2	0.4
122-09-8	a,a-Dimethylphenethylamine	1.3	U	0.64	1.3	2
87-65-0	2,6-Dichlorophenol	0.2	U	0.098	0.2	0.29
1888-71-7	Hexachloropropene	0.13	U	0.066	0.13	0.4
924-16-3	N-Nitrosodibutylamine	0.17	U	0.083	0.17	0.29
120-58-1	Isosafrole	0.17	U	0.083	0.17	0.4
95-94-3	1,2,4,5-Tetrachlorobenzene	0.14	U	0.069	0.14	0.4
94-59-7	Safrole	0.2	U	0.098	0.2	0.4
130-15-4	1,4-Naphthoquinone	0.12	U	0.063	0.12	0.4
99-65-0	1,3-Dinitrobenzene	0.15	U	0.073	0.15	0.29
608-93-5	Pentachlorobenzene	0.15	U	0.073	0.15	0.4
134-32-7	1-Naphthylamine	0.2	U	0.098	0.2	0.4
91-59-8	2-Naphthylamine	0.78	U	0.39	0.78	0.78
58-90-2	2,3,4,6-Tetrachlorophenol	0.2	U	0.1	0.2	0.4
99-55-8	5-Nitro-o-toluidine	0.14	U	0.069	0.14	0.4
106-50-3	p-Phenylenediamine	0.17	U	0.085	0.17	0.4
62-44-2	Phenacetin	0.17	U	0.085	0.17	0.4
92-67-1	4-Aminobiphenyl	0.78	U	0.39	0.78	0.98
23950-58-5	Pronamide	0.11	U	0.054	0.11	0.4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-04RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407RE1 Lab File ID 72407.D

Sample wt/vol: 25.29 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1617

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.13	U	0.067	0.13	0.39
88-85-7	Dinoseb	0.39	U	0.19	0.39	0.4
56-57-5	4-Nitroquinoline-1-oxide	0.29	U	0.15	0.29	2
91-80-5	Methapyrilone	0.19	U	0.097	0.19	0.4
140-57-8	Aramite	0.58	U	0.29	0.58	0.58
60-11-7	p-Dimethylaminoazobenzene	0.14	U	0.069	0.14	0.4
53-96-3	2-Acetylaminofluorene	0.18	U	0.089	0.18	0.4
57-97-6	7,12-Dimethylbenz(a)anthracene	0.1	U	0.051	0.1	0.39
56-49-5	3-Methylcholanthrene	0.11	U	0.057	0.11	0.39
100-75-4	N-Nitrosopiperidine	0.12	U	0.063	0.12	0.4
99-35-4	1,3,5-Trinitrobenzene	0.58	U	0.29	0.58	0.58
2303-16-4	Diallate (Avadex)	0.22	U	0.11	0.22	0.39
465-73-6	Isodrin	0.14	U	0.072	0.14	0.4
510-15-6	Chlorobenzilate	0.082	U	0.041	0.082	0.39
143-50-0	Kepone	0.15	U	0.076	0.15	1.5
126-68-1	0,0,0-Triethylphosphorothioate	0.14	U	0.07	0.14	0.4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-04RE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408RE1 Lab File ID 72408.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1304

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.67	U	0.33	0.67	0.67
62-75-9	N-Nitrosodimethylamine	0.18	U	0.089	0.18	0.25
62-53-3	Aniline	0.19	U	0.096	0.19	0.34
111-44-4	Bis(2-chloroethyl)ether	0.17	U	0.084	0.17	0.25
108-95-2	Phenol	0.16	U	0.082	0.16	0.63
95-57-8	2-Chlorophenol	0.17	U	0.086	0.17	0.34
541-73-1	1,3-Dichlorobenzene	0.15	U	0.076	0.15	0.34
106-46-7	1,4-Dichlorobenzene	0.16	U	0.079	0.16	0.34
95-50-1	1,2-Dichlorobenzene	0.14	U	0.072	0.14	0.34
100-51-6	Benzyl alcohol	0.23	U	0.12	0.23	0.84
108-60-1	2,2'-Oxybis(1-chloropropane)	0.55	U	0.28	0.55	0.55
95-48-7	2-Methylphenol	0.24	U	0.12	0.24	0.33
67-72-1	Hexachloroethane	0.12	U	0.063	0.12	0.34
621-64-7	N-Nitroso-di-n-propylamine	0.15	U	0.076	0.15	0.25
106-44-5	4-Methylphenol	0.15	U	0.074	0.15	0.34
98-95-3	Nitrobenzene	0.15	U	0.075	0.15	0.25
78-59-1	Isophorone	0.15	U	0.074	0.15	0.34
88-75-5	2-Nitrophenol	0.18	U	0.09	0.18	0.34
105-67-9	2,4-Dimethylphenol	0.14	U	0.072	0.14	0.33
111-91-1	Bis(2-chloroethoxy)methane	0.14	U	0.072	0.14	0.33
120-83-2	2,4-Dichlorophenol	0.19	U	0.094	0.19	0.25
120-82-1	1,2,4-Trichlorobenzene	0.14	U	0.073	0.14	0.34
106-47-8	4-Chloroaniline	0.16	U	0.079	0.16	0.34
87-68-3	Hexachlorobutadiene	0.14	U	0.073	0.14	0.34
59-50-7	4-Chloro-3-methylphenol	0.14	U	0.07	0.14	0.34
77-47-4	Hexachlorocyclopentadiene	0.1	U	0.05	0.1	0.84

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.17	U	0.085	0.17	0.33
95-95-4	2,4,5-Trichlorophenol	0.18	U	0.093	0.18	0.33
91-58-7	2-Chloronaphthalene	0.17	U	0.084	0.17	0.34
88-74-4	2-Nitroaniline	0.14	U	0.072	0.14	0.34
131-11-3	Dimethylphthalate	0.15	U	0.074	0.15	0.34
606-20-2	2,6-Dinitrotoluene	0.12	U	0.063	0.12	0.25
99-09-2	3-Nitroaniline	0.2	U	0.1	0.2	0.25
51-28-5	2,4-Dinitrophenol	0.55	U	0.28	0.55	1.2
132-64-9	Dibenzofuran	0.14	U	0.068	0.14	0.34
121-14-2	2,4-Dinitrotoluene	0.12	U	0.061	0.12	0.25
100-02-7	4-Nitrophenol	0.13	U	0.066	0.13	0.38
7005-72-3	4-Chlorophenyl-phenylether	0.13	U	0.064	0.13	0.34
84-66-2	Diethylphthalate	0.13	U	0.064	0.13	0.34
100-01-6	4-Nitroaniline	0.22	U	0.11	0.22	0.25
534-52-1	4,6-Dinitro-2-methylphenol	0.67	U	0.33	0.67	0.67
86-30-6	N-Nitrosodiphenylamine	0.16	U	0.079	0.16	0.33
101-55-3	4-Bromophenyl-phenylether	0.12	U	0.061	0.12	0.34
118-74-1	Hexachlorobenzene	0.13	U	0.066	0.13	0.33
87-86-5	Pentachlorophenol	0.33	U	0.17	0.33	0.63
84-74-2	Di-n-butylphthalate	0.11	U	0.055	0.11	0.34
85-68-7	Butylbenzylphthalate	0.16	U	0.079	0.16	0.34
91-94-1	3,3'-Dichlorobenzidine	0.15	U	0.074	0.15	0.25
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	U	0.1	0.21	0.25
117-84-0	Di-n-octylphthalate	0.14	U	0.073	0.14	0.34
109-06-8	2-Picoline	0.12	U	0.063	0.12	0.34
10595-95-6	N-Nitrosomethylethylamine	0.14	U	0.068	0.14	0.25

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.13	U	0.066	0.13	0.63
66-27-3	Methylmethanesulfonate	0.14	U	0.072	0.14	0.34
62-50-0	Ethyl methanesulfonate	0.12	U	0.058	0.12	0.34
76-01-7	Pentachloroethane	0.12	U	0.059	0.12	0.34
930-55-2	N-Nitrosopyrrolidine	0.12	U	0.061	0.12	0.34
98-86-2	Acetophenone	0.25	U	0.12	0.25	0.34
59-89-2	N-Nitrosomorpholine	0.16	U	0.08	0.16	0.34
95-53-4	o-Toluidine	0.18	U	0.088	0.18	0.34
122-09-8	a,a-Dimethylphenethylamine	1.1	U	0.55	1.1	1.7
87-65-0	2,6-Dichlorophenol	0.17	U	0.084	0.17	0.25
1888-71-7	Hexachloropropene	0.11	U	0.056	0.11	0.34
924-16-3	N-Nitrosodibutylamine	0.14	U	0.072	0.14	0.25
120-58-1	Isosafrole	0.14	U	0.072	0.14	0.34
95-94-3	1,2,4,5-Tetrachlorobenzene	0.12	U	0.059	0.12	0.34
94-59-7	Safrole	0.17	U	0.084	0.17	0.34
130-15-4	1,4-Naphthoquinone	0.11	U	0.054	0.11	0.34
99-65-0	1,3-Dinitrobenzene	0.12	U	0.063	0.12	0.25
608-93-5	Pentachlorobenzene	0.12	U	0.063	0.12	0.34
134-32-7	1-Naphthylamine	0.17	U	0.084	0.17	0.34
91-59-8	2-Naphthylamine	0.67	U	0.33	0.67	0.67
58-90-2	2,3,4,6-Tetrachlorophenol	0.18	U	0.088	0.18	0.34
99-55-8	5-Nitro-o-toluidine	0.12	U	0.059	0.12	0.34
106-50-3	p-Phenylenediamine	0.14	U	0.073	0.14	0.34
62-44-2	Phenacetin	0.14	U	0.073	0.14	0.34
92-67-1	4-Aminobiphenyl	0.67	U	0.33	0.67	0.84
23950-58-5	Pronamide	0.093	U	0.046	0.093	0.34

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 72409.D

Sample wt/vol: 25.59 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1601

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.12	U	0.058	0.12	0.33
88-85-7	Dinoseb	0.33	U	0.17	0.33	0.34
56-57-5	4-Nitroquinoline-1-oxide	0.25	U	0.12	0.25	1.7
91-80-5	Methapyriline	0.16	U	0.083	0.16	0.34
140-57-8	Aramite	0.5	U	0.25	0.5	0.5
60-11-7	p-Dimethylaminoazobenzene	0.12	U	0.059	0.12	0.34
53-96-3	2-Acetylaminofluorene	0.15	U	0.076	0.15	0.34
57-97-6	7,12-Dimethylbenz(a)anthracene	0.088	U	0.044	0.088	0.33
56-49-5	3-Methylcholanthrene	0.098	U	0.049	0.098	0.33
100-75-4	N-Nitrosopiperidine	0.11	U	0.054	0.11	0.34
99-35-4	1,3,5-Trinitrobenzene	0.5	U	0.25	0.5	0.5
2303-16-4	Diallate (Avadex)	0.18	U	0.093	0.18	0.33
465-73-6	Isodrin	0.12	U	0.061	0.12	0.34
510-15-6	Chlorobenzilate	0.07	U	0.035	0.07	0.33
143-50-0	Kepone	0.13	U	0.065	0.13	1.2
126-68-1	0,0,0-Triethylphosphorothioate	0.12	U	0.06	0.12	0.34

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-FDRE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.66	U	0.33	0.66	0.66
62-75-9	N-Nitrosodimethylamine	0.18	U	0.088	0.18	0.25
62-53-3	Aniline	0.19	U	0.096	0.19	0.34
111-44-4	Bis(2-chloroethyl)ether	0.17	U	0.083	0.17	0.25
108-95-2	Phenol	0.16	U	0.081	0.16	0.62
95-57-8	2-Chlorophenol	0.17	U	0.086	0.17	0.34
541-73-1	1,3-Dichlorobenzene	0.15	U	0.076	0.15	0.34
106-46-7	1,4-Dichlorobenzene	0.16	U	0.078	0.16	0.34
95-50-1	1,2-Dichlorobenzene	0.14	U	0.071	0.14	0.34
100-51-6	Benzyl alcohol	0.23	U	0.11	0.23	0.83
108-60-1	2,2'-Oxybis(1-chloropropane)	0.55	U	0.27	0.55	0.55
95-48-7	2-Methylphenol	0.24	U	0.12	0.24	0.33
67-72-1	Hexachloroethane	0.12	U	0.062	0.12	0.34
621-64-7	N-Nitroso-di-n-propylamine	0.15	U	0.076	0.15	0.25
106-44-5	4-Methylphenol	0.15	U	0.073	0.15	0.34
98-95-3	Nitrobenzene	0.15	U	0.075	0.15	0.25
78-59-1	Isophorone	0.15	U	0.073	0.15	0.34
88-75-5	2-Nitrophenol	0.18	U	0.09	0.18	0.34
105-67-9	2,4-Dimethylphenol	0.14	U	0.071	0.14	0.33
111-91-1	Bis(2-chloroethoxy)methane	0.14	U	0.071	0.14	0.33
120-83-2	2,4-Dichlorophenol	0.19	U	0.093	0.19	0.25
120-82-1	1,2,4-Trichlorobenzene	0.14	U	0.072	0.14	0.34
106-47-8	4-Chloroaniline	0.16	U	0.078	0.16	0.34
87-68-3	Hexachlorobutadiene	0.14	U	0.072	0.14	0.34
59-50-7	4-Chloro-3-methylphenol	0.14	U	0.07	0.14	0.34
77-47-4	Hexachlorocyclopentadiene	0.1	U	0.05	0.1	0.83

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	0.17	U	0.085	0.17	0.33
95-95-4	2,4,5-Trichlorophenol	0.18	U	0.092	0.18	0.33
91-58-7	2-Chloronaphthalene	0.16	U	0.083	0.16	0.34
88-74-4	2-Nitroaniline	0.14	U	0.071	0.14	0.34
131-11-3	Dimethylphthalate	0.15	U	0.073	0.15	0.34
606-20-2	2,6-Dinitrotoluene	0.12	U	0.062	0.12	0.25
99-09-2	3-Nitroaniline	0.2	U	0.1	0.2	0.25
51-28-5	2,4-Dinitrophenol	0.55	U	0.27	0.55	1.2
132-64-9	Dibenzofuran	0.13	U	0.067	0.13	0.34
121-14-2	2,4-Dinitrotoluene	0.12	U	0.061	0.12	0.25
100-02-7	4-Nitrophenol	0.13	U	0.066	0.13	0.37
7005-72-3	4-Chlorophenyl-phenylether	0.13	U	0.063	0.13	0.34
84-66-2	Diethylphthalate	0.13	U	0.063	0.13	0.34
100-01-6	4-Nitroaniline	0.22	U	0.11	0.22	0.25
534-52-1	4,6-Dinitro-2-methylphenol	0.66	U	0.33	0.66	0.66
86-30-6	N-Nitrosodiphenylamine	0.16	U	0.078	0.16	0.33
101-55-3	4-Bromophenyl-phenylether	0.12	U	0.061	0.12	0.34
118-74-1	Hexachlorobenzene	0.13	U	0.066	0.13	0.33
87-86-5	Pentachlorophenol	0.33	U	0.16	0.33	0.62
84-74-2	Di-n-butylphthalate	0.11	U	0.055	0.11	0.34
85-68-7	Butylbenzylphthalate	0.16	U	0.078	0.16	0.34
91-94-1	3,3'-Dichlorobenzidine	0.15	U	0.073	0.15	0.25
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	U	0.1	0.21	0.25
117-84-0	Di-n-octylphthalate	0.14	U	0.072	0.14	0.34
109-06-8	2-Picoline	0.12	U	0.062	0.12	0.34
10595-95-6	N-Nitrosomethylethylamine	0.13	U	0.067	0.13	0.25

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	0.13	U	0.066	0.13	0.62
66-27-3	Methylmethanesulfonate	0.14	U	0.071	0.14	0.34
62-50-0	Ethyl methanesulfonate	0.11	U	0.057	0.11	0.34
76-01-7	Pentachloroethane	0.12	U	0.058	0.12	0.34
930-55-2	N-Nitrosopyrrolidine	0.12	U	0.061	0.12	0.34
98-86-2	Acetophenone	0.25	U	0.12	0.25	0.34
59-89-2	N-Nitrosomorpholine	0.16	U	0.08	0.16	0.34
95-53-4	o-Toluidine	0.17	U	0.087	0.17	0.34
122-09-8	a,a-Dimethylphenethylamine	1.1	U	0.55	1.1	1.7
87-65-0	2,6-Dichlorophenol	0.17	U	0.083	0.17	0.25
1888-71-7	Hexachloropropene	0.11	U	0.056	0.11	0.34
924-16-3	N-Nitrosodibutylamine	0.14	U	0.071	0.14	0.25
120-58-1	Isosafrole	0.14	U	0.071	0.14	0.34
95-94-3	1,2,4,5-Tetrachlorobenzene	0.12	U	0.058	0.12	0.34
94-59-7	Safrole	0.16	U	0.083	0.16	0.34
130-15-4	1,4-Naphthoquinone	0.11	U	0.054	0.11	0.34
99-65-0	1,3-Dinitrobenzene	0.12	U	0.062	0.12	0.25
608-93-5	Pentachlorobenzene	0.12	U	0.062	0.12	0.34
134-32-7	1-Naphthylamine	0.16	U	0.083	0.16	0.34
91-59-8	2-Naphthylamine	0.66	U	0.33	0.66	0.66
58-90-2	2,3,4,6-Tetrachlorophenol	0.17	U	0.087	0.17	0.34
99-55-8	5-Nitro-o-toluidine	0.12	U	0.058	0.12	0.34
106-50-3	p-Phenylenediamine	0.14	U	0.072	0.14	0.34
62-44-2	Phenacetin	0.14	U	0.072	0.14	0.34
92-67-1	4-Aminobiphenyl	0.66	U	0.33	0.66	0.83
23950-58-5	Pronamide	0.092	U	0.046	0.092	0.34

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572409RE1 Lab File ID 72409.D

Sample wt/vol: 25.8 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1641

PercentSolids: 62.3 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	0.11	U	0.057	0.11	0.33
88-85-7	Dinoseb	0.33	U	0.16	0.33	0.34
56-57-5	4-Nitroquinoline-1-oxide	0.25	U	0.12	0.25	1.6
91-80-5	Methapyriline	0.16	U	0.082	0.16	0.34
140-57-8	Aramite	0.5	U	0.25	0.5	0.5
60-11-7	p-Dimethylaminoazobenzene	0.12	U	0.058	0.12	0.34
53-96-3	2-Acetylaminofluorene	0.15	U	0.076	0.15	0.34
57-97-6	7,12-Dimethylbenz(a)anthracene	0.087	U	0.044	0.087	0.33
56-49-5	3-Methylcholanthrene	0.097	U	0.048	0.097	0.33
100-75-4	N-Nitrosopiperidine	0.11	U	0.054	0.11	0.34
99-35-4	1,3,5-Trinitrobenzene	0.5	U	0.25	0.5	0.5
2303-16-4	Diallate (Avadex)	0.18	U	0.092	0.18	0.33
465-73-6	Isodrin	0.12	U	0.061	0.12	0.34
510-15-6	Chlorobenzilate	0.07	U	0.035	0.07	0.33
143-50-0	Kepone	0.13	U	0.065	0.13	1.2
126-68-1	0,0,0-Triethylphosphorothioate	0.12	U	0.06	0.12	0.34

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-FD

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1204

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FDRE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	19.3		4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FDRE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SW-FDRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410RE1 Lab File ID 72410.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1328

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1006

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-EBRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-SD-EBRE1

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EBRE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EBRE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415RE1 Lab File ID 72415.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1440

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

8270 QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125743MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125743MB Lab File ID: 9077MB.D

Sample wt/vol: 20.41 Units: G Date Received: 04/17/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1735

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.52	U	0.26	0.52	0.52
62-75-9	N-Nitrosodimethylamine	0.14	U	0.07	0.14	0.2
62-53-3	Aniline	0.15	U	0.075	0.15	0.26
111-44-4	Bis(2-chloroethyl)ether	0.13	U	0.066	0.13	0.2
108-95-2	Phenol	0.13	U	0.064	0.13	0.49
95-57-8	2-Chlorophenol	0.14	U	0.068	0.14	0.26
541-73-1	1,3-Dichlorobenzene	0.12	U	0.06	0.12	0.26
106-46-7	1,4-Dichlorobenzene	0.12	U	0.062	0.12	0.26
95-50-1	1,2-Dichlorobenzene	0.11	U	0.056	0.11	0.26
100-51-6	Benzyl alcohol	0.18	U	0.09	0.18	0.65
108-60-1	2,2'-Oxybis(1-chloropropane)	0.43	U	0.22	0.43	0.43
95-48-7	2-Methylphenol	0.19	U	0.094	0.19	0.26
67-72-1	Hexachloroethane	0.098	U	0.049	0.098	0.26
621-64-7	N-Nitroso-di-n-propylamine	0.12	U	0.06	0.12	0.2
106-44-5	4-Methylphenol	0.12	U	0.058	0.12	0.26
98-95-3	Nitrobenzene	0.12	U	0.059	0.12	0.2
78-59-1	Isophorone	0.12	U	0.058	0.12	0.26
88-75-5	2-Nitrophenol	0.14	U	0.07	0.14	0.26
105-67-9	2,4-Dimethylphenol	0.11	U	0.056	0.11	0.26
111-91-1	Bis(2-chloroethoxy)methane	0.11	U	0.056	0.11	0.26
120-83-2	2,4-Dichlorophenol	0.15	U	0.073	0.15	0.2
120-82-1	1,2,4-Trichlorobenzene	0.11	U	0.057	0.11	0.26
106-47-8	4-Chloroaniline	0.12	U	0.062	0.12	0.26
87-68-3	Hexachlorobutadiene	0.11	U	0.057	0.11	0.26
59-50-7	4-Chloro-3-methylphenol	0.11	U	0.055	0.11	0.26
77-47-4	Hexachlorocyclopentadiene	0.078	U	0.039	0.078	0.65
88-06-2	2,4,6-Trichlorophenol	0.13	U	0.067	0.13	0.26

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125743MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125743MB Lab File ID: 9077MB.D

Sample wt/vol: 20.41 Units: G Date Received: 04/17/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1735

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	0.14	U	0.072	0.14	0.26
91-58-7	2-Chloronaphthalene	0.13	U	0.065	0.13	0.26
88-74-4	2-Nitroaniline	0.11	U	0.056	0.11	0.26
131-11-3	Dimethylphthalate	0.12	U	0.058	0.12	0.26
606-20-2	2,6-Dinitrotoluene	0.098	U	0.049	0.098	0.2
99-09-2	3-Nitroaniline	0.16	U	0.078	0.16	0.2
51-28-5	2,4-Dinitrophenol	0.43	U	0.22	0.43	0.98
132-64-9	Dibenzofuran	0.1	U	0.053	0.1	0.26
121-14-2	2,4-Dinitrotoluene	0.096	U	0.048	0.096	0.2
100-02-7	4-Nitrophenol	0.1	U	0.052	0.1	0.29
7005-72-3	4-Chlorophenyl-phenylether	0.1	U	0.05	0.1	0.26
84-66-2	Diethylphthalate	0.1	U	0.05	0.1	0.26
100-01-6	4-Nitroaniline	0.17	U	0.086	0.17	0.2
534-52-1	4,6-Dinitro-2-methylphenol	0.52	U	0.26	0.52	0.52
86-30-6	N-Nitrosodiphenylamine	0.12	U	0.062	0.12	0.26
101-55-3	4-Bromophenyl-phenylether	0.096	U	0.048	0.096	0.26
118-74-1	Hexachlorobenzene	0.1	U	0.052	0.1	0.26
87-86-5	Pentachlorophenol	0.26	U	0.13	0.26	0.49
84-74-2	Di-n-butylphthalate	0.086	U	0.043	0.086	0.26
85-68-7	Butylbenzylphthalate	0.12	U	0.062	0.12	0.26
91-94-1	3,3'-Dichlorobenzidine	0.12	U	0.058	0.12	0.2
117-81-7	Bis(2-ethylhexyl)phthalate	0.16	U	0.081	0.16	0.2
117-84-0	Di-n-octylphthalate	0.11	U	0.057	0.11	0.26
109-06-8	2-Picoline	0.098	U	0.049	0.098	0.26
10595-95-6	N-Nitrosomethylethylamine	0.1	U	0.053	0.1	0.2
55-18-5	N-Nitrosodiethylamine	0.1	U	0.052	0.1	0.49
66-27-3	Methylmethanesulfonate	0.11	U	0.056	0.11	0.26

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125743MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125743MB Lab File ID: 9077MB.D

Sample wt/vol: 20.41 Units: G Date Received: 04/17/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1735

PercentSolids: 100 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	0.09	U	0.045	0.09	0.26
76-01-7	Pentachloroethane	0.092	U	0.046	0.092	0.26
930-55-2	N-Nitrosopyrrolidine	0.096	U	0.048	0.096	0.26
98-86-2	Acetophenone	0.2	U	0.098	0.2	0.26
59-89-2	N-Nitrosomorpholine	0.12	U	0.063	0.12	0.26
95-53-4	o-Toluidine	0.14	U	0.068	0.14	0.26
122-09-8	a,a-Dimethylphenethylamine	0.86	U	0.43	0.86	1.3
87-65-0	2,6-Dichlorophenol	0.13	U	0.066	0.13	0.2
1888-71-7	Hexachloropropene	0.088	U	0.044	0.088	0.26
924-16-3	N-Nitrosodibutylamine	0.11	U	0.056	0.11	0.2
120-58-1	Isosafrole	0.11	U	0.056	0.11	0.26
95-94-3	1,2,4,5-Tetrachlorobenzene	0.092	U	0.046	0.092	0.26
94-59-7	Safrole	0.13	U	0.065	0.13	0.26
130-15-4	1,4-Naphthoquinone	0.084	U	0.042	0.084	0.26
99-65-0	1,3-Dinitrobenzene	0.098	U	0.049	0.098	0.2
608-93-5	Pentachlorobenzene	0.098	U	0.049	0.098	0.26
134-32-7	1-Naphthylamine	0.13	U	0.065	0.13	0.26
91-59-8	2-Naphthylamine	0.52	U	0.26	0.52	0.52
58-90-2	2,3,4,6-Tetrachlorophenol	0.14	U	0.068	0.14	0.26
99-55-8	5-Nitro-o-toluidine	0.092	U	0.046	0.092	0.26
106-50-3	p-Phenylenediamine	0.11	U	0.057	0.11	0.26
62-44-2	Phenacetin	0.11	U	0.057	0.11	0.26
92-67-1	4-Aminobiphenyl	0.52	U	0.26	0.52	0.66
23950-58-5	Pronamide	0.072	U	0.036	0.072	0.26
82-68-8	Pentachloronitrobenzene(PCNB)	0.09	U	0.045	0.09	0.26
88-85-7	Dinoseb	0.26	U	0.13	0.26	0.26
56-57-5	4-Nitroquinoline-1-oxide	0.2	U	0.098	0.2	1.3

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125743MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125743MB Lab File ID: 9077MB.D

Sample wt/vol: 20.41 Units: G Date Received: 04/17/12

Concentrated Extract Volume: 1 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1735

PercentSolids: 100 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	0.13	U	0.065	0.13	0.26
140-57-8	Aramite	0.39	U	0.2	0.39	0.39
60-11-7	p-Dimethylaminoazobenzene	0.092	U	0.046	0.092	0.26
53-96-3	2-Acetylaminofluorene	0.12	U	0.06	0.12	0.26
57-97-6	7,12-Dimethylbenz(a)anthracene	0.068	U	0.034	0.068	0.26
56-49-5	3-Methylcholanthrene	0.076	U	0.038	0.076	0.26
100-75-4	N-Nitrosopiperidine	0.084	U	0.042	0.084	0.26
99-35-4	1,3,5-Trinitrobenzene	0.39	U	0.2	0.39	0.39
2303-16-4	Diallate (Avadex)	0.14	U	0.072	0.14	0.26
465-73-6	Isodrin	0.096	U	0.048	0.096	0.26
510-15-6	Chlorobenzilate	0.055	U	0.027	0.055	0.26
143-50-0	Kepone	0.1	U	0.051	0.1	0.98
126-68-1	0,0,0-Triethylphosphorothioate	0.094	U	0.047	0.094	0.26

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 126265MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 126265MB Lab File ID: 9117MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/19/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 0919

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.2	U	2.1	4.2	4.2
62-75-9	N-Nitrosodimethylamine	4.4	U	2.2	4.4	4.4
62-53-3	Aniline	5.6	U	2.8	5.6	5.6
111-44-4	Bis(2-chloroethyl)ether	6	U	3	6	6
108-95-2	Phenol	3.4	U	1.7	3.4	4
95-57-8	2-Chlorophenol	5.8	U	2.9	5.8	5.8
541-73-1	1,3-Dichlorobenzene	5.4	U	2.7	5.4	5.4
106-46-7	1,4-Dichlorobenzene	5.4	U	2.7	5.4	5.4
95-50-1	1,2-Dichlorobenzene	5.2	U	2.6	5.2	5.2
100-51-6	Benzyl alcohol	6.2	U	3.1	6.2	10
108-60-1	2,2'-Oxybis(1-chloropropane)	6.6	U	3.3	6.6	6.6
95-48-7	2-Methylphenol	5.2	U	2.6	5.2	5.2
67-72-1	Hexachloroethane	5.2	U	2.6	5.2	5.2
621-64-7	N-Nitroso-di-n-propylamine	6	U	3	6	6
106-44-5	4-Methylphenol	12.2	U	6.1	12.2	12.2
98-95-3	Nitrobenzene	2	U	1	2	4
78-59-1	Isophorone	7.6	U	3.8	7.6	7.6
88-75-5	2-Nitrophenol	1.5	U	0.77	1.5	4
105-67-9	2,4-Dimethylphenol	4.6	U	2.3	4.6	4.6
111-91-1	Bis(2-chloroethoxy)methane	7	U	3.5	7	7
120-83-2	2,4-Dichlorophenol	6.2	U	3.1	6.2	6.2
120-82-1	1,2,4-Trichlorobenzene	5.2	U	2.6	5.2	5.2
106-47-8	4-Chloroaniline	6	U	3	6	6
87-68-3	Hexachlorobutadiene	5	U	2.5	5	5
59-50-7	4-Chloro-3-methylphenol	5.4	U	2.7	5.4	5.4
77-47-4	Hexachlorocyclopentadiene	1.6	U	0.82	1.6	4
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.84	1.7	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 126265MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 126265MB Lab File ID: 9117MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/19/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 0919

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	6.8	U	3.4	6.8	6.8
91-58-7	2-Chloronaphthalene	5.6	U	2.8	5.6	5.6
88-74-4	2-Nitroaniline	6	U	3	6	6
131-11-3	Dimethylphthalate	6	U	3	6	6
606-20-2	2,6-Dinitrotoluene	5.6	U	2.8	5.6	5.6
99-09-2	3-Nitroaniline	5.6	U	2.8	5.6	5.6
51-28-5	2,4-Dinitrophenol	11.2	U	5.6	11.2	20
132-64-9	Dibenzofuran	5.4	U	2.7	5.4	5.4
121-14-2	2,4-Dinitrotoluene	5.6	U	2.8	5.6	5.6
100-02-7	4-Nitrophenol	8	U	4	8	8
7005-72-3	4-Chlorophenyl-phenylether	5	U	2.5	5	5
84-66-2	Diethylphthalate	5.6	U	2.8	5.6	5.6
100-01-6	4-Nitroaniline	3	U	1.5	3	4
534-52-1	4,6-Dinitro-2-methylphenol	8	U	4	8	8
86-30-6	N-Nitrosodiphenylamine	6.8	U	3.4	6.8	6.8
101-55-3	4-Bromophenyl-phenylether	4.6	U	2.3	4.6	4.6
118-74-1	Hexachlorobenzene	0.82	U	0.41	0.82	4
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10
84-74-2	Di-n-butylphthalate	0.98	J	0.86	1.7	4
85-68-7	Butylbenzylphthalate	6	U	3	6	6
91-94-1	3,3'-Dichlorobenzidine	5.4	U	2.7	5.4	5.4
117-81-7	Bis(2-ethylhexyl)phthalate	14		4.4	8.8	8.8
117-84-0	Di-n-octylphthalate	4	U	2	4	4
109-06-8	2-Picoline	8	U	4	8	8
10595-95-6	N-Nitrosomethylethylamine	5.4	U	2.7	5.4	5.4
55-18-5	N-Nitrosodiethylamine	6.2	U	3.1	6.2	6.2
66-27-3	Methylmethanesulfonate	3.8	U	1.9	3.8	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
126265MB

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 126265MB Lab File ID: 9117MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/19/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 0919

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	5	U	2.5	5	5
76-01-7	Pentachloroethane	5	U	2.5	5	20
930-55-2	N-Nitrosopyrrolidine	5.4	U	2.7	5.4	5.4
98-86-2	Acetophenone	8	U	4	8	8
59-89-2	N-Nitrosomorpholine	6	U	3	6	6
95-53-4	o-Toluidine	5.4	U	2.7	5.4	5.4
122-09-8	a,a-Dimethylphenethylamine	32	U	16	32	32
87-65-0	2,6-Dichlorophenol	7	U	3.5	7	7
1888-71-7	Hexachloropropene	4	U	2	4	4
924-16-3	N-Nitrosodibutylamine	5.4	U	2.7	5.4	5.4
120-58-1	Isosafrole	5.2	U	2.6	5.2	5.2
95-94-3	1,2,4,5-Tetrachlorobenzene	4.4	U	2.2	4.4	4.4
94-59-7	Safrole	5	U	2.5	5	5
130-15-4	1,4-Naphthoquinone	6.2	U	3.1	6.2	6.2
99-65-0	1,3-Dinitrobenzene	5	U	2.5	5	5
608-93-5	Pentachlorobenzene	4.4	U	2.2	4.4	4.4
134-32-7	1-Naphthylamine	3.6	U	1.8	3.6	4
91-59-8	2-Naphthylamine	5	U	2.5	5	5
58-90-2	2,3,4,6-Tetrachlorophenol	6	U	3	6	6
99-55-8	5-Nitro-o-toluidine	5.2	U	2.6	5.2	5.2
106-50-3	p-Phenylenediamine	4	U	2	4	4
62-44-2	Phenacetin	1.8	U	0.89	1.8	4
92-67-1	4-Aminobiphenyl	4	U	2	4	4
23950-58-5	Pronamide	1.6	U	0.81	1.6	4
82-68-8	Pentachloronitrobenzene(PCNB)	4	U	2	4	4
88-85-7	Dinoseb	8	U	4	8	8
56-57-5	4-Nitroquinoline-1-oxide	7.4	U	3.7	7.4	10

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 126265MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 126265MB Lab File ID: 9117MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/19/12

Concentrated Extract Volume: 1 Date Extracted: 04/19/12

Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 0919

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	4.4	U	2.2	4.4	4.4
140-57-8	Aramite	8	U	4	8	8
60-11-7	p-Dimethylaminoazobenzene	1.2	U	0.62	1.2	4
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4
57-97-6	7,12-Dimethylbenz(a)anthracene	1.9	U	0.96	1.9	4
56-49-5	3-Methylcholanthrene	4.4	U	2.2	4.4	4.4
100-75-4	N-Nitrosopiperidine	5.6	U	2.8	5.6	5.6
99-35-4	1,3,5-Trinitrobenzene	4	U	2	4	4
2303-16-4	Diallate (Avadex)	1.7	U	0.84	1.7	4
465-73-6	Isodrin	5.2	U	2.6	5.2	5.2
510-15-6	Chlorobenzilate	1.6	U	0.78	1.6	4
143-50-0	Kepone	32	U	16	32	32
126-68-1	0,0,0-Triethylphosphorothioate	5.8	U	2.9	5.8	5.8

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 128106MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 128106MB Lab File ID: 9245MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1105

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.2	U	2.1	4.2	4.2
62-75-9	N-Nitrosodimethylamine	4.4	U	2.2	4.4	4.4
62-53-3	Aniline	5.6	U	2.8	5.6	5.6
111-44-4	Bis(2-chloroethyl)ether	6	U	3	6	6
108-95-2	Phenol	3.4	U	1.7	3.4	4
95-57-8	2-Chlorophenol	5.8	U	2.9	5.8	5.8
541-73-1	1,3-Dichlorobenzene	5.4	U	2.7	5.4	5.4
106-46-7	1,4-Dichlorobenzene	5.4	U	2.7	5.4	5.4
95-50-1	1,2-Dichlorobenzene	5.2	U	2.6	5.2	5.2
100-51-6	Benzyl alcohol	6.2	U	3.1	6.2	10
108-60-1	2,2'-Oxybis(1-chloropropane)	6.6	U	3.3	6.6	6.6
95-48-7	2-Methylphenol	5.2	U	2.6	5.2	5.2
67-72-1	Hexachloroethane	5.2	U	2.6	5.2	5.2
621-64-7	N-Nitroso-di-n-propylamine	6	U	3	6	6
106-44-5	4-Methylphenol	12.2	U	6.1	12.2	12.2
98-95-3	Nitrobenzene	2	U	1	2	4
78-59-1	Isophorone	7.6	U	3.8	7.6	7.6
88-75-5	2-Nitrophenol	1.5	U	0.77	1.5	4
105-67-9	2,4-Dimethylphenol	4.6	U	2.3	4.6	4.6
111-91-1	Bis(2-chloroethoxy)methane	7	U	3.5	7	7
120-83-2	2,4-Dichlorophenol	6.2	U	3.1	6.2	6.2
120-82-1	1,2,4-Trichlorobenzene	5.2	U	2.6	5.2	5.2
106-47-8	4-Chloroaniline	6	U	3	6	6
87-68-3	Hexachlorobutadiene	5	U	2.5	5	5
59-50-7	4-Chloro-3-methylphenol	5.4	U	2.7	5.4	5.4
77-47-4	Hexachlorocyclopentadiene	1.6	U	0.82	1.6	4
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.84	1.7	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128106MB

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 128106MB Lab File ID: 9245MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1105

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	6.8	U	3.4	6.8	6.8
91-58-7	2-Chloronaphthalene	5.6	U	2.8	5.6	5.6
88-74-4	2-Nitroaniline	6	U	3	6	6
131-11-3	Dimethylphthalate	6	U	3	6	6
606-20-2	2,6-Dinitrotoluene	5.6	U	2.8	5.6	5.6
99-09-2	3-Nitroaniline	5.6	U	2.8	5.6	5.6
51-28-5	2,4-Dinitrophenol	11.2	U	5.6	11.2	20
132-64-9	Dibenzofuran	5.4	U	2.7	5.4	5.4
121-14-2	2,4-Dinitrotoluene	5.6	U	2.8	5.6	5.6
100-02-7	4-Nitrophenol	8	U	4	8	8
7005-72-3	4-Chlorophenyl-phenylether	5	U	2.5	5	5
84-66-2	Diethylphthalate	5.6	U	2.8	5.6	5.6
100-01-6	4-Nitroaniline	3	U	1.5	3	4
534-52-1	4,6-Dinitro-2-methylphenol	8	U	4	8	8
86-30-6	N-Nitrosodiphenylamine	6.8	U	3.4	6.8	6.8
101-55-3	4-Bromophenyl-phenylether	4.6	U	2.3	4.6	4.6
118-74-1	Hexachlorobenzene	0.82	U	0.41	0.82	4
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10
84-74-2	Di-n-butylphthalate	1.7	U	0.86	1.7	4
85-68-7	Butylbenzylphthalate	6	U	3	6	6
91-94-1	3,3'-Dichlorobenzidine	5.4	U	2.7	5.4	5.4
117-81-7	Bis(2-ethylhexyl)phthalate	8.8	U	4.4	8.8	8.8
117-84-0	Di-n-octylphthalate	4	U	2	4	4
109-06-8	2-Picoline	8	U	4	8	8
10595-95-6	N-Nitrosomethylethylamine	5.4	U	2.7	5.4	5.4
55-18-5	N-Nitrosodiethylamine	6.2	U	3.1	6.2	6.2
66-27-3	Methylmethanesulfonate	3.8	U	1.9	3.8	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 128106MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 128106MB Lab File ID: 9245MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1105

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	5	U	2.5	5	5
76-01-7	Pentachloroethane	5	U	2.5	5	20
930-55-2	N-Nitrosopyrrolidine	5.4	U	2.7	5.4	5.4
98-86-2	Acetophenone	8	U	4	8	8
59-89-2	N-Nitrosomorpholine	6	U	3	6	6
95-53-4	o-Toluidine	5.4	U	2.7	5.4	5.4
122-09-8	a,a-Dimethylphenethylamine	32	U	16	32	32
87-65-0	2,6-Dichlorophenol	7	U	3.5	7	7
1888-71-7	Hexachloropropene	4	U	2	4	4
924-16-3	N-Nitrosodibutylamine	5.4	U	2.7	5.4	5.4
120-58-1	Isosafrole	5.2	U	2.6	5.2	5.2
95-94-3	1,2,4,5-Tetrachlorobenzene	4.4	U	2.2	4.4	4.4
94-59-7	Safrole	5	U	2.5	5	5
130-15-4	1,4-Naphthoquinone	6.2	U	3.1	6.2	6.2
99-65-0	1,3-Dinitrobenzene	5	U	2.5	5	5
608-93-5	Pentachlorobenzene	4.4	U	2.2	4.4	4.4
134-32-7	1-Naphthylamine	3.6	U	1.8	3.6	4
91-59-8	2-Naphthylamine	5	U	2.5	5	5
58-90-2	2,3,4,6-Tetrachlorophenol	6	U	3	6	6
99-55-8	5-Nitro-o-toluidine	5.2	U	2.6	5.2	5.2
106-50-3	p-Phenylenediamine	4	U	2	4	4
62-44-2	Phenacetin	1.8	U	0.89	1.8	4
92-67-1	4-Aminobiphenyl	4	U	2	4	4
23950-58-5	Pronamide	1.6	U	0.81	1.6	4
82-68-8	Pentachloronitrobenzene(PCNB)	4	U	2	4	4
88-85-7	Dinoseb	8	U	4	8	8
56-57-5	4-Nitroquinoline-1-oxide	7.4	U	3.7	7.4	10

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 128106MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 128106MB Lab File ID: 9245MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1105

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	4.4	U	2.2	4.4	4.4
140-57-8	Aramite	8	U	4	8	8
60-11-7	p-Dimethylaminoazobenzene	1.2	U	0.62	1.2	4
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4
57-97-6	7,12-Dimethylbenz(a)anthracene	1.9	U	0.96	1.9	4
56-49-5	3-Methylcholanthrene	4.4	U	2.2	4.4	4.4
100-75-4	N-Nitrosopiperidine	5.6	U	2.8	5.6	5.6
99-35-4	1,3,5-Trinitrobenzene	4	U	2	4	4
2303-16-4	Diallate (Avadex)	1.7	U	0.84	1.7	4
465-73-6	Isodrin	5.2	U	2.6	5.2	5.2
510-15-6	Chlorobenzilate	1.6	U	0.78	1.6	4
143-50-0	Kepone	32	U	16	32	32
126-68-1	0,0,0-Triethylphosphorothioate	5.8	U	2.9	5.8	5.8

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128130MB

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 128130MB Lab File ID: 9249MB.D

Sample wt/vol: 20.21 Units: G Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1017

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.53	U	0.26	0.53	0.53
62-75-9	N-Nitrosodimethylamine	0.14	U	0.07	0.14	0.2
62-53-3	Aniline	0.15	U	0.076	0.15	0.27
111-44-4	Bis(2-chloroethyl)ether	0.13	U	0.066	0.13	0.2
108-95-2	Phenol	0.13	U	0.064	0.13	0.49
95-57-8	2-Chlorophenol	0.14	U	0.068	0.14	0.27
541-73-1	1,3-Dichlorobenzene	0.12	U	0.06	0.12	0.27
106-46-7	1,4-Dichlorobenzene	0.12	U	0.062	0.12	0.27
95-50-1	1,2-Dichlorobenzene	0.11	U	0.056	0.11	0.27
100-51-6	Benzyl alcohol	0.18	U	0.091	0.18	0.66
108-60-1	2,2'-Oxybis(1-chloropropane)	0.44	U	0.22	0.44	0.44
95-48-7	2-Methylphenol	0.19	U	0.095	0.19	0.26
67-72-1	Hexachloroethane	0.099	U	0.049	0.099	0.27
621-64-7	N-Nitroso-di-n-propylamine	0.12	U	0.06	0.12	0.2
106-44-5	4-Methylphenol	0.12	U	0.058	0.12	0.27
98-95-3	Nitrobenzene	0.12	U	0.059	0.12	0.2
78-59-1	Isophorone	0.12	U	0.058	0.12	0.27
88-75-5	2-Nitrophenol	0.14	U	0.071	0.14	0.27
105-67-9	2,4-Dimethylphenol	0.11	U	0.056	0.11	0.26
111-91-1	Bis(2-chloroethoxy)methane	0.11	U	0.056	0.11	0.26
120-83-2	2,4-Dichlorophenol	0.15	U	0.074	0.15	0.2
120-82-1	1,2,4-Trichlorobenzene	0.11	U	0.057	0.11	0.27
106-47-8	4-Chloroaniline	0.12	U	0.062	0.12	0.27
87-68-3	Hexachlorobutadiene	0.11	U	0.057	0.11	0.27
59-50-7	4-Chloro-3-methylphenol	0.11	U	0.055	0.11	0.27
77-47-4	Hexachlorocyclopentadiene	0.079	U	0.04	0.079	0.66
88-06-2	2,4,6-Trichlorophenol	0.13	U	0.067	0.13	0.26

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 128130MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 128130MB Lab File ID: 9249MB.D

Sample wt/vol: 20.21 Units: G Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1017

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	0.15	U	0.073	0.15	0.26
91-58-7	2-Chloronaphthalene	0.13	U	0.066	0.13	0.27
88-74-4	2-Nitroaniline	0.11	U	0.056	0.11	0.27
131-11-3	Dimethylphthalate	0.12	U	0.058	0.12	0.27
606-20-2	2,6-Dinitrotoluene	0.099	U	0.049	0.099	0.2
99-09-2	3-Nitroaniline	0.16	U	0.079	0.16	0.2
51-28-5	2,4-Dinitrophenol	0.44	U	0.22	0.44	0.99
132-64-9	Dibenzofuran	0.11	U	0.053	0.11	0.27
121-14-2	2,4-Dinitrotoluene	0.097	U	0.048	0.097	0.2
100-02-7	4-Nitrophenol	0.1	U	0.052	0.1	0.3
7005-72-3	4-Chlorophenyl-phenylether	0.1	U	0.05	0.1	0.27
84-66-2	Diethylphthalate	0.1	U	0.05	0.1	0.27
100-01-6	4-Nitroaniline	0.17	U	0.087	0.17	0.2
534-52-1	4,6-Dinitro-2-methylphenol	0.53	U	0.26	0.53	0.53
86-30-6	N-Nitrosodiphenylamine	0.12	U	0.062	0.12	0.26
101-55-3	4-Bromophenyl-phenylether	0.097	U	0.048	0.097	0.27
118-74-1	Hexachlorobenzene	0.1	U	0.052	0.1	0.26
87-86-5	Pentachlorophenol	0.26	U	0.13	0.26	0.49
84-74-2	Di-n-butylphthalate	0.087	U	0.044	0.087	0.27
85-68-7	Butylbenzylphthalate	0.12	U	0.062	0.12	0.27
91-94-1	3,3'-Dichlorobenzidine	0.12	U	0.058	0.12	0.2
117-81-7	Bis(2-ethylhexyl)phthalate	0.16	U	0.082	0.16	0.2
117-84-0	Di-n-octylphthalate	0.11	U	0.057	0.11	0.27
109-06-8	2-Picoline	0.099	U	0.049	0.099	0.27
10595-95-6	N-Nitrosomethylethylamine	0.11	U	0.053	0.11	0.2
55-18-5	N-Nitrosodiethylamine	0.1	U	0.052	0.1	0.49
66-27-3	Methylmethanesulfonate	0.11	U	0.056	0.11	0.27

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 128130MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 128130MB Lab File ID: 9249MB.D

Sample wt/vol: 20.21 Units: G Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1017

PercentSolids: 100 decanted: _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	0.091	U	0.046	0.091	0.27
76-01-7	Pentachloroethane	0.093	U	0.046	0.093	0.27
930-55-2	N-Nitrosopyrrolidine	0.097	U	0.048	0.097	0.27
98-86-2	Acetophenone	0.2	U	0.099	0.2	0.27
59-89-2	N-Nitrosomorpholine	0.13	U	0.063	0.13	0.27
95-53-4	o-Toluidine	0.14	U	0.069	0.14	0.27
122-09-8	a,a-Dimethylphenethylamine	0.87	U	0.44	0.87	1.3
87-65-0	2,6-Dichlorophenol	0.13	U	0.066	0.13	0.2
1888-71-7	Hexachloropropene	0.089	U	0.044	0.089	0.27
924-16-3	N-Nitrosodibutylamine	0.11	U	0.056	0.11	0.2
120-58-1	Isosafrole	0.11	U	0.056	0.11	0.27
95-94-3	1,2,4,5-Tetrachlorobenzene	0.093	U	0.046	0.093	0.27
94-59-7	Safrole	0.13	U	0.066	0.13	0.27
130-15-4	1,4-Naphthoquinone	0.085	U	0.042	0.085	0.27
99-65-0	1,3-Dinitrobenzene	0.099	U	0.049	0.099	0.2
608-93-5	Pentachlorobenzene	0.099	U	0.049	0.099	0.27
134-32-7	1-Naphthylamine	0.13	U	0.066	0.13	0.27
91-59-8	2-Naphthylamine	0.53	U	0.26	0.53	0.53
58-90-2	2,3,4,6-Tetrachlorophenol	0.14	U	0.069	0.14	0.27
99-55-8	5-Nitro-o-toluidine	0.093	U	0.046	0.093	0.27
106-50-3	p-Phenylenediamine	0.11	U	0.057	0.11	0.27
62-44-2	Phenacetin	0.11	U	0.057	0.11	0.27
92-67-1	4-Aminobiphenyl	0.53	U	0.26	0.53	0.66
23950-58-5	Pronamide	0.073	U	0.037	0.073	0.27
82-68-8	Pentachloronitrobenzene(PCNB)	0.091	U	0.046	0.091	0.26
88-85-7	Dinoseb	0.26	U	0.13	0.26	0.27
56-57-5	4-Nitroquinoline-1-oxide	0.2	U	0.099	0.2	1.3

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128130MB

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 128130MB Lab File ID: 9249MB.D

Sample wt/vol: 20.21 Units: G Date Received: 04/30/12

Concentrated Extract Volume: 1 Date Extracted: 04/30/12

Level:(low/med) LOW Date Analyzed: 05/01/12 Time: 1017

PercentSolids: 100 decanted : _____ Dilution Factor: 1

Extraction: OTHER Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	0.13	U	0.065	0.13	0.27
140-57-8	Aramite	0.4	U	0.2	0.4	0.4
60-11-7	p-Dimethylaminoazobenzene	0.093	U	0.046	0.093	0.27
53-96-3	2-Acetylaminofluorene	0.12	U	0.06	0.12	0.27
57-97-6	7,12-Dimethylbenz(a)anthracene	0.069	U	0.035	0.069	0.26
56-49-5	3-Methylcholanthrene	0.077	U	0.038	0.077	0.26
100-75-4	N-Nitrosopiperidine	0.085	U	0.042	0.085	0.27
99-35-4	1,3,5-Trinitrobenzene	0.4	U	0.2	0.4	0.4
2303-16-4	Diallate (Avadex)	0.15	U	0.073	0.15	0.26
465-73-6	Isodrin	0.097	U	0.048	0.097	0.27
510-15-6	Chlorobenzilate	0.055	U	0.028	0.055	0.26
143-50-0	Kepone	0.1	U	0.051	0.1	0.99
126-68-1	0,0,0-Triethylphosphorothioate	0.095	U	0.048	0.095	0.27

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 125743MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9077MB.D Lab Sample ID: 125743MB

Instrument ID: SMSD03 Date Extracted: 04/17/12

Matrix: SOIL Date Analyzed: 04/24/12

Level:(low/med) LOW Time Analyzed: 1735

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	125744LCS	125744LCS	9077LCS.D	04/24/12	1759
2	TFS-SD-02	350572403	72403.D	04/24/12	1822
3	TFS-SD-03	350572404	72404.D	04/24/12	1846
4	TFS-SD-04	350572407	72407.D	04/25/12	1426
5	TFS-SD-04 MS	350572411	72411.D	04/25/12	1450
6	TFS-SD-04 MSD	350572412	72412.D	04/25/12	1513
7	TFS-SD-01	350572401	72401.D	04/25/12	1537
8	TFS-SD-FD	350572409	72409.D	04/25/12	1601

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 126265MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9117MB.D Lab Sample ID: 126265MB

Instrument ID: SMSD03 Date Extracted: 04/19/12

Matrix: WATER Date Analyzed: 04/24/12

Level:(low/med) LOW Time Analyzed: 0919

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	126266LCS	126266LCS	9117LCS.D	04/24/12	0942
2	TFS-SD-EB	350572415	72415.D	04/24/12	1006
3	TFS-SW-01	350572402	72402.D	04/24/12	1030
4	TFS-SW-02	350572405	72405.D	04/24/12	1053
5	TFS-SW-03	350572406	72406.D	04/24/12	1117
6	TFS-SW-04	350572408	72408.D	04/24/12	1140
7	TFS-SW-FD	350572410	72410.D	04/24/12	1204
8	TFS-SW-03 MS	350572413	72413.D	04/24/12	1228
9	TFS-SW-03 MSD	350572414	72414.D	04/24/12	1251

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 128106MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9245MB.D Lab Sample ID: 128106MB

Instrument ID: SMSD03 Date Extracted: 04/30/12

Matrix: WATER Date Analyzed: 05/01/12

Level:(low/med) LOW Time Analyzed: 1105

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128107LCS	128107LCS	9245LCS.D	05/01/12	1128
2	TFS-SW-01RE1	350572402RE1	72402.D	05/01/12	1152
3	TFS-SW-02RE1	350572405RE1	72405.D	05/01/12	1217
4	TFS-SW-03RE1	350572406RE1	72406.D	05/01/12	1240
5	TFS-SW-04RE1	350572408RE1	72408.D	05/01/12	1304
6	TFS-SW-FDRE1	350572410RE1	72410.D	05/01/12	1328
7	TFS-SW-03 MSRE1	350572413RE1	72413.D	05/01/12	1352
8	TFS-SW-03 MSDRE1	350572414RE1	72414.D	05/01/12	1416
9	TFS-SD-EBRE1	350572415RE1	72415.D	05/01/12	1440

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 128130MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9249MB.D Lab Sample ID: 128130MB

Instrument ID: SMSD03 Date Extracted: 04/30/12

Matrix: SOIL Date Analyzed: 05/01/12

Level:(low/med) LOW Time Analyzed: 1017

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128131LCS	128131LCS	9249LCS.D	05/01/12	1041
2	TFS-SD-01RE1	350572401RE1	72401.D	05/01/12	1505
3	TFS-SD-02RE1	350572403RE1	72403.D	05/01/12	1529
4	TFS-SD-03RE1	350572404RE1	72404.D	05/01/12	1553
5	TFS-SD-04RE1	350572407RE1	72407.D	05/01/12	1617
6	TFS-SD-FDRE1	350572409RE1	72409.D	05/01/12	1641
7	TFS-SD-04 MSRE1	350572411RE1	72411.D	05/01/12	1705
8	TFS-SD-04 MSDRE1	350572412RE1	72412.D	05/01/12	1729

COMMENTS:

2A

WATER SEMI-VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.Lab Code: PEL Case No. SAS No: SDG NO.: 3505724Column(1): HPMS-5 ID: 0.25 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
126265MB	50.5	29.9	83.6	79.6	91.4	92.6	0
126266LCS	46.5	27.6	81.0	78.6	90.2	81.6	0
128106MB	47.6	28.4	86.4	86.0	100.0	105.0	0
128107LCS	51.4	30.0	90.2	88.0	101.0	91.2	0
TFS-SD-EB	49.2	27.7	86.9	83.7	104.0	104.0	0
TFS-SD-EBRE1	43.9	23.6	79.8	78.2	93.6	97.3	0
TFS-SW-01	14.8 *	14.6	54.7	51.4	31.3 *	61.2	2
TFS-SW-01RE1	34.6	23.9	55.5	50.4	55.9	62.0	0
TFS-SW-02	42.6	26.4	65.1	62.9	67.7	73.3	0
TFS-SW-02RE1	40.0	24.6	70.6	65.9	74.2	83.9	0
TFS-SW-03	32.5	21.6	56.1	53.7	59.2	67.1	0
TFS-SW-03 MS	41.2	25.8	66.7	63.7	74.6	65.1	0
TFS-SW-03 MSD	46.5	28.5	76.9	73.1	86.4	66.9	0
TFS-SW-03 MSDRE1	40.9	25.5	67.1	66.1	72.7	69.8	0
TFS-SW-03 MSRE1	40.0	24.8	67.5	64.9	70.2	66.9	0
TFS-SW-03RE1	39.4	24.3	63.7	62.9	73.8	81.4	0
TFS-SW-04	39.1	25.1	65.1	61.4	64.8	73.7	0
TFS-SW-04RE1	51.5	31.6	81.2	78.8	91.4	96.1	0
TFS-SW-FD	21.8	13.3	35.9 *	34.3 *	38.7 *	42.2 *	4
TFS-SW-FDRE1	45.0	29.0	73.5	73.5	84.4	82.7	0

Control Limits

S1 = 2-Fluorophenol	20 - 110
S2 = Phenol-d5	10 - 115
S3 = Nitrobenzene-d5	40 - 110
S4 = 2-Fluorobiphenyl	50 - 110
S5 = 2,4,6-Tribromophenol	40 - 125
S6 = p-Terphenyl-d14	50 - 135

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

2A

SOIL SEMI-VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.Lab Code: PEL Case No. SAS No: SDG NO.: 3505724Column(1): HPMS-5 ID: 0.25 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
125743MB	65.3	61.2	62.5	62.5	61.2	79.2	0
125744LCS	76.0	76.0	76.0	80.0	90.0	88.0	0
128130MB	75.5	75.5	76.0	72.0	91.8	100.0	0
128131LCS	61.2	67.3	70.8	70.8	81.6	79.2	0
TFS-SD-01	63.6	63.6	60.5	44.7 *	75.3	65.8	1
TFS-SD-01RE1	16.7 *	21.8 *	20.5 *	17.4 *	42.3	38.5	4
TFS-SD-02	50.0	52.3	40.9	16.6 *	48.9	38.6	1
TFS-SD-02RE1	38.5	38.5 *	34.8 *	14.3 *	37.4	30.4	3
TFS-SD-03	63.2	61.8	52.9	35.3 *	61.8	55.9	1
TFS-SD-03RE1	47.1	47.1	44.1	20.6 *	54.4	44.1	1
TFS-SD-04	53.4	52.1	50.0	33.3 *	57.5	50.0	1
TFS-SD-04 MS	62.5	58.3	55.6	50.0	58.3	55.6	0
TFS-SD-04 MSD	44.6	43.2	43.2	37.8 *	43.2	40.5	1
TFS-SD-04 MSDRE1	61.1	62.5	58.3	47.2	70.8	52.8	0
TFS-SD-04 MSRE1	58.1	60.8	59.5	51.4	74.3	62.2	0
TFS-SD-04RE1	46.6	47.9	45.9	40.5 *	61.6	54.1	1
TFS-SD-FD	46.0	47.6	45.2	27.4 *	54.0	48.4	1
TFS-SD-FDRE1	40.3	41.9	38.7	29.4 *	50.0	45.2	1

Control Limits

S1 = 2-Fluorophenol	35 - 105
S2 = Phenol-d5	40 - 100
S3 = Nitrobenzene-d5	35 - 100
S4 = 2-Fluorobiphenyl	45 - 105
S5 = 2,4,6-Tribromophenol	35 - 125
S6 = p-Terphenyl-d14	30 - 125

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.2
68	Less than 2.0% of mass 69	0.6 (1.3)1
69	Mass 69 relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.83)1
127	10.0 - 80.0% of mass 198	45.1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	33
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.5 (14.69)2
442	Greater than 50.0% of mass 198	92
443	15.0 - 24.0% of mass 442	17.3 (18.77)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1072999	45921	8270CAL7.D	04/23/12	1023
2	STD1073000	45922	8270CAL6.D	04/23/12	1047
3	STD1073001	45923	8270CAL5.D	04/23/12	1110
4	STD1073002	45924	8270CAL4.D	04/23/12	1134
5	STD1073004	45925	8270CAL3.D	04/23/12	1158
6	STD1073005	45926	8270CAL2.D	04/23/12	1221
7	STD1073006	45927	8270CAL1.D	04/23/12	1245
8	SSC1072998	45872	8270SEC2.D	04/23/12	1333
9	STD1073007	45933	BSCAL7.D	04/23/12	1356
10	STD1073008	45934	BSCAL6.D	04/23/12	1420
11	STD1073009	45935	BSCAL5.D	04/23/12	1444
12	STD1073010	45936	BSCAL4.D	04/23/12	1507
13	STD1073012	45937	BSCAL3.D	04/23/12	1531
14	STD1073013	45938	BSCAL2.D	04/23/12	1555
15	STD1073014	45939	BSCAL1.D	04/23/12	1619
16	SSC1072994	44859	BSSEC.D	04/23/12	1642
17	STD1073015	45955	AP9CAL7.D	04/23/12	1706
18	STD1073016	45956	AP9CAL6.D	04/23/12	1730
19	STD1073017	45957	AP9CAL5.D	04/23/12	1753

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

20	STD1073018	45958	AP9CAL4.D	04/23/12	1817
21	STD1073020	45959	AP9CAL3.D	04/23/12	1841
22	STD1073021	45960	AP9CAL2.D	04/23/12	1904
23	STD1073022	45961	AP9CAL1.D	04/23/12	1928
24	SSC1072993	44612	AP9SEC2.D	04/23/12	2015

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/24/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0737
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30
68	Less than 2.0% of mass 69	0.5 (1.01)1
69	Mass 69 relative abundance	47.9
70	Less than 2.0% of mass 69	0.3 (0.58)1
127	10.0 - 80.0% of mass 198	44.1
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7.4
275	10.0 - 60.0% of mass 198	35.8
365	Greater than 1.0% of mass 198	7.2
441	0.0 - 24.0% of mass 442	16.2 (14.61)2
442	Greater than 50.0% of mass 198	110.7
443	15.0 - 24.0% of mass 442	21.9 (19.79)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073003	45924	8270CCV1.D	04/24/12	0805
2	CCV1073011	45936	BSCCV1.D	04/24/12	0829
3	CCV1073019	45958	AP9CCV1.D	04/24/12	0852
4	126265MB	126265MB	9117MB.D	04/24/12	0919
5	126266LCS	126266LCS	9117LCS.D	04/24/12	0942
6	TFS-SD-EB	350572415	72415.D	04/24/12	1006
7	TFS-SW-01	350572402	72402.D	04/24/12	1030
8	TFS-SW-02	350572405	72405.D	04/24/12	1053
9	TFS-SW-03	350572406	72406.D	04/24/12	1117
10	TFS-SW-04	350572408	72408.D	04/24/12	1140
11	TFS-SW-FD	350572410	72410.D	04/24/12	1204
12	TFS-SW-03 MS	350572413	72413.D	04/24/12	1228
13	TFS-SW-03 MSD	350572414	72414.D	04/24/12	1251
14	125743MB	125743MB	9077MB.D	04/24/12	1735
15	125744LCS	125744LCS	9077LCS.D	04/24/12	1759
16	TFS-SD-02	350572403	72403.D	04/24/12	1822
17	TFS-SD-03	350572404	72404.D	04/24/12	1846

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/25/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0747
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	29.8
68	Less than 2.0% of mass 69	0.6 (1.34)1
69	Mass 69 relative abundance	47.7
70	Less than 2.0% of mass 69	0.3 (0.62)1
127	10.0 - 80.0% of mass 198	47.3
197	Less than 2.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	31.9
365	Greater than 1.0% of mass 198	5.9
441	0.0 - 24.0% of mass 442	14.4 (15.98)2
442	Greater than 50.0% of mass 198	90.2
443	15.0 - 24.0% of mass 442	17.8 (19.71)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073205	45924	8270CCV1.D	04/25/12	0807
2	CCV1073207	45936	BSCCV1.D	04/25/12	0831
3	CCV1073206	45958	AP9CCV1.D	04/25/12	0854
4	TFS-SD-04	350572407	72407.D	04/25/12	1426
5	TFS-SD-04 MS	350572411	72411.D	04/25/12	1450
6	TFS-SD-04 MSD	350572412	72412.D	04/25/12	1513
7	TFS-SD-01	350572401	72401.D	04/25/12	1537
8	TFS-SD-FD	350572409	72409.D	04/25/12	1601

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP2.D DFTPP Injection Date: 05/01/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0731
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.5
68	Less than 2.0% of mass 69	0.7 (1.29)1
69	Mass 69 relative abundance	51.3
70	Less than 2.0% of mass 69	0.1 (0.19)1
127	10.0 - 80.0% of mass 198	46.1
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	35.2
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.6 (13.86)2
442	Greater than 50.0% of mass 198	97.9
443	15.0 - 24.0% of mass 442	18.1 (18.52)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1077665	45924	8270CCV1.D	05/01/12	0751
2	CCV1077666	45936	BSCCV1.D	05/01/12	0815
3	CCV1077668	45958	AP9CCV2.D	05/01/12	0952
4	128130MB	128130MB	9249MB.D	05/01/12	1017
5	128131LCS	128131LCS	9249LCS.D	05/01/12	1041
6	128106MB	128106MB	9245MB.D	05/01/12	1105
7	128107LCS	128107LCS	9245LCS.D	05/01/12	1128
8	TFS-SW-01RE1	350572402RE1	72402.D	05/01/12	1152
9	TFS-SW-02RE1	350572405RE1	72405.D	05/01/12	1217
10	TFS-SW-03RE1	350572406RE1	72406.D	05/01/12	1240
11	TFS-SW-04RE1	350572408RE1	72408.D	05/01/12	1304
12	TFS-SW-FDRE1	350572410RE1	72410.D	05/01/12	1328
13	TFS-SW-03 MSRE1	350572413RE1	72413.D	05/01/12	1352
14	TFS-SW-03 MSDRE1	350572414RE1	72414.D	05/01/12	1416
15	TFS-SD-EBRE1	350572415RE1	72415.D	05/01/12	1440
16	TFS-SD-01RE1	350572401RE1	72401.D	05/01/12	1505
17	TFS-SD-02RE1	350572403RE1	72403.D	05/01/12	1529
18	TFS-SD-03RE1	350572404RE1	72404.D	05/01/12	1553
19	TFS-SD-04RE1	350572407RE1	72407.D	05/01/12	1617

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Lab File ID: DFTPP2.D DFTPP Injection Date: 05/01/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0731
 GC Column: HPMS-5 ID: 0.25 (mm)

20	TFS-SD-FDRE1	350572409RE1	72409.D	05/01/12	1641
21	TFS-SD-04 MSRE1	350572411RE1	72411.D	05/01/12	1705
22	TFS-SD-04 MSDRE1	350572412RE1	72412.D	05/01/12	1729

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
1 126265MB	257877	4.45	884610	5.61	611889	7.30
2 126266LCS	301689	4.45	987118	5.61	695374	7.30
3 TFS-SD-EB	328294	4.45	1091462	5.61	761640	7.30
4 TFS-SW-01	274250	4.45	921522	5.61	646519	7.30
5 TFS-SW-02	303851	4.45	1059764	5.61	719458	7.30
6 TFS-SW-03	330748	4.45	1079566	5.61	754196	7.30
7 TFS-SW-04	331194	4.45	1092163	5.61	772713	7.30
8 TFS-SW-FD	375285	4.45	1232949	5.61	881995	7.30
9 TFS-SW-03 MS	368101	4.45	1262565	5.61	898608	7.30
10 TFS-SW-03 MSD	393177	4.45	1293903	5.61	916871	7.30
11 125743MB	284340	4.45	941161	5.61	634613	7.30
12 125744LCS	304505	4.45	982126	5.61	679790	7.30
13 TFS-SD-02	289565	4.45	933129	5.61	630025	7.30
14 TFS-SD-03	291842	4.45	976536	5.61	650663	7.30
15 TFS-SD-04	260357	4.43	865825	5.59	604825	7.29
16 TFS-SD-04 MS	310666	4.43	995866	5.60	673439	7.29
17 TFS-SD-04 MSD	319078	4.43	1020929	5.60	669437	7.29
18 TFS-SD-01	276907	4.43	913547	5.59	607409	7.29
19 TFS-SD-FD	311934	4.43	995526	5.59	652496	7.29
20 128130MB	226205	4.39	737636	5.56	535746	7.25
21 128131LCS	234140	4.39	796807	5.56	560066	7.25
22 128106MB	223512	4.39	729031	5.56	512026	7.25
23 128107LCS	222428	4.39	765598	5.56	537620	7.25
24 TFS-SW-01RE1	220536	4.39	739878	5.56	536495	7.25
25 TFS-SW-02RE1	243064	4.39	804323	5.56	572574	7.25
26 TFS-SW-03RE1	249109	4.39	850809	5.56	586856	7.25
27 TFS-SW-04RE1	249170	4.39	852151	5.56	604455	7.25
28 TFS-SW-FDRE1	257431	4.39	869835	5.56	615544	7.26
29 TFS-SW-03 MSRE1	275019	4.40	909373	5.56	636150	7.26

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
30 TFS-SW-03 MSDRE1	280189	4.40	934220	5.56	648796	7.26
31 TFS-SD-EBRE1	263071	4.39	854444	5.56	591304	7.26
32 TFS-SD-01RE1	257241	4.39	828562	5.56	585411	7.26
33 TFS-SD-02RE1	270036	4.39	881775	5.56	615331	7.26
34 TFS-SD-03RE1	262301	4.39	865348	5.56	593902	7.26
35 TFS-SD-04RE1	263764	4.39	875670	5.56	608665	7.26
36 TFS-SD-FDRE1	271834	4.39	898588	5.56	628479	7.26
37 TFS-SD-04 MSRE1	278507	4.40	935487	5.56	642865	7.26
38 TFS-SD-04 MSDRE1	286989	4.40	951660	5.56	660676	7.26

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT	
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68	
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18	
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18	
EPA SAMPLE NO.							
1	126265MB	1193054	8.76	1745313	11.35	1705844	12.68
2	126266LCS	1339944	8.76	2088299	11.36	1824692	12.68
3	TFS-SD-EB	1457892	8.76	1957710	11.35	2031624	12.68
4	TFS-SW-01	1254700	8.76	1764375	11.35	1817544	12.68
5	TFS-SW-02	1400436	8.76	1894813	11.35	1984548	12.68
6	TFS-SW-03	1470708	8.76	2029819	11.35	2096315	12.68
7	TFS-SW-04	1502310	8.76	2037862	11.35	2088217	12.68
8	TFS-SW-FD	1691413	8.76	2308764	11.35	2369392	12.68
9	TFS-SW-03 MS	1738546	8.76	2763342	11.36	2330818	12.68
10	TFS-SW-03 MSD	1750265	8.76	2822486	11.36	2343249	12.69
11	125743MB	1234362	8.76	1656113	11.35	1685359	12.68
12	125744LCS	1273580	8.76	1936310	11.36	1707050	12.68
13	TFS-SD-02	1245704	8.76	1626853	11.35	1689926	12.68
14	TFS-SD-03	1255109	8.76	1740062	11.35	1743073	12.68
15	TFS-SD-04	1183628	8.74	1578142	11.34	1653382	12.66
16	TFS-SD-04 MS	1234229	8.74	1732523	11.34	1699082	12.66
17	TFS-SD-04 MSD	1204175	8.74	1678147	11.34	1696247	12.66
18	TFS-SD-01	1168285	8.74	1547176	11.34	1657079	12.67
19	TFS-SD-FD	1234432	8.74	1588726	11.34	1724588	12.66
20	128130MB	1043364	8.71	1383408	11.30	1417326	12.63
21	128131LCS	1121859	8.71	1666363	11.30	1445007	12.63
22	128106MB	1026085	8.71	1380806	11.30	1356416	12.62
23	128107LCS	1071618	8.71	1642305	11.31	1367160	12.63
24	TFS-SW-01RE1	1062126	8.71	1438124	11.30	1448204	12.63
25	TFS-SW-02RE1	1109875	8.71	1457698	11.30	1470518	12.63
26	TFS-SW-03RE1	1163372	8.71	1516690	11.30	1537435	12.63
27	TFS-SW-04RE1	1174838	8.71	1544153	11.31	1545518	12.64
28	TFS-SW-FDRE1	1237373	8.71	1723699	11.31	1602018	12.64
29	TFS-SW-03 MSRE1	1225823	8.72	1840348	11.32	1548900	12.64

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18
EPA SAMPLE NO.						
30 TFS-SW-03 MSDRE1	1270431	8.72	1841575	11.31	1591386	12.65
31 TFS-SD-EBRE1	1162512	8.71	1467126	11.31	1453166	12.65
32 TFS-SD-01RE1	1145334	8.71	1486043	11.31	1535696	12.64
33 TFS-SD-02RE1	1176527	8.71	1528819	11.31	1550443	12.64
34 TFS-SD-03RE1	1162994	8.71	1515182	11.31	1502772	12.64
35 TFS-SD-04RE1	1208471	8.71	1558149	11.31	1561161	12.65
36 TFS-SD-FDRE1	1223598	8.71	1558363	11.31	1574857	12.64
37 TFS-SD-04 MSRE1	1254598	8.72	1759369	11.31	1539963	12.64
38 TFS-SD-04 MSDRE1	1273459	8.72	1757843	11.31	1606898	12.64

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 3.38			S2: 4.14				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	DFTPP2	45777	DFTPP2.D	04/23/12	1003		
2	STD1072999	45921	8270CAL7.D	04/23/12	1023	3.39	4.15
3	STD1073000	45922	8270CAL6.D	04/23/12	1047	3.38	4.14
4	STD1073001	45923	8270CAL5.D	04/23/12	1110	3.38	4.14
5	STD1073002	45924	8270CAL4.D	04/23/12	1134	3.38	4.14
6	STD1073004	45925	8270CAL3.D	04/23/12	1158	3.38	4.14
7	STD1073005	45926	8270CAL2.D	04/23/12	1221	3.39	4.14
8	STD1073006	45927	8270CAL1.D	04/23/12	1245	3.39	4.14
9	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1309		
10	SSC1072998	45872	8270SEC2.D	04/23/12	1333	3.38	4.14
11	STD1073007	45933	BSCAL7.D	04/23/12	1356		
12	STD1073008	45934	BSCAL6.D	04/23/12	1420		
13	STD1073009	45935	BSCAL5.D	04/23/12	1444		
14	STD1073010	45936	BSCAL4.D	04/23/12	1507		
15	STD1073012	45937	BSCAL3.D	04/23/12	1531		
16	STD1073013	45938	BSCAL2.D	04/23/12	1555		
17	STD1073014	45939	BSCAL1.D	04/23/12	1619		
18	SSC1072994	44859	BSSEC.D	04/23/12	1642		
19	STD1073015	45955	AP9CAL7.D	04/23/12	1706		
20	STD1073016	45956	AP9CAL6.D	04/23/12	1730		
21	STD1073017	45957	AP9CAL5.D	04/23/12	1753		
22	STD1073018	45958	AP9CAL4.D	04/23/12	1817		
23	STD1073020	45959	AP9CAL3.D	04/23/12	1841		
24	STD1073021	45960	AP9CAL2.D	04/23/12	1904		
25	STD1073022	45961	AP9CAL1.D	04/23/12	1928		
26	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1952		

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 3.38			S2: 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	SSC1072993	44612	AP9SEC2.D	04/23/12	2015	
28	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	0717	
29	DFTPP2	45777	DFTPP2.D	04/24/12	0737	
30	CCV1073003	45924	8270CCV1.D	04/24/12	0805	3.38 4.14
31	CCV1073011	45936	BSCCV1.D	04/24/12	0829	
32	CCV1073019	45958	AP9CCV1.D	04/24/12	0852	
33	126265MB	126265MB	9117MB.D	04/24/12	0919	3.38 4.13
34	126266LCS	126266LCS	9117LCS.D	04/24/12	0942	3.38 4.14
35	TFS-SD-EB	350572415	72415.D	04/24/12	1006	3.38 4.13
36	TFS-SW-01	350572402	72402.D	04/24/12	1030	3.38 4.14
37	TFS-SW-02	350572405	72405.D	04/24/12	1053	3.39 4.14
38	TFS-SW-03	350572406	72406.D	04/24/12	1117	3.38 4.14
39	TFS-SW-04	350572408	72408.D	04/24/12	1140	3.38 4.14
40	TFS-SW-FD	350572410	72410.D	04/24/12	1204	3.38 4.14
41	TFS-SW-03 MS	350572413	72413.D	04/24/12	1228	3.38 4.14
42	TFS-SW-03 MSD	350572414	72414.D	04/24/12	1251	3.38 4.14
43	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1315	
44	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1339	
45	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1402	
46	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1426	
47	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1449	
48	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1513	
49	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1537	
50	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1600	
51	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1624	
52	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	1648	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 3.38			S2: 4.14				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
53	ZZZZZZ	ZZZZZZ	04/24/12	1711			
54	125743MB	9077MB.D	04/24/12	1735	3.38	4.13	
55	125744LCS	9077LCS.D	04/24/12	1759	3.38	4.14	
56	TFS-SD-02	350572403	72403.D	04/24/12	1822	3.38	4.13
57	TFS-SD-03	350572404	72404.D	04/24/12	1846	3.38	4.13
58	DFTPP1	45777	DFTPP1.D	04/25/12	0747		
59	CCV1073205	45924	8270CCV1.D	04/25/12	0807	3.37	4.12
60	CCV1073207	45936	BSCCV1.D	04/25/12	0831		
61	CCV1073206	45958	AP9CCV1.D	04/25/12	0854		
62	ZZZZZZ	ZZZZZZ	04/25/12	0918			
63	ZZZZZZ	ZZZZZZ	04/25/12	0943			
64	ZZZZZZ	ZZZZZZ	04/25/12	1007			
65	ZZZZZZ	ZZZZZZ	04/25/12	1030			
66	ZZZZZZ	ZZZZZZ	04/25/12	1054			
67	ZZZZZZ	ZZZZZZ	04/25/12	1118			
68	ZZZZZZ	ZZZZZZ	04/25/12	1141			
69	ZZZZZZ	ZZZZZZ	04/25/12	1205			
70	ZZZZZZ	ZZZZZZ	04/25/12	1228			
71	ZZZZZZ	ZZZZZZ	04/25/12	1252			
72	ZZZZZZ	ZZZZZZ	04/25/12	1315			
73	ZZZZZZ	ZZZZZZ	04/25/12	1339			
74	ZZZZZZ	ZZZZZZ	04/25/12	1402			
75	TFS-SD-04	350572407	72407.D	04/25/12	1426	3.37	4.12
76	TFS-SD-04 MS	350572411	72411.D	04/25/12	1450	3.37	4.12
77	TFS-SD-04 MSD	350572412	72412.D	04/25/12	1513	3.37	4.12
78	TFS-SD-01	350572401	72401.D	04/25/12	1537	3.37	4.12

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 3.38			S2: 4.14				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
79	TFS-SD-FD	350572409	72409.D	04/25/12	1601	3.37	4.12
80	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1624		
81	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/01/12	0709		
82	DFTPP2	45777	DFTPP2.D	05/01/12	0731		
83	CCV1077665	45924	8270CCV1.D	05/01/12	0751	3.32	4.08
84	CCV1077666	45936	BSCCV1.D	05/01/12	0815		
85	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/01/12	0838		
86	CCV1077668	45958	AP9CCV2.D	05/01/12	0952		
87	128130MB	128130MB	9249MB.D	05/01/12	1017	3.32	4.08
88	128131LCS	128131LCS	9249LCS.D	05/01/12	1041	3.32	4.08
89	128106MB	128106MB	9245MB.D	05/01/12	1105	3.32	4.08
90	128107LCS	128107LCS	9245LCS.D	05/01/12	1128	3.32	4.08
91	TFS-SW-01RE1	350572402RE1	72402.D	05/01/12	1152	3.32	4.08
92	TFS-SW-02RE1	350572405RE1	72405.D	05/01/12	1217	3.32	4.08
93	TFS-SW-03RE1	350572406RE1	72406.D	05/01/12	1240	3.32	4.08
94	TFS-SW-04RE1	350572408RE1	72408.D	05/01/12	1304	3.32	4.08
95	TFS-SW-FDRE1	350572410RE1	72410.D	05/01/12	1328	3.32	4.08
96	TFS-SW-03 MSRE1	350572413RE1	72413.D	05/01/12	1352	3.32	4.08
97	TFS-SW-03 MSDRE1	350572414RE1	72414.D	05/01/12	1416	3.33	4.08
98	TFS-SD-EBRE1	350572415RE1	72415.D	05/01/12	1440	3.32	4.08
99	TFS-SD-01RE1	350572401RE1	72401.D	05/01/12	1505	3.32	4.08
100	TFS-SD-02RE1	350572403RE1	72403.D	05/01/12	1529	3.32	4.08
101	TFS-SD-03RE1	350572404RE1	72404.D	05/01/12	1553	3.32	4.08
102	TFS-SD-04RE1	350572407RE1	72407.D	05/01/12	1617	3.32	4.08
103	TFS-SD-FDRE1	350572409RE1	72409.D	05/01/12	1641	3.32	4.08
104	TFS-SD-04 MSRE1	350572411RE1	72411.D	05/01/12	1705	3.32	4.08

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
105 TFS-SD-04 MSDRE1	350572412RE1	72412.D	05/01/12	1729	3.32	4.08

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

125744LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	2	1.2	60.0			23 - 145
N-Nitrosodimethylamine	2	1.4	70.0			20 - 115
Aniline	2	1.4	70.0			38 - 111
Bis(2-chloroethyl)ether	2	1.6	80.0			40 - 105
Phenol	2	1.4	70.0			40 - 100
2-Chlorophenol	2	1.4	70.0			45 - 105
1,3-Dichlorobenzene	2	1.3	65.0			40 - 100
1,4-Dichlorobenzene	2	1.3	65.0			35 - 105
1,2-Dichlorobenzene	2	1.3	65.0			45 - 95
Benzyl alcohol	2	1.4	70.0			20 - 125
2,2'-Oxybis(1-chloropropane)	2	1.4	70.0			20 - 115
2-Methylphenol	2	1.4	70.0			40 - 105
Hexachloroethane	2	1.3	65.0			35 - 110
N-Nitroso-di-n-propylamine	2	1.7	85.0			40 - 115
4-Methylphenol	2	1.6	80.0			40 - 105
Nitrobenzene	2	1.4	70.0			40 - 115
Isophorone	2	1.8	90.0			45 - 110
2-Nitrophenol	2	1.5	75.0			40 - 110
2,4-Dimethylphenol	2	1.6	80.0			30 - 105
Bis(2-chloroethoxy)methane	2	1.6	80.0			45 - 110
2,4-Dichlorophenol	2	1.5	75.0			45 - 110
1,2,4-Trichlorobenzene	2	1.4	70.0			45 - 110
4-Chloroaniline	2	1.7	85.0			10 - 95
Hexachlorobutadiene	2	1.5	75.0			40 - 115
4-Chloro-3-methylphenol	2	1.6	80.0			45 - 115
Hexachlorocyclopentadiene	2	0.87	43.5			24 - 119
2,4,6-Trichlorophenol	2	1.5	75.0			45 - 110
2,4,5-Trichlorophenol	2	1.6	80.0			50 - 110
2-Chloronaphthalene	2	1.6	80.0			45 - 105
2-Nitroaniline	2	1.8	90.0			45 - 120
Dimethylphthalate	2	1.7	85.0			50 - 110
2,6-Dinitrotoluene	2	1.6	80.0			50 - 110

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

125744LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	2	1.8	90.0			25 - 110
2,4-Dinitrophenol	4	0.97	24.2			15 - 130
Dibenzofuran	2	1.6	80.0			50 - 105
2,4-Dinitrotoluene	2	1.6	80.0			50 - 115
4-Nitrophenol	2	1.8	90.0			15 - 140
4-Chlorophenyl-phenylether	2	1.6	80.0			45 - 110
Diethylphthalate	2	1.7	85.0			50 - 115
4-Nitroaniline	2	2	100.0			35 - 115
4,6-Dinitro-2-methylphenol	2	0.91	45.5			30 - 135
N-Nitrosodiphenylamine	2	1.6	80.0			50 - 115
4-Bromophenyl-phenylether	2	1.6	80.0			45 - 115
Hexachlorobenzene	2	1.5	75.0			45 - 120
Pentachlorophenol	2	1.6	80.0			25 - 120
Di-n-butylphthalate	2	1.7	85.0			55 - 110
Butylbenzylphthalate	2	2	100.0			50 - 125
3,3'-Dichlorobenzidine	4	2.9	72.5			10 - 130
Bis(2-ethylhexyl)phthalate	2	1.9	95.0			45 - 125
Di-n-octylphthalate	2	1.9	95.0			40 - 130
2-Picoline	2	1.1	55.0 *			70 - 130
N-Nitrosomethylethylamine	2	1.2	60.0 *			70 - 130
N-Nitrosodiethylamine	2	1.3	65.0 *			70 - 130
Methylmethanesulfonate	2	1.2	60.0 *			70 - 130
Ethyl methanesulfonate	2	1.6	80.0			70 - 130
Pentachloroethane	2	1.3	65.0			30 - 130
N-Nitrosopyrrolidine	2	1.6	80.0			70 - 130
Acetophenone	4	3.1	77.5			70 - 130
N-Nitrosomorpholine	2	1.7	85.0			70 - 130
o-Toluidine	2	1.3	65.0 *			70 - 130
a,a-Dimethylphenethylamine	2	0.63	31.5 *			70 - 130
2,6-Dichlorophenol	2	1.6	80.0			70 - 130
Hexachloropropene	2	1.1	55.0 *			70 - 130
N-Nitrosodibutylamine	2	1.5	75.0			70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

125744LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	2	1.6	80.0			70 - 130
1,2,4,5-Tetrachlorobenzene	2	1.5	75.0			70 - 130
Safrole	2	1.8	90.0			70 - 130
1,4-Naphthoquinone	2	0.11	5.5 *			70 - 130
1,3-Dinitrobenzene	2	1.8	90.0			70 - 130
Pentachlorobenzene	2	1.6	80.0			70 - 130
1-Naphthylamine	2	1.3	65.0 *			70 - 130
2-Naphthylamine	2	1.4	70.0			70 - 130
2,3,4,6-Tetrachlorophenol	2	1.5	75.0			70 - 130
5-Nitro-o-toluidine	2	1.6	80.0			70 - 130
p-Phenylenediamine	2	1.8	90.0			70 - 130
Phenacetin	2	1.7	85.0			70 - 130
4-Aminobiphenyl	2	1.8	90.0			70 - 130
Pronamide	2	1.7	85.0			70 - 130
Pentachloronitrobenzene(PCNB)	2	1.9	95.0			70 - 130
Dinoseb	2	1.3	65.0 *			70 - 130
4-Nitroquinoline-1-oxide	2	1.3	65.0 *			70 - 130
Methapyriline	2	0	0.0 *			70 - 130
Aramite	2	1.5	75.0			70 - 130
p-Dimethylaminoazobenzene	2	1.5	75.0			70 - 130
2-Acetylaminofluorene	2	1.4	70.0			70 - 130
7,12-Dimethylbenz(a)anthracene	2	1.8	90.0			56 - 122
3-Methylcholanthrene	2	1.7	85.0			55 - 121
N-Nitrosopiperidine	2	1.6	80.0			70 - 130
1,3,5-Trinitrobenzene	2	0.84	42.0 *			70 - 130
Diallate (Avadex)	2	1.6	80.0			70 - 130
Isodrin	2	1.8	90.0			70 - 130
Chlorobenzilate	2	1.4	70.0			70 - 130
Kepone	2	1.1	55.0 *			70 - 130
0,0,0-Triethylphosphorothioate	2	1.4	70.0			70 - 130

Spike Recovery: 14 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

126266LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	17.5	43.8			22 - 70
N-Nitrosodimethylamine	40	22	55.0			25 - 110
Aniline	40	24.3	60.8			14 - 99
Bis(2-chloroethyl)ether	40	34.6	86.5			35 - 110
Phenol	40	11.8	29.5			0 - 115
2-Chlorophenol	40	26.2	65.5			35 - 105
1,3-Dichlorobenzene	40	27.9	69.8			30 - 100
1,4-Dichlorobenzene	40	27.8	69.5			30 - 100
1,2-Dichlorobenzene	40	27.5	68.8			35 - 100
Benzyl alcohol	40	23.7	59.2			30 - 110
2,2'-Oxybis(1-chloropropane)	40	30.1	75.2			25 - 130
2-Methylphenol	40	21.8	54.5			40 - 110
Hexachloroethane	40	27.9	69.8			30 - 95
N-Nitroso-di-n-propylamine	40	38.1	95.2			35 - 130
4-Methylphenol	40	23.7	59.2			30 - 110
Nitrobenzene	40	30.1	75.2			45 - 110
Isophorone	40	38	95.0			50 - 110
2-Nitrophenol	40	30.1	75.2			40 - 115
2,4-Dimethylphenol	40	29.3	73.2			30 - 110
Bis(2-chloroethoxy)methane	40	32.6	81.5			45 - 105
2,4-Dichlorophenol	40	29.1	72.8			50 - 105
1,2,4-Trichlorobenzene	40	29.6	74.0			35 - 105
4-Chloroaniline	40	31.6	79.0			15 - 110
Hexachlorobutadiene	40	32.1	80.2			25 - 105
4-Chloro-3-methylphenol	40	27.7	69.2			45 - 110
Hexachlorocyclopentadiene	40	17.6	44.0			13 - 80
2,4,6-Trichlorophenol	40	29.2	73.0			50 - 115
2,4,5-Trichlorophenol	40	30.2	75.5			50 - 110
2-Chloronaphthalene	40	30.4	76.0			50 - 105
2-Nitroaniline	40	26.7	66.8			50 - 115
Dimethylphthalate	40	33.4	83.5			25 - 125
2,6-Dinitrotoluene	40	31.3	78.2			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

126266LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	30.4	76.0			20 - 125
2,4-Dinitrophenol	80	78.8	98.5			15 - 140
Dibenzofuran	40	31.1	77.8			55 - 105
2,4-Dinitrotoluene	40	32.1	80.2			50 - 120
4-Nitrophenol	40	17.4	43.5			0 - 125
4-Chlorophenyl-phenylether	40	31.3	78.2			50 - 110
Diethylphthalate	40	33.4	83.5			40 - 120
4-Nitroaniline	40	37.1	92.8			35 - 120
4,6-Dinitro-2-methylphenol	40	30.1	75.2			40 - 130
N-Nitrosodiphenylamine	40	31.6	79.0			50 - 110
4-Bromophenyl-phenylether	40	30.4	76.0			50 - 115
Hexachlorobenzene	40	28	70.0			50 - 110
Pentachlorophenol	40	36.2	90.5			40 - 115
Di-n-butylphthalate	40	32.4	81.0			55 - 115
Butylbenzylphthalate	40	37.9	94.8			45 - 115
3,3'-Dichlorobenzidine	80	55.4	69.2			20 - 110
Bis(2-ethylhexyl)phthalate	40	37.9	94.8			40 - 125
Di-n-octylphthalate	40	35.6	89.0			35 - 135
2-Picoline	40	23.9	59.8			15 - 110
N-Nitrosomethylethylamine	40	30.1	75.2			25 - 131
N-Nitrosodiethylamine	40	33	82.5			46 - 111
Methylmethanesulfonate	40	23.9	59.8			15 - 103
Ethyl methanesulfonate	40	34.7	86.8			46 - 113
Pentachloroethane	40	33.2	83.0			27 - 99
N-Nitrosopyrrolidine	40	36	90.0			51 - 112
Acetophenone	80	66.8	83.5			45 - 118
N-Nitrosomorpholine	40	37.4	93.5			51 - 112
o-Toluidine	40	30.2	75.5			49 - 97
a,a-Dimethylphenethylamine	40	21.5	53.8 *			70 - 130
2,6-Dichlorophenol	40	36.7	91.8			50 - 135
Hexachloropropene	40	28.6	71.5			21 - 105
N-Nitrosodibutylamine	40	38.9	97.2			43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

126266LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	34.9	87.2			70 - 130
1,2,4,5-Tetrachlorobenzene	40	33.2	83.0			40 - 100
Safrole	40	40.3	101.0 *			52 - 100
1,4-Naphthoquinone	40	0	0.0 *			28 - 143
1,3-Dinitrobenzene	40	38.4	96.0			61 - 112
Pentachlorobenzene	40	33.5	83.8			50 - 99
1-Naphthylamine	40	38.6	96.5 *			38 - 91
2-Naphthylamine	40	35.6	89.0			70 - 130
2,3,4,6-Tetrachlorophenol	40	33.5	83.8			55 - 122
5-Nitro-o-toluidine	40	34.9	87.2			70 - 130
p-Phenylenediamine	40	39.7	99.2			58 - 107
Phenacetin	40	36.5	91.2			57 - 114
4-Aminobiphenyl	40	42	105.0 *			49 - 103
Pronamide	40	39.4	98.5			59 - 99
Pentachloronitrobenzene(PCNB)	40	41.9	105.0 *			60 - 104
Dinoseb	40	40.2	100.0			44 - 142
4-Nitroquinoline-1-oxide	40	46.2	116.0			10 - 125
Methapyriline	40	510	1275.0 *			0 - 90
Aramite	40	33.5	83.8			41 - 127
p-Dimethylaminoazobenzene	40	33.7	84.2			70 - 130
2-Acetylaminofluorene	40	32	80.0			63 - 103
7,12-Dimethylbenz(a)anthracene	40	37.9	94.8			57 - 95
3-Methylcholanthrene	40	34.9	87.2			52 - 105
N-Nitrosopiperidine	40	37.4	93.5			53 - 112
1,3,5-Trinitrobenzene	40	20.7	51.8			29 - 163
Diallate (Avadex)	40	38.2	95.5			56 - 98
Isodrin	40	41.8	104.0			54 - 110
Chlorobenzilate	40	30.1	75.2			58 - 101
Kepone	40	32.6	81.5			0 - 165
0,0,0-Triethylphosphorothioate	40	35	87.5			50 - 106

Spike Recovery: 7 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128107LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	13.6	34.0			22 - 70
N-Nitrosodimethylamine	40	25.2	63.0			25 - 110
Aniline	40	24.6	61.5			14 - 99
Bis(2-chloroethyl)ether	40	37.9	94.8			35 - 110
Phenol	40	12.4	31.0			0 - 115
2-Chlorophenol	40	28.2	70.5			35 - 105
1,3-Dichlorobenzene	40	31	77.5			30 - 100
1,4-Dichlorobenzene	40	30.2	75.5			30 - 100
1,2-Dichlorobenzene	40	30.4	76.0			35 - 100
Benzyl alcohol	40	26.2	65.5			30 - 110
2,2'-Oxybis(1-chloropropane)	40	32	80.0			25 - 130
2-Methylphenol	40	24.3	60.8			40 - 110
Hexachloroethane	40	33.4	83.5			30 - 95
N-Nitroso-di-n-propylamine	40	43.8	110.0			35 - 130
4-Methylphenol	40	29.3	73.2			30 - 110
Nitrobenzene	40	33.3	83.2			45 - 110
Isophorone	40	40.7	102.0			50 - 110
2-Nitrophenol	40	31.6	79.0			40 - 115
2,4-Dimethylphenol	40	30.8	77.0			30 - 110
Bis(2-chloroethoxy)methane	40	34.8	87.0			45 - 105
2,4-Dichlorophenol	40	30.4	76.0			50 - 105
1,2,4-Trichlorobenzene	40	30.9	77.2			35 - 105
4-Chloroaniline	40	34.7	86.8			15 - 110
Hexachlorobutadiene	40	35.4	88.5			25 - 105
4-Chloro-3-methylphenol	40	30.6	76.5			45 - 110
Hexachlorocyclopentadiene	40	27	67.5			13 - 80
2,4,6-Trichlorophenol	40	31.6	79.0			50 - 115
2,4,5-Trichlorophenol	40	35.9	89.8			50 - 110
2-Chloronaphthalene	40	32	80.0			50 - 105
2-Nitroaniline	40	37.2	93.0			50 - 115
Dimethylphthalate	40	35.5	88.8			25 - 125
2,6-Dinitrotoluene	40	32.5	81.2			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128107LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	32.3	80.8			20 - 125
2,4-Dinitrophenol	80	72.5	90.6			15 - 140
Dibenzofuran	40	34.2	85.5			55 - 105
2,4-Dinitrotoluene	40	34.6	86.5			50 - 120
4-Nitrophenol	40	16.8	42.0			0 - 125
4-Chlorophenyl-phenylether	40	34.8	87.0			50 - 110
Diethylphthalate	40	36.8	92.0			40 - 120
4-Nitroaniline	40	37.1	92.8			35 - 120
4,6-Dinitro-2-methylphenol	40	30.8	77.0			40 - 130
N-Nitrosodiphenylamine	40	32.5	81.2			50 - 110
4-Bromophenyl-phenylether	40	31.8	79.5			50 - 115
Hexachlorobenzene	40	30.7	76.8			50 - 110
Pentachlorophenol	40	40.6	102.0			40 - 115
Di-n-butylphthalate	40	34.6	86.5			55 - 115
Butylbenzylphthalate	40	37.2	93.0			45 - 115
3,3'-Dichlorobenzidine	80	57.1	71.4			20 - 110
Bis(2-ethylhexyl)phthalate	40	38.4	96.0			40 - 125
Di-n-octylphthalate	40	38.8	97.0			35 - 135
2-Picoline	40	15.4	38.5			15 - 110
N-Nitrosomethylethylamine	40	28	70.0			25 - 131
N-Nitrosodiethylamine	40	32	80.0			46 - 111
Methylmethanesulfonate	40	27.5	68.8			15 - 103
Ethyl methanesulfonate	40	38.2	95.5			46 - 113
Pentachloroethane	40	35.4	88.5			27 - 99
N-Nitrosopyrrolidine	40	35.9	89.8			51 - 112
Acetophenone	80	77.4	96.8			45 - 118
N-Nitrosomorpholine	40	36.6	91.5			51 - 112
o-Toluidine	40	29.8	74.5			49 - 97
a,a-Dimethylphenethylamine	40	0	0.0*			70 - 130
2,6-Dichlorophenol	40	36.9	92.2			50 - 135
Hexachloropropene	40	33.8	84.5			21 - 105
N-Nitrosodibutylamine	40	36.4	91.0			43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128107LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	35.4	88.5			70 - 130
1,2,4,5-Tetrachlorobenzene	40	34.8	87.0			40 - 100
Safrole	40	39.1	97.8			52 - 100
1,4-Naphthoquinone	40	36.2	90.5			28 - 143
1,3-Dinitrobenzene	40	38.1	95.2			61 - 112
Pentachlorobenzene	40	35.1	87.8			50 - 99
1-Naphthylamine	40	41.7	104.0 *			38 - 91
2-Naphthylamine	40	36.6	91.5			70 - 130
2,3,4,6-Tetrachlorophenol	40	34.9	87.2			55 - 122
5-Nitro-o-toluidine	40	31.7	79.2			70 - 130
p-Phenylenediamine	40	35	87.5			58 - 107
Phenacetin	40	31.9	79.8			57 - 114
4-Aminobiphenyl	40	42	105.0 *			49 - 103
Pronamide	40	36.4	91.0			59 - 99
Pentachloronitrobenzene(PCNB)	40	41.7	104.0			60 - 104
Dinoseb	40	40.8	102.0			44 - 142
4-Nitroquinoline-1-oxide	40	26.1	65.2			10 - 125
Methapyriline	40	128	320.0 *			0 - 90
Aramite	40	30.8	77.0			41 - 127
p-Dimethylaminoazobenzene	40	30.8	77.0			70 - 130
2-Acetylaminofluorene	40	26.6	66.5			63 - 103
7,12-Dimethylbenz(a)anthracene	40	37.1	92.8			57 - 95
3-Methylcholanthrene	40	33	82.5			52 - 105
N-Nitrosopiperidine	40	33	82.5			53 - 112
1,3,5-Trinitrobenzene	40	21.9	54.8			29 - 163
Diallate (Avadex)	40	34.8	87.0			56 - 98
Isodrin	40	36.4	91.0			54 - 110
Chlorobenzilate	40	29.7	74.2			58 - 101
Kepone	40	21.7	54.2			0 - 165
0,0,0-Triethylphosphorothioate	40	34.4	86.0			50 - 106

Spike Recovery: 4 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128131LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	2	0.9	45.0			23 - 145
N-Nitrosodimethylamine	2	1.3	65.0			20 - 115
Aniline	2	1	50.0			38 - 111
Bis(2-chloroethyl)ether	2	1.2	60.0			40 - 105
Phenol	2	1.1	55.0			40 - 100
2-Chlorophenol	2	1	50.0			45 - 105
1,3-Dichlorobenzene	2	1	50.0			40 - 100
1,4-Dichlorobenzene	2	1	50.0			35 - 105
1,2-Dichlorobenzene	2	1	50.0			45 - 95
Benzyl alcohol	2	1.2	60.0			20 - 125
2,2'-Oxybis(1-chloropropane)	2	1.1	55.0			20 - 115
2-Methylphenol	2	1.1	55.0			40 - 105
Hexachloroethane	2	1.1	55.0			35 - 110
N-Nitroso-di-n-propylamine	2	1.5	75.0			40 - 115
4-Methylphenol	2	1.4	70.0			40 - 105
Nitrobenzene	2	1.2	60.0			40 - 115
Isophorone	2	1.5	75.0			45 - 110
2-Nitrophenol	2	1.1	55.0			40 - 110
2,4-Dimethylphenol	2	1.2	60.0			30 - 105
Bis(2-chloroethoxy)methane	2	1.2	60.0			45 - 110
2,4-Dichlorophenol	2	1.1	55.0			45 - 110
1,2,4-Trichlorobenzene	2	1.1	55.0			45 - 110
4-Chloroaniline	2	1.2	60.0			10 - 95
Hexachlorobutadiene	2	1.3	65.0			40 - 115
4-Chloro-3-methylphenol	2	1.3	65.0			45 - 115
Hexachlorocyclopentadiene	2	0.92	46.0			24 - 119
2,4,6-Trichlorophenol	2	1.1	55.0			45 - 110
2,4,5-Trichlorophenol	2	1.4	70.0			50 - 110
2-Chloronaphthalene	2	1.2	60.0			45 - 105
2-Nitroaniline	2	1.4	70.0			45 - 120
Dimethylphthalate	2	1.4	70.0			50 - 110
2,6-Dinitrotoluene	2	1.2	60.0			50 - 110

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128131LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	2	1.2	60.0			25 - 110
2,4-Dinitrophenol	3.9	2.4	61.5			15 - 130
Dibenzofuran	2	1.3	65.0			50 - 105
2,4-Dinitrotoluene	2	1.3	65.0			50 - 115
4-Nitrophenol	2	1.5	75.0			15 - 140
4-Chlorophenyl-phenylether	2	1.3	65.0			45 - 110
Diethylphthalate	2	1.4	70.0			50 - 115
4-Nitroaniline	2	1.4	70.0			35 - 115
4,6-Dinitro-2-methylphenol	2	1.2	60.0			30 - 135
N-Nitrosodiphenylamine	2	1.2	60.0			50 - 115
4-Bromophenyl-phenylether	2	1.2	60.0			45 - 115
Hexachlorobenzene	2	1.1	55.0			45 - 120
Pentachlorophenol	2	1.4	70.0			25 - 120
Di-n-butylphthalate	2	1.3	65.0			55 - 110
Butylbenzylphthalate	2	1.5	75.0			50 - 125
3,3'-Dichlorobenzidine	3.9	2.2	56.4			10 - 130
Bis(2-ethylhexyl)phthalate	2	1.4	70.0			45 - 125
Di-n-octylphthalate	2	1.4	70.0			40 - 130
2-Picoline	2	0.88	44.0 *			70 - 130
N-Nitrosomethylethylamine	2	1	50.0 *			70 - 130
N-Nitrosodiethylamine	2	1	50.0 *			70 - 130
Methylmethanesulfonate	2	1.2	60.0 *			70 - 130
Ethyl methanesulfonate	2	1.3	65.0 *			70 - 130
Pentachloroethane	2	1	50.0			30 - 130
N-Nitrosopyrrolidine	2	1.2	60.0 *			70 - 130
Acetophenone	3.9	2.6	66.7 *			70 - 130
N-Nitrosomorpholine	2	1.4	70.0			70 - 130
o-Toluidine	2	0.99	49.5 *			70 - 130
a,a-Dimethylphenethylamine	2	0.68	34.0 *			70 - 130
2,6-Dichlorophenol	2	1.3	65.0 *			70 - 130
Hexachloropropene	2	1.1	55.0 *			70 - 130
N-Nitrosodibutylamine	2	1.1	55.0 *			70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

128131LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	2	1.2	60.0 *			70 - 130
1,2,4,5-Tetrachlorobenzene	2	1.2	60.0 *			70 - 130
Safrole	2	1.4	70.0			70 - 130
1,4-Naphthoquinone	2	1.2	60.0 *			70 - 130
1,3-Dinitrobenzene	2	1.4	70.0			70 - 130
Pentachlorobenzene	2	1.3	65.0 *			70 - 130
1-Naphthylamine	2	0.67	33.5 *			70 - 130
2-Naphthylamine	2	1.3	65.0 *			70 - 130
2,3,4,6-Tetrachlorophenol	2	1.2	60.0 *			70 - 130
5-Nitro-o-toluidine	2	1.2	60.0 *			70 - 130
p-Phenylenediamine	2	1.3	65.0 *			70 - 130
Phenacetin	2	1.2	60.0 *			70 - 130
4-Aminobiphenyl	2	1.3	65.0 *			70 - 130
Pronamide	2	1.3	65.0 *			70 - 130
Pentachloronitrobenzene(PCNB)	2	1.5	75.0			70 - 130
Dinoseb	2	1.4	70.0			70 - 130
4-Nitroquinoline-1-oxide	2	0.89	44.5 *			70 - 130
Methapyriline	2	0	0.0 *			70 - 130
Aramite	2	1.1	55.0 *			70 - 130
p-Dimethylaminoazobenzene	2	1.2	60.0 *			70 - 130
2-Acetylaminofluorene	2	1	50.0 *			70 - 130
7,12-Dimethylbenz(a)anthracene	2	1.4	70.0			56 - 122
3-Methylcholanthrene	2	1.2	60.0			55 - 121
N-Nitrosopiperidine	2	1.1	55.0 *			70 - 130
1,3,5-Trinitrobenzene	2	0.79	39.5 *			70 - 130
Diallate (Avadex)	2	1.2	60.0 *			70 - 130
Isodrin	2	1.4	70.0			70 - 130
Chlorobenzilate	2	1.1	55.0 *			70 - 130
Kepone	2	0.13	6.5 *			70 - 130
0,0,0-Triethylphosphorothioate	2	1.1	55.0 *			70 - 130

Spike Recovery: 35 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Pyridine	2.9	0	1.6	55.2	23 - 145
N-Nitrosodimethylamine	2.9	0	1.8	62.1	20 - 115
Aniline	2.9	0	1.5	51.7	38 - 111
Bis(2-chloroethyl)ether	2.9	0	1.8	62.1	40 - 105
Phenol	2.9	0	1.6	55.2	40 - 100
2-Chlorophenol	2.9	0	1.7	58.6	45 - 105
1,3-Dichlorobenzene	2.9	0	1.4	48.3	40 - 100
1,4-Dichlorobenzene	2.9	0	1.4	48.3	35 - 105
1,2-Dichlorobenzene	2.9	0	1.5	51.7	45 - 95
Benzyl alcohol	2.9	0	1.6	55.2	20 - 125
2,2'-Oxybis(1-chloropropane)	2.9	0	1.5	51.7	20 - 115
2-Methylphenol	2.9	0	1.6	55.2	40 - 105
Hexachloroethane	2.9	0	1.4	48.3	35 - 110
N-Nitroso-di-n-propylamine	2.9	0	1.9	65.5	40 - 115
4-Methylphenol	2.9	0	1.9	65.5	40 - 105
Nitrobenzene	2.9	0	1.6	55.2	40 - 115
Isophorone	2.9	0	2.0	69.0	45 - 110
2-Nitrophenol	2.9	0	1.7	58.6	40 - 110
2,4-Dimethylphenol	2.9	0	1.8	62.1	30 - 105
Bis(2-chloroethoxy)methane	2.9	0	1.7	58.6	45 - 110
2,4-Dichlorophenol	2.9	0	1.6	55.2	45 - 110
1,2,4-Trichlorobenzene	2.9	0	1.5	51.7	45 - 110
4-Chloroaniline	2.9	0	1.8	62.1	10 - 95
Hexachlorobutadiene	2.9	0	1.5	51.7	40 - 115
4-Chloro-3-methylphenol	2.9	0	1.7	58.6	45 - 115
Hexachlorocyclopentadiene	2.9	0	0	0.0 *	24 - 119
2,4,6-Trichlorophenol	2.9	0	1.6	55.2	45 - 110
2,4,5-Trichlorophenol	2.9	0	1.7	58.6	50 - 110
2-Chloronaphthalene	2.9	0	1.5	51.7	45 - 105
2-Nitroaniline	2.9	0	1.9	65.5	45 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Dimethylphthalate	2.9	0	1.7	58.6	50 - 110
2,6-Dinitrotoluene	2.9	0	1.6	55.2	50 - 110
3-Nitroaniline	2.9	0	1.8	62.1	25 - 110
2,4-Dinitrophenol	5.8	0	0	0.0 *	15 - 130
Dibenzofuran	2.9	0	1.5	51.7	50 - 105
2,4-Dinitrotoluene	2.9	0	1.6	55.2	50 - 115
4-Nitrophenol	2.9	0	1.6	55.2	15 - 140
4-Chlorophenyl-phenylether	2.9	0	1.4	48.3	45 - 110
Diethylphthalate	2.9	0	1.6	55.2	50 - 115
4-Nitroaniline	2.9	0	2.1	72.4	35 - 115
4,6-Dinitro-2-methylphenol	2.9	0	0.67	23.1 *	30 - 135
N-Nitrosodiphenylamine	2.9	0	1.7	58.6	50 - 115
4-Bromophenyl-phenylether	2.9	0	1.5	51.7	45 - 115
Hexachlorobenzene	2.9	0	1.4	48.3	45 - 120
Pentachlorophenol	2.9	0	1.3	44.8	25 - 120
Di-n-butylphthalate	2.9	0	1.4	48.3 *	55 - 110
Butylbenzylphthalate	2.9	0	1.5	51.7	50 - 125
3,3'-Dichlorobenzidine	5.8	0	2.8	48.3	10 - 130
Bis(2-ethylhexyl)phthalate	2.9	0	1.4	48.3	45 - 125
Di-n-octylphthalate	2.9	0	1.4	48.3	40 - 130
2-Picoline	2.9	0	1.4	48.3 *	70 - 130
N-Nitrosomethylethylamine	2.9	0	1.5	51.7 *	70 - 130
N-Nitrosodiethylamine	2.9	0	1.5	51.7 *	70 - 130
Methylmethanesulfonate	2.9	0	1.1	37.9 *	70 - 130
Ethyl methanesulfonate	2.9	0	1.7	58.6 *	70 - 130
Pentachloroethane	2.9	0	1.1	37.9	30 - 130
N-Nitrosopyrrolidine	2.9	0	1.6	55.2 *	70 - 130
Acetophenone	5.8	0	3.5	60.3 *	70 - 130
N-Nitrosomorpholine	2.9	0	1.8	62.1 *	70 - 130
o-Toluidine	2.9	0	1.3	44.8 *	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
a,a-Dimethylphenethylamine	2.9	0	1.2	41.4 *	70 - 130
2,6-Dichlorophenol	2.9	0	1.7	58.6 *	70 - 130
Hexachloropropene	2.9	0	0.56	19.3 *	70 - 130
N-Nitrosodibutylamine	2.9	0	1.8	62.1 *	70 - 130
Isosafrole	2.9	0	1.6	55.2 *	70 - 130
1,2,4,5-Tetrachlorobenzene	2.9	0	1.4	48.3 *	70 - 130
Safrole	2.9	0	1.7	58.6 *	70 - 130
1,4-Naphthoquinone	2.9	0	0	0.0 *	70 - 130
1,3-Dinitrobenzene	2.9	0	1.8	62.1 *	70 - 130
Pentachlorobenzene	2.9	0	1.4	48.3 *	70 - 130
1-Naphthylamine	2.9	0	1.7	58.6 *	70 - 130
2-Naphthylamine	2.9	0	1.2	41.4 *	70 - 130
2,3,4,6-Tetrachlorophenol	2.9	0	1.4	48.3 *	70 - 130
5-Nitro-o-toluidine	2.9	0	1.4	48.3 *	70 - 130
p-Phenylenediamine	2.9	0	1.8	62.1 *	70 - 130
Phenacetin	2.9	0	1.7	58.6 *	70 - 130
4-Aminobiphenyl	2.9	0	1.5	51.7 *	70 - 130
Pronamide	2.9	0	1.6	55.2 *	70 - 130
Pentachloronitrobenzene(PCNB)	2.9	0	1.6	55.2 *	70 - 130
Dinoseb	2.9	0	1.6	55.2 *	70 - 130
4-Nitroquinoline-1-oxide	2.9	0	0.73	25.2 *	70 - 130
Methapyriline	2.9	0	21	731.0 *	70 - 130
Aramite	2.9	0	1.2	41.4 *	70 - 130
p-Dimethylaminoazobenzene	2.9	0	1.3	44.8 *	70 - 130
2-Acetylaminofluorene	2.9	0	1.4	48.3 *	70 - 130
7,12-Dimethylbenz(a)anthracene	2.9	0	1.3	44.8 *	56 - 122
3-Methylcholanthrene	2.9	0	1.2	41.4 *	55 - 121
N-Nitrosopiperidine	2.9	0	1.7	58.6 *	70 - 130
1,3,5-Trinitrobenzene	2.9	0	0.79	27.2 *	70 - 130
Diallate (Avadex)	2.9	0	1.3	44.8 *	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Isodrin	2.9	0	1.3	44.8 *	70 - 130
Chlorobenzilate	2.9	0	1.2	41.4 *	70 - 130
Kepone	2.9	0	0.73	25.2 *	70 - 130
0,0,0-Triethylphosphorothioate	2.9	0	1.4	48.3 *	70 - 130

Spike Recovery: 47 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Pyridine	3.0	1.1	36.7	37.0 *	30	23 - 145
N-Nitrosodimethylamine	3.0	1.3	43.3	32.3 *	30	20 - 115
Aniline	3.0	1.1	36.7 *	30.8 *	30	38 - 111
Bis(2-chloroethyl)ether	3.0	1.4	46.7	25.0	30	40 - 105
Phenol	3.0	1.2	40.0	28.6	30	40 - 100
2-Chlorophenol	3.0	1.2	40.0 *	34.5 *	30	45 - 105
1,3-Dichlorobenzene	3.0	0.99	33.0 *	34.3 *	30	40 - 100
1,4-Dichlorobenzene	3.0	1.0	33.3 *	33.3 *	30	35 - 105
1,2-Dichlorobenzene	3.0	1.1	36.7 *	30.8 *	30	45 - 95
Benzyl alcohol	3.0	1.2	40.0	28.6	30	20 - 125
2,2'-Oxybis(1-chloropropane)	3.0	1.1	36.7	30.8 *	30	20 - 115
2-Methylphenol	3.0	1.2	40.0	28.6	30	40 - 105
Hexachloroethane	3.0	0.94	31.3 *	39.3 *	30	35 - 110
N-Nitroso-di-n-propylamine	3.0	1.4	46.7	30.3 *	30	40 - 115
4-Methylphenol	3.0	1.3	43.3	37.5 *	30	40 - 105
Nitrobenzene	3.0	1.3	43.3	20.7	30	40 - 115
Isophorone	3.0	1.5	50.0	28.6	30	45 - 110
2-Nitrophenol	3.0	1.2	40.0	34.5 *	30	40 - 110
2,4-Dimethylphenol	3.0	1.4	46.7	25.0	30	30 - 105
Bis(2-chloroethoxy)methane	3.0	1.3	43.3 *	26.7	30	45 - 110
2,4-Dichlorophenol	3.0	1.2	40.0 *	28.6	30	45 - 110
1,2,4-Trichlorobenzene	3.0	1.1	36.7 *	30.8 *	30	45 - 110
4-Chloroaniline	3.0	1.3	43.3	32.3 *	30	10 - 95
Hexachlorobutadiene	3.0	1.1	36.7 *	30.8 *	30	40 - 115
4-Chloro-3-methylphenol	3.0	1.2	40.0 *	34.5 *	30	45 - 115
Hexachlorocyclopentadiene	3.0	0	0.0 *		30	24 - 119
2,4,6-Trichlorophenol	3.0	1.2	40.0 *	28.6	30	45 - 110
2,4,5-Trichlorophenol	3.0	1.2	40.0 *	34.5 *	30	50 - 110
2-Chloronaphthalene	3.0	1.2	40.0 *	22.2	30	45 - 105
2-Nitroaniline	3.0	1.5	50.0	23.5	30	45 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dimethylphthalate	3.0	1.3	43.3 *	26.7	30	50 - 110
2,6-Dinitrotoluene	3.0	1.2	40.0 *	28.6	30	50 - 110
3-Nitroaniline	3.0	1.4	46.7	25.0	30	25 - 110
2,4-Dinitrophenol	5.9	0	0.0 *		30	15 - 130
Dibenzofuran	3.0	1.2	40.0 *	22.2	30	50 - 105
2,4-Dinitrotoluene	3.0	1.2	40.0 *	28.6	30	50 - 115
4-Nitrophenol	3.0	1.1	36.7	37.0 *	30	15 - 140
4-Chlorophenyl-phenylether	3.0	1.0	33.3 *	33.3 *	30	45 - 110
Diethylphthalate	3.0	1.3	43.3 *	20.7	30	50 - 115
4-Nitroaniline	3.0	1.6	53.3	27.0	30	35 - 115
4,6-Dinitro-2-methylphenol	3.0	0.48	16.0 *	33.0 *	30	30 - 135
N-Nitrosodiphenylamine	3.0	1.3	43.3 *	26.7	30	50 - 115
4-Bromophenyl-phenylether	3.0	1.1	36.7 *	30.8 *	30	45 - 115
Hexachlorobenzene	3.0	1.1	36.7 *	24.0	30	45 - 120
Pentachlorophenol	3.0	0.64	21.3 *	68.0 *	30	25 - 120
Di-n-butylphthalate	3.0	1.0	33.3 *	33.3 *	30	55 - 110
Butylbenzylphthalate	3.0	1.2	40.0 *	22.2	30	50 - 125
3,3'-Dichlorobenzidine	5.9	2.0	33.9	33.3 *	30	10 - 130
Bis(2-ethylhexyl)phthalate	3.0	1.1	36.7 *	24.0	30	45 - 125
Di-n-octylphthalate	3.0	1.1	36.7 *	24.0	30	40 - 130
2-Picoline	3.0	1.1	36.7 *	24.0	30	70 - 130
N-Nitrosomethylethylamine	3.0	1.2	40.0 *	22.2	30	70 - 130
N-Nitrosodiethylamine	3.0	1.3	43.3 *	14.3	30	70 - 130
Methylmethanesulfonate	3.0	0.93	31.0 *	16.7	30	70 - 130
Ethyl methanesulfonate	3.0	1.4	46.7 *	19.4	30	70 - 130
Pentachloroethane	3.0	0.84	28.0 *	26.8	30	30 - 130
N-Nitrosopyrrolidine	3.0	1.4	46.7 *	13.3	30	70 - 130
Acetophenone	5.9	2.7	45.8 *	25.8	30	70 - 130
N-Nitrosomorpholine	3.0	1.4	46.7 *	25.0	30	70 - 130
o-Toluidine	3.0	1.1	36.7 *	16.7	30	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
a,a-Dimethylphenethylamine	3.0	0	0.0 *	200.0 *	30	70 - 130
2,6-Dichlorophenol	3.0	1.4	46.7 *	19.4	30	70 - 130
Hexachloropropene	3.0	0.41	13.7 *	30.9 *	30	70 - 130
N-Nitrosodibutylamine	3.0	1.4	46.7 *	25.0	30	70 - 130
Isosafrole	3.0	1.2	40.0 *	28.6	30	70 - 130
1,2,4,5-Tetrachlorobenzene	3.0	1.2	40.0 *	15.4	30	70 - 130
Safrole	3.0	1.4	46.7 *	19.4	30	70 - 130
1,4-Naphthoquinone	3.0	0	0.0 *		30	70 - 130
1,3-Dinitrobenzene	3.0	1.5	50.0 *	18.2	30	70 - 130
Pentachlorobenzene	3.0	1.1	36.7 *	24.0	30	70 - 130
1-Naphthylamine	3.0	1.4	46.7 *	19.4	30	70 - 130
2-Naphthylamine	3.0	0.92	30.7 *	26.4	30	70 - 130
2,3,4,6-Tetrachlorophenol	3.0	1.1	36.7 *	24.0	30	70 - 130
5-Nitro-o-toluidine	3.0	1.3	43.3 *	7.4	30	70 - 130
p-Phenylenediamine	3.0	1.4	46.7 *	25.0	30	70 - 130
Phenacetin	3.0	1.4	46.7 *	19.4	30	70 - 130
4-Aminobiphenyl	3.0	1.2	40.0 *	22.2	30	70 - 130
Pronamide	3.0	1.3	43.3 *	20.7	30	70 - 130
Pentachloronitrobenzene(PCNB)	3.0	1.3	43.3 *	20.7	30	70 - 130
Dinoseb	3.0	1.2	40.0 *	28.6	30	70 - 130
4-Nitroquinoline-1-oxide	3.0	0.39	13.0 *	60.7 *	30	70 - 130
Methapyriline	3.0	7.6	253.0 *	94.4 *	30	70 - 130
Aramite	3.0	1.0	33.3 *	18.2	30	70 - 130
p-Dimethylaminoazobenzene	3.0	1.1	36.7 *	16.7	30	70 - 130
2-Acetylaminofluorene	3.0	1.1	36.7 *	24.0	30	70 - 130
7,12-Dimethylbenz(a)anthracene	3.0	1.0	33.3 *	26.1	30	56 - 122
3-Methylcholanthrene	3.0	1.1	36.7 *	8.7	30	55 - 121
N-Nitrosopiperidine	3.0	1.4	46.7 *	19.4	30	70 - 130
1,3,5-Trinitrobenzene	3.0	0.68	22.7 *	15.0	30	70 - 130
Diallate (Avadex)	3.0	1.0	33.3 *	26.1	30	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Isodrin	3.0	1.1	36.7 *	16.7	30	70 - 130
Chlorobenzilate	3.0	1.0	33.3 *	18.2	30	70 - 130
Kepone	3.0	0.62	20.7 *	16.3	30	70 - 130
0,0,0-Triethylphosphorothioate	3.0	1.0	33.3 *	33.3 *	30	70 - 130

RPD: 29 out of 94 outside limits

Spike Recovery: 75 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Pyridine	3.0	0	1.4	46.7	23 - 145
N-Nitrosodimethylamine	3.0	0	1.7	56.7	20 - 115
Aniline	3.0	0	1.5	50.0	38 - 111
Bis(2-chloroethyl)ether	3.0	0	1.8	60.0	40 - 105
Phenol	3.0	0	1.7	56.7	40 - 100
2-Chlorophenol	3.0	0	1.7	56.7	45 - 105
1,3-Dichlorobenzene	3.0	0	1.3	43.3	40 - 100
1,4-Dichlorobenzene	3.0	0	1.3	43.3	35 - 105
1,2-Dichlorobenzene	3.0	0	1.4	46.7	45 - 95
Benzyl alcohol	3.0	0	1.8	60.0	20 - 125
2,2'-Oxybis(1-chloropropane)	3.0	0	1.4	46.7	20 - 115
2-Methylphenol	3.0	0	1.7	56.7	40 - 105
Hexachloroethane	3.0	0	1.2	40.0	35 - 110
N-Nitroso-di-n-propylamine	3.0	0	2.1	56.0	40 - 115
4-Methylphenol	3.0	0	2.1	70.0	40 - 105
Nitrobenzene	3.0	0	1.6	53.3	40 - 115
Isophorone	3.0	0	2.2	73.3	45 - 110
2-Nitrophenol	3.0	0	1.8	60.0	40 - 110
2,4-Dimethylphenol	3.0	0	2.0	66.7	30 - 105
Bis(2-chloroethoxy)methane	3.0	0	1.8	60.0	45 - 110
2,4-Dichlorophenol	3.0	0	1.8	60.0	45 - 110
1,2,4-Trichlorobenzene	3.0	0	1.4	46.7	45 - 110
4-Chloroaniline	3.0	0	1.9	63.3	10 - 95
Hexachlorobutadiene	3.0	0	1.3	43.3	40 - 115
4-Chloro-3-methylphenol	3.0	0	2.0	66.7	45 - 115
Hexachlorocyclopentadiene	3.0	0	0	0.0 *	24 - 119
2,4,6-Trichlorophenol	3.0	0	1.8	60.0	45 - 110
2,4,5-Trichlorophenol	3.0	0	2.2	73.3	50 - 110
2-Chloronaphthalene	3.0	0	1.6	53.3	45 - 105
2-Nitroaniline	3.0	0	2.1	70.0	45 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Dimethylphthalate	3.0	0	2.1	70.0	50 - 110
2,6-Dinitrotoluene	3.0	0	1.9	63.3	50 - 110
3-Nitroaniline	3.0	0	2.1	70.0	25 - 110
2,4-Dinitrophenol	5.9	0	0.54	9.2 *	15 - 130
Dibenzofuran	3.0	0	1.7	56.7	50 - 105
2,4-Dinitrotoluene	3.0	0	1.9	63.3	50 - 115
4-Nitrophenol	3.0	0	2.0	66.7	15 - 140
4-Chlorophenyl-phenylether	3.0	0	1.5	50.0	45 - 110
Diethylphthalate	3.0	0	1.8	60.0	50 - 115
4-Nitroaniline	3.0	0	2.4	80.0	35 - 115
4,6-Dinitro-2-methylphenol	3.0	0	0.80	26.7 *	30 - 135
N-Nitrosodiphenylamine	3.0	0	1.7	56.7	50 - 115
4-Bromophenyl-phenylether	3.0	0	1.4	46.7	45 - 115
Hexachlorobenzene	3.0	0	1.4	46.7	45 - 120
Pentachlorophenol	3.0	0	1.7	56.7	25 - 120
Di-n-butylphthalate	3.0	0	1.4	46.7 *	55 - 110
Butylbenzylphthalate	3.0	0	1.7	56.7	50 - 125
3,3'-Dichlorobenzidine	5.9	0	3.0	50.8	10 - 130
Bis(2-ethylhexyl)phthalate	3.0	0	1.6	53.3	45 - 125
Di-n-octylphthalate	3.0	0	1.6	53.3	40 - 130
2-Picoline	3.0	0	1.4	46.7 *	70 - 130
N-Nitrosomethylethylamine	3.0	0	1.5	50.0 *	70 - 130
N-Nitrosodiethylamine	3.0	0	1.6	53.3 *	70 - 130
Methylmethanesulfonate	3.0	0	1.3	43.3 *	70 - 130
Ethyl methanesulfonate	3.0	0	1.8	60.0 *	70 - 130
Pentachloroethane	3.0	0	0.97	32.3	30 - 130
N-Nitrosopyrrolidine	3.0	0	1.9	63.3 *	70 - 130
Acetophenone	5.9	0	3.7	62.7 *	70 - 130
N-Nitrosomorpholine	3.0	0	2.0	66.7 *	70 - 130
o-Toluidine	3.0	0	1.5	50.0 *	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
a,a-Dimethylphenethylamine	3.0	0	1.5	50.0 *	70 - 130
2,6-Dichlorophenol	3.0	0	2.0	66.7 *	70 - 130
Hexachloropropene	3.0	0	0.15	5.0 *	70 - 130
N-Nitrosodibutylamine	3.0	0	2.1	70.0	70 - 130
Isosafrole	3.0	0	1.7	56.7 *	70 - 130
1,2,4,5-Tetrachlorobenzene	3.0	0	1.5	50.0 *	70 - 130
Safrole	3.0	0	2.0	66.7 *	70 - 130
1,4-Naphthoquinone	3.0	0	0.088	2.9 *	70 - 130
1,3-Dinitrobenzene	3.0	0	2.1	70.0	70 - 130
Pentachlorobenzene	3.0	0	1.6	53.3 *	70 - 130
1-Naphthylamine	3.0	0	2.2	73.3	70 - 130
2-Naphthylamine	3.0	0	1.8	60.0 *	70 - 130
2,3,4,6-Tetrachlorophenol	3.0	0	1.8	60.0 *	70 - 130
5-Nitro-o-toluidine	3.0	0	1.9	63.3 *	70 - 130
p-Phenylenediamine	3.0	0	2.0	66.7 *	70 - 130
Phenacetin	3.0	0	2.0	66.7 *	70 - 130
4-Aminobiphenyl	3.0	0	2.1	70.0	70 - 130
Pronamide	3.0	0	1.8	60.0 *	70 - 130
Pentachloronitrobenzene(PCNB)	3.0	0	1.9	63.3 *	70 - 130
Dinoseb	3.0	0	1.9	63.3 *	70 - 130
4-Nitroquinoline-1-oxide	3.0	0	0.80	26.7 *	70 - 130
Methapyriline	3.0	0	30	1013.0 *	70 - 130
Aramite	3.0	0	0.69	23.0 *	70 - 130
p-Dimethylaminoazobenzene	3.0	0	1.4	46.7 *	70 - 130
2-Acetylaminofluorene	3.0	0	1.6	53.3 *	70 - 130
7,12-Dimethylbenz(a)anthracene	3.0	0	1.5	50.0 *	56 - 122
3-Methylcholanthrene	3.0	0	1.5	50.0 *	55 - 121
N-Nitrosopiperidine	3.0	0	1.8	60.0 *	70 - 130
1,3,5-Trinitrobenzene	3.0	0	1.0	33.3 *	70 - 130
Diallate (Avadex)	3.0	0	1.0	33.3 *	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MSRE1

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
Isodrin	3.0	0	1.6	53.3 *	70 - 130
Chlorobenzilate	3.0	0	1.4	46.7 *	70 - 130
Kepone	3.0	0	0.40	13.3 *	70 - 130
0,0,0-Triethylphosphorothioate	3.0	0	1.5	50.0 *	70 - 130

Spike Recovery: 43 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Pyridine	2.9	1.5	51.7	6.9	30	23 - 145
N-Nitrosodimethylamine	2.9	1.8	62.1	5.7	30	20 - 115
Aniline	2.9	1.4	48.3	6.9	30	38 - 111
Bis(2-chloroethyl)ether	2.9	1.8	62.1	0.0	30	40 - 105
Phenol	2.9	1.7	58.6	0.0	30	40 - 100
2-Chlorophenol	2.9	1.7	58.6	0.0	30	45 - 105
1,3-Dichlorobenzene	2.9	1.2	41.4	8.0	30	40 - 100
1,4-Dichlorobenzene	2.9	1.3	44.8	0.0	30	35 - 105
1,2-Dichlorobenzene	2.9	1.3	44.8 *	7.4	30	45 - 95
Benzyl alcohol	2.9	1.8	62.1	0.0	30	20 - 125
2,2'-Oxybis(1-chloropropane)	2.9	1.3	44.8	7.4	30	20 - 115
2-Methylphenol	2.9	1.6	55.2	6.1	30	40 - 105
Hexachloroethane	2.9	1.1	37.9	8.7	30	35 - 110
N-Nitroso-di-n-propylamine	2.9	2.0	54.5	4.9	30	40 - 115
4-Methylphenol	2.9	2.0	69.0	4.9	30	40 - 105
Nitrobenzene	2.9	1.6	55.2	0.0	30	40 - 115
Isophorone	2.9	2.0	69.0	9.5	30	45 - 110
2-Nitrophenol	2.9	1.8	62.1	0.0	30	40 - 110
2,4-Dimethylphenol	2.9	1.8	62.1	10.5	30	30 - 105
Bis(2-chloroethoxy)methane	2.9	1.7	58.6	5.7	30	45 - 110
2,4-Dichlorophenol	2.9	1.7	58.6	5.7	30	45 - 110
1,2,4-Trichlorobenzene	2.9	1.3	44.8 *	7.4	30	45 - 110
4-Chloroaniline	2.9	1.7	58.6	11.1	30	10 - 95
Hexachlorobutadiene	2.9	1.2	41.4	8.0	30	40 - 115
4-Chloro-3-methylphenol	2.9	1.8	62.1	10.5	30	45 - 115
Hexachlorocyclopentadiene	2.9	0	0.0 *		30	24 - 119
2,4,6-Trichlorophenol	2.9	1.7	58.6	5.7	30	45 - 110
2,4,5-Trichlorophenol	2.9	1.9	65.5	14.6	30	50 - 110
2-Chloronaphthalene	2.9	1.4	48.3	13.3	30	45 - 105
2-Nitroaniline	2.9	2.0	69.0	4.9	30	45 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dimethylphthalate	2.9	1.9	65.5	10.0	30	50 - 110
2,6-Dinitrotoluene	2.9	1.8	62.1	5.4	30	50 - 110
3-Nitroaniline	2.9	1.9	65.5	10.0	30	25 - 110
2,4-Dinitrophenol	5.7	0	0.0 *	200.0 *	30	15 - 130
Dibenzofuran	2.9	1.5	51.7	12.5	30	50 - 105
2,4-Dinitrotoluene	2.9	1.8	62.1	5.4	30	50 - 115
4-Nitrophenol	2.9	1.8	62.1	10.5	30	15 - 140
4-Chlorophenyl-phenylether	2.9	1.3	44.8 *	14.3	30	45 - 110
Diethylphthalate	2.9	1.6	55.2	11.8	30	50 - 115
4-Nitroaniline	2.9	2.2	75.9	8.7	30	35 - 115
4,6-Dinitro-2-methylphenol	2.9	0.74	25.5 *	7.8	30	30 - 135
N-Nitrosodiphenylamine	2.9	1.5	51.7	12.5	30	50 - 115
4-Bromophenyl-phenylether	2.9	1.3	44.8 *	7.4	30	45 - 115
Hexachlorobenzene	2.9	1.3	44.8 *	7.4	30	45 - 120
Pentachlorophenol	2.9	1.3	44.8	26.7	30	25 - 120
Di-n-butylphthalate	2.9	1.2	41.4 *	15.4	30	55 - 110
Butylbenzylphthalate	2.9	1.5	51.7	12.5	30	50 - 125
3,3'-Dichlorobenzidine	5.7	2.7	47.4	10.5	30	10 - 130
Bis(2-ethylhexyl)phthalate	2.9	1.5	51.7	6.5	30	45 - 125
Di-n-octylphthalate	2.9	1.5	51.7	6.5	30	40 - 130
2-Picoline	2.9	1.4	48.3 *	0.0	30	70 - 130
N-Nitrosomethylethylamine	2.9	1.5	51.7 *	0.0	30	70 - 130
N-Nitrosodiethylamine	2.9	1.6	55.2 *	0.0	30	70 - 130
Methylmethanesulfonate	2.9	1.3	44.8 *	0.0	30	70 - 130
Ethyl methanesulfonate	2.9	1.8	62.1 *	0.0	30	70 - 130
Pentachloroethane	2.9	0.98	33.8	1.0	30	30 - 130
N-Nitrosopyrrolidine	2.9	2.0	69.0 *	5.1	30	70 - 130
Acetophenone	5.7	3.6	63.2 *	2.7	30	70 - 130
N-Nitrosomorpholine	2.9	2.0	69.0 *	0.0	30	70 - 130
o-Toluidine	2.9	1.5	51.7 *	0.0	30	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
a,a-Dimethylphenethylamine	2.9	1.8	62.1 *	18.2	30	70 - 130
2,6-Dichlorophenol	2.9	1.9	65.5 *	5.1	30	70 - 130
Hexachloropropene	2.9	0.067	2.3 *	76.5 *	30	70 - 130
N-Nitrosodibutylamine	2.9	1.9	65.5 *	10.0	30	70 - 130
Isosafrole	2.9	1.6	55.2 *	6.1	30	70 - 130
1,2,4,5-Tetrachlorobenzene	2.9	1.4	48.3 *	6.9	30	70 - 130
Safrole	2.9	1.8	62.1 *	10.5	30	70 - 130
1,4-Naphthoquinone	2.9	0	0.0 *	200.0 *	30	70 - 130
1,3-Dinitrobenzene	2.9	1.9	65.5 *	10.0	30	70 - 130
Pentachlorobenzene	2.9	1.4	48.3 *	13.3	30	70 - 130
1-Naphthylamine	2.9	1.9	65.5 *	14.6	30	70 - 130
2-Naphthylamine	2.9	1.5	51.7 *	18.2	30	70 - 130
2,3,4,6-Tetrachlorophenol	2.9	1.5	51.7 *	18.2	30	70 - 130
5-Nitro-o-toluidine	2.9	1.8	62.1 *	5.4	30	70 - 130
p-Phenylenediamine	2.9	1.9	65.5 *	5.1	30	70 - 130
Phenacetin	2.9	1.8	62.1 *	10.5	30	70 - 130
4-Aminobiphenyl	2.9	1.7	58.6 *	21.1	30	70 - 130
Pronamide	2.9	1.6	55.2 *	11.8	30	70 - 130
Pentachloronitrobenzene(PCNB)	2.9	1.7	58.6 *	11.1	30	70 - 130
Dinoseb	2.9	1.7	58.6 *	11.1	30	70 - 130
4-Nitroquinoline-1-oxide	2.9	0.67	23.1 *	17.7	30	70 - 130
Methapyriline	2.9	26	897.0 *	15.6	30	70 - 130
Aramite	2.9	1.2	41.4 *	54.0 *	30	70 - 130
p-Dimethylaminoazobenzene	2.9	1.3	44.8 *	7.4	30	70 - 130
2-Acetylaminofluorene	2.9	1.5	51.7 *	6.5	30	70 - 130
7,12-Dimethylbenz(a)anthracene	2.9	1.3	44.8 *	14.3	30	56 - 122
3-Methylcholanthrene	2.9	1.3	44.8 *	14.3	30	55 - 121
N-Nitrosopiperidine	2.9	1.8	62.1 *	0.0	30	70 - 130
1,3,5-Trinitrobenzene	2.9	0.90	31.0 *	10.5	30	70 - 130
Diallate (Avadex)	2.9	1.2	41.4 *	18.2	30	70 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSDRE1

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Isodrin	2.9	1.3	44.8 *	20.7	30	70 - 130
Chlorobenzilate	2.9	1.2	41.4 *	15.4	30	70 - 130
Kepone	2.9	0.34	11.7 *	16.2	30	70 - 130
0,0,0-Triethylphosphorothioate	2.9	1.4	48.3 *	6.9	30	70 - 130

RPD: 4 out of 94 outside limits

Spike Recovery: 52 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Pyridine	41	0	17	42.6	22 - 70
N-Nitrosodimethylamine	41	0	21	52.5	25 - 110
Aniline	41	0	25	61.5	14 - 99
Bis(2-chloroethyl)ether	41	0	35	86.8	35 - 110
Phenol	41	0	13	32.4	0 - 115
2-Chlorophenol	41	0	27	67.2	35 - 105
1,3-Dichlorobenzene	41	0	28	68.4	30 - 100
1,4-Dichlorobenzene	41	0	28	67.4	30 - 100
1,2-Dichlorobenzene	41	0	28	68.1	35 - 100
Benzyl alcohol	41	0	25	60.8	30 - 110
2,2'-Oxybis(1-chloropropane)	41	0	30	74.5	25 - 130
2-Methylphenol	41	0	23	56.6	40 - 110
Hexachloroethane	41	0	27	66.7	30 - 95
N-Nitroso-di-n-propylamine	41	0	39	96.1	35 - 130
4-Methylphenol	41	0	26	64.0	30 - 110
Nitrobenzene	41	0	29	71.8	45 - 110
Isophorone	41	0	38	93.6	50 - 110
2-Nitrophenol	41	0	30	73.3	40 - 115
2,4-Dimethylphenol	41	0	30	73.3	30 - 110
Bis(2-chloroethoxy)methane	41	0	33	80.1	45 - 105
2,4-Dichlorophenol	41	0	28	69.9	50 - 105
1,2,4-Trichlorobenzene	41	0	29	70.1	35 - 105
4-Chloroaniline	41	0	32	78.7	15 - 110
Hexachlorobutadiene	41	0	30	74.0	25 - 105
4-Chloro-3-methylphenol	41	0	29	71.6	45 - 110
Hexachlorocyclopentadiene	41	0	20	49.3	13 - 80
2,4,6-Trichlorophenol	41	0	30	73.8	50 - 115
2,4,5-Trichlorophenol	41	0	30	72.5	50 - 110
2-Chloronaphthalene	41	0	30	73.8	50 - 105
2-Nitroaniline	41	0	36	88.5	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Dimethylphthalate	41	0	33	80.6	25 - 125
2,6-Dinitrotoluene	41	0	32	78.7	50 - 115
3-Nitroaniline	41	0	32	78.9	20 - 125
2,4-Dinitrophenol	82	0	30	36.8	15 - 140
Dibenzofuran	41	0	32	77.7	55 - 105
2,4-Dinitrotoluene	41	0	33	80.9	50 - 120
4-Nitrophenol	41	0	18	43.4	0 - 125
4-Chlorophenyl-phenylether	41	0	32	77.9	50 - 110
Diethylphthalate	41	0	34	84.6	40 - 120
4-Nitroaniline	41	0	38	93.9	35 - 120
4,6-Dinitro-2-methylphenol	41	0	22	52.7	40 - 130
N-Nitrosodiphenylamine	41	0	32	79.7	50 - 110
4-Bromophenyl-phenylether	41	0	30	74.8	50 - 115
Hexachlorobenzene	41	0	28	68.6	50 - 110
Pentachlorophenol	41	0	33	79.9	40 - 115
Di-n-butylphthalate	41	0	33	80.9	55 - 115
Butylbenzylphthalate	41	0	38	93.9	45 - 115
3,3'-Dichlorobenzidine	82	0	50	61.8	20 - 110
Bis(2-ethylhexyl)phthalate	41	0	45	110.0	40 - 125
Di-n-octylphthalate	41	0	40	97.1	35 - 135
2-Picoline	41	0	20	48.5	15 - 110
N-Nitrosomethylethylamine	41	0	27	65.9	25 - 131
N-Nitrosodiethylamine	41	0	29	70.1	46 - 111
Methylmethanesulfonate	41	0	20	50.0	15 - 103
Ethyl methanesulfonate	41	0	33	80.1	46 - 113
Pentachloroethane	41	0	27	65.7	27 - 99
N-Nitrosopyrrolidine	41	0	33	81.1	51 - 112
Acetophenone	82	0	60	73.4	45 - 118
N-Nitrosomorpholine	41	0	34	84.6	51 - 112
o-Toluidine	41	0	26	65.0	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
a,a-Dimethylphenethylamine	41	0	17	40.7 *	70 - 130
2,6-Dichlorophenol	41	0	31	76.2	50 - 135
Hexachloropropene	41	0	23	56.1	21 - 105
N-Nitrosodibutylamine	41	0	31	76.2	43 - 130
Isosafrole	41	0	29	71.3	70 - 130
1,2,4,5-Tetrachlorobenzene	41	0	28	67.6	40 - 100
Safrole	41	0	33	80.1	52 - 100
1,4-Naphthoquinone	41	0	0	0.0 *	28 - 143
1,3-Dinitrobenzene	41	0	32	79.7	61 - 112
Pentachlorobenzene	41	0	28	68.1	50 - 99
1-Naphthylamine	41	0	34	84.1	38 - 91
2-Naphthylamine	41	0	30	73.0	70 - 130
2,3,4,6-Tetrachlorophenol	41	0	28	67.4	55 - 122
5-Nitro-o-toluidine	41	0	32	77.2	70 - 130
p-Phenylenediamine	41	0	37	90.2	58 - 107
Phenacetin	41	0	34	84.6	57 - 114
4-Aminobiphenyl	41	0	35	84.8	49 - 103
Pronamide	41	0	35	86.5	59 - 99
Pentachloronitrobenzene(PCNB)	41	0	34	82.4	60 - 104
Dinoseb	41	0	29	71.3	44 - 142
4-Nitroquinoline-1-oxide	41	0	18	45.3	10 - 125
Methapyriline	41	0	380	924.0 *	0 - 90
Aramite	41	0	28	67.9	41 - 127
p-Dimethylaminoazobenzene	41	0	29	70.3	70 - 130
2-Acetylaminofluorene	41	0	28	68.6	63 - 103
7,12-Dimethylbenz(a)anthracene	41	0	31	77.0	57 - 95
3-Methylcholanthrene	41	0	30	72.3	52 - 105
N-Nitrosopiperidine	41	0	32	79.4	53 - 112
1,3,5-Trinitrobenzene	41	0	16	39.7	29 - 163
Diallate (Avadex)	41	0	33	80.4	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MS

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Isodrin	41	0	35	85.5	54 - 110
Chlorobenzilate	41	0	26	63.0	58 - 101
Kepone	41	0	19	46.6	0 - 165
0,0,0-Triethylphosphorothioate	41	0	31	75.0	50 - 106

Spike Recovery: 3 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Pyridine	41	22	52.9	21.5 *	20	22 - 70
N-Nitrosodimethylamine	41	25	61.3	15.5	20	25 - 110
Aniline	41	31	76.0	21.0 *	20	14 - 99
Bis(2-chloroethyl)ether	41	39	95.3	9.4	20	35 - 110
Phenol	41	14	33.8	4.4	20	0 - 115
2-Chlorophenol	41	30	73.8	9.4	20	35 - 105
1,3-Dichlorobenzene	41	31	76.7	11.5	20	30 - 100
1,4-Dichlorobenzene	41	31	76.0	12.0	20	30 - 100
1,2-Dichlorobenzene	41	32	78.2	13.7	20	35 - 100
Benzyl alcohol	41	27	67.2	10.0	20	30 - 110
2,2'-Oxybis(1-chloropropane)	41	33	81.4	8.8	20	25 - 130
2-Methylphenol	41	25	61.8	8.7	20	40 - 110
Hexachloroethane	41	31	76.7	14.0	20	30 - 95
N-Nitroso-di-n-propylamine	41	42	104.0	7.8	20	35 - 130
4-Methylphenol	41	28	68.9	7.4	20	30 - 110
Nitrobenzene	41	32	79.7	10.4	20	45 - 110
Isophorone	41	43	105.0	11.6	20	50 - 110
2-Nitrophenol	41	33	81.1	10.2	20	40 - 115
2,4-Dimethylphenol	41	34	83.3	12.8	20	30 - 110
Bis(2-chloroethoxy)methane	41	37	90.2	11.8	20	45 - 105
2,4-Dichlorophenol	41	33	80.4	14.0	20	50 - 105
1,2,4-Trichlorobenzene	41	33	79.9	13.1	20	35 - 105
4-Chloroaniline	41	42	102.0	25.5 *	20	15 - 110
Hexachlorobutadiene	41	35	86.8	15.9	20	25 - 105
4-Chloro-3-methylphenol	41	33	81.9	13.4	20	45 - 110
Hexachlorocyclopentadiene	41	22	55.1	11.3	20	13 - 80
2,4,6-Trichlorophenol	41	34	82.4	11.0	20	50 - 115
2,4,5-Trichlorophenol	41	34	82.4	12.7	20	50 - 110
2-Chloronaphthalene	41	34	82.8	11.6	20	50 - 105
2-Nitroaniline	41	38	94.4	6.4	20	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dimethylphthalate	41	36	89.2	10.1	20	25 - 125
2,6-Dinitrotoluene	41	35	86.0	8.9	20	50 - 115
3-Nitroaniline	41	39	94.6	18.1	20	20 - 125
2,4-Dinitrophenol	82	62	75.9	69.4 *	20	15 - 140
Dibenzofuran	41	35	86.0	10.2	20	55 - 105
2,4-Dinitrotoluene	41	36	88.2	8.7	20	50 - 120
4-Nitrophenol	41	20	47.8	9.7	20	0 - 125
4-Chlorophenyl-phenylether	41	35	86.3	10.1	20	50 - 110
Diethylphthalate	41	38	91.9	8.3	20	40 - 120
4-Nitroaniline	41	44	107.0	13.4	20	35 - 120
4,6-Dinitro-2-methylphenol	41	31	75.2	35.2 *	20	40 - 130
N-Nitrosodiphenylamine	41	37	89.7	11.9	20	50 - 110
4-Bromophenyl-phenylether	41	35	85.3	13.2	20	50 - 115
Hexachlorobenzene	41	32	78.2	13.0	20	50 - 110
Pentachlorophenol	41	40	96.8	19.1	20	40 - 115
Di-n-butylphthalate	41	37	90.4	11.2	20	55 - 115
Butylbenzylphthalate	41	41	101.0	7.3	20	45 - 115
3,3'-Dichlorobenzidine	82	55	67.0	8.2	20	20 - 110
Bis(2-ethylhexyl)phthalate	41	45	111.0	0.4	20	40 - 125
Di-n-octylphthalate	41	44	107.0	9.8	20	35 - 135
2-Picoline	41	23	56.9	15.8	20	15 - 110
N-Nitrosomethylethylamine	41	28	68.6	4.0	20	25 - 131
N-Nitrosodiethylamine	41	30	73.0	4.1	20	46 - 111
Methylmethanesulfonate	41	22	54.7	8.9	20	15 - 103
Ethyl methanesulfonate	41	33	80.4	0.3	20	46 - 113
Pentachloroethane	41	28	68.4	4.0	20	27 - 99
N-Nitrosopyrrolidine	41	35	84.8	4.4	20	51 - 112
Acetophenone	82	68	83.8	13.3	20	45 - 118
N-Nitrosomorpholine	41	35	86.5	2.3	20	51 - 112
o-Toluidine	41	32	77.2	17.2	20	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
a,a-Dimethylphenethylamine	41	19	46.8 *	14.0	20	70 - 130
2,6-Dichlorophenol	41	32	79.4	4.1	20	50 - 135
Hexachloropropene	41	24	60.0	6.8	20	21 - 105
N-Nitrosodibutylamine	41	32	77.9	2.2	20	43 - 130
Isosafrole	41	31	76.5	7.0	20	70 - 130
1,2,4,5-Tetrachlorobenzene	41	28	68.4	1.1	20	40 - 100
Safrole	41	34	84.1	4.8	20	52 - 100
1,4-Naphthoquinone	41	0	0.0 *		20	28 - 143
1,3-Dinitrobenzene	41	34	84.1	5.4	20	61 - 112
Pentachlorobenzene	41	28	69.6	2.1	20	50 - 99
1-Naphthylamine	41	41	99.5 *	16.8	20	38 - 91
2-Naphthylamine	41	35	85.3	15.5	20	70 - 130
2,3,4,6-Tetrachlorophenol	41	29	71.1	5.3	20	55 - 122
5-Nitro-o-toluidine	41	33	80.6	4.3	20	70 - 130
p-Phenylenediamine	41	39	96.3	6.6	20	58 - 107
Phenacetin	41	37	90.7	7.0	20	57 - 114
4-Aminobiphenyl	41	40	98.3	14.7	20	49 - 103
Pronamide	41	37	90.7	4.7	20	59 - 99
Pentachloronitrobenzene(PCNB)	41	36	88.2	6.9	20	60 - 104
Dinoseb	41	34	83.3	15.5	20	44 - 142
4-Nitroquinoline-1-oxide	41	17	42.6	6.1	20	10 - 125
Methapyriline	41	460	1115.0 *	18.8	20	0 - 90
Aramite	41	29	71.6	5.3	20	41 - 127
p-Dimethylaminoazobenzene	41	28	68.9 *	2.1	20	70 - 130
2-Acetylaminofluorene	41	28	69.9	1.8	20	63 - 103
7,12-Dimethylbenz(a)anthracene	41	32	78.4	1.9	20	57 - 95
3-Methylcholanthrene	41	30	74.5	3.0	20	52 - 105
N-Nitrosopiperidine	41	34	83.1	4.5	20	53 - 112
1,3,5-Trinitrobenzene	41	16	40.2	1.2	20	29 - 163
Diallate (Avadex)	41	33	80.6	0.3	20	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Isodrin	41	36	89.5	4.5	20	54 - 110
Chlorobenzilate	41	25	62.3	1.2	20	58 - 101
Kepone	41	19	47.1	1.0	20	0 - 165
0,0,0-Triethylphosphorothioate	41	30	73.0	2.6	20	50 - 106

RPD: 5 out of 94 outside limits

Spike Recovery: 5 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Pyridine	41	0	16	40.4	22 - 70
N-Nitrosodimethylamine	41	0	23	56.9	25 - 110
Aniline	41	0	15	37.3	14 - 99
Bis(2-chloroethyl)ether	41	0	31	76.7	35 - 110
Phenol	41	0	11	26.7	0 - 115
2-Chlorophenol	41	0	24	58.6	35 - 105
1,3-Dichlorobenzene	41	0	26	64.0	30 - 100
1,4-Dichlorobenzene	41	0	26	63.0	30 - 100
1,2-Dichlorobenzene	41	0	26	64.0	35 - 100
Benzyl alcohol	41	0	26	64.7	30 - 110
2,2'-Oxybis(1-chloropropane)	41	0	27	65.4	25 - 130
2-Methylphenol	41	0	20	49.8	40 - 110
Hexachloroethane	41	0	26	64.0	30 - 95
N-Nitroso-di-n-propylamine	41	0	33	81.6	35 - 130
4-Methylphenol	41	0	22	53.4	30 - 110
Nitrobenzene	41	0	28	67.6	45 - 110
Isophorone	41	0	34	83.6	50 - 110
2-Nitrophenol	41	0	27	65.4	40 - 115
2,4-Dimethylphenol	41	0	26	64.7	30 - 110
Bis(2-chloroethoxy)methane	41	0	28	69.4	45 - 105
2,4-Dichlorophenol	41	0	26	63.0	50 - 105
1,2,4-Trichlorobenzene	41	0	27	66.4	35 - 105
4-Chloroaniline	41	0	20	48.5	15 - 110
Hexachlorobutadiene	41	0	30	74.0	25 - 105
4-Chloro-3-methylphenol	41	0	25	61.8	45 - 110
Hexachlorocyclopentadiene	41	0	19	46.8	13 - 80
2,4,6-Trichlorophenol	41	0	24	59.8	50 - 115
2,4,5-Trichlorophenol	41	0	28	69.9	50 - 110
2-Chloronaphthalene	41	0	27	66.4	50 - 105
2-Nitroaniline	41	0	30	74.0	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Dimethylphthalate	41	0	29	71.6	25 - 125
2,6-Dinitrotoluene	41	0	28	68.1	50 - 115
3-Nitroaniline	41	0	29	70.8	20 - 125
2,4-Dinitrophenol	82	0	58	71.3	15 - 140
Dibenzofuran	41	0	28	67.9	55 - 105
2,4-Dinitrotoluene	41	0	29	70.1	50 - 120
4-Nitrophenol	41	0	16	38.2	0 - 125
4-Chlorophenyl-phenylether	41	0	28	68.1	50 - 110
Diethylphthalate	41	0	30	73.3	40 - 120
4-Nitroaniline	41	0	30	73.5	35 - 120
4,6-Dinitro-2-methylphenol	41	0	26	62.5	40 - 130
N-Nitrosodiphenylamine	41	0	27	67.2	50 - 110
4-Bromophenyl-phenylether	41	0	27	67.2	50 - 115
Hexachlorobenzene	41	0	25	62.0	50 - 110
Pentachlorophenol	41	0	28	67.6	40 - 115
Di-n-butylphthalate	41	0	30	73.0	55 - 115
Butylbenzylphthalate	41	0	30	73.5	45 - 115
3,3'-Dichlorobenzidine	82	0	13	15.4 *	20 - 110
Bis(2-ethylhexyl)phthalate	41	0	36	87.3	40 - 125
Di-n-octylphthalate	41	0	34	83.3	35 - 135
2-Picoline	41	0	24	58.3	15 - 110
N-Nitrosomethylethylamine	41	0	23	56.9	25 - 131
N-Nitrosodiethylamine	41	0	25	60.5	46 - 111
Methylmethanesulfonate	41	0	23	56.4	15 - 103
Ethyl methanesulfonate	41	0	29	70.8	46 - 113
Pentachloroethane	41	0	25	62.3	27 - 99
N-Nitrosopyrrolidine	41	0	27	66.7	51 - 112
Acetophenone	82	0	54	66.7	45 - 118
N-Nitrosomorpholine	41	0	28	68.9	51 - 112
o-Toluidine	41	0	18	45.3 *	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MSRE1

Lab Code: PEL Case No.: SAS No.: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
a,a-Dimethylphenethylamine	41	0	0	0.0 *	70 - 130
2,6-Dichlorophenol	41	0	27	66.7	50 - 135
Hexachloropropene	41	0	23	55.9	21 - 105
N-Nitrosodibutylamine	41	0	24	59.1	43 - 130
Isosafrole	41	0	26	65.0 *	70 - 130
1,2,4,5-Tetrachlorobenzene	41	0	26	63.0	40 - 100
Safrole	41	0	29	71.8	52 - 100
1,4-Naphthoquinone	41	0	26	63.2	28 - 143
1,3-Dinitrobenzene	41	0	28	67.4	61 - 112
Pentachlorobenzene	41	0	26	63.7	50 - 99
1-Naphthylamine	41	0	24	58.3	38 - 91
2-Naphthylamine	41	0	12	28.7 *	70 - 130
2,3,4,6-Tetrachlorophenol	41	0	24	57.6	55 - 122
5-Nitro-o-toluidine	41	0	24	57.6 *	70 - 130
p-Phenylenediamine	41	0	28	69.4	58 - 107
Phenacetin	41	0	27	66.2	57 - 114
4-Aminobiphenyl	41	0	11	27.5 *	49 - 103
Pronamide	41	0	27	65.9	59 - 99
Pentachloronitrobenzene(PCNB)	41	0	30	74.3	60 - 104
Dinoseb	41	0	30	73.5	44 - 142
4-Nitroquinoline-1-oxide	41	0	14	34.8	10 - 125
Methapyriline	41	0	15	35.8	0 - 90
Aramite	41	0	22	54.9	41 - 127
p-Dimethylaminoazobenzene	41	0	20	48.5 *	70 - 130
2-Acetylaminofluorene	41	0	20	50.2 *	63 - 103
7,12-Dimethylbenz(a)anthracene	41	0	25	60.5	57 - 95
3-Methylcholanthrene	41	0	25	61.0	52 - 105
N-Nitrosopiperidine	41	0	27	65.4	53 - 112
1,3,5-Trinitrobenzene	41	0	16	38.0	29 - 163
Diallate (Avadex)	41	0	25	60.5	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SW-03 MSRE1

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Isodrin	41	0	28	67.6	54 - 110
Chlorobenzilate	41	0	22	54.9 *	58 - 101
Kepona	41	0	0	0.0	0 - 165
0,0,0-Triethylphosphorothioate	41	0	25	61.8	50 - 106

Spike Recovery: 10 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Pyridine	41	16	39.5	2.5	20	22 - 70
N-Nitrosodimethylamine	41	24	57.8	1.7	20	25 - 110
Aniline	41	20	50.2	29.7 *	20	14 - 99
Bis(2-chloroethyl)ether	41	32	77.2	0.6	20	35 - 110
Phenol	41	11	27.2	1.8	20	0 - 115
2-Chlorophenol	41	25	61.8	5.3	20	35 - 105
1,3-Dichlorobenzene	41	26	64.2	0.4	20	30 - 100
1,4-Dichlorobenzene	41	26	64.5	2.3	20	30 - 100
1,2-Dichlorobenzene	41	26	64.5	0.8	20	35 - 100
Benzyl alcohol	41	26	63.0	2.7	20	30 - 110
2,2'-Oxybis(1-chloropropane)	41	26	64.7	1.1	20	25 - 130
2-Methylphenol	41	20	48.5	2.5	20	40 - 110
Hexachloroethane	41	26	64.7	1.1	20	30 - 95
N-Nitroso-di-n-propylamine	41	33	81.4	0.3	20	35 - 130
4-Methylphenol	41	23	55.6	4.0	20	30 - 110
Nitrobenzene	41	28	68.1	0.7	20	45 - 110
Isophorone	41	34	82.8	0.9	20	50 - 110
2-Nitrophenol	41	27	65.9	0.7	20	40 - 115
2,4-Dimethylphenol	41	26	63.0	2.7	20	30 - 110
Bis(2-chloroethoxy)methane	41	29	70.1	1.1	20	45 - 105
2,4-Dichlorophenol	41	26	64.0	1.5	20	50 - 105
1,2,4-Trichlorobenzene	41	27	65.2	1.9	20	35 - 105
4-Chloroaniline	41	27	66.9	31.8 *	20	15 - 110
Hexachlorobutadiene	41	30	73.0	1.3	20	25 - 105
4-Chloro-3-methylphenol	41	25	61.0	1.2	20	45 - 110
Hexachlorocyclopentadiene	41	20	48.0	2.6	20	13 - 80
2,4,6-Trichlorophenol	41	24	59.3	0.8	20	50 - 115
2,4,5-Trichlorophenol	41	30	73.0	4.5	20	50 - 110
2-Chloronaphthalene	41	26	65.0	2.2	20	50 - 105
2-Nitroaniline	41	30	73.5	0.7	20	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dimethylphthalate	41	29	71.6	0.0	20	25 - 125
2,6-Dinitrotoluene	41	28	67.6	0.7	20	50 - 115
3-Nitroaniline	41	30	74.3	4.7	20	20 - 125
2,4-Dinitrophenol	82	55	67.0	6.2	20	15 - 140
Dibenzofuran	41	28	69.1	1.8	20	55 - 105
2,4-Dinitrotoluene	41	28	68.9	1.8	20	50 - 120
4-Nitrophenol	41	16	39.5	3.2	20	0 - 125
4-Chlorophenyl-phenylether	41	28	68.9	1.1	20	50 - 110
Diethylphthalate	41	30	73.5	0.3	20	40 - 120
4-Nitroaniline	41	32	77.5	5.2	20	35 - 120
4,6-Dinitro-2-methylphenol	41	25	60.8	2.8	20	40 - 130
N-Nitrosodiphenylamine	41	28	67.6	0.7	20	50 - 110
4-Bromophenyl-phenylether	41	27	65.7	2.2	20	50 - 115
Hexachlorobenzene	41	25	61.5	0.8	20	50 - 110
Pentachlorophenol	41	26	64.5	4.8	20	40 - 115
Di-n-butylphthalate	41	29	71.3	2.4	20	55 - 115
Butylbenzylphthalate	41	31	76.2	3.6	20	45 - 115
3,3'-Dichlorobenzidine	82	35	42.8	93.9 *	20	20 - 110
Bis(2-ethylhexyl)phthalate	41	34	83.1	4.9	20	40 - 125
Di-n-octylphthalate	41	33	80.6	3.3	20	35 - 135
2-Picoline	41	22	53.9	7.9	20	15 - 110
N-Nitrosomethylethylamine	41	24	58.1	2.1	20	25 - 131
N-Nitrosodiethylamine	41	25	60.3	0.4	20	46 - 111
Methylmethanesulfonate	41	24	60.0	6.3	20	15 - 103
Ethyl methanesulfonate	41	30	74.5	5.1	20	46 - 113
Pentachloroethane	41	26	64.0	2.7	20	27 - 99
N-Nitrosopyrrolidine	41	27	65.4	1.9	20	51 - 112
Acetophenone	82	59	71.8	7.4	20	45 - 118
N-Nitrosomorpholine	41	29	71.6	3.8	20	51 - 112
o-Toluidine	41	26	64.5	34.8 *	20	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSDRE1

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
a,a-Dimethylphenethylamine	41	0	0.0 *		20	70 - 130
2,6-Dichlorophenol	41	29	70.1	5.0	20	50 - 135
Hexachloropropene	41	24	59.8	6.8	20	21 - 105
N-Nitrosodibutylamine	41	28	67.9	13.9	20	43 - 130
Isosafrole	41	27	65.9 *	1.5	20	70 - 130
1,2,4,5-Tetrachlorobenzene	41	27	66.7	5.7	20	40 - 100
Safrole	41	30	74.5	3.7	20	52 - 100
1,4-Naphthoquinone	41	27	66.2	4.5	20	28 - 143
1,3-Dinitrobenzene	41	29	71.3	5.7	20	61 - 112
Pentachlorobenzene	41	27	66.7	4.5	20	50 - 99
1-Naphthylamine	41	34	84.6	36.7 *	20	38 - 91
2-Naphthylamine	41	20	48.5 *	51.4 *	20	70 - 130
2,3,4,6-Tetrachlorophenol	41	25	62.0	7.4	20	55 - 122
5-Nitro-o-toluidine	41	26	64.5 *	11.2	20	70 - 130
p-Phenylenediamine	41	28	69.1	0.4	20	58 - 107
Phenacetin	41	27	65.9	0.4	20	57 - 114
4-Aminobiphenyl	41	18	44.6 *	47.6 *	20	49 - 103
Pronamide	41	28	68.4	3.6	20	59 - 99
Pentachloronitrobenzene(PCNB)	41	32	77.2	3.9	20	60 - 104
Dinoseb	41	31	77.0	4.6	20	44 - 142
4-Nitroquinoline-1-oxide	41	16	40.2	14.4	20	10 - 125
Methapyriline	41	43	105.0 *	98.4 *	20	0 - 90
Aramite	41	25	61.3	11.0	20	41 - 127
p-Dimethylaminoazobenzene	41	23	55.9 *	14.1	20	70 - 130
2-Acetylaminofluorene	41	22	54.4 *	8.0	20	63 - 103
7,12-Dimethylbenz(a)anthracene	41	24	59.8	1.2	20	57 - 95
3-Methylcholanthrene	41	26	63.2	3.6	20	52 - 105
N-Nitrosopiperidine	41	26	64.0	2.3	20	53 - 112
1,3,5-Trinitrobenzene	41	16	38.7	1.9	20	29 - 163
Diallate (Avadex)	41	26	62.5	3.2	20	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSDRE1

Lab Code: PEL Case No.: SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Isodrin	41	29	71.8	6.0	20	54 - 110
Chlorobenzilate	41	24	58.8	6.9	20	58 - 101
Kepone	41	0	0.0		20	0 - 165
0,0,0-Triethylphosphorothioate	41	26	64.5	4.3	20	50 - 106

RPD: 8 out of 94 outside limits

Spike Recovery: 8 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8270 Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(#) = 0.05Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D		RRF10 =8270CAL2.D			
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D		RRF60 =8270CAL5.D			
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
Pyridine	1.430	1.447	1.524	1.547	1.528		
N-Nitrosodimethylamine	0.687	0.700	0.680	0.683	0.676		
Aniline	1.738	1.770	1.908	1.938	1.891		
Bis(2-chloroethyl)ether	1.059	1.079	1.103	1.131	1.124		
Phenol	* 1.631	1.590	1.687	1.797	1.829		*
2-Chlorophenol	1.119	1.054	1.148	1.201	1.191		
1,3-Dichlorobenzene	1.399	1.287	1.420	1.458	1.471		
1,4-Dichlorobenzene	* 1.484	1.425	1.469	1.519	1.522		*
1,2-Dichlorobenzene	1.304	1.323	1.355	1.379	1.380		
Benzyl alcohol	0.738	0.712	0.751	0.795	0.848		
2,2'-Oxybis(1-chloropropane)	0.780	0.709	0.750	0.790	0.777		
2-Methylphenol	0.952	0.955	0.991	1.091	1.089		
Hexachloroethane	0.583	0.553	0.574	0.609	0.598		
N-Nitroso-di-n-propylamine	# 1.113	1.088	1.136	1.235	1.214		#
4-Methylphenol	1.362	1.406	1.475	1.554	1.571		
Nitrobenzene	0.526	0.524	0.528	0.543	0.527		
Isophorone	0.611	0.617	0.633	0.653	0.643		
2-Nitrophenol	* 0.179	0.188	0.197	0.197	0.203		*
2,4-Dimethylphenol	0.303	0.290	0.299	0.305	0.303		
Bis(2-chloroethoxy)methane	0.428	0.419	0.433	0.445	0.439		
2,4-Dichlorophenol	* 0.319	0.347	0.350	0.364	0.374		*
1,2,4-Trichlorobenzene	0.452	0.431	0.429	0.446	0.453		
4-Chloroaniline	0.430	0.409	0.428	0.438	0.436		
Hexachlorobutadiene	* 0.330	0.315	0.340	0.344	0.349		*
4-Chloro-3-methylphenol	* 0.330	0.321	0.342	0.354	0.350		*
Hexachlorocyclopentadiene	# 0.544	0.573	0.624	0.650	0.667		#
2,4,6-Trichlorophenol	* 0.442	0.463	0.486	0.517	0.525		*
2,4,5-Trichlorophenol	0.399	0.438	0.453	0.468	0.483		
2-Chloronaphthalene	1.087	1.104	1.169	1.216	1.205		
2-Nitroaniline	0.354	0.388	0.407	0.422	0.422		
Dimethylphthalate	1.307	1.314	1.378	1.403	1.374		
2,6-Dinitrotoluene	0.266	0.286	0.300	0.319	0.323		
3-Nitroaniline	0.254	0.255	0.276	0.278	0.274		
2,4-Dinitrophenol	#	0.095	0.142	0.195	0.210		#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(%) = 0.05Max %RSD for CCC(*) = 30 %

COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
LAB FILE ID:	RRF4 =8270CAL1.D	RRF10 =8270CAL2.D					
RRF20 =8270CAL3.D	RRF45 =8270CAL4.D	RRF60 =8270CAL5.D					
Dibenzofuran	1.688	1.639	1.683	1.774	1.743		
2,4-Dinitrotoluene	0.377	0.399	0.411	0.433	0.446		
4-Nitrophenol	# 0.232	0.281	0.304	0.314	0.309		#
4-Chlorophenyl-phenylether	0.764	0.787	0.822	0.925	0.954		
Diethylphthalate	1.243	1.225	1.226	1.281	1.266		
4-Nitroaniline	0.265	0.217	0.216	0.222	0.238		
4,6-Dinitro-2-methylphenol	0.093	0.122	0.142	0.171	0.174		
N-Nitrosodiphenylamine	* 0.482	0.488	0.500	0.509	0.504		*
4-Bromophenyl-phenylether	0.269	0.272	0.283	0.301	0.298		
Hexachlorobenzene	0.316	0.301	0.315	0.344	0.348		
Pentachlorophenol	* 0.155	0.183	0.205	0.210			*
Di-n-butylphthalate	0.999	1.047	1.099	1.143	1.113		
Butylbenzylphthalate	0.335	0.346	0.355	0.354	0.343		
3,3'-Dichlorobenzidine	0.391	0.416	0.444	0.493	0.488		
Bis(2-ethylhexyl)phthalate	0.565	0.570	0.609	0.633	0.621		
Di-n-octylphthalate	* 0.763	0.818	0.876	0.936	0.916		*
2-Picoline	1.437	1.331	1.456	1.476	1.476		
N-Nitrosomethylethylamine	0.571	0.596	0.635	0.627	0.640		
N-Nitrosodiethylamine	0.536	0.581	0.603	0.631	0.648		
Methylmethanesulfonate	1.028	0.997	1.035	1.046	1.042		
Ethyl methanesulfonate	0.987	1.038	1.099	1.091	1.067		
Pentachloroethane	0.575	0.546	0.600	0.625	0.629		
N-Nitrosopyrrolidine	0.552	0.578	0.633	0.675	0.670		
Acetophenone	0.562	0.554	0.578	0.613	0.623		
N-Nitrosomorpholine	0.605	0.600	0.661	0.685	0.686		
o-Toluidine	1.906	1.922	2.072	2.209	2.202		
a,a-Dimethylphenethylamine	0.504	0.572	0.610	0.641	0.632		
2,6-Dichlorophenol	0.297	0.297	0.320	0.343	0.350		
Hexachloropropene	0.408	0.423	0.410	0.448	0.465		
N-Nitrosodibutylamine	0.280	0.278	0.310	0.330	0.335		
Isosafrole	0.282	0.303	0.303	0.324	0.334		
1,2,4,5-Tetrachlorobenzene	0.701	0.686	0.718	0.771	0.792		
Safrole	0.242	0.292	0.277	0.317	0.325		
1,4-Naphthoquinone	0.367	0.373	0.422	0.440	0.458		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID: RRF4 =8270CAL1.D RRF10 =8270CAL2.D							
RRF20 =8270CAL3.D RRF45 =8270CAL4.D RRF60 =8270CAL5.D							
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
1,3-Dinitrobenzene	0.170	0.186	0.191	0.211	0.214		
Pentachlorobenzene	0.673	0.670	0.702	0.747	0.778		
1-Naphthylamine	0.648	0.663	0.681	0.708	0.725		
2-Naphthylamine	0.806	0.879	0.915	0.932	0.950		
2,3,4,6-Tetrachlorophenol	0.334	0.366	0.392	0.421	0.426		
5-Nitro-o-toluidine	0.315	0.317	0.343	0.367	0.377		
p-Phenylenediamine	0.255	0.283	0.304	0.313	0.327		
Phenacetin	0.275	0.285	0.271	0.269	0.279		
4-Aminobiphenyl	0.649	0.680	0.701	0.688	0.713		
Pronamide	0.315	0.312	0.346	0.347	0.362		
Pentachloronitrobenzene(PCNB)	0.121	0.135	0.141	0.145	0.153		
Dinoseb	0.123	0.159	0.193	0.226	0.231		
4-Nitroquinoline-1-oxide	0.008	0.012	0.012	0.010	0.009		
Methapyriline	0.011	0.011	0.013	0.015	0.014		
Aramite	0.081	0.091	0.095	0.098	0.099		
p-Dimethylaminoazobenzene	0.200	0.209	0.222	0.240	0.248		
2-Acetylaminofluorene	0.321	0.356	0.383	0.430	0.441		
7,12-Dimethylbenz(a)anthracene	0.480	0.503	0.535	0.576	0.603		
3-Methylcholanthrene	0.562	0.580	0.618	0.652	0.674		
N-Nitrosopiperidine	0.158	0.164	0.160	0.183	0.178		
1,3,5-Trinitrobenzene	0.617	0.745	0.835	0.942	0.961		
Diallate (Avadex)	0.408	0.445	0.471	0.499	0.517		
Isodrin	0.116	0.117	0.124	0.121	0.124		
Chlorobenzilate	0.318	0.314	0.337	0.369	0.384		
Kepone	0.046	0.061	0.066	0.068	0.067		
0,0,0-Triethylphosphorothioate	0.874	0.849	0.901	0.964	1.014		
=====							
2-Fluorophenol(SURR)	1.109	1.085	1.161	1.193	1.186		
Phenol-d5(SURR)	1.464	1.441	1.516	1.613	1.619		
Nitrobenzene-d5(SURR)	0.527	0.515	0.536	0.553	0.547		
2-Fluorobiphenyl(SURR)	1.504	1.477	1.534	1.626	1.585		
2,4,6-Tribromophenol(SURR)	0.232	0.261	0.273	0.289	0.292		
p-Terphenyl-d14(SURR)	0.904	0.818	0.821	0.757	0.689		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04Lab Code: PEL Case No. SAS No: SDG No.: 3505724Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(#) = 0.05Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D					
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2	
Pyridine	1.527	1.517				1.50266	3	
N-Nitrosodimethylamine	0.660	0.671				0.67937	1.9	
Aniline	1.881	1.925				1.86438	4.2	
Bis(2-chloroethyl)ether	1.107	1.136				1.10557	2.6	
Phenol	* 1.855	1.926				1.75904	7.1	*
2-Chlorophenol	1.175	1.208				1.15668	4.7	
1,3-Dichlorobenzene	1.437	1.460				1.41871	4.5	
1,4-Dichlorobenzene	* 1.518	1.530				1.49525	2.5	*
1,2-Dichlorobenzene	1.381	1.408				1.36142	2.7	
Benzyl alcohol	0.838	0.864				0.79242	7.5	
2,2'-Oxybis(1-chloropropane)	0.775	0.829				0.77294	4.7	
2-Methylphenol	1.096	1.160				1.04767	7.8	
Hexachloroethane	0.602	0.615				0.59057	3.7	
N-Nitroso-di-n-propylamine	# 1.205	1.250				1.17738	5.4	#
4-Methylphenol	1.604	1.633				1.51461	6.8	
Nitrobenzene	0.538	0.540				0.53215	1.4	
Isophorone	0.653					0.63498	0.99986	
2-Nitrophenol	* 0.203	0.211				0.19693	5.3	*
2,4-Dimethylphenol	0.310	0.313				0.30321	2.5	
Bis(2-chloroethoxy)methane	0.456	0.456				0.43959	3.2	
2,4-Dichlorophenol	* 0.368	0.382				0.35774	5.9	*
1,2,4-Trichlorobenzene	0.457	0.463				0.44729	2.9	
4-Chloroaniline	0.443	0.438				0.43162	2.6	
Hexachlorobutadiene	* 0.355	0.360				0.34168	4.5	*
4-Chloro-3-methylphenol	* 0.349	0.363				0.34436	4.2	*
Hexachlorocyclopentadiene	# 0.670	0.689				0.63111	8.6	#
2,4,6-Trichlorophenol	* 0.517	0.534				0.49778	7	*
2,4,5-Trichlorophenol	0.486	0.494				0.46015	7.2	
2-Chloronaphthalene	1.219	1.207				1.17243	4.7	
2-Nitroaniline	0.414	0.421				0.40396	6.2	
Dimethylphthalate	1.345	1.307				1.347	2.9	
2,6-Dinitrotoluene	0.322	0.315				0.30449	7	
3-Nitroaniline	0.278	0.279				0.27047	4.1	
2,4-Dinitrophenol	# 0.215	0.219				0.17918	0.9995	#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D					
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2	
Dibenzofuran	1.740	1.714				1.71164	2.6	
2,4-Dinitrotoluene	0.456	0.467				0.42698	7.7	
4-Nitrophenol	# 0.308	0.310				0.29402	10	#
4-Chlorophenyl-phenylether	0.977	0.994				0.8889	10.8	
Diethylphthalate	1.242	1.221				1.24358	1.8	
4-Nitroaniline	0.237	0.244				0.23414	7.5	
4,6-Dinitro-2-methylphenol	0.179	0.187				0.15268	0.99853	
N-Nitrosodiphenylamine	* 0.520	0.524				0.50383	3.1	*
4-Bromophenyl-phenylether	0.307	0.316				0.29225	6.2	
Hexachlorobenzene	0.357	0.371				0.33604	7.6	
Pentachlorophenol	* 0.211	0.222				0.1975	12.5	*
Di-n-butylphthalate	1.105	1.052				1.07969	4.6	
Butylbenzylphthalate	0.338	0.340				0.34424	2.3	
3,3'-Dichlorobenzidine	0.502	0.507				0.46301	10	
Bis(2-ethylhexyl)phthalate	0.608	0.559				0.59501	5	
Di-n-octylphthalate	* 0.898	0.826				0.86193	7.2	*
2-Picoline	1.525	1.549				1.46426	4.8	
N-Nitrosomethylethylamine	0.645	0.656				0.62435	4.8	
N-Nitrosodiethylamine	0.654	0.680				0.6188	8	
Methylmethanesulfonate	1.024	1.053				1.03228	1.8	
Ethyl methanesulfonate	1.105	1.113				1.07144	4.2	
Pentachloroethane	0.639	0.667				0.61152	6.7	
N-Nitrosopyrrolidine	0.710	0.749				0.65232	10.7	
Acetophenone	0.628	0.654				0.60177	6.2	
N-Nitrosomorpholine	0.692	0.746				0.66788	7.7	
o-Toluidine	2.225	2.356				2.12749	7.9	
a,a-Dimethylphenethylamine	0.649	0.658				0.60958	9	
2,6-Dichlorophenol	0.362	0.375				0.33474	9.2	
Hexachloropropene	0.476	0.488				0.44551	7.3	
N-Nitrosodibutylamine	0.359	0.364				0.32224	10.7	
Isosafrole	0.360	0.364				0.32423	9.4	
1,2,4,5-Tetrachlorobenzene	0.816	0.822				0.75792	7.4	
Safrole	0.329	0.348				0.30436	11.8	
1,4-Naphthoquinone	0.460	0.475				0.42786	10	

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505724Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(%) = 0.05Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D					
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2	
1,3-Dinitrobenzene	0.219	0.226				0.20234	10	
Pentachlorobenzene	0.789	0.815				0.73904	7.9	
1-Naphthylamine	0.739	0.732				0.69942	5.1	
2-Naphthylamine	0.968	0.968				0.91679	6.4	
2,3,4,6-Tetrachlorophenol	0.436	0.467				0.40598	11.1	
5-Nitro-o-toluidine	0.386	0.388				0.35606	8.8	
p-Phenylenediamine	0.331	0.323				0.30516	9.1	
Phenacetin	0.286	0.286				0.27867	2.5	
4-Aminobiphenyl	0.710	0.696				0.6911	3.2	
Pronamide	0.362	0.362				0.34374	6.3	
Pentachloronitrobenzene(PCNB)	0.157	0.153				0.1436	8.6	
Dinoseb	0.235	0.239				0.2009	0.99959	
4-Nitroquinoline-1-oxide	0.008	0.007				0.00936	0.9988	<-
Methapyriline	0.014	0.015				0.01339	11.8	
Aramite	0.103	0.102				0.09549	8.1	
p-Dimethylaminoazobenzene	0.262	0.268				0.23538	11.1	
2-Acetylaminofluorene	0.465	0.490				0.41224	14.8	
7,12-Dimethylbenz(a)anthracene	0.635	0.653				0.56938	11.6	
3-Methylcholanthrene	0.681	0.723				0.64128	9	
N-Nitrosopiperidine	0.185	0.190				0.17391	7.5	
1,3,5-Trinitrobenzene	0.987	1.040				0.87534	0.99799	
Diallate (Avadex)	0.550	0.588				0.49675	12.4	
Isodrin	0.125	0.127				0.1219	3.4	
Chlorobenzilate	0.409	0.417				0.36387	11.6	
Kepone	0.067	0.061				0.06225	12.3	
0,0,0-Triethylphosphorothioate	1.030	1.098				0.96135	9.5	
=====								
2-Fluorophenol(SURR)	1.171	1.186				1.15589	3.6	
Phenol-d5(SURR)	1.608	1.585				1.54937	4.9	
Nitrobenzene-d5(SURR)	0.549	0.552				0.53982	2.7	
2-Fluorobiphenyl(SURR)	1.580	1.529				1.54784	3.3	
2,4,6-Tribromophenol(SURR)	0.299	0.311				0.27947	9.5	
p-Terphenyl-d14(SURR)	0.671	0.622				0.75461	13.2	

Average Used: 6.3

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.459	2.9	AVRG
N-Nitrosodimethylamine	0.67937	0.69377	2.1	AVRG
Aniline	1.86438	1.791	3.9	AVRG
Bis(2-chloroethyl)ether	1.10557	1.19	7.6	AVRG
Phenol	* 1.75904	1.767	0.5	AVRG *
2-Chlorophenol	1.15668	1.15	0.6	AVRG
1,3-Dichlorobenzene	1.41871	1.424	0.4	AVRG
1,4-Dichlorobenzene	* 1.49525	1.509	0.9	AVRG *
1,2-Dichlorobenzene	1.36142	1.362	0.0	AVRG
Benzyl alcohol	0.79242	0.73825	6.8	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.80115	3.6	AVRG
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58903	0.3	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.244	5.7	AVRG #
4-Methylphenol	1.51461	1.54	1.7	AVRG
Nitrobenzene	0.53215	0.52704	1.0	AVRG
Isophorone	45	56.2	24.9	LINR
2-Nitrophenol	* 0.19693	0.19603	0.5	AVRG *
2,4-Dimethylphenol	0.30321	0.32693	7.8	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46869	6.6	AVRG
2,4-Dichlorophenol	* 0.35774	0.35146	1.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.44124	1.4	AVRG
4-Chloroaniline	0.43162	0.45571	5.6	AVRG
Hexachlorobutadiene	* 0.34168	0.37423	9.5	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.34325	0.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.66526	5.4	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.51405	3.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47926	4.2	AVRG
2-Chloronaphthalene	1.17243	1.21	3.2	AVRG
2-Nitroaniline	0.40396	0.43684	8.1	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.31835	4.6	AVRG
3-Nitroaniline	0.27047	0.29706	9.8	AVRG
2,4-Dinitrophenol	# 45	49.6	10.2	LINR #
Dibenzofuran	1.71164	1.795	4.9	AVRG
2,4-Dinitrotoluene	0.42698	0.44249	3.6	AVRG

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.31262	6.3	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.93795	5.5	AVRG
Diethylphthalate	1.24358	1.303	4.8	AVRG
4-Nitroaniline	0.23414	0.25728	9.9	AVRG
4,6-Dinitro-2-methylphenol	45	43.7	2.9	LINR
N-Nitrosodiphenylamine	* 0.50383	0.55994	11.1	AVRG *
4-Bromophenyl-phenylether	0.29225	0.31014	6.1	AVRG
Hexachlorobenzene	0.33604	0.34736	3.4	AVRG
Pentachlorophenol	* 0.1975	0.20129	1.9	AVRG *
Di-n-butylphthalate	1.07969	1.167	8.1	AVRG
Butylbenzylphthalate	0.34424	0.38811	12.7	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.69176	16.3	AVRG
Di-n-octylphthalate	* 0.86193	0.98898	14.7	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.205	4.2	AVRG
Phenol-d5(SURR)	1.54937	1.48	4.5	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.51104	5.3	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.521	1.7	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28828	3.2	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.72682	3.7	AVRG

Average Used: 5.2

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1642
 CCV ID: SSC1072994 Lab File ID: BSSEC.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.47412	2.4	AVRG
Acetophenone	0.60177	0.55437	7.9	AVRG

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SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.382	5.6	AVRG
N-Nitrosomethylethylamine	0.62435	0.5569	10.8	AVRG
N-Nitrosodiethylamine	0.6188	0.57695	6.8	AVRG
Methylmethanesulfonate	1.03228	0.91616	11.2	AVRG
Ethyl methanesulfonate	1.07144	1.184	10.5	AVRG
Pentachloroethane	0.61152	0.57889	5.3	AVRG
N-Nitrosopyrrolidine	0.65232	0.65475	0.4	AVRG
Acetophenone	0.60177	0.55655	7.5	AVRG
N-Nitrosomorpholine	0.66788	0.67921	1.7	AVRG
o-Toluidine	2.12749	1.942	8.7	AVRG
a,a-Dimethylphenethylamine	0.60958	0.66908	9.8	AVRG
2,6-Dichlorophenol	0.33474	0.3387	1.2	AVRG
Hexachloropropene	0.44551	0.4091	8.2	AVRG
N-Nitrosodibutylamine	0.32224	0.31635	1.8	AVRG
Isosafrole	0.32423	0.33158	2.3	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.71394	5.8	AVRG
Safrole	0.30436	0.34282	12.6	AVRG
1,4-Naphthoquinone	0.42786	0.42484	0.7	AVRG
1,3-Dinitrobenzene	0.20234	0.21355	5.5	AVRG
Pentachlorobenzene	0.73904	0.72588	1.8	AVRG
1-Naphthylamine	0.69942	0.92682	32.5	AVRG
2-Naphthylamine	0.91679	1.124	22.6	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.37542	7.5	AVRG
5-Nitro-o-toluidine	0.35606	0.3347	6.0	AVRG
p-Phenylenediamine	0.30516	0.30466	0.2	AVRG
Phenacetin	0.27867	0.26573	4.6	AVRG
4-Aminobiphenyl	0.6911	0.65241	5.6	AVRG
Pronamide	0.34374	0.35236	2.5	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14392	0.2	AVRG
Dinoseb	45	46.2	2.7	LINR
4-Nitroquinoline-1-oxide	45	42.8	4.9	2ORD
Methapyriline	0.01339	0.20423	1425.2	AVRG
Aramite	0.09549	0.09236	3.3	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23703	0.7	AVRG
2-Acetylaminofluorene	0.41224	0.39744	3.6	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.59118	3.8	AVRG

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SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64437	0.5	AVRG
N-Nitrosopiperidine	0.17391	0.17104	1.7	AVRG
1,3,5-Trinitrobenzene	45	25.4	43.6	LINR
Diallate (Avadex)	0.49675	0.48038	3.3	AVRG
Isodrin	0.1219	0.13008	6.7	AVRG
Chlorobenzilate	0.36387	0.35124	3.5	AVRG
Kepone	0.06225	0.06098	2.0	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.92383	3.9	AVRG

Average Used: 38.8

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/24/12 Time: 0805
 CCV ID: CCV1073003 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.616	7.5	AVRG
N-Nitrosodimethylamine	0.67937	0.78423	15.4	AVRG
Aniline	1.86438	1.869	0.2	AVRG
Bis(2-chloroethyl)ether	1.10557	1.157	4.7	AVRG
Phenol	* 1.75904	1.816	3.2	AVRG *
2-Chlorophenol	1.15668	1.21	4.6	AVRG
1,3-Dichlorobenzene	1.41871	1.472	3.8	AVRG
1,4-Dichlorobenzene	* 1.49525	1.544	3.3	AVRG *
1,2-Dichlorobenzene	1.36142	1.409	3.5	AVRG
Benzyl alcohol	0.79242	0.82053	3.5	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.84286	9.0	AVRG
2-Methylphenol	1.04767	1.104	5.4	AVRG
Hexachloroethane	0.59057	0.61761	4.6	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.278	8.5	AVRG #
4-Methylphenol	1.51461	1.6	5.6	AVRG
Nitrobenzene	0.53215	0.57944	8.9	AVRG
Isophorone	45	47.7	6.0	LINR
2-Nitrophenol	* 0.19693	0.20564	4.4	AVRG *
2,4-Dimethylphenol	0.30321	0.31796	4.9	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.45414	3.3	AVRG
2,4-Dichlorophenol	* 0.35774	0.36326	1.5	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.45367	1.4	AVRG
4-Chloroaniline	0.43162	0.44076	2.1	AVRG
Hexachlorobutadiene	* 0.34168	0.35916	5.1	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.37069	7.6	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.6665	5.6	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.52897	6.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.4832	5.0	AVRG
2-Chloronaphthalene	1.17243	1.234	5.3	AVRG
2-Nitroaniline	0.40396	0.45634	13.0	AVRG
Dimethylphthalate	1.347	1.417	5.2	AVRG
2,6-Dinitrotoluene	0.30449	0.32983	8.3	AVRG
3-Nitroaniline	0.27047	0.27439	1.4	AVRG
2,4-Dinitrophenol	# 45	43.3	3.8	LINR #
Dibenzofuran	1.71164	1.79	4.6	AVRG
2,4-Dinitrotoluene	0.42698	0.43653	2.2	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/24/12 Time: 0805
 CCV ID: CCV1073003 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.3328	13.2	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.95804	7.8	AVRG
Diethylphthalate	1.24358	1.323	6.4	AVRG
4-Nitroaniline	0.23414	0.22536	3.7	AVRG
4,6-Dinitro-2-methylphenol	45	43.5	3.3	LINR
N-Nitrosodiphenylamine	* 0.50383	0.50748	0.7	AVRG *
4-Bromophenyl-phenylether	0.29225	0.29269	0.2	AVRG
Hexachlorobenzene	0.33604	0.34006	1.2	AVRG
Pentachlorophenol	* 0.1975	0.19723	0.1	AVRG *
Di-n-butylphthalate	1.07969	1.144	6.0	AVRG
Butylbenzylphthalate	0.34424	0.34287	0.4	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.64322	8.1	AVRG
Di-n-octylphthalate	* 0.86193	0.93201	8.1	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.199	3.7	AVRG
Phenol-d5(SURR)	1.54937	1.626	4.9	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.57602	6.7	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.65	6.6	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.29173	4.4	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.75771	0.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/24/12 Time: 0829
 CCV ID: CCV1073011 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.49091	6.0	AVRG
Acetophenone	0.60177	0.62207	3.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/24/12 Time: 0852
 CCV ID: CCV1073019 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.485	1.4	AVRG
N-Nitrosomethylethylamine	0.62435	0.63672	2.0	AVRG
N-Nitrosodiethylamine	0.6188	0.62792	1.5	AVRG
Methylmethanesulfonate	1.03228	1.059	2.6	AVRG
Ethyl methanesulfonate	1.07144	1.101	2.8	AVRG
Pentachloroethane	0.61152	0.6281	2.7	AVRG
N-Nitrosopyrrolidine	0.65232	0.66831	2.5	AVRG
Acetophenone	0.60177	0.57735	4.1	AVRG
N-Nitrosomorpholine	0.66788	0.71307	6.8	AVRG
o-Toluidine	2.12749	2.161	1.6	AVRG
a,a-Dimethylphenethylamine	0.60958	0.68263	12.0	AVRG
2,6-Dichlorophenol	0.33474	0.3522	5.2	AVRG
Hexachloropropene	0.44551	0.45305	1.7	AVRG
N-Nitrosodibutylamine	0.32224	0.34131	5.9	AVRG
Isosafrole	0.32423	0.33609	3.7	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.75484	0.4	AVRG
Safrole	0.30436	0.321	5.5	AVRG
1,4-Naphthoquinone	0.42786	0.4538	6.1	AVRG
1,3-Dinitrobenzene	0.20234	0.2055	1.6	AVRG
Pentachlorobenzene	0.73904	0.7204	2.5	AVRG
1-Naphthylamine	0.69942	0.72034	3.0	AVRG
2-Naphthylamine	0.91679	0.95988	4.7	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.43332	6.7	AVRG
5-Nitro-o-toluidine	0.35606	0.36659	3.0	AVRG
p-Phenylenediamine	0.30516	0.33019	8.2	AVRG
Phenacetin	0.27867	0.27751	0.4	AVRG
4-Aminobiphenyl	0.6911	0.69691	0.8	AVRG
Pronamide	0.34374	0.3508	2.1	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14382	0.2	AVRG
Dinoseb	45	43.8	2.7	LINR
4-Nitroquinoline-1-oxide	45	49.7	10.4	2ORD
Methapyriline	0.01339	0.01522	13.7	AVRG
Aramite	0.09549	0.09634	0.9	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23355	0.8	AVRG
2-Acetylaminofluorene	0.41224	0.43453	5.4	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.58932	3.5	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/24/12 Time: 0852
 CCV ID: CCV1073019 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.66473	3.7	AVRG
N-Nitrosopiperidine	0.17391	0.18011	3.6	AVRG
1,3,5-Trinitrobenzene	45	45.5	1.1	LINR
Diallate (Avadex)	0.49675	0.50134	0.9	AVRG
Isodrin	0.1219	0.12392	1.7	AVRG
Chlorobenzilate	0.36387	0.36228	0.4	AVRG
Kepone	0.06225	0.06587	5.8	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.96936	0.8	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0807
 CCV ID: CCV1073205 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.618	7.7	AVRG
N-Nitrosodimethylamine	0.67937	0.72948	7.4	AVRG
Aniline	1.86438	1.913	2.6	AVRG
Bis(2-chloroethyl)ether	1.10557	1.156	4.6	AVRG
Phenol	* 1.75904	1.81	2.9	AVRG *
2-Chlorophenol	1.15668	1.207	4.4	AVRG
1,3-Dichlorobenzene	1.41871	1.454	2.5	AVRG
1,4-Dichlorobenzene	* 1.49525	1.542	3.1	AVRG *
1,2-Dichlorobenzene	1.36142	1.414	3.9	AVRG
Benzyl alcohol	0.79242	0.83539	5.4	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.77409	0.1	AVRG
2-Methylphenol	1.04767	1.077	2.8	AVRG
Hexachloroethane	0.59057	0.60371	2.2	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.271	8.0	AVRG #
4-Methylphenol	1.51461	1.591	5.0	AVRG
Nitrobenzene	0.53215	0.55613	4.5	AVRG
Isophorone	45	48.2	7.1	LINR
2-Nitrophenol	* 0.19693	0.2093	6.3	AVRG *
2,4-Dimethylphenol	0.30321	0.31323	3.3	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.45842	4.3	AVRG
2,4-Dichlorophenol	* 0.35774	0.37225	4.1	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.45774	2.3	AVRG
4-Chloroaniline	0.43162	0.44392	2.8	AVRG
Hexachlorobutadiene	* 0.34168	0.3446	0.9	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.3592	4.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.62491	1.0	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.51111	2.7	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47518	3.3	AVRG
2-Chloronaphthalene	1.17243	1.22	4.1	AVRG
2-Nitroaniline	0.40396	0.42491	5.2	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.32553	6.9	AVRG
3-Nitroaniline	0.27047	0.28278	4.6	AVRG
2,4-Dinitrophenol	# 45	38.5	14.4	LINR #
Dibenzofuran	1.71164	1.758	2.7	AVRG
2,4-Dinitrotoluene	0.42698	0.44072	3.2	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0807
 CCV ID: CCV1073205 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.33089	12.5	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.91847	3.3	AVRG
Diethylphthalate	1.24358	1.319	6.1	AVRG
4-Nitroaniline	0.23414	0.22929	2.1	AVRG
4,6-Dinitro-2-methylphenol	45	41.6	7.6	LINR
N-Nitrosodiphenylamine	* 0.50383	0.51795	2.8	AVRG *
4-Bromophenyl-phenylether	0.29225	0.30213	3.4	AVRG
Hexachlorobenzene	0.33604	0.34836	3.7	AVRG
Pentachlorophenol	* 0.1975	0.1994	1.0	AVRG *
Di-n-butylphthalate	1.07969	1.218	12.8	AVRG
Butylbenzylphthalate	0.34424	0.36936	7.3	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.65678	10.4	AVRG
Di-n-octylphthalate	* 0.86193	0.97186	12.8	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.181	2.2	AVRG
Phenol-d5(SURR)	1.54937	1.602	3.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.57053	5.7	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.575	1.8	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28382	1.6	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.79497	5.3	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0831
 CCV ID: CCV1073207 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50368	8.8	AVRG
Acetophenone	0.60177	0.63877	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0854
 CCV ID: CCV1073206 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.498	2.3	AVRG
N-Nitrosomethylethylamine	0.62435	0.65104	4.3	AVRG
N-Nitrosodiethylamine	0.6188	0.64202	3.8	AVRG
Methylmethanesulfonate	1.03228	1.058	2.5	AVRG
Ethyl methanesulfonate	1.07144	1.09	1.7	AVRG
Pentachloroethane	0.61152	0.65218	6.6	AVRG
N-Nitrosopyrrolidine	0.65232	0.67498	3.5	AVRG
Acetophenone	0.60177	0.56499	6.1	AVRG
N-Nitrosomorpholine	0.66788	0.68347	2.3	AVRG
o-Toluidine	2.12749	2.183	2.6	AVRG
a,a-Dimethylphenethylamine	0.60958	0.66097	8.4	AVRG
2,6-Dichlorophenol	0.33474	0.3465	3.5	AVRG
Hexachloropropene	0.44551	0.42693	4.2	AVRG
N-Nitrosodibutylamine	0.32224	0.33329	3.4	AVRG
Isosafrole	0.32423	0.32534	0.3	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.7566	0.2	AVRG
Safrole	0.30436	0.31711	4.2	AVRG
1,4-Naphthoquinone	0.42786	0.47884	11.9	AVRG
1,3-Dinitrobenzene	0.20234	0.22085	9.1	AVRG
Pentachlorobenzene	0.73904	0.73711	0.3	AVRG
1-Naphthylamine	0.69942	0.72386	3.5	AVRG
2-Naphthylamine	0.91679	0.95926	4.6	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.45662	12.5	AVRG
5-Nitro-o-toluidine	0.35606	0.38258	7.4	AVRG
p-Phenylenediamine	0.30516	0.35368	15.9	AVRG
Phenacetin	0.27867	0.30599	9.8	AVRG
4-Aminobiphenyl	0.6911	0.70117	1.5	AVRG
Pronamide	0.34374	0.36541	6.3	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14588	1.6	AVRG
Dinoseb	45	38.3	14.9	LINR
4-Nitroquinoline-1-oxide	45	45	0.0	2ORD
Methapyriline	0.01339	0.01541	15.1	AVRG
Aramite	0.09549	0.09713	1.7	AVRG
p-Dimethylaminoazobenzene	0.23538	0.24214	2.9	AVRG
2-Acetylaminofluorene	0.41224	0.45066	9.3	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.57451	0.9	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0854
 CCV ID: CCV1073206 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.65326	1.9	AVRG
N-Nitrosopiperidine	0.17391	0.17845	2.6	AVRG
1,3,5-Trinitrobenzene	45	44.9	0.2	LINR
Diallate (Avadex)	0.49675	0.51295	3.3	AVRG
Isodrin	0.1219	0.1218	0.1	AVRG
Chlorobenzilate	0.36387	0.3761	3.4	AVRG
Kepone	0.06225	0.06088	2.2	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.96241	0.1	AVRG

Average Used: 4.6

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 05/01/12 Time: 0751
 CCV ID: CCV1077665 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.577	4.9	AVRG
N-Nitrosodimethylamine	0.67937	0.81056	19.3	AVRG
Aniline	1.86438	1.799	3.5	AVRG
Bis(2-chloroethyl)ether	1.10557	1.112	0.6	AVRG
Phenol	* 1.75904	1.776	1.0	AVRG *
2-Chlorophenol	1.15668	1.18	2.0	AVRG
1,3-Dichlorobenzene	1.41871	1.441	1.6	AVRG
1,4-Dichlorobenzene	* 1.49525	1.48	1.0	AVRG *
1,2-Dichlorobenzene	1.36142	1.394	2.4	AVRG
Benzyl alcohol	0.79242	0.8065	1.8	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.76706	0.8	AVRG
2-Methylphenol	1.04767	1.052	0.4	AVRG
Hexachloroethane	0.59057	0.61245	3.7	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.307	11.0	AVRG #
4-Methylphenol	1.51461	1.609	6.2	AVRG
Nitrobenzene	0.53215	0.56779	6.7	AVRG
Isophorone	45	47.7	6.0	LINR
2-Nitrophenol	* 0.19693	0.20088	2.0	AVRG *
2,4-Dimethylphenol	0.30321	0.31475	3.8	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.45081	2.6	AVRG
2,4-Dichlorophenol	* 0.35774	0.37081	3.7	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.46562	4.1	AVRG
4-Chloroaniline	0.43162	0.43676	1.2	AVRG
Hexachlorobutadiene	* 0.34168	0.36835	7.8	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.36652	6.4	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.6481	2.7	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.47792	4.0	AVRG *
2,4,5-Trichlorophenol	0.46015	0.52205	13.5	AVRG
2-Chloronaphthalene	1.17243	1.194	1.8	AVRG
2-Nitroaniline	0.40396	0.43697	8.2	AVRG
Dimethylphthalate	1.347	1.427	5.9	AVRG
2,6-Dinitrotoluene	0.30449	0.31551	3.6	AVRG
3-Nitroaniline	0.27047	0.27344	1.1	AVRG
2,4-Dinitrophenol	# 45	41.2	8.4	LINR #
Dibenzofuran	1.71164	1.809	5.7	AVRG
2,4-Dinitrotoluene	0.42698	0.44191	3.5	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 05/01/12 Time: 0751
 CCV ID: CCV1077665 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.31688	7.8	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.98273	10.6	AVRG
Diethylphthalate	1.24358	1.312	5.5	AVRG
4-Nitroaniline	0.23414	0.21759	7.1	AVRG
4,6-Dinitro-2-methylphenol	45	41.6	7.6	LINR
N-Nitrosodiphenylamine	* 0.50383	0.49961	0.8	AVRG *
4-Bromophenyl-phenylether	0.29225	0.30462	4.2	AVRG
Hexachlorobenzene	0.33604	0.33304	0.9	AVRG
Pentachlorophenol	* 0.1975	0.19953	1.0	AVRG *
Di-n-butylphthalate	1.07969	1.148	6.3	AVRG
Butylbenzylphthalate	0.34424	0.33651	2.2	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.64429	8.3	AVRG
Di-n-octylphthalate	* 0.86193	0.96976	12.5	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.161	0.4	AVRG
Phenol-d5(SURR)	1.54937	1.596	3.0	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.58198	7.8	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.623	4.9	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.30619	9.6	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.7574	0.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 05/01/12 Time: 0815
 CCV ID: CCV1077666 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.48531	4.8	AVRG
Acetophenone	0.60177	0.63808	6.0	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 05/01/12 Time: 0952
 CCV ID: CCV1077668 Lab File ID: AP9CCV2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.418	3.2	AVRG
N-Nitrosomethylethylamine	0.62435	0.62142	0.5	AVRG
N-Nitrosodiethylamine	0.6188	0.60255	2.6	AVRG
Methylmethanesulfonate	1.03228	1.055	2.2	AVRG
Ethyl methanesulfonate	1.07144	1.066	0.5	AVRG
Pentachloroethane	0.61152	0.62166	1.7	AVRG
N-Nitrosopyrrolidine	0.65232	0.64838	0.6	AVRG
Acetophenone	0.60177	0.59012	1.9	AVRG
N-Nitrosomorpholine	0.66788	0.67938	1.7	AVRG
o-Toluidine	2.12749	2.07	2.7	AVRG
a,a-Dimethylphenethylamine	0.60958	0.64263	5.4	AVRG
2,6-Dichlorophenol	0.33474	0.36059	7.7	AVRG
Hexachloropropene	0.44551	0.47572	6.8	AVRG
N-Nitrosodibutylamine	0.32224	0.34372	6.7	AVRG
Isosafrole	0.32423	0.33533	3.4	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.75444	0.5	AVRG
Safrole	0.30436	0.31995	5.1	AVRG
1,4-Naphthoquinone	0.42786	0.43772	2.3	AVRG
1,3-Dinitrobenzene	0.20234	0.20294	0.3	AVRG
Pentachlorobenzene	0.73904	0.7574	2.5	AVRG
1-Naphthylamine	0.69942	0.67141	4.0	AVRG
2-Naphthylamine	0.91679	0.90546	1.2	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.42203	4.0	AVRG
5-Nitro-o-toluidine	0.35606	0.3545	0.4	AVRG
p-Phenylenediamine	0.30516	0.31465	3.1	AVRG
Phenacetin	0.27867	0.2794	0.3	AVRG
4-Aminobiphenyl	0.6911	0.68972	0.2	AVRG
Pronamide	0.34374	0.35417	3.0	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.15559	8.3	AVRG
Dinoseb	45	46.5	3.3	LINR
4-Nitroquinoline-1-oxide	45	30.6	32.0	2ORD
Methapyriline	0.01339	0.01551	15.8	AVRG
Aramite	0.09549	0.0993	4.0	AVRG
p-Dimethylaminoazobenzene	0.23538	0.25097	6.6	AVRG
2-Acetylaminofluorene	0.41224	0.4177	1.3	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.59053	3.7	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SMSD03 CalibrationDate: 05/01/12 Time: 0952
 CCV ID: CCV1077668 Lab File ID: AP9CCV2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64256	0.2	AVRG
N-Nitrosopiperidine	0.17391	0.17295	0.6	AVRG
1,3,5-Trinitrobenzene	45	46.4	3.1	LINR
Diallate (Avadex)	0.49675	0.49647	0.1	AVRG
Isodrin	0.1219	0.12664	3.9	AVRG
Chlorobenzilate	0.36387	0.3817	4.9	AVRG
Kepone	0.06225	0.03895	37.4	AVRG
0,0,0-Triethylphosphorothioate	0.96135	1.01	5.1	AVRG

Average Used: 4.7

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FL-PRO Organics

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Florida DEP/FL PRO

IV. PREPARATION

Soil samples were prepared by SW846 EPA 3550 for FL-PRO semi-volatile analysis.
Water samples were prepared by SW846 EPA 3510 for FL-PRO semi-volatile analysis.
During extraction samples TFS-SW-01, TFS-SW-02, TFS-SW-03, TFS-SW-04, TFS-SW-FD, TFS-SD-03 MS, TFS-SD-03 MSD exhibited heavy emulsion and required additional cleanup. This emulsion is most likely caused by sample matrix and is the probable cause for surrogate recoveries that are below criteria.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample TFS-SD-01 was recovered below criteria for the following surrogate:
Nonatriacontane (C-39) at 59.1 % with criteria of (60-118). The most probable cause for this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 144 mg/Kg.

Sample TFS-SW-02 was recovered below criteria for the following surrogate: o-Terphenyl Surrogate at 64.7 % with criteria of (82-142). The most probable cause for this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 1100ug/L.

Sample TFS-SW-03 was recovered below criteria for the following surrogate: o-Terphenyl Surrogate at 70.6 % with criteria of (82-142). The most probable cause for

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505724

Client: CH2M Hill

this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 1200ug/L.

Sample TFS-SW-04 was recovered below criteria for the following surrogate: o-Terphenyl Surrogate at 41.2 % with criteria of (82-142). The most probable cause for this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 860ug/L.

Sample TFS-SW-FD was recovered below criteria for the following surrogate: o-Terphenyl Surrogate at 58.8 % with criteria of (82-142). The most probable cause for this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 980ug/L.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 04/22/2012

FL-PRO ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.0
Lab Code : PEL Case No. SAS No: SDG No.: 3505724

Method: FL-PRO

EPA Sample No	Lab Sample ID
<u>TFS-SD-01</u>	<u>350572401</u>
<u>TFS-SW-01</u>	<u>350572402</u>
<u>TFS-SD-02</u>	<u>350572403</u>
<u>TFS-SD-03</u>	<u>350572404</u>
<u>TFS-SW-02</u>	<u>350572405</u>
<u>TFS-SW-03</u>	<u>350572406</u>
<u>TFS-SD-04</u>	<u>350572407</u>
<u>TFS-SW-04</u>	<u>350572408</u>
<u>TFS-SD-FD</u>	<u>350572409</u>
<u>TFS-SW-FD</u>	<u>350572410</u>
<u>TFS-SD-EB</u>	<u>350572415</u>

FL-PRO Sample Data

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572401 Lab File ID 724-1.D

Sample wt/vol: 33.75 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1300

PercentSolids: 50.2 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	144		25.3	50.6	50.6

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-01

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572402 Lab File ID 724-2.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1320

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	2100		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572403 Lab File ID 724-3.D

Sample wt/vol: 33.91 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1322

PercentSolids: 43.6 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	103		29	58	58

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572404 Lab File ID 724-4.D

Sample wt/vol: 33.13 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1345

PercentSolids: 58.9 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	144		22	44	44

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-02

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572405 Lab File ID 724-5.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1342

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1100		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572406 Lab File ID 724-6.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1405

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1200		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 350572407 Lab File ID 724-7.D

Sample wt/vol: 33.47 Units: G Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 0855

PercentSolids: 54 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	91.1		23.7	47.5	47.5

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-04

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572408 Lab File ID 724-8.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1140

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	860		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. TFS-SD-FD
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724
 Matrix: SOIL Lab Sample ID: 350572409 Lab File ID 724-9.D
 Sample wt/vol: 33.46 Units: G Date Received: 04/13/12
 Concentrated Extract Volume: 2 Date Extracted: 04/16/12
 Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 1407
 PercentSolids: 62.3 decanted : _____ Dilution Factor: 1
 Extraction: SONC Station ID: _____ Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	95.7		20.6	41.2	41.2

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SW-FD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572410 Lab File ID 724-10.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1427

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	980		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. TFS-SD-EB

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 350572415 Lab File ID 724-15.D

Sample wt/vol: 980 Units: ML Date Received: 04/13/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 1449

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

FL-PRO QC Summary

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125441MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: SOIL Lab Sample ID: 125441MB Lab File ID: 9045MB.D

Sample wt/vol: 33.52 Units: G Date Received: 04/16/12

Concentrated Extract Volume: 2 Date Extracted: 04/16/12

Level:(low/med) LOW Date Analyzed: 04/17/12 Time: 0810

PercentSolids: 100 decanted: _____ Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	25.6	U	12.8	25.6	25.6

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW. 125735MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Matrix: WATER Lab Sample ID: 125735MB Lab File ID: 9076MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/17/12

Concentrated Extract Volume: 2 Date Extracted: 04/17/12

Level:(low/med) LOW Date Analyzed: 04/18/12 Time: 0820

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	500	U	250	500	500

FL-PRO ORGANIC METHOD BLANK SUMMARY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 125441MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9045MB.D Lab Sample ID: 125441MB

Instrument ID: SFID01 Date Extracted: 04/16/12

Matrix: SOIL Date Analyzed: 04/17/12

Level:(low/med) LOW Time Analyzed: 0810

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	125440LCS	125440LCS	9045LCS.D	04/17/12	0832
2	TFS-SD-04	350572407	724-7.D	04/17/12	0855
3	TFS-SD-04 MS	350572411	724-11MS.D	04/17/12	0917
4	TFS-SD-04 MSD	350572412	724-12SD.D	04/17/12	1001
5	TFS-SD-01	350572401	724-1.D	04/17/12	1300
6	TFS-SD-02	350572403	724-3.D	04/17/12	1322
7	TFS-SD-03	350572404	724-4.D	04/17/12	1345
8	TFS-SD-FD	350572409	724-9.D	04/17/12	1407

COMMENTS:

FL-PRO ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: Boca Chica TFS / 426847.PP.FW.04 EPA Sample No. 125735MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

Lab File ID: 9076MB.D Lab Sample ID: 125735MB

Instrument ID: SFID01 Date Extracted: 04/17/12

Matrix: WATER Date Analyzed: 04/18/12

Level:(low/med) LOW Time Analyzed: 0820

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	125734LCS	125734LCS	9076LCS.D	04/18/12	0842
2	TFS-SW-04	350572408	724-8.D	04/18/12	1140
3	TFS-SW-03 MS	350572413	724-13MS.D	04/18/12	1203
4	TFS-SW-03 MSD	350572414	724-14SD.D	04/18/12	1225
5	TFS-SW-01	350572402	724-2.D	04/18/12	1320
6	TFS-SW-02	350572405	724-5.D	04/18/12	1342
7	TFS-SW-03	350572406	724-6.D	04/18/12	1405
8	TFS-SW-FD	350572410	724-10.D	04/18/12	1427
9	TFS-SD-EB	350572415	724-15.D	04/18/12	1449

COMMENTS:

2A

WATER FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. SAS No: SDG NO.: 3505724

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
125734LCS	95.0	66.7					0
125735MB	100.0	62.7					0
TFS-SD-EB	92.2	85.0					0
TFS-SW-01	83.3	91.5					0
TFS-SW-02	64.7 *	62.1					1
TFS-SW-03	70.6 *	71.9					1
TFS-SW-03 MS	82.4	85.0					0
TFS-SW-03 MSD	87.3	78.4					0
TFS-SW-04	41.2 *	47.7					1
TFS-SW-FD	58.8 *	64.1					1

Control Limits

S1 = o-Terphenyl Surrogate 82 - 142
S2 = Nonatriacontane (C-39) 42 - 193

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

110512 1719

2A

SOIL FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.

Lab Code : PEL Case No. SAS No: SDG NO.: 3505724

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
125440LCS	93.3	75.6					0
125441MB	100.0	84.4					0
TFS-SD-01	67.8	59.1 *					1
TFS-SD-02	85.3	81.2					0
TFS-SD-03	76.5	71.4					0
TFS-SD-04	76.4	69.9					0
TFS-SD-04 MS	71.4	69.0					0
TFS-SD-04 MSD	80.0	72.3					0
TFS-SD-FD	70.8	66.7					0

Control Limits

S1 = o-Terphenyl Surrogate 62 - 109
S2 = Nonatriacontane (C-39) 60 - 118

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

110512 1719

FL-PRO ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date: 03/28/12
 Instrument ID: SFID01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 4.16			S2 : 10.58				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	STD1064818	45519	PROCAL7.D	03/28/12	1416	4.17	10.63
2	STD1064817	45520	PROCAL6.D	03/28/12	1438	4.17	10.59
3	STD1064816	45521	PROCAL5.D	03/28/12	1501	4.16	10.54
4	STD1064815	45522	PROCAL4.D	03/28/12	1523	4.16	10.58
5	STD1064814	45523	PROCAL3.D	03/28/12	1545	4.14	10.5
6	STD1064813	45524	PROCAL2.D	03/28/12	1608	4.16	10.54
7	STD1064812	45525	PROCAL1.D	03/28/12	1630	4.13	10.5
8	SSC1064821	45526	PROSEC.D	03/28/12	1652	4.13	10.44
9	CCV1070393	45522	PROCCV1.D	04/17/12	0748	4.15	10.45
10	125441MB	125441MB	9045MB.D	04/17/12	0810	4.13	10.39
11	125440LCS	125440LCS	9045LCS.D	04/17/12	0832	4.12	10.38
12	TFS-SD-04	350572407	724-7.D	04/17/12	0855	4.14	10.46
13	TFS-SD-04 MS	350572411	724-11MS.D	04/17/12	0917	4.13	10.45
14	TFS-SD-04 MSD	350572412	724-12SD.D	04/17/12	1001	4.12	10.37
15	CCV1070394	45522	PROCCV2.D	04/17/12	1238	4.14	10.45
16	TFS-SD-01	350572401	724-1.D	04/17/12	1300	4.16	10.55
17	TFS-SD-02	350572403	724-3.D	04/17/12	1322	4.18	10.59
18	TFS-SD-03	350572404	724-4.D	04/17/12	1345	4.17	10.59
19	TFS-SD-FD	350572409	724-9.D	04/17/12	1407	4.17	10.58
20	CCV1070897	45522	PROCCV3.D	04/17/12	1559	4.19	10.67
21	CCV1070731	45522	PROCCV1.D	04/18/12	0747	4.13	10.45
22	125735MB	125735MB	9076MB.D	04/18/12	0820	4.2	10.66
23	125734LCS	125734LCS	9076LCS.D	04/18/12	0842	4.12	10.4
24	TFS-SW-04	350572408	724-8.D	04/18/12	1140	4.15	10.54
25	TFS-SW-03 MS	350572413	724-13MS.D	04/18/12	1203	4.17	10.58
26	TFS-SW-03 MSD	350572414	724-14SD.D	04/18/12	1225	4.14	10.47

QC LIMITS

S1 = o-Terphenyl Surrogate (+/- 0.2 MINUTES)
 S2 = Nonatriacontane (C-39) (+/- 0.46 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

FL-PRO ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date: 03/28/12
 Instrument ID: SFID01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 4.16			S2 : 10.58			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	CCV1070732	45522	PROCCV2.D	04/18/12	1258	4.13 10.43
28	TFS-SW-01	350572402	724-2.D	04/18/12	1320	4.14 10.49
29	TFS-SW-02	350572405	724-5.D	04/18/12	1342	4.15 10.53
30	TFS-SW-03	350572406	724-6.D	04/18/12	1405	4.16 10.55
31	TFS-SW-FD	350572410	724-10.D	04/18/12	1427	4.18 10.61
32	TFS-SD-EB	350572415	724-15.D	04/18/12	1449	4.14 10.5
33	CCV1070908	45522	PROCCV3.D	04/18/12	1652	4.12 10.4

QC LIMITS

S1 = o-Terphenyl Surrogate (+/- 0.2 MINUTES)
 S2 = Nonatriacontane (C-39) (+/- 0.46 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. 125440LCS
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	103	80.3	78.0			63 - 153

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP. EPA Sample No. 125734LCS
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	3400	2600	76.5			55 - 118

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268

TFS-SD-04 MS

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC #	QC LIMITS REC.
TPH	190	91	220	66.6	62 - 204

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SD-04 MSD

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED mg/Kg	MSD CONCENTRATION mg/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
TPH	190	240	77.1	8.4	25	62 - 204

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4268 EPA Sample No. TFS-SW-03 MS
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
TPH	3500	860	3600	79.0	41 - 101

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 4

TFS-SW-03 MSD

Lab Code : PEL Case No.: SAS No: SDG No.: 3505724

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
TPH	3500	3700	81.8	2.7	20	41 - 101

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

FL-PRO Standards Data

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:	RRF0.17 =PROCAL1.D	RRF0.34 =PROCAL2.D			
RRF0.85 =PROCAL3.D	RRF1.7 =PROCAL4.D	RRF2.55 =PROCAL5.D			
COMPOUND	RRF0.17	RRF0.34	RRF0.85	RRF1.7	RRF2.55
TPH	11892200	8905905.882	7673328.235	7746596.471	6757141.176
=====					
Nonatriacontane (C-39)(SURR)	5045493.333	5107080	5812986.667	5564053.333	5221266.667
o-Terphenyl Surrogate(SURR)	6862940	6760680	7635860	8031980	6886480

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:		RRF3.4 =PROCAL6.D	RRF5.1 =PROCAL7.D			
COMPOUND	RRF3.4	RRF5.1				
TPH	6619844.118	6701392.157				
=====						
Nonatriacontane (C-39)(SURR)	5110173.333	4655386.667				
o-Terphenyl Surrogate(SURR)	7013080	6544620				

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
TPH	LINR	-0.16196821	1.54514E-07	0.99787
=====				
Nonatriacontane (C-39)(SURR)	AVRG		5216634.286	7.2
o-Terphenyl Surrogate(SURR)	AVRG		7105091.429	7.5

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PROCAL1.D		RT2: PROCAL2.D			
RT3: PROCAL3.D		RT4: PROCAL4.D		RT5: PROCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
TPH	6.202	6.357	6.357	6.357	6.357		
=====							
Nonatriacontane (C-39)(SURR)	10.497	10.543	10.503	10.583	10.543		
o-Terphenyl Surrogate(SURR)	4.130	4.157	4.140	4.160	4.157		

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No. SAS No: SDG No.: 3505724
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID: RT6: PROCAL6.D RT7: PROCAL7.D								
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW	
							FROM	TO
TPH	6.357	6.357				6.357	0.908	11.805
=====								
Nonatriacontane (C-39)(SURR)	10.587	10.630				10.583	10.123	11.043
o-Terphenyl Surrogate(SURR)	4.167	4.173				4.160	3.960	4.360

7SSC

FL-PRO ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 03/28/12 Time: 1652
 CCV ID: SSC1064821 Lab File ID: PROSEC.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.65	2.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5339786.667	2.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7346880	3.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/17/12 Time: 0748
 CCV ID: CCV1070393 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.6	5.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	4651240	10.8	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6374240	10.3	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/17/12 Time: 1238
 CCV ID: CCV1070394 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.52	10.6	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	4570333.333	12.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6078440	14.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/17/12 Time: 1559
 CCV ID: CCV1070897 Lab File ID: PROCCV3.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.65	2.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	4803266.667	7.9	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6286520	11.5	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/18/12 Time: 0747
 CCV ID: CCV1070731 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.58	7.1	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	4668373.333	10.5	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6365720	10.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/18/12 Time: 1258
 CCV ID: CCV1070732 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.68	1.2	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5145360	1.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6849980	3.6	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: Boca Chica TFS / 426847.PP.FW.04
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505724
 Instrument ID: SFID01 CalibrationDate: 04/18/12 Time: 1652
 CCV ID: CCV1070908 Lab File ID: PROCCV3.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.78	4.7	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5272360	1.1	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6950420	2.2	AVRG

Chain of Custody Documentation



CHAIN OF CUSTODY RECORD

Page 1 of 2
 3505724 NY

Special Handling: STD
 TAT- Indicate Date Needed: _____
 All TATs subject to laboratory approval.
 Min. 24-hour notification needed for rushes.
 Samples disposed of after 60 days unless otherwise instructed.

Report To: Greg Howell Invoice To: Greg Howell
472 Mill Northlake 400
1000 Abernathy Rd. Ste 1600
Atlanta, GA 30328
 Project Mgr.: Greg Howell P.O. No.: _____ RQN: _____
 Project No.: 426 847.PP.FW.04
 Site Name: Boca Chica TFS
 Location: Key West NAS State: FL
 Sampler(s): Adrian Teal / N. Monroe
Jadine

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9= _____ 10= _____ 11= _____
 DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
 X1= _____ X2= _____ X3= _____

Containers:	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic
8260 Soil	SO	3	1		
8290, 8270 SIM, FL-PRO	GW	3	1		
8260 Water	SO	3	1		
8270	SO	3	1		
8270 SIM	GW	3	1		
FL-PRO	GW	3	1		

Lab Id:	Sample Id:	Date:	Time:	Type
-01	TFS-SD-01	4/12/12	1130	G SO
-02	TFS-SW-01		1138	G GW
-03	TFS-SD-02		1215	G SO
-04	TFS-SD-03		1305	G SO
-05	TFS-SW-02		1225	G GW
-06	TFS-SW-03		1316	G GW
-07	TFS-SD-04		1330	G SO
-08	TFS-SW-04		1405	G GW
-09	TFS-SD-FD			G SO
-10	TFS-SW-FD			G GW

Reinquinished by: Jadine
 Received by: _____
 Date: 4/12/12 Time: 1700
 EDD Format P/W vials received
 Condition upon receipt: Iced Ambient 132.1, 4.0
30.3, 1

ORIGIN ID: EYWA 7706049095x542
CH2M HILL

1000 ABERNATHY RD NE STE 1600

ATLANTA, GA 303285621
UNITED STATES US

SHIP DATE: 12APR12
ACTWGT: 66.0 LB MAN
CAD: /POS1302
DIMS: 24x14x14 IN

BILL SENDER

156297-858-2100
04/12/12 09:56:58
#598730

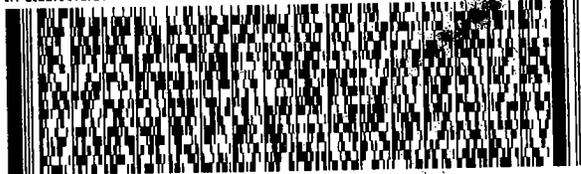
**TO SAMPLE RECEIVING
PELL
8405 BENJAMIN RD
STE A
TAMPA FL 33634**

(813) 888-9507

REF:

INU:
PO:

DEPT:



**FedEx
Express**



J12101112100125

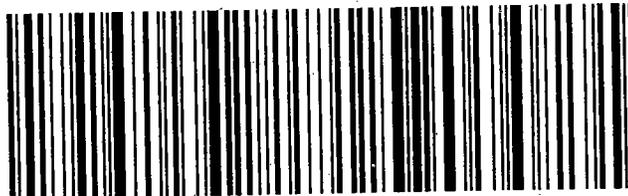
2 of 5
MPS# 7957 6275 9604
0681
Mst# 8993 7168 2510

**FRI - 13 APR A1
PRIORITY OVERNIGHT**

34 TPFA

**33634
FL-US TPA**

0200



ORIGIN ID: EYWA-7706049095x542
CH2M HILL

1000 ABERNATHY RD NE STE 1600

ATLANTA, GA 303295621
UNITED STATES US

SHIP DATE: 12APR12
ACTWGT: 66.0 LB MAN
CAD: /POS1302
DIMS: 24x14x14 IN

BILL SENDER

Part # 156297-135-9112-011212190125

TO **SAMPLE RECEIVING**
PELL
8405 BENJAMIN RD
STE A
TAMPA FL 33634

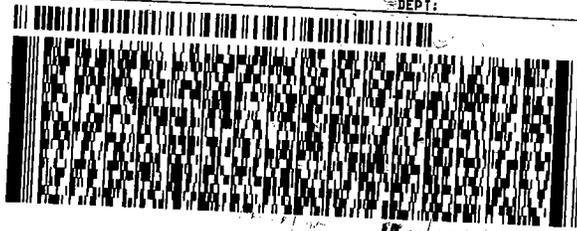
(813) 888-9507

INV:

PO:

REF:

DEPT:



FedEx
Express



1210112190125

4 of 5

MPS# 0681 **7957 6275 9626**

Mstr# 8993 7168 2510

0200

FRI - 13 APR A1
PRIORITY OVERNIGHT

34 TPFA

33634

FL-US TPA



RT 163 1 A
9626
04.13
FZ



ORIGIN ID: EYWA 7706049095x542
 CH2M HILL
 1000 ABERNATHY RD NE STE 1600
 ATLANTA, GA 303285621
 UNITED STATES US

SHIP DATE: 12APR12
 ACTWGT: 66.0 LB MAN
 CAD: /POS1302
 DIMS: 24x14x14 IN
 BILL SENDER

Part # 156297-485-111212190126

TO **SAMPLE RECEIVING**
PELL
8405 BENJAMIN RD
STE A
TAMPA FL 33634
 (813) 888-9507

REF: _____ DEPT: _____
 NU: _____ PO: _____



9615
 04.13
 A

3 of 5
 MPS# 7957 6275 9615
 0681
 Mstr# 8993 7168 2510

FRI - 13 APR A1
 PRIORITY OVERNIGHT

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33634
 FL-US TPA



3505724

ALIGN OPEN END OF FEDEX AIRBILL POUCH HERE

FedEx Express **NEW Package**
US Airbill

FedEx Tracking Number

8993 7168 2510

1 From 4/12/12
Date

Sender's Name Adrian Teal
City

Company CH2MHILL
Address

1000 Alameda Rd
Address

City Atlanta State GA ZIP 30328
Dept./Floor/Room

2 Your Internal Billing Reference 426847.PP.FW.04

3 To Recipients Name Sample Receiving Phone 813 888-9507
Company PEL

Address 4105 Benjamin Pk. City Atlanta
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address 4105 Benjamin Pk. City Atlanta
We cannot deliver to P.O. boxes or P.O. ZIP codes.

City Tomball State TX ZIP 77634
Dept./Floor/Room

Address 4105 Benjamin Pk. City Atlanta
We cannot deliver to P.O. boxes or P.O. ZIP codes.

City Tomball State TX ZIP 77634
Dept./Floor/Room



8993 7168 2510

Recipient's Copy

4 Express Package Service **1200**
NOTE: Service order has changed. Please select carefully.
* To most locations.
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day
 FedEx First Overnight
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Priority Overnight
Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Standard Overnight
Next business afternoon.
Saturday Delivery NOT available.

5 Packaging *Declared value limit \$500.
 FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options
 SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

No Signature Required
Package may be left without obtaining a signature for delivery.

Direct Signature
Someone at recipient's address may sign for delivery. Fee applies.

Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
 No Yes
As per attached Shipper's Declaration, not required.

Dry Ice
Dry Ice, 3 UN 1845
 Cargo Aircraft Only

7 Payment Bill to:
 Sender (FedEx Billing Section)
 Recipient Third Party Credit Card Cash/Check

Total Packages 1 Total Weight 3.00 lbs. \$ 00
Total Declared Value* 00 Credit Card Auth.

Obtain receipt. Acct. No. 672

Rev. Date 11/10 - Part #15335 - ©1994-2010 FedEx - PRINTED IN U.S.A. SRY

ORIGIN ID: EYWA 7706049095x542
CH2M HILL
1000 ABERNATHY RD NE STE 1600
ATLANTA, GA 303285621
UNITED STATES US

SHIP DATE: 12APR12
ACTWGT: 66.0 LB MAN
CAD: /POS1302
DIMS: 24x14x14 IN
BILL SENDER

Part # 156297-433 HIZ U/1/12/12
REF: 04/13/12 04:48:55

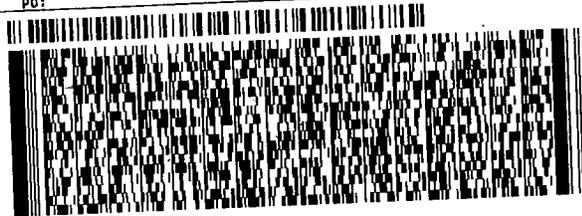
TO **SAMPLE RECEIVING**
PELL
8405 BENJAMIN RD
STE A
TAMPA FL 33634

(813) 888-9607

REF:

INV:
PO:

DEPT:



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521061211110121212

5 of 5

MPS# 7957 6275 9637
0681
Mstr# 8993 7168 2510

0200

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33634
FL-US TPA



RT
FZ
163 1
9637
04.13
A

ALIGN OPEN END OF FEDEX AIRBILL POUCH HERE

pH LOG SHEET

WO#: 3505724
 Client/Project NAS Key West

SampNumber	Method	Matrix	pH	Containers	Temp	Acid
350572402	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572402	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572405	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572405	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572406	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572406	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572408	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572408	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572410	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572410	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12

SampNumber	Method	Matrix	pH	Containers	Temp	Acid
350572413	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572413	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572414	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572414	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572415	FL-PRO	W	< 2	(2)		H2SO4 nlabus 13-Apr-12
350572415	8260	W	< 2	(3)		HCL nlabus 13-Apr-12
350572416	8260	W	< 2	(2)		HCL nlabus 13-Apr-12

3505724

SAMPLE RECEIPT CONFIRMATION SHEET

Client Information			
SDG:	3505724	Req:	91013
Client:	CH2M Hill	Project:	Boca Chica Truck Fill Stand - JP-5
Level:	4	Date Rec'd:	4/13/2012 10:20:00 AM
Rec'd via:	Fed-Ex	Due Date:	4/27/2012

Sample Verification			
Samples/Cooler Secure?	<input type="text" value="Yes"/>	All Samples on COC accounted For?	<input type="text" value="Yes"/>
Temperature of Samples(Celsius)	<input type="text" value="1.3C-4.0C"/>	All Samples Rec'd Intact?	<input type="text" value="Yes"/>
pH Verified?	<input type="text" value="Yes"/>	Sample Vol. Sufficient For Analysis	<input type="text" value="Yes"/>
pH WNL?	<input type="text" value="Yes"/>	Samples Rec'd W/ Hold Time?	<input type="text" value="Yes"/>
Soil Origin (Domestic/Foreign):	<input type="text" value="Domestic"/>	Are All Samples to be Analyzed?	<input type="text" value="Yes"/>
Site Location/Project on COC?	<input type="text" value="Yes"/>	Correct Sample Containers?	<input type="text" value="Yes"/>
Client Project # on COC?	<input type="text" value="Yes"/>	COC Comments written on COC?	<input type="text" value="Yes"/>
Project Mgr. Indicated on COC?	<input type="text" value="Yes"/>	Samplers Initials on COC?	<input type="text" value="Yes"/>
COC relinquished/Dated by Client?	<input type="text" value="Yes"/>	Sample Date/Time Indicated?	<input type="text" value="Yes"/>
COC Received/Dated by SA?	<input type="text" value="Yes"/>	TAT Requested:	<input type="text" value="STD"/>
Specific Subcontract Indicated?	<input type="text" value="No"/>	Client Requests Verbal Results?	<input type="text" value="No"/>
Samples Received By	<input type="text" value="Fed-Ex"/>	Client Requests Faxed Results?	<input type="text" value="No"/>
SA to Conduct ALL Analyses?	<input type="text" value="Yes"/>		
Radioactivity Check?	<input type="text" value="No"/>		
COC Present?	<input type="text" value="Yes"/>		

LABEL REVIEW 

PEER REVIEW 

Client: CH2M Hill

WONo: 3505724

Profile Name: NAS Key West

Profile #: 91013

MATRIX S

Sample #	Bottle	Parameter	Check	Received	Date
01	002	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:33 PM
01	003	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:34 PM
01	001	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:35 PM
01	002	8260 Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:03 PM
01	001	8260 Volatile Organic Compounds	Consumed	Viviane Wenzel	4/24/2012 1:07:15 PM
01	004	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:45:42 PM
01	004	8270 GCMS semivolatitle	Out	Tammy Reuter	4/16/2012 2:05:55 PM
01	004	8270 GCMS semivolatitle	In	Tammy Reuter	4/16/2012 7:06:28 PM
01	004	8270_SIM GCMS semivolatitle SIM	In	Nicole Labus	4/13/2012 3:45:41 PM
01	004	8270_SIM GCMS semivolatitle SIM	Out	Tammy Reuter	4/16/2012 2:05:58 PM
01	004	8270_SIM GCMS semivolatitle SIM	In	Tammy Reuter	4/16/2012 7:06:28 PM
01	004	Dry Weight Dry Weight	In	Nicole Labus	4/13/2012 3:45:43 PM
01	004	Dry Weight Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:38 AM
01	004	Dry Weight Dry Weight	In	Ryan Bennett	4/18/2012 4:20:18 PM
01	004	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:45:43 PM
01	004	FL-PRO Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:00 PM
01	004	FL-PRO Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:29 PM
03	001	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:36 PM
03	002	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:36 PM
03	003	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:36 PM
03	002	8260 Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:06 PM
03	003	8260 Volatile Organic Compounds	Consumed	Viviane Wenzel	4/24/2012 1:07:19 PM
03	004	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:45:45 PM
03	004	8270 GCMS semivolatitle	Out	Tammy Reuter	4/16/2012 2:06:04 PM
03	004	8270 GCMS semivolatitle	In	Tammy Reuter	4/16/2012 7:06:33 PM

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03	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/30/2012 10:49:34 AM
03	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/30/2012 7:29:58 PM
03	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:45:45 PM
03	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:04 PM
03	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:33 PM
03	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:45:45 PM
03	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:28 AM
03	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:08 PM
03	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:45:45 PM
03	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:04 PM
03	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:33 PM
04	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:37 PM
04	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:37 PM
04	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:38 PM
04	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:10 PM
04	003	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/24/2012 1:07:22 PM
04	004	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:45:47 PM
04	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/16/2012 2:06:08 PM
04	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/16/2012 7:06:37 PM
04	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:45:47 PM
04	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:08 PM
04	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:37 PM
04	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:45:47 PM
04	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:16 AM
04	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:22 PM
04	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:45:47 PM
04	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:08 PM
04	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:37 PM

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07	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:38 PM
07	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:38 PM
07	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:39 PM
07	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:14 PM
07	001	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/24/2012 1:07:25 PM
07	004	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:45:59 PM
07	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/16/2012 2:06:13 PM
07	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/16/2012 7:06:40 PM
07	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/30/2012 10:49:57 AM
07	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/30/2012 7:29:45 PM
07	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:45:59 PM
07	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:13 PM
07	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:40 PM
07	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:45:59 PM
07	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:05 AM
07	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:25 PM
07	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:45:59 PM
07	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:13 PM
07	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:40 PM
09	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:39 PM
09	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:40 PM
09	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:40 PM
09	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:17 PM
09	003	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/24/2012 1:07:28 PM
09	004	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:46:01 PM
09	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/16/2012 2:06:09 PM
09	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/16/2012 7:06:42 PM
09	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/30/2012 10:49:40 AM
09	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/30/2012 7:29:39 PM

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09	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:46:01 PM
09	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:09 PM
09	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:42 PM
09	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:46:01 PM
09	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:20 AM
09	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:40 PM
09	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:46:01 PM
09	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:09 PM
09	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:42 PM
11	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:41 PM
11	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:41 PM
11	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:21 PM
11	003	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/23/2012 2:40:19 PM
11	004	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:46:00 PM
11	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/16/2012 2:06:14 PM
11	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/16/2012 7:06:47 PM
11	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/30/2012 10:49:44 AM
11	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/30/2012 7:29:37 PM
11	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:46:00 PM
11	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:14 PM
11	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:47 PM
11	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:46:00 PM
11	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:33 AM
11	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:34 PM
11	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:46:00 PM
11	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:14 PM
11	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:47 PM
12	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:42 PM

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12	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:42 PM
12	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:46:43 PM
12	001	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/18/2012 12:53:25 PM
12	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	4/23/2012 2:40:23 PM
12	004	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:46:03 PM
12	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/16/2012 2:06:11 PM
12	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/16/2012 7:06:44 PM
12	004	8270	GCMS semivolatiles	Out	Tammy Reuter	4/30/2012 10:49:42 AM
12	004	8270	GCMS semivolatiles	In	Tammy Reuter	4/30/2012 7:29:34 PM
12	004	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:46:03 PM
12	004	8270_SIM	GCMS semivolatiles SIM	Out	Tammy Reuter	4/16/2012 2:06:11 PM
12	004	8270_SIM	GCMS semivolatiles SIM	In	Tammy Reuter	4/16/2012 7:06:44 PM
12	004	Dry Weight	Dry Weight	In	Nicole Labus	4/13/2012 3:46:03 PM
12	004	Dry Weight	Dry Weight	Out	Ryan Bennett	4/18/2012 9:29:23 AM
12	004	Dry Weight	Dry Weight	In	Ryan Bennett	4/18/2012 4:20:31 PM
12	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:46:03 PM
12	004	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/16/2012 2:06:11 PM
12	004	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/16/2012 7:06:44 PM

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MATRIX W

Sample #	Bottle	Parameter	Check	Received	Date
02	002	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:22 PM
02	003	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:24 PM
02	001	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:24 PM
02	001	8260 Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:20 AM
02	007	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:49:47 PM
02	006	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:49:48 PM
02	006	8270 GCMS semivolatitle	Consumed	Duffie Young	4/19/2012 11:35:34 AM
02	009	8270 GCMS semivolatitle	Consumed	Ryan Bennett	4/30/2012 11:31:13 AM
02	009	8270_SIM GCMS semivolatitle SIM	In	Nicole Labus	4/13/2012 3:50:20 PM
02	008	8270_SIM GCMS semivolatitle SIM	In	Nicole Labus	4/13/2012 3:50:22 PM
02	008	8270_SIM GCMS semivolatitle SIM	Consumed	Duffie Young	4/19/2012 11:37:52 AM
02	005	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:34 PM
02	004	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:36 PM
02	004	FL-PRO Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:16 AM
05	001	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:25 PM
05	002	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:26 PM
05	003	8260 Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:27 PM
05	003	8260 Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:24 AM
05	007	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:49:49 PM
05	006	8270 GCMS semivolatitle	In	Nicole Labus	4/13/2012 3:49:49 PM
05	006	8270 GCMS semivolatitle	Consumed	Duffie Young	4/19/2012 11:35:45 AM
05	007	8270 GCMS semivolatitle	Consumed	Ryan Bennett	4/30/2012 11:31:18 AM
05	008	8270_SIM GCMS semivolatitle SIM	In	Nicole Labus	4/13/2012 3:50:22 PM
05	009	8270_SIM GCMS semivolatitle SIM	Consumed	Duffie Young	4/19/2012 11:37:57 AM
05	004	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:36 PM
05	005	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:37 PM

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05	004	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:12 AM
06	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:28 PM
06	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:28 PM
06	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:29 PM
06	003	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:28 AM
06	006	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:50 PM
06	007	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:50 PM
06	006	8270	GCMS semivolatiles	Consumed	Duffie Young	4/19/2012 11:35:51 AM
06	007	8270	GCMS semivolatiles	Consumed	Ryan Bennett	4/30/2012 11:31:22 AM
06	008	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:24 PM
06	009	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:24 PM
06	009	8270_SIM	GCMS semivolatiles SIM	Consumed	Duffie Young	4/19/2012 11:38:00 AM
06	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:37 PM
06	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:38 PM
06	005	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:29 AM
08	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:29 PM
08	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:30 PM
08	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:30 PM
08	002	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:33 AM
08	007	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:50 PM
08	006	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:51 PM
08	006	8270	GCMS semivolatiles	Consumed	Duffie Young	4/19/2012 11:35:53 AM
08	007	8270	GCMS semivolatiles	Consumed	Ryan Bennett	4/30/2012 11:31:29 AM
08	009	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:24 PM
08	008	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:25 PM
08	008	8270_SIM	GCMS semivolatiles SIM	Consumed	Duffie Young	4/19/2012 11:38:03 AM
08	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:38 PM
08	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:38 PM

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08	005	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:22 AM
10	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:31 PM
10	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:31 PM
10	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:32 PM
10	001	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:37 AM
10	007	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:51 PM
10	006	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:52 PM
10	007	8270	GCMS semivolatiles	Consumed	Duffie Young	4/19/2012 11:35:57 AM
10	004	8270	GCMS semivolatiles	Consumed	Ryan Bennett	4/30/2012 11:43:22 AM
10	009	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:25 PM
10	008	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:26 PM
10	006	8270_SIM	GCMS semivolatiles SIM	Consumed	Duffie Young	4/19/2012 11:38:06 AM
10	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:39 PM
10	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:39 PM
10	005	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:33 AM
13	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:32 PM
13	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:33 PM
13	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:34 PM
13	002	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:07:29 AM
13	007	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:49:53 PM
13	006	8270	GCMS semivolatiles	In	Nicole Labus	4/13/2012 3:50:07 PM
13	007	8270	GCMS semivolatiles	Consumed	Duffie Young	4/19/2012 11:36:00 AM
13	006	8270	GCMS semivolatiles	Consumed	Ryan Bennett	4/30/2012 11:31:30 AM
13	008	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:26 PM
13	009	8270_SIM	GCMS semivolatiles SIM	In	Nicole Labus	4/13/2012 3:50:26 PM
13	008	8270_SIM	GCMS semivolatiles SIM	Consumed	Duffie Young	4/19/2012 11:38:10 AM
13	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:40 PM
13	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:40 PM

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13	005	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:25 AM
14	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:34 PM
14	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:35 PM
14	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:36 PM
14	003	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:07:32 AM
14	006	8270	GCMS semivolatile	In	Nicole Labus	4/13/2012 3:50:11 PM
14	007	8270	GCMS semivolatile	In	Nicole Labus	4/13/2012 3:50:11 PM
14	006	8270	GCMS semivolatile	Consumed	Duffie Young	4/19/2012 11:36:04 AM
14	007	8270	GCMS semivolatile	Consumed	Ryan Bennett	4/30/2012 11:31:37 AM
14	008	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/13/2012 3:50:27 PM
14	009	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/13/2012 3:50:27 PM
14	009	8270_SIM	GCMS semivolatile SIM	Consumed	Duffie Young	4/19/2012 11:38:15 AM
14	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:41 PM
14	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:41 PM
14	005	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:19 AM
15	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:36 PM
15	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:37 PM
15	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:37 PM
15	002	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:42 AM
15	007	8270	GCMS semivolatile	In	Nicole Labus	4/13/2012 3:50:12 PM
15	006	8270	GCMS semivolatile	In	Nicole Labus	4/13/2012 3:50:13 PM
15	007	8270	GCMS semivolatile	Consumed	Duffie Young	4/19/2012 11:36:07 AM
15	006	8270	GCMS semivolatile	Consumed	Ryan Bennett	4/30/2012 11:31:38 AM
15	008	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/13/2012 3:50:28 PM
15	009	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/13/2012 3:50:28 PM
15	008	8270_SIM	GCMS semivolatile SIM	Consumed	Duffie Young	4/19/2012 11:38:18 AM
15	005	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:42 PM
15	004	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/13/2012 3:50:43 PM

WONo: 3505724

Profile Name: NAS Key West

Profile #: 91013

15	004	FL-PRO	Petroleum Hydrocarbons	Consumed	Duffie Young	4/17/2012 11:50:31 AM
16	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:38 PM
16	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/13/2012 3:49:38 PM
16	001	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	4/25/2012 11:10:46 AM

Addendum

Letter of Acceptance

Customer Name: CH2M Hill
Date and Time Received: 4/13/2012 10:20:00 AM
Date to be Reported: 5/11/2012
Laboratory Submission Number/SDG: 3505724

Project: Boca Chica TFS / 426847.PP.FW.04

Samples: The submission consisted of 16 samples, including QC, with sample identification shown in the attached data tables.

Tests: The Samples will be analyzed for EPA methods: 8260, 8270, 8270_SIM, FL-PRO.

Sample Custody/COC discrepancies:

None.

Notes:

Temp 1.3C, 2.1C, 4.0C, 3.0C, 3.1C
P/w vials received
pH<2 8260, FLPRO

Distribution of Report to:

CH2M Hill
Attn: Greg Rowell

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. Spectrum Analytical letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar materials.

Log-in Report

Level: 4

Total of: 68 analyses on 16 samples (including QC)

17-Apr-12

Report/SDG #: 3505724

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-01	350572401		S	4/12/2012 11:30:00 AM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SW-01	350572402		W	4/12/2012 11:38:00 AM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-02	350572403		S	4/12/2012 12:15:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Report/SDG #: 3505724

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-03	350572404		S	4/12/2012 1:05:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SW-02	350572405		W	4/12/2012 12:25:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SW-03	350572406		W	4/12/2012 1:16:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-04	350572407		S	4/12/2012 1:38:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Report/SDG #: 3505724

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SW-04	350572408		W	4/12/2012 2:05:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-FD	350572409		S	4/12/2012	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SW-FD	350572410		W	4/12/2012	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-04 MS	350572411		S	4/12/2012 1:38:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Report/SDG #: 3505724

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-04 MSD	350572412		S	4/12/2012 1:38:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-03 MS	350572413		W	4/12/2012 1:16:00 AM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-03 MSD	350572414		W	4/12/2012 1:16:00 AM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-SD-EB	350572415		W	4/12/2012 3:30:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Report/SDG #: 3505724

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-TB01	350572416		W	4/12/2012 3:40:00 PM	4/13/2012 10:20:00 AM

Method

8260	Volatile Organic Compounds	8260
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Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Thursday, April 26, 2012 12:44 PM
To: Bethany.Garvey@CH2M.com; 'Camden.Robinson@CH2M.com'
Subject: FW: 3505724-8260-NAS

Good afternoon.

This will be in the case narrative for the referenced method and SDG.

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Soil samples were prepared by SW846/5035 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Soil samples were prepared by SW846/5035 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met. The low calibration standard is 0.005 mg/Kg for the following analyte(s): 1, 2, 3-Trichloropropane.

The ICAL on batch M2032312 did not meet the 15 %RSD for the following analytes: Acetone (21.7%), 2_Butanone (18.4%) and 2-Hexanone (19.8%).

The ICAL on batch M6041612 did not meet the 15%RSD for the following analytes: cis-1, 3-Dichloropropene (17.3%), trans-1, 3-Dichloropropene (15.4%) and Ethyl methacrylate (22.4%).

The CCV analyzed in batch M2042412 did not meet the 20 %D criteria for the following analytes: Dichlorodifluoromethane (27%), Ethyl methacrylate (20.6%), Isobutyl alcohol (28.8%), Methyl methacrylate (22.1%) and Propionitrile (24.5%)

The CCV analyzed in batch M6042512 did not meet the 20 %D criteria for the following analyte: 1, 4-Dichloro-2-butene (24.7%)

The average response factor criteria was met and analysis proceeded to meet holding times and requested turn around time.

B. Blanks:

All acceptance criteria were met .Please note that:

Blank 042512BLK62 was analyzed with the water samples on 04/25/12. The following analyte(s) were detected below RL: Acetone at 2.6 ug/L. No further action was taken, since hit detected was below the RL.

Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met .Please note that:

Sample TFS-SD-01 was recovered above criteria for the following surrogate(s): 4-Bromofluorobenzene at 122 % with criteria of (85-120). Sample was reanalyzed.

Sample TFS-SD-01RE2 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 68 % with criteria of (85-120), Toluene-d8 at 84 % with criteria of (85-115). Sample was reanalyzed, reporting both runs.

Sample TFS-SD-02 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 42 % with criteria of (85-120), Toluene-d8 at 70 % with criteria of (85-115). Sample was reanalyzed.

Sample TFS-SD-02RE1 was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 78 % with criteria of (85-120). Sample was reanalyzed, reporting both runs.

Sample TFS-SD-04 MSD was recovered below criteria for the following surrogate(s): 4-Bromofluorobenzene at 54 % with criteria of (85-120), Toluene-d8 at 70 % with criteria of (85-115). Sample was reanalyzed, obtaining similar results, only one run was reported.

Samples coded accordingly.

D. Spikes:**1. Laboratory Control Spikes (LCS)**

All acceptance criteria were met .Please note that:

LCS 042312LCS21D was analyzed with the soil samples on 04/23/12. The following

analyte(s) were recovered above criteria: 1, 4-Dichloro-2-butene at 117 % with criteria of (68-115), Ethyl methacrylate at 122 % with criteria of (73-121), Isobutyl alcohol at 138 % with criteria of (70-130), Propionitrile at 135 % with criteria of (70-130). No further action was taken, since LCS21042312 sample met criteria.

LCS 042412LCS21 was analyzed with the soil samples on 04/24/12. The following analyte(s) were recovered above criteria: Vinyl chloride at 134 % with criteria of (60-125). No further action was taken, since LCSD21042412 sample met criteria.

LCS 042412LCS21D was analyzed with the soil samples on 04/24/12. All criteria were met. The following analyte(s) exceeded RPD criteria: Chloroethane at 36.4 % with criteria of (30), Dichlorodifluoromethane at 34.6 % with criteria of (30), and Trichlorofluoromethane at 31.7 % with criteria of (30). No further action was taken, since percent recovery criteria were met.

LCS 042512LCS61 was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 70 % with criteria of (75-152). No further action was taken, since LCSD621 042512 sample met criteria.

LCS 042512LCS61D was analyzed with the water samples on 04/25/12. All criteria were met. The following analyte(s) exceeded RPD criteria: 1,4-Dioxane at 22.2 % with criteria of (20), Methyl iodide at 33.3 % with criteria of (20). No further action was taken, since percent recovery criteria were met.

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-SD-04 MS was analyzed with the soil samples on 04/24/12. The following analyte(s) were recovered below criteria: 1,1,1,2-Tetrachloroethane at 70.5 % with criteria of (75-125), Acrolein at 0 % with criteria of (31-148), Chlorobenzene at 69 % with criteria of (75-125), Ethyl methacrylate at 69 % with criteria of (73-121), Ethylbenzene at 65.1 % with criteria of (75-125), Styrene at 59.3 % with criteria of (75-125), Vinyl acetate at 67.4 % with criteria of (77-150), Xylene (total) at 66 % with criteria of (82-124).

MS - TFS-SW-03 MS was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 68.5 % with criteria of (75-152).

SD - TFS-SW-03 MSD was analyzed with the water samples on 04/25/12. The following analyte(s) were recovered below criteria: Methyl iodide at 51.5 % with criteria of (75-152). The following analyte(s) exceeded RPD criteria: Methyl iodide at 28.3 % with criteria of (20).

Samples were reanalyzed with similar results.

Samples coded accordingly.

E. Internal Standards:

All acceptance criteria were met. Please note that:

TFS-SD-01 did not meet criteria for the following internal standard(s): 1, 4-Dichlorobenzene-d4

TFS-SD-01RE1 did not meet criteria for the following internal standard(s): 1,4-Dichlorobenzene-d4 .

Sample was reanalyzed with similar results. Reporting both runs.

Samples coded accordingly.

F. Samples:

Sample analysis proceeded normally.

Analytes were detected in Equipment Blank TFS-SD-EB. The following analyte(s) were detected below RL: Acetone at 1.8 ug/L, Toluene at 0.39 ug/L.

Analytes were detected in Trip Blank TFS-TB01. The following analyte(s) were detected below RL: Acetone at 2.2 ug/L, Carbon disulfide at 0.27 ug/L. Client specified reporting limits were used.

Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Friday, April 27, 2012 7:33 PM
To: Bethany.Garvey@CH2M.com; Camden.Robinson@CH2M.com
Subject: FW: 3505724-8270SIM-NAS Key West

Good afternoon.

This will be in the case narrative for the referenced method and SDG.

A. Blanks:

All acceptance criteria were met with the exception of:

Blank 126839MB was analyzed with the soil samples extracted on 04/23/12. The following analytes were detected below RL: 2-Methylnaphthalene at 0.0014 mg/Kg, Naphthalene at 0.0016 mg/Kg. Since these compounds were detected below the RL, no further action was taken.

Samples coded accordingly.

B. Surrogates:

All acceptance criteria were met with the exception of:

Sample 125753MB was recovered above criteria for the following surrogate: 2-Fluorobiphenyl at 160 % with criteria of (43-145). No further action was taken, since all target analytes were ND.

Sample 125754LCS was recovered above criteria for the following surrogate: 2-Fluorobiphenyl at 171 % with criteria of (43-145). No further action was taken, since all LCS criteria were met.

Sample TFS-SD-02 was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 42.2 % with criteria of (43-145), p-Terphenyl-d14 at 37.8 % with criteria of (43-145). The sample was re-extracted and re-analyzed with similar surrogate failures. Only the original analysis is reported.

Sample TFS-SD-03 was recovered below criteria for the following surrogate: p-Terphenyl-d14 at 30.3 % with criteria of (43-145). The sample was re-extracted and re-analyzed and also failed surrogate criteria. Only the original analysis is reported.

Samples coded accordingly.

C. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed for water and soil samples.

It should be noted that there were analytical differences between the parent, MS and MSD in the soil samples. These were confirmed upon re-extraction. Only the original extraction of the parent, MS and MSD are reported, however the MSD required re-analysis at a 2X dilution. The full MSD run had several compounds over calibration range and is not reported. These results are not uncommon in soil samples, where there can be an uneven pattern of soil contamination.

All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-SD-04 MS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Methylnaphthalene at 0 % with criteria of (71-132), 2-Methylnaphthalene at 0 % with criteria of (54-145), Acenaphthylene at 22.8 % with criteria of (54-115), Naphthalene at 0 % with criteria of (59-111) and the following analytes were recovered above criteria: Benzo(a)anthracene at 442 % with criteria of (53-119), Benzo(a)pyrene at 500 % with criteria of (20-120), Benzo(b)fluoranthene at 639 % with criteria of (50-171), Benzo(g,h,i)perylene at 222 % with criteria of (50-150), Benzo(k)fluoranthene at 222 % with criteria of (32-158), Chrysene at 325 % with criteria of (34-140), Dibenzo(a,h)anthracene at 117 % with criteria of (41-114), Fluoranthene at 750 % with criteria of (55-132), Indeno(1,2,3-cd)pyrene at 244 % with criteria of (19-122), Phenanthrene at 414 % with criteria of (54-112), Pyrene at 517 % with criteria of (55-123).

SD - TFS-SD-04 MSD was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Methylnaphthalene at 40.5 % with criteria of (71-132), 2-Methylnaphthalene at 0 % with criteria of (54-145), Acenaphthylene at 0 % with criteria of (54-115) and the following analytes were recovered above criteria: Acenaphthene at 249 % with criteria of (57-119), Anthracene at 337 % with criteria of (40-138), Benzo(a)anthracene at 5240 % with criteria of (53-119), Benzo(a)pyrene at 5676 % with criteria of (20-120), Benzo(b)fluoranthene at 7405 % with criteria of (50-171), Benzo(g,h,i)perylene at 2405 % with criteria of (50-150), Benzo(k)fluoranthene at 2297 % with criteria of (32-158), Chrysene at 3343 % with criteria of (34-140), Dibenzo(a,h)anthracene at 811 % with criteria of (41-114), Fluoranthene at 4838 % with criteria of (55-132), Fluorene at 151 % with criteria of (59-118), Indeno(1,2,3-cd)pyrene at 2238 % with criteria of (19-122), Naphthalene at 189 % with criteria of (59-111), Phenanthrene at 1132 % with criteria of (54-112), Pyrene at 3854 % with criteria of (55-123). The following analytes exceeded RPD criteria: 1-Methylnaphthalene at 79.2 % with criteria of (30), 2-Methylnaphthalene at 76.1 % with criteria of (30), Acenaphthene at 109.2 % with criteria of (30), Acenaphthylene at 200 % with criteria of (30), Anthracene at 93.8 % with criteria of (30), Benzo(a)anthracene at 160.4 % with criteria of (30), Benzo(a)pyrene at 154.8 % with criteria of (30), Benzo(b)fluoranthene at 152.6 % with criteria of (30), Benzo(g,h,i)perylene at 138.5 % with criteria of (30), Benzo(k)fluoranthene at 152.5 % with criteria of (30), Chrysene at 151.4 % with criteria of (30), Dibenzo(a,h)anthracene at 135.1 % with criteria of (30), Fluoranthene at 133.3 % with criteria of (30), Fluorene at 69.9 % with criteria of (30), Indeno(1,2,3-cd)pyrene at 137 % with criteria of (30), Naphthalene at 136.1 % with criteria of (30), Phenanthrene at 85.7 % with criteria of (30), Pyrene at 140.9 % with criteria of (30).

MS - TFS-SW-03 MS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: Benzo(b)fluoranthene at 52.9 % with criteria of (56-173), Benzo(k)fluoranthene at 52.5 % with criteria of (56-158), Chrysene at 45.1 % with criteria of (55-128).

SD - TFS-SW-03 MSD was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: Benzo(b)fluoranthene at 21.6 % with criteria of (56-173), Benzo(k)fluoranthene at 48.6 % with criteria of (56-158), Chrysene at 35.3 % with criteria of (55-128), Fluoranthene at 43.1 % with criteria of (55-155).

Samples coded accordingly.

Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Monday, May 07, 2012 7:54 PM
To: 'Greg.Rowell@CH2M.com'
Cc: Bethany.Garvey@CH2M.com; Camden.Robinson@CH2M.com
Subject: FW: 3505724-8270-NAS Key West
Importance: High

Good afternoon.

This will be in the case narrative for the referenced method and SDG.

I. HOLDING TIMES

A. Sample Preparation: The following samples were re-prepped out of hold: TFS-SD-01RE1, TFS-SD-02RE1, TFS-SD-03RE1, TFS-SD-04 MSDRE1, TFS-SD-04 MSRE1, TFS-SD-04RE1, TFS-SD-EBRE1, TFS-SD-FDRE1, TFS-SW-01RE1, TFS-SW-02RE1, TFS-SW-03 MSDRE1, TFS-SW-03 MSRE1, TFS-SW-03RE1, TFS-SW-04RE1, TFS-SW-FDRE1. All samples were originally extracted within hold, but were re-extracted due to LCS failures. Both the original and re-extracted samples are reported.

B. Sample Analysis: All holding times were met.

II. METHODS

EPA SW846 8270D

III. PREPARATION

Soil samples were prepared by SW846 EPA 3545 for 8270 semi-volatile analysis.
 Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

IV. ANALYSIS**A. Calibration:**

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyriline (+1425%), 1,3,5-Trinitrobenzene (-43.6%). These failures were a result of a discrepancy between the primary and secondary standards. No further action was taken, since these compounds were not detected in any samples. The secondary standard is also used to spike the LCS and MS/MSD. Because of this difference, Methapyriline exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since Methapyriline was recovered on the high side and was not detected in any samples.

CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepone (-37.4%). This compound has been historically a poor performer. No further action was taken, since this compound was not

detected in any samples.

A. Blanks:

All acceptance criteria were met with the exception of:

Blank 126265MB was analyzed with the water samples extracted on 04/19/12. The following analyte was detected below RL: Di-n-butylphthalate at 0.98 ug/L. The following analyte was detected above RL: Bis (2-ethylhexyl)phthalate at 14 ug/L. No further action was taken, since these compounds were not detected in the associated samples.

Samples coded accordingly.

B. Surrogates:

All acceptance criteria were met with the exception of:

Sample TFS-SD-01 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 44.7 % with criteria of (45-105). The sample was re-extracted (TFS-SD-01RE1) and was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 17.4 % with criteria of (45-105), 2-Fluorophenol at 16.7 % with criteria of (35-105), Nitrobenzene-d5 at 20.5 % with criteria of (35-100), Phenol-d5 at 21.8 % with criteria of (40-100).

Sample TFS-SD-02 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 16.6 % with criteria of (45-105). The sample was re-extracted (TFS-SD-02RE1) and was recovered below criteria for the following surrogates: 2-Fluorobiphenyl at 14.3 % with criteria of (45-105), Nitrobenzene-d5 at 34.8 % with criteria of (35-100), Phenol-d5 at 38.5 % with criteria of (40-100).

Sample TFS-SD-03 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 35.3 % with criteria of (45-105). The sample was re-extracted (TFS-SD-03RE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 20.6 % with criteria of (45-105).

Sample TFS-SD-04 was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 33.3 % with criteria of (45-105). The sample was re-extracted (TFS-SD-04RE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 40.5 % with criteria of (45-105).

Sample TFS-SD-04 MSD was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 37.8 % with criteria of (45-105).

Sample TFS-SD-FD was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 27.4 % with criteria of (45-105). The sample was re-extracted (TFS-SD-FDRE1) and was recovered below criteria for the following surrogate: 2-Fluorobiphenyl at 29.4 % with criteria of (45-105).

Sample TFS-SW-01 was recovered below criteria for the following surrogates: 2,4,6-Tribromophenol at 31.3 % with criteria of (40-125), 2-Fluorophenol at 14.8 % with criteria of (20-110).

Sample TFS-SW-FD was recovered below criteria for the following surrogates: 2,4,6-Tribromophenol at 38.7 % with criteria of (40-125), 2-Fluorobiphenyl at 34.3 % with criteria of (50-110), Nitrobenzene-d5 at 35.9 % with criteria of (40-110), p-Terphenyl-d14 at 42.2 % with criteria of (50-135).

All the above samples contained low levels of late eluting, non-target compounds that may have interfered with surrogate recovery, especially 2-Fluorobiphenyl. Since all the samples were re-extracted, no further action was taken.

Samples coded accordingly.

C. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:

LCS 125744LCS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 1-Naphthylamine at 65 % with criteria of (70-130), 4-Nitroquinoline-1-oxide at 65 % with criteria of (70-130), Dinoseb at 65 % with criteria of (70-130), Methylmethanesulfonate at 60 % with criteria of (70-130), N-Nitrosodiethylamine at 65 % with criteria of (70-130), N-Nitrosomethylethylamine at 60 % with criteria of (70-130), o-Toluidine at 65 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 1,3,5-Trinitrobenzene at 42 % with criteria of (60-140), 1,4-Naphthoquinone at 5.5 % with criteria of (60-140), 2-Picoline at 55 % with criteria of (60-140), a,a-Dimethylphenethylamine at 31.5 % with criteria of (60-140), Hexachloropropene at 55 % with criteria of (60-140), Kepone at 55 % with criteria of (60-140), Methapyriline at 0 % with criteria of (60-140).

LCS 126266LCS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered above criteria: 1-Naphthylamine at 96.5 % with criteria of (38-91), 4-Aminobiphenyl at 105 % with criteria of (49-103), Pentachloronitrobenzene (PCNB) at 105 % with criteria of (60-104), Safrole at 101 % with criteria of (52-100). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 0 % with criteria of (8.83-162.2), a,a-Dimethylphenethylamine at 53.8 % with criteria of (60-140), Methapyriline at 1275 % with criteria of (0-105).

LCS 128107LCS was analyzed with the water samples extracted on 04/30/12. The following analyte was recovered above criteria: 4-Aminobiphenyl at 105 % with criteria of (49-103). The following analytes had marginal exceedance limit failures: 1-Naphthylamine at 104 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Methapyriline at 320 % with criteria of (0-105).

LCS 128131LCS was analyzed with the soil samples extracted on 04/30/12. The following analytes were recovered below criteria: 1,2,4,5-Tetrachlorobenzene at 60 % with criteria of (70-130), 1,4-Naphthoquinone at 60 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 60 % with criteria of (70-130), 2,6-Dichlorophenol at 65 % with criteria of (70-130), 2-Naphthylamine at 65 % with criteria of (70-130), 4-Aminobiphenyl at 65 % with criteria of (70-130), 5-Nitro-o-toluidine at 60 % with criteria of (70-130), Acetophenone at 66.7 % with criteria of (70-130), Diallylate (Avadex) at 60 % with criteria of (70-130), Ethyl methanesulfonate at 65 % with criteria of (70-130), Isosafrole at 60 % with criteria of (70-130), Methylmethanesulfonate at 60 % with criteria of (70-130), N-Nitrosopyrrolidine at 60 % with criteria of (70-130), p-Dimethylaminoazobenzene at 60 % with criteria of (70-130), Pentachlorobenzene at 65 % with criteria of (70-130), Phenacetin at 60 % with criteria of (70-130), p-Phenylenediamine at 65 % with criteria of (70-130), Pronamide at 65 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 0,0,0-Triethylphosphorothioate at 55 % with criteria of (60-140), 1,3,5-Trinitrobenzene at 39.5 % with criteria of (60-140), 1-Naphthylamine at 33.5 % with criteria of (60-140), 2-Acetylaminofluorene at 50 % with criteria of (60-140), 2-Picoline at 44 % with criteria of (60-140), 4-Nitroquinoline-1-oxide at 44.5 % with criteria of (60-140), a,a-Dimethylphenethylamine at 34 % with criteria of (60-140), Aramite at 55 % with criteria of (60-140), Chlorobenzilate at 55 % with criteria of (60-140), Hexachloropropene at 55 % with criteria of (60-140), Kepone at 6.5 % with criteria of (60-140), Methapyriline at 0 % with criteria of (60-140), N-Nitrosodibutylamine at 55 % with criteria of (60-140), N-Nitrosodiethylamine at 50 % with criteria of (60-140), N-Nitrosomethylethylamine at 50 % with criteria of (60-140), N-Nitrosopiperidine at 55 % with criteria of (60-140), o-Toluidine at 49.5 % with criteria of (60-140).

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

Client requested MS/SD sets were analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-SD-04 MS was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 48.3 %

with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 48.3 % with criteria of (70-130), 1,3,5-Trinitrobenzene at 27.2 % with criteria of (70-130), 1,3-Dinitrobenzene at 62.1 % with criteria of (70-130), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 58.6 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 48.3 % with criteria of (70-130), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,6-Dichlorophenol at 58.6 % with criteria of (70-130), 2-Acetylaminofluorene at 48.3 % with criteria of (70-130), 2-Naphthylamine at 41.4 % with criteria of (70-130), 2-Picoline at 48.3 % with criteria of (70-130), 3-Methylcholanthrene at 41.4 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 23.1 % with criteria of (30-135), 4-Aminobiphenyl at 51.7 % with criteria of (70-130), 4-Nitroquinoline-1-oxide at 25.2 % with criteria of (70-130), 5-Nitro-o-toluidine at 48.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 44.8 % with criteria of (56-122), a,a-Dimethylphenethylamine at 41.4 % with criteria of (70-130), Acetophenone at 60.3 % with criteria of (70-130), Aramite at 41.4 % with criteria of (70-130), Chlorobenzilate at 41.4 % with criteria of (70-130), Diallate (Avadex) at 44.8 % with criteria of (70-130), Di-n-butylphthalate at 48.3 % with criteria of (55-110), Dinoseb at 55.2 % with criteria of (70-130), Ethyl methanesulfonate at 58.6 % with criteria of (70-130), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 19.3 % with criteria of (70-130), Isodrin at 44.8 % with criteria of (70-130), Isosafrole at 55.2 % with criteria of (70-130), Kepone at 25.2 % with criteria of (70-130), Methylmethanesulfonate at 37.9 % with criteria of (70-130), N-Nitrosodibutylamine at 62.1 % with criteria of (70-130), N-Nitrosodiethylamine at 51.7 % with criteria of (70-130), N-Nitrosomethylethylamine at 51.7 % with criteria of (70-130), N-Nitrosomorpholine at 62.1 % with criteria of (70-130), N-Nitrosopiperidine at 58.6 % with criteria of (70-130), N-Nitrosopyrrolidine at 55.2 % with criteria of (70-130), o-Toluidine at 44.8 % with criteria of (70-130), p-Dimethylaminoazobenzene at 44.8 % with criteria of (70-130), Pentachlorobenzene at 48.3 % with criteria of (70-130), Pentachloronitrobenzene(PCNB) at 55.2 % with criteria of (70-130), Phenacetin at 58.6 % with criteria of (70-130), p-Phenylenediamine at 62.1 % with criteria of (70-130), Pronamide at 55.2 % with criteria of (70-130), Safrole at 58.6 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 731 % with criteria of (70-130).

SD - TFS-SD-04 MSD was analyzed with the soil samples extracted on 04/17/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 33.3 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 40 % with criteria of (70-130), 1,2,4-Trichlorobenzene at 36.7 % with criteria of (45-110), 1,2-Dichlorobenzene at 36.7 % with criteria of (45-95), 1,3,5-Trinitrobenzene at 22.7 % with criteria of (70-130), 1,3-Dichlorobenzene at 33 % with criteria of (40-100), 1,3-Dinitrobenzene at 50 % with criteria of (70-130), 1,4-Dichlorobenzene at 33.3 % with criteria of (35-105), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 46.7 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 36.7 % with criteria of (70-130), 2,4,5-Trichlorophenol at 40 % with criteria of (50-110), 2,4,6-Trichlorophenol at 40 % with criteria of (45-110), 2,4-Dichlorophenol at 40 % with criteria of (45-110), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,4-Dinitrotoluene at 40 % with criteria of (50-115), 2,6-Dichlorophenol at 46.7 % with criteria of (70-130), 2,6-Dinitrotoluene at 40 % with criteria of (50-110), 2-Acetylaminofluorene at 36.7 % with criteria of (70-130), 2-Chloronaphthalene at 40 % with criteria of (45-105), 2-Chlorophenol at 40 % with criteria of (45-105), 2-Naphthylamine at 30.7 % with criteria of (70-130), 2-Picoline at 36.7 % with criteria of (70-130), 3-Methylcholanthrene at 36.7 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 16 % with criteria of (30-135), 4-Aminobiphenyl at 40 % with criteria of (70-130), 4-Bromophenyl-phenylether at 36.7 % with criteria of (45-115), 4-Chloro-3-methylphenol at 40 % with criteria of (45-115), 4-Chlorophenyl-phenylether at 33.3 % with criteria of (45-110), 4-Nitroquinoline-1-oxide at 13 % with criteria of (70-130), 5-Nitro-o-toluidine at 43.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 33.3 % with criteria of (56-122), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Acetophenone at 45.8 % with criteria of (70-130), Aniline at 36.7 % with criteria of (38-111), Aramite at 33.3 % with criteria of (70-130), Bis(2-chloroethoxy)methane at 43.3 % with criteria of (45-110), Bis(2-ethylhexyl)phthalate at 36.7 % with criteria of (45-125), Butylbenzylphthalate at 40 % with criteria of (50-125), Chlorobenzilate at 33.3 % with criteria of (70-130), Diallate (Avadex) at 33.3 % with criteria of (70-130), Dibenzofuran at 40 % with criteria of (50-105), Diethylphthalate at 43.3 % with criteria of (50-115), Dimethylphthalate at 43.3 %

with criteria of (50-110), Di-n-butylphthalate at 33.3 % with criteria of (55-110), Di-n-octylphthalate at 36.7 % with criteria of (40-130), Dinoseb at 40 % with criteria of (70-130), Ethyl methanesulfonate at 46.7 % with criteria of (70-130), Hexachlorobenzene at 36.7 % with criteria of (45-120), Hexachlorobutadiene at 36.7 % with criteria of (40-115), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloroethane at 31.3 % with criteria of (35-110), Hexachloropropene at 13.7 % with criteria of (70-130), Isodrin at 36.7 % with criteria of (70-130), Isosafrole at 40 % with criteria of (70-130), Kepone at 20.7 % with criteria of (70-130), Methylmethanesulfonate at 31 % with criteria of (70-130), N-Nitrosodibutylamine at 46.7 % with criteria of (70-130), N-Nitrosodiethylamine at 43.3 % with criteria of (70-130), N-Nitrosodiphenylamine at 43.3 % with criteria of (50-115), N-Nitrosomethylethylamine at 40 % with criteria of (70-130), N-Nitrosomorpholine at 46.7 % with criteria of (70-130), N-Nitrosopiperidine at 46.7 % with criteria of (70-130), N-Nitrosopyrrolidine at 46.7 % with criteria of (70-130), o-Toluidine at 36.7 % with criteria of (70-130), p-Dimethylaminoazobenzene at 36.7 % with criteria of (70-130), Pentachlorobenzene at 36.7 % with criteria of (70-130), Pentachloroethane at 28 % with criteria of (30-130), Pentachloronitrobenzene(PCNB) at 43.3 % with criteria of (70-130), Pentachlorophenol at 21.3 % with criteria of (25-120), Phenacetin at 46.7 % with criteria of (70-130), p-Phenylenediamine at 46.7 % with criteria of (70-130), Pronamide at 43.3 % with criteria of (70-130), Safrole at 46.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 253 % with criteria of (70-130). The following analytes exceeded RPD criteria: 0,0,0-Triethylphosphorothioate at 33.3 % with criteria of (30), 1,2,4-Trichlorobenzene at 30.8 % with criteria of (30), 1,2-Dichlorobenzene at 30.8 % with criteria of (30), 1,3-Dichlorobenzene at 34.3 % with criteria of (30), 1,4-Dichlorobenzene at 33.3 % with criteria of (30), 2,2'-Oxybis(1-chloropropane) at 30.8 % with criteria of (30), 2,4,5-Trichlorophenol at 34.5 % with criteria of (30), 2-Chlorophenol at 34.5 % with criteria of (30), 2-Nitrophenol at 34.5 % with criteria of (30), 3,3'-Dichlorobenzidine at 33.3 % with criteria of (30), 4,6-Dinitro-2-methylphenol at 33 % with criteria of (30), 4-Bromophenyl-phenylether at 30.8 % with criteria of (30), 4-Chloro-3-methylphenol at 34.5 % with criteria of (30), 4-Chloroaniline at 32.3 % with criteria of (30), 4-Chlorophenyl-phenylether at 33.3 % with criteria of (30), 4-Methylphenol at 37.5 % with criteria of (30), 4-Nitrophenol at 37 % with criteria of (30), 4-Nitroquinoline-1-oxide at 60.7 % with criteria of (30), a,a-Dimethylphenethylamine at 200 % with criteria of (30), Aniline at 30.8 % with criteria of (30), Di-n-butylphthalate at 33.3 % with criteria of (30), Hexachlorobutadiene at 30.8 % with criteria of (30), Hexachloroethane at 39.3 % with criteria of (30), Hexachloropropene at 30.9 % with criteria of (30), Methapyriline at 94.4 % with criteria of (30), N-Nitrosodimethylamine at 32.3 % with criteria of (30), N-Nitroso-di-n-propylamine at 30.3 % with criteria of (30), Pentachlorophenol at 68 % with criteria of (30), Pyridine at 37 % with criteria of (30).

MS - TFS-SD-04 MSRE1 was analyzed with the soil samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 50 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 50 % with criteria of (70-130), 1,3,5-Trinitrobenzene at 33.3 % with criteria of (70-130), 1,4-Naphthoquinone at 2.9 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 60 % with criteria of (70-130), 2,4-Dinitrophenol at 9.2 % with criteria of (15-130), 2,6-Dichlorophenol at 66.7 % with criteria of (70-130), 2-Acetylaminofluorene at 53.3 % with criteria of (70-130), 2-Naphthylamine at 60 % with criteria of (70-130), 2-Picoline at 46.7 % with criteria of (70-130), 3-Methylcholanthrene at 50 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 26.7 % with criteria of (30-135), 4-Nitroquinoline-1-oxide at 26.7 % with criteria of (70-130), 5-Nitro-o-toluidine at 63.3 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 50 % with criteria of (56-122), a,a-Dimethylphenethylamine at 50 % with criteria of (70-130), Acetophenone at 62.7 % with criteria of (70-130), Aramite at 23 % with criteria of (70-130), Chlorobenzilate at 46.7 % with criteria of (70-130), Diallate (Avadex) at 33.3 % with criteria of (70-130), Di-n-butylphthalate at 46.7 % with criteria of (55-110), Dinoseb at 63.3 % with criteria of (70-130), Ethyl methanesulfonate at 60 % with criteria of (70-130), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 5 % with criteria of (70-130), Isodrin at 53.3 % with criteria of (70-130), Isosafrole at 56.7 % with criteria of (70-130), Kepone at 13.3 % with criteria of (70-130), Methylmethanesulfonate at 43.3 % with criteria of (70-130), N-Nitrosodiethylamine at 53.3 % with criteria of (70-130), N-Nitrosomethylethylamine at 50 % with criteria of (70-130),

N-Nitrosomorpholine at 66.7 % with criteria of (70-130), N-Nitrosopiperidine at 60 % with criteria of (70-130), N-Nitrosopyrrolidine at 63.3 % with criteria of (70-130), o-Toluidine at 50 % with criteria of (70-130), p-Dimethylaminoazobenzene at 46.7 % with criteria of (70-130), Pentachlorobenzene at 53.3 % with criteria of (70-130), Pentachloronitrobenzene (PCNB) at 63.3 % with criteria of (70-130), Phenacetin at 66.7 % with criteria of (70-130), p-Phenylenediamine at 66.7 % with criteria of (70-130), Pronamide at 60 % with criteria of (70-130), Safrole at 66.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 1013 % with criteria of (70-130).

SD - TFS-SD-04 MSDRE1 was analyzed with the soil samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 0,0,0-Triethylphosphorothioate at 48.3 % with criteria of (70-130), 1,2,4,5-Tetrachlorobenzene at 48.3 % with criteria of (70-130), 1,2,4-Trichlorobenzene at 44.8 % with criteria of (45-110), 1,2-Dichlorobenzene at 44.8 % with criteria of (45-95), 1,3,5-Trinitrobenzene at 31 % with criteria of (70-130), 1,3-Dinitrobenzene at 65.5 % with criteria of (70-130), 1,4-Naphthoquinone at 0 % with criteria of (70-130), 1-Naphthylamine at 65.5 % with criteria of (70-130), 2,3,4,6-Tetrachlorophenol at 51.7 % with criteria of (70-130), 2,4-Dinitrophenol at 0 % with criteria of (15-130), 2,6-Dichlorophenol at 65.5 % with criteria of (70-130), 2-Acetylaminofluorene at 51.7 % with criteria of (70-130), 2-Naphthylamine at 51.7 % with criteria of (70-130), 2-Picoline at 48.3 % with criteria of (70-130), 3-Methylcholanthrene at 44.8 % with criteria of (55-121), 4,6-Dinitro-2-methylphenol at 25.5 % with criteria of (30-135), 4-Aminobiphenyl at 58.6 % with criteria of (70-130), 4-Bromophenyl-phenylether at 44.8 % with criteria of (45-115), 4-Chlorophenyl-phenylether at 44.8 % with criteria of (45-110), 4-Nitroquinoline-1-oxide at 23.1 % with criteria of (70-130), 5-Nitro-o-toluidine at 62.1 % with criteria of (70-130), 7,12-Dimethylbenz(a)anthracene at 44.8 % with criteria of (56-122), a,a-Dimethylphenethylamine at 62.1 % with criteria of (70-130), Acetophenone at 63.2 % with criteria of (70-130), Aramite at 41.4 % with criteria of (70-130), Chlorobenzilate at 41.4 % with criteria of (70-130), Diallate (Avadex) at 41.4 % with criteria of (70-130), Di-n-butylphthalate at 41.4 % with criteria of (55-110), Dinoseb at 58.6 % with criteria of (70-130), Ethyl methanesulfonate at 62.1 % with criteria of (70-130), Hexachlorobenzene at 44.8 % with criteria of (45-120), Hexachlorocyclopentadiene at 0 % with criteria of (24-119), Hexachloropropene at 2.3 % with criteria of (70-130), Isodrin at 44.8 % with criteria of (70-130), Isosafrole at 55.2 % with criteria of (70-130), Kepone at 11.7 % with criteria of (70-130), Methylmethanesulfonate at 44.8 % with criteria of (70-130), N-Nitrosodibutylamine at 65.5 % with criteria of (70-130), N-Nitrosodiethylamine at 55.2 % with criteria of (70-130), N-Nitrosomethylethylamine at 51.7 % with criteria of (70-130), N-Nitrosomorpholine at 69 % with criteria of (70-130), N-Nitrosopiperidine at 62.1 % with criteria of (70-130), N-Nitrosopyrrolidine at 69 % with criteria of (70-130), o-Toluidine at 51.7 % with criteria of (70-130), p-Dimethylaminoazobenzene at 44.8 % with criteria of (70-130), Pentachlorobenzene at 48.3 % with criteria of (70-130), Pentachloronitrobenzene(PCNB) at 58.6 % with criteria of (70-130), Phenacetin at 62.1 % with criteria of (70-130), p-Phenylenediamine at 65.5 % with criteria of (70-130), Pronamide at 55.2 % with criteria of (70-130), Safrole at 62.1 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 897 % with criteria of (70-130). The following analytes exceeded RPD criteria: 1,4-Naphthoquinone at 200 % with criteria of (30), 2,4-Dinitrophenol at 200 % with criteria of (30), Aramite at 54 % with criteria of (30), Hexachloropropene at 76.5 % with criteria of (30).

MS - TFS-SW-03 MS was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), a,a-Dimethylphenethylamine at 40.7 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 924 % with criteria of (0-90).

SD - TFS-SW-03 MSD was analyzed with the water samples extracted on 04/19/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), a,a-Dimethylphenethylamine at 46.8 % with criteria of (70-130), p-Dimethylaminoazobenzene at 68.9 % with criteria of (70-130) and the following analytes were recovered above criteria: 1-Naphthylamine at 99.5 % with criteria of (38-91), Methapyriline at 1115 % with criteria of (0-90). The following analytes exceeded RPD criteria: 2,4-Dinitrophenol at 69.4 % with criteria of (20), 4,6-Dinitro-2-methylphenol at

35.2 % with criteria of (20), 4-Chloroaniline at 25.5 % with criteria of (20), Aniline at 21 % with criteria of (20), Pyridine at 21.5 % with criteria of (20).

MS - TFS-SW-03 MSRE1 was analyzed with the water samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 2-Acetylaminofluorene at 50.2 % with criteria of (63-103), 2-Naphthylamine at 28.7 % with criteria of (70-130), 3,3'-Dichlorobenzidine at 15.4 % with criteria of (20-110), 4-Aminobiphenyl at 27.5 % with criteria of (49-103), 5-Nitro-o-toluidine at 57.6 % with criteria of (70-130), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Chlorobenzilate at 54.9 % with criteria of (58-101), Isosafrole at 65 % with criteria of (70-130), o-Toluidine at 45.3 % with criteria of (49-97), p-Dimethylaminoazobenzene at 48.5 % with criteria of (70-130).

SD - TFS-SW-03 MSDRE1 was analyzed with the water samples re-extracted on 04/30/12. The following analytes were recovered below criteria: 2-Acetylaminofluorene at 54.4 % with criteria of (63-103), 2-Naphthylamine at 48.5 % with criteria of (70-130), 4-Aminobiphenyl at 44.6 % with criteria of (49-103), 5-Nitro-o-toluidine at 64.5 % with criteria of (70-130), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Isosafrole at 65.9 % with criteria of (70-130), p-Dimethylaminoazobenzene at 55.9 % with criteria of (70-130) and the following analyte was recovered above criteria: Methapyriline at 105 % with criteria of (0-90). The following analytes exceeded RPD criteria: 1-Naphthylamine at 36.7 % with criteria of (20), 2-Naphthylamine at 51.4 % with criteria of (20), 3,3'-Dichlorobenzidine at 93.9 % with criteria of (20), 4-Aminobiphenyl at 47.6 % with criteria of (20), 4-Chloroaniline at 31.8 % with criteria of (20), Aniline at 29.7 % with criteria of (20), Methapyriline at 98.4 % with criteria of (20), o-Toluidine at 34.8 % with criteria of (20).

None of the compounds that failed LCS recoveries were detected in any samples. Samples coded accordingly.

End Of Report

Date Reported:
11-May-12



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Final Report
 Re-Issued Report
 Revised Report

Laboratory Report

CH2M Hill
Northpark 400
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328

Project # 3505794
Project: NAS Key West / Boca Chica / MW Sampling

Attn: Greg Rowell

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
350579401	TFS-MW-03	W	19-Apr-12 9:30	20-Apr-12 9:55
350579402	TFS-MW-06	W	19-Apr-12 11:15	20-Apr-12 9:55
350579403	TFS-MW-FD1	W	19-Apr-12 0:00	20-Apr-12 9:55
350579404	TFS-MW-15	W	19-Apr-12 13:26	20-Apr-12 9:55
350579405	TFS-MW-16	W	19-Apr-12 14:20	20-Apr-12 9:55
350579406	TFS-MW-TB2	W	19-Apr-12 0:00	20-Apr-12 9:55

The samples were analyzed for the methods listed on the attached table of contents. See the attached data tables for results.

Soil samples are reported on dry weight basis, unless otherwise noted.

Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis.

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met unless noted in the case narrative.

Spectrum Analytical is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Florida	E84207
Texas	T104704408-11
South Carolina	96011001
North Dakota	R-178
California	07253CA
Louisiana	02025
Kansas	E-10385
Arkansas	11-036-1



Certificate # L2259 Testing

Respectfully Submitted,

Brian Spann
Laboratory Director
Spectrum Analytical, Inc. Florida Division

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EXECUTIVE SUMMARY - Detection Highlights

3505794

SAMPLE ID: TFS-MW-03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Nitrate-N	0.140	0.100	MG/L	E300.1
Nitrite-N	0.200	0.100	MG/L	E300.1
Sulfate	36.7	1.00	MG/L	E300.1
Alkalinity (Total)	175	5.00	MG/L	A2320
Sulfide	0.600 J	2.00	MG/L	E376.1
TOC	2.15	1.00	MG/L	SW9060

SAMPLE ID: TFS-MW-03RE1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Nitrate-N	0.130	0.100	MG/L	E300.1
Sulfate	36.8	1.00	MG/L	E300.1

SAMPLE ID: TFS-MW-06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Sulfate	27.1	1.00	MG/L	E300.1
Acenaphthene	0.170	0.051	UG/L	SW8270D-SIM
Anthracene	0.0360 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.0800	0.051	UG/L	SW8270D-SIM
Fluorene	0.0210 J	0.051	UG/L	SW8270D-SIM
Phenanthrene	0.0230 J	0.051	UG/L	SW8270D-SIM
Pyrene	0.0420 J	0.051	UG/L	SW8270D-SIM
TPH	920	510	UG/L	FL-PRO
Alkalinity (Total)	275	5.00	MG/L	A2320
Sulfide	3.61	2.00	MG/L	E376.1
TOC	7.48	1.00	MG/L	SW9060

EXECUTIVE SUMMARY - Detection Highlights

3505794

SAMPLE ID: TFS-MW-15

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	5.50 J	10	UG/L	SW8260B
Benzene	0.810	0.50	UG/L	SW8260B
Carbon disulfide	0.650 J	1.0	UG/L	SW8260B
Ethylbenzene	0.260 J	0.50	UG/L	SW8260B
Toluene	0.250 J	1.0	UG/L	SW8260B
1-Methylnaphthalene	2.80	0.051	UG/L	SW8270D-SIM
2-Methylnaphthalene	2.00	0.051	UG/L	SW8270D-SIM
Acenaphthene	2.40	0.051	UG/L	SW8270D-SIM
Acenaphthylene	0.100	0.051	UG/L	SW8270D-SIM
Anthracene	0.780	0.051	UG/L	SW8270D-SIM
Benzo(a)anthracene	0.180	0.051	UG/L	SW8270D-SIM
Chrysene	0.0940	0.051	UG/L	SW8270D-SIM
Fluoranthene	2.30	0.051	UG/L	SW8270D-SIM
Fluorene	3.40	0.051	UG/L	SW8270D-SIM
Naphthalene	2.90	0.051	UG/L	SW8270D-SIM
Phenanthrene	3.50	0.051	UG/L	SW8270D-SIM
Pyrene	1.30	0.051	UG/L	SW8270D-SIM
TPH	22400	2600	UG/L	FL-PRO

SAMPLE ID: TFS-MW-16

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	2.90 J	10	UG/L	SW8260B
Carbon disulfide	0.990 J	1.0	UG/L	SW8260B
TPH	320 J	510	UG/L	FL-PRO

SAMPLE ID: TFS-MW-FD1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acenaphthene	0.180	0.051	UG/L	SW8270D-SIM
Anthracene	0.0400 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.0840	0.051	UG/L	SW8270D-SIM

EXECUTIVE SUMMARY - Detection Highlights

3505794

Naphthalene	0.0240 J	0.051	UG/L	SW8270D-SIM
Phenanthrene	0.0250 J	0.051	UG/L	SW8270D-SIM
Pyrene	0.0440 J	0.051	UG/L	SW8270D-SIM
TPH	900	510	UG/L	FL-PRO

SAMPLE ID: TFS-MW-TB2

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	3.10 J	10	UG/L	SW8260B

Organics

Organic Data Qualifiers

- U** Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.
- J** Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.
- B** Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.
- E** Indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.
- D** Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C** The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.
- P** This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns.
- N** This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.
- A** This qualifier indicates that a TIC is a suspected aldol-condensation product.
- X** Data flagged as rejected by analyst utilizing analytical judgement.

Organic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

8260 Volatile Organics

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met. The low calibration standard is 10 ug/L for the following analyte(s): Acrylonitrile.

B. Blanks:

All acceptance criteria were met with the exception of:
Blank 050212BLK14 was analyzed with the water samples on 05/02/12. The following analyte(s) were detected below RL: Acetone at 2.3 ug/L, Carbon disulfide at 0.32 ug/L, Chloromethane at 0.42 ug/L.
Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample 050212BLK14 was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 119 % with criteria of (85-115).

Sample 050212LCS12 was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 116 % with criteria of (85-115).

Sample 050212LCS12D was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 116 % with criteria of (85-115).

Sample TFS-MW-15 was recovered above criteria for the following surrogate(s): 1,2-Dichloroethane-d4 at 122 % with criteria of (70-120), Dibromofluoromethane at 123 % with criteria of (85-115).

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

Sample TFS-MW-16 was recovered above criteria for the following surrogate(s): 1,2-Dichloroethane-d4 at 128 % with criteria of (70-120), Dibromofluoromethane at 131 % with criteria of (85-115).

Sample TFS-MW-FD1 was recovered above criteria for the following surrogate(s): Dibromofluoromethane at 118 % with criteria of (85-115).

Sample TFS-MW-TB2 was recovered above criteria for the following surrogate(s): 1,2-Dichloroethane-d4 at 122 % with criteria of (70-120), Dibromofluoromethane at 122 % with criteria of (85-115).

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:
LCS 050212LCS12 was analyzed with the water samples on 05/02/12.
The following analyte(s) were recovered above criteria: Acrolein at 178 % with criteria of (31-148). The following analyte(s) had marginal exceedance limit failures: Acrolein at 178 % with criteria of (11.5-167.5).

LCS 050212LCS12D was analyzed with the water samples on 05/02/12.
The following analyte(s) were recovered above criteria: Acrolein at 161 % with criteria of (31-148).

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

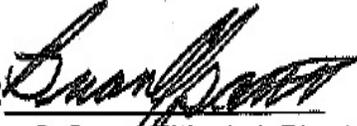
Sample analysis proceeded normally.
Analytes were detected in Trip Blank TFS-MW-TB2. The following analyte(s) were detected below RL: Acetone at 3.1 ug/L. Client specified reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/03/2012

VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Method: 8260

EPA Sample No	Lab Sample ID
<u>TFS-MW-03</u>	<u>350579401</u>
<u>TFS-MW-06</u>	<u>350579402</u>
<u>TFS-MW-FD1</u>	<u>350579403</u>
<u>TFS-MW-15</u>	<u>350579404</u>
<u>TFS-MW-16</u>	<u>350579405</u>
<u>TFS-MW-TB2</u>	<u>350579406</u>

8260 Sample Data

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 5794-01.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2211

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 5794-02.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2234

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-FD1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 5794-03.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2256

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 5794-04.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2318

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.65	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	5.5	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.81		0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 5794-04.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2318

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.25	J	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.26	J	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 5794-04.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2318

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.99	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.9	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 5794-05.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2341

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-TB2

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	3.1	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-TB2

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-TB2

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579406 Lab File ID 5794-06.D

Sample wt/vol: 5 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

8260 QC Summary

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW 050212BLK14

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 050212BLK14 Lab File ID: BLK14.D

Sample wt/vol: 5 Units: ML Date Received: 05/02/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2041

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.42	J	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.32	J	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.3	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW 050212BLK14

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 050212BLK14 Lab File ID: BLK14.D

Sample wt/vol: 5 Units: ML Date Received: 05/02/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/02/12 Time: 2041

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West / Boca Chica / MW S EPA Sample No. 050212BLK14

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Lab File ID: BLK14.D Lab Sample ID: 050212BLK14

Instrument ID: VMS01 Date Extracted: _____

Matrix: WATER Date Analyzed: 05/02/12

Level:(low/med) LOW Time Analyzed: 2041

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	050212LCS12	050212LCS12	LCS12.D	05/02/12	1934
2	050212LCS12D	050212LCS12D	LCS12D.D	05/02/12	1956
3	TFS-MW-TB2	350579406	5794-06.D	05/02/12	2149
4	TFS-MW-03	350579401	5794-01.D	05/02/12	2211
5	TFS-MW-06	350579402	5794-02.D	05/02/12	2234
6	TFS-MW-FD1	350579403	5794-03.D	05/02/12	2256
7	TFS-MW-15	350579404	5794-04.D	05/02/12	2318
8	TFS-MW-16	350579405	5794-05.D	05/02/12	2341

COMMENTS:

2A

WATER VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. SAS No: SDG NO.: 3505794

Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
050212BLK14	119.0 *	110.0	102.0	119.0			1
050212LCS12	116.0 *	113.0	99.2	113.0			1
050212LCS12D	116.0 *	114.0	105.0	119.0			1
TFS-MW-03	113.0	102.0	90.6	113.0			0
TFS-MW-06	115.0	108.0	98.6	111.0			0
TFS-MW-15	123.0 *	118.0	106.0	122.0 *			2
TFS-MW-16	131.0 *	117.0	107.0	128.0 *			2
TFS-MW-FD1	118.0 *	111.0	101.0	119.0			1
TFS-MW-TB2	122.0 *	112.0	98.8	122.0 *			2

Control Limits

- S1 = Dibromofluoromethane 85 - 115
- S2 = Toluene-d8 85 - 120
- S3 = 4-Bromofluorobenzene 75 - 120
- S4 = 1,2-Dichloroethane-d4 70 - 120

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out
 Control limit source: (lab/method) METHOD

Form II

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: BFB14.D BFB Injection Date: 05/02/12
 Instrument ID: VMS01 BFB Injection Time: 1826
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.9
75	30.0 - 60.0% of mass 95	47.8
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.8 (1)1
174	50.0 - 100.0% of mass 95	82.4
175	5.0 - 9.0% of mass 174	6.2 (7.56)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.4 (96.38)1
177	5.0 - 9.0% of mass 176	5.5 (6.88)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1076321	050212CCV14	50CCV14.D	05/02/12	1911
2	050212LCS12	050212LCS12	LCS12.D	05/02/12	1934
3	050212LCS12D	050212LCS12D	LCS12D.D	05/02/12	1956
4	050212BLK14	050212BLK14	BLK14.D	05/02/12	2041
5	TFS-MW-TB2	350579406	5794-06.D	05/02/12	2149
6	TFS-MW-03	350579401	5794-01.D	05/02/12	2211
7	TFS-MW-06	350579402	5794-02.D	05/02/12	2234
8	TFS-MW-FD1	350579403	5794-03.D	05/02/12	2256
9	TFS-MW-15	350579404	5794-04.D	05/02/12	2318
10	TFS-MW-16	350579405	5794-05.D	05/02/12	2341

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Lab File ID (Standard): 50PPB.D Date Analyzed: 4/27/2012
 Instrument ID: VMS01 Time Analyzed: 20:20
 GC Column: DB-624 ID: 0.18 (mm)
 Matrix: (soil/water) W Heated Purge: (Y/N) No

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	1480488	6.62	1194948	9.14	721940	10.54
UPPER LIMIT	2960976	7.12	2389896	9.64	1443880	11.04
LOWER LIMIT	740244	6.12	597474	8.64	360970	10.04
EPA SAMPLE NO.						
1 050212LCS12	1307442	6.62	1105612	9.14	672429	10.54
2 050212LCS12D	1293491	6.62	1067449	9.14	649560	10.54
3 050212BLK14	1231859	6.62	1038248	9.15	574281	10.54
4 TFS-MW-TB2	1203477	6.62	1031333	9.14	574438	10.54
5 TFS-MW-03	1341401	6.62	1122953	9.14	642037	10.54
6 TFS-MW-06	1301428	6.62	1043082	9.14	591351	10.54
7 TFS-MW-FD1	1267275	6.62	1006116	9.14	572049	10.54
8 TFS-MW-15	1236218	6.62	1059821	9.14	614270	10.54
9 TFS-MW-16	1181574	6.62	982634	9.14	561346	10.54

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 5.89			S2: 8.12			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	042712bfb02	042712bfb02	bfb02.D	04/27/12	1652	
2	STD1075199	200PPT	200PPT.D	04/27/12	1743	
3	STD1075232	500PPT	500PPT.D	04/27/12	1806	
4	STD1075198	1PPB	1PPB.D	04/27/12	1828	
5	STD1075201	2PPB	2PPB.D	04/27/12	1850	
6	STD1075234	5PPB	5PPB.D	04/27/12	1913	5.89 8.12
7	STD1075197	10PPB	10PPB.D	04/27/12	1935	5.89 8.12
8	STD1075200	20PPB	20PPB.D	04/27/12	1957	5.89 8.12
9	STD1075233	50PPB	50PPB.D	04/27/12	2020	5.89 8.12
10	STD1075235	60PPB	60PPB.D	04/27/12	2042	5.89 8.12
11	STD1075236	80PPB	80PPB.D	04/27/12	2104	5.89 8.12
12	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2127	
13	SSC1075238	SEC12	SEC12.D	04/27/12	2149	5.89 8.12
14	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2211	
15	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2233	
16	050212BFB14	050212BFB14	BFB14.D	05/02/12	1826	
17	ZZZZZ	ZZZZZ	ZZZZZ	05/02/12	1849	
18	CCV1076321	050212CCV14	50CCV14.D	05/02/12	1911	5.89 8.12
19	050212LCS12	050212LCS12	LCS12.D	05/02/12	1934	5.89 8.12
20	050212LCS12D	050212LCS12D	LCS12D.D	05/02/12	1956	5.89 8.12
21	ZZZZZ	ZZZZZ	ZZZZZ	05/02/12	2019	
22	050212BLK14	050212BLK14	BLK14.D	05/02/12	2041	5.89 8.12
23	ZZZZZ	ZZZZZ	ZZZZZ	05/02/12	2104	
24	ZZZZZ	ZZZZZ	ZZZZZ	05/02/12	2126	
25	TFS-MW-TB2	350579406	5794-06.D	05/02/12	2149	5.89 8.12
26	TFS-MW-03	350579401	5794-01.D	05/02/12	2211	5.89 8.12

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505794
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1: 5.89			S2: 8.12				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
27	TFS-MW-06	350579402	5794-02.D	05/02/12	2234	5.89	8.12
28	TFS-MW-FD1	350579403	5794-03.D	05/02/12	2256	5.89	8.12
29	TFS-MW-15	350579404	5794-04.D	05/02/12	2318	5.89	8.12
30	TFS-MW-16	350579405	5794-05.D	05/02/12	2341	5.89	8.12
31	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0003		
32	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0026		
33	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0049		
34	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0111		
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0133		
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0156		
37	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0219		
38	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0241		
39	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0303		
40	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0326		
41	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0348		
42	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	0410		

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

050212LCS12

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	11.6	58.0			30 - 155
Chloromethane	20	16.8	84.0			40 - 125
Vinyl chloride	20	18.3	91.5			50 - 145
Bromomethane	20	18	90.0			30 - 145
Chloroethane	20	20.5	102.0			60 - 135
Trichlorofluoromethane	20	22.7	114.0			60 - 145
1,1-Dichloroethene	20	23.5	118.0			70 - 130
Acrolein	40	71.3	178.0 *			31 - 148
Methyl iodide	20	21	105.0			75 - 152
Carbon disulfide	20	24.6	123.0			35 - 160
Methylene chloride	20	22.8	114.0			55 - 140
trans-1,2-Dichloroethene	20	22.8	114.0			60 - 140
Acrylonitrile	40	49.3	123.0			55 - 126
1,1-Dichloroethane	20	22.7	114.0			70 - 135
Acetone	40	50.5	126.0			40 - 140
2-Butanone	40	47.2	118.0			30 - 150
Chloroform	20	23.7	118.0			65 - 135
1,1,1-Trichloroethane	20	24.3	122.0			65 - 130
Carbon tetrachloride	20	24.7	124.0			65 - 140
Benzene	20	21.6	108.0			80 - 120
1,2-Dichloroethane	20	23.2	116.0			70 - 130
Trichloroethene	20	22.4	112.0			70 - 125
Vinyl acetate	20	21.4	107.0			77 - 150
1,2-Dichloropropane	20	22.5	112.0			75 - 125
Dibromomethane	20	23.9	120.0			75 - 125
Bromodichloromethane	20	22.9	114.0			75 - 120
cis-1,3-Dichloropropene	20	21.2	106.0			70 - 130
4-Methyl-2-pentanone	40	47.4	118.0			60 - 135
Toluene	20	22.8	114.0			75 - 120
trans-1,3-Dichloropropene	20	21.4	107.0			55 - 140
Ethyl methacrylate	20	19.9	99.5			73 - 121
1,1,2-Trichloroethane	20	22.7	114.0			75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

050212LCS12

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	21.8	109.0			45 - 150
2-Hexanone	40	45	112.0			55 - 130
Dibromochloromethane	20	23.6	118.0			60 - 135
1,2-Dibromoethane	20	21.5	108.0			80 - 120
Chlorobenzene	20	21.4	107.0			80 - 120
1,1,1,2-Tetrachloroethane	20	22.6	113.0			80 - 130
Ethylbenzene	20	22.1	110.0			75 - 125
Styrene	20	21.7	108.0			65 - 135
Bromoform	20	23	115.0			70 - 130
1,1,1,2,2-Tetrachloroethane	20	21.8	109.0			65 - 130
1,2,3-Trichloropropane	20	22.9	114.0			75 - 125
1,2-Dibromo-3-chloropropane	20	23.7	118.0			50 - 130
1,4-Dichloro-2-butene	40	36.7	91.8			68 - 115
Acetonitrile	200	238	119.0			37 - 122
Allyl chloride	20	23.5	118.0			70 - 130
1,4-Dioxane	400	579	145.0			0 - 167
Isobutyl alcohol	400	435	109.0			70 - 130
Methacrylonitrile	200	230	115.0			70 - 130
Methyl methacrylate	20	20.8	104.0			33 - 172
Propionitrile	200	259	130.0			70 - 130
Chloroprene	20	21.7	108.0			70 - 130
Xylene (total)	60	65.1	108.0			82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

050212LCS12D

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	10.7	53.5	8.1	20	30 - 155
Chloromethane	20	16.5	82.5	1.8	20	40 - 125
Vinyl chloride	20	17.8	89.0	2.8	20	50 - 145
Bromomethane	20	16.7	83.5	7.5	20	30 - 145
Chloroethane	20	18.8	94.0	8.7	20	60 - 135
Trichlorofluoromethane	20	22	110.0	3.1	20	60 - 145
1,1-Dichloroethene	20	22.6	113.0	3.9	20	70 - 130
Acrolein	40	64.4	161.0 *	10.2	20	31 - 148
Methyl iodide	20	21	105.0	0.0	20	75 - 152
Carbon disulfide	20	23	115.0	6.7	20	35 - 160
Methylene chloride	20	21.9	110.0	4.0	20	55 - 140
trans-1,2-Dichloroethene	20	21.9	110.0	4.0	20	60 - 140
Acrylonitrile	40	44.7	112.0	9.8	20	55 - 126
1,1-Dichloroethane	20	22.2	111.0	2.2	20	70 - 135
Acetone	40	49.8	124.0	1.4	20	40 - 140
2-Butanone	40	44.2	110.0	6.6	20	30 - 150
Chloroform	20	22.8	114.0	3.9	20	65 - 135
1,1,1-Trichloroethane	20	22.9	114.0	5.9	20	65 - 130
Carbon tetrachloride	20	23.9	120.0	3.3	20	65 - 140
Benzene	20	21	105.0	2.8	20	80 - 120
1,2-Dichloroethane	20	22.6	113.0	2.6	20	70 - 130
Trichloroethene	20	21.5	108.0	4.1	20	70 - 125
Vinyl acetate	20	20.9	104.0	2.4	20	77 - 150
1,2-Dichloropropane	20	21.8	109.0	3.2	20	75 - 125
Dibromomethane	20	23.1	116.0	3.4	20	75 - 125
Bromodichloromethane	20	22	110.0	4.0	20	75 - 120
cis-1,3-Dichloropropene	20	20	100.0	5.8	20	70 - 130
4-Methyl-2-pentanone	40	42.7	107.0	10.4	20	60 - 135
Toluene	20	21.8	109.0	4.5	20	75 - 120
trans-1,3-Dichloropropene	20	21.3	106.0	0.5	20	55 - 140
Ethyl methacrylate	20	19.4	97.0	2.5	20	73 - 121
1,1,2-Trichloroethane	20	21.5	108.0	5.4	20	75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

050212LCS12D

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	21.9	110.0	0.5	20	45 - 150
2-Hexanone	40	44.7	112.0	0.7	20	55 - 130
Dibromochloromethane	20	23.1	116.0	2.1	20	60 - 135
1,2-Dibromoethane	20	21.7	108.0	0.9	20	80 - 120
Chlorobenzene	20	21.5	108.0	0.5	20	80 - 120
1,1,1,2-Tetrachloroethane	20	21.9	110.0	3.1	20	80 - 130
Ethylbenzene	20	21.6	108.0	2.3	20	75 - 125
Styrene	20	21.6	108.0	0.5	20	65 - 135
Bromoform	20	22.4	112.0	2.6	20	70 - 130
1,1,2,2-Tetrachloroethane	20	21.6	108.0	0.9	20	65 - 130
1,2,3-Trichloropropane	20	21.6	108.0	5.8	20	75 - 125
1,2-Dibromo-3-chloropropane	20	22.7	114.0	4.3	20	50 - 130
1,4-Dichloro-2-butene	40	35.4	88.5	3.6	20	68 - 115
Acetonitrile	200	214	107.0	10.6	20	37 - 122
Allyl chloride	20	21.1	106.0	10.8	20	70 - 130
1,4-Dioxane	400	475	119.0	19.7	20	0 - 167
Isobutyl alcohol	400	420	105.0	3.5	20	70 - 130
Methacrylonitrile	200	213	106.0	7.7	20	70 - 130
Methyl methacrylate	20	19.2	96.0	8.0	20	33 - 172
Propionitrile	200	233	116.0	10.6	20	70 - 130
Chloroprene	20	20.7	104.0	4.7	20	70 - 130
Xylene (total)	60	63.6	106.0	2.3	20	82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8260 Standards Data

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND		RRF0.2	RRF0.5	RRF1	RRF2	RRF5	%RSD OR R^2
Dichlorodifluoromethane				0.201	0.193	0.195	
Chloromethane	#		0.559	0.448	0.391	0.380	#
Vinyl chloride	*		0.329	0.274	0.249	0.258	*
Bromomethane				0.243	0.203	0.190	
Chloroethane				0.161	0.156	0.169	
Trichlorofluoromethane				0.182	0.163	0.180	
1,1-Dichloroethene	*		0.429	0.408	0.350	0.370	*
Acrolein					0.046	0.045	
Methyl iodide				0.106	0.090	0.140	
Carbon disulfide				0.623	0.504	0.510	
Methylene chloride				1.005	0.618	0.560	
trans-1,2-Dichloroethene			0.434	0.445	0.364	0.395	
Acrylonitrile						0.173	
1,1-Dichloroethane	#			0.645	0.548	0.539	#
Acetone						0.245	
2-Butanone				0.293	0.257	0.235	
Chloroform	*	0.445	0.506	0.520	0.449	0.498	*
1,1,1-Trichloroethane			0.414	0.403	0.352	0.393	
Carbon tetrachloride			0.346	0.370	0.311	0.332	
Benzene		1.324	1.229	1.152	0.966	1.034	
1,2-Dichloroethane			0.455	0.491	0.456	0.456	
Trichloroethene			0.343	0.331	0.280	0.296	
Vinyl acetate				1.060	1.011	1.105	
1,2-Dichloropropane	*	0.344	0.339	0.365	0.333	0.345	*
Dibromomethane				0.198	0.193	0.194	
Bromodichloromethane		0.403	0.389	0.426	0.373	0.367	
cis-1,3-Dichloropropene		0.343	0.417	0.450	0.396	0.392	
4-Methyl-2-pentanone				0.170	0.141	0.161	
Toluene	*		0.702	0.774	0.622	0.651	*
trans-1,3-Dichloropropene			0.411	0.448	0.390	0.406	
Ethyl methacrylate				0.364	0.311	0.335	
1,1,2-Trichloroethane			0.283	0.315	0.271	0.292	
Tetrachloroethene			0.332	0.344	0.298	0.288	
2-Hexanone				0.496	0.406	0.312	

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND	RRF0.2	RRF0.5	RRF1	RRF2	RRF5	RRF	%RSD OR R^2
Dibromochloromethane	0.277	0.353	0.414	0.354	0.379		
1,2-Dibromoethane			0.401	0.343	0.372		
Chlorobenzene	#	1.144	1.214	0.993	1.019		#
1,1,1,2-Tetrachloroethane		0.412	0.410	0.356	0.363		
Ethylbenzene	*	0.509	0.544	0.435	0.494		*
Styrene			0.979	0.854	0.926		
Bromoform	#		0.301	0.272	0.276		#
1,1,2,2-Tetrachloroethane	# 0.695	0.847	1.065	0.889	0.960		#
1,2,3-Trichloropropane			0.291	0.267	0.287		
1,2-Dibromo-3-chloropropane				0.183	0.157		
1,4-Dichloro-2-butene			0.218	0.187	0.196		
Acetonitrile				0.103	0.104		
Allyl chloride			1.161	1.033	1.041		
1,4-Dioxane			0.002	0.002	0.002		
Isobutyl alcohol			0.006	0.007	0.006		
Methacrylonitrile			0.149	0.130	0.142		
Methyl methacrylate			0.237	0.189	0.192		
Propionitrile			0.072	0.068	0.070		
Chloroprene			0.552	0.426	0.439		
o-Xylene		1.217	1.378	1.211	1.265		
p,m-Xylene	0.648	0.588	0.645	0.538	0.604		
=====							
Dibromofluoromethane(SURR)					0.241		
Toluene-d8(SURR)					0.842		
4-Bromofluorobenzene(SURR)					0.755		
1,2-Dichloroethane-d4(SURR)					0.056		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(%) = 0.1 Max %RSD for CCC(*) = 30 %

COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dichlorodifluoromethane	0.212	0.210	0.235	0.241	0.226	0.21409	8.5
Chloromethane	# 0.393	0.363	0.398	0.428	0.397	0.41739	14.1 #
Vinyl chloride	* 0.284	0.274	0.310	0.347	0.316	0.29359	11.4 *
Bromomethane	0.186	0.128	0.120	0.134	0.123	0.16585	0.99441
Chloroethane	0.167	0.157	0.170	0.191	0.177	0.16851	6.8
Trichlorofluoromethane	0.199	0.177	0.201	0.199	0.205	0.18832	8
1,1-Dichloroethene	* 0.416	0.363	0.383	0.393	0.390	0.38923	6.6 *
Acrolein	0.040	0.036	0.033	0.030	0.033	0.03756	16.2 <-
Methyl iodide	0.190	0.234	0.298	0.316	0.326	0.21248	0.99613
Carbon disulfide	0.555	0.505	0.535	0.559	0.561	0.54402	7.4
Methylene chloride	0.569	0.488	0.491	0.491	0.483	0.58791	0.99973
trans-1,2-Dichloroethene	0.429	0.390	0.397	0.406	0.412	0.40803	6.2
Acrylonitrile	0.169	0.158	0.173	0.170	0.172	0.16913	3.4
1,1-Dichloroethane	# 0.604	0.547	0.554	0.570	0.570	0.5721	6.2 #
Acetone	0.178	0.136	0.139	0.212	0.212	0.18711	23.5 <-
2-Butanone	0.221	0.201	0.213	0.257	0.251	0.24092	12.3
Chloroform	* 0.523	0.469	0.470	0.481	0.480	0.4841	5.6 *
1,1,1-Trichloroethane	0.431	0.391	0.404	0.415	0.421	0.40255	5.7
Carbon tetrachloride	0.386	0.338	0.367	0.374	0.379	0.35594	7.1
Benzene	1.137	1.031	1.049	1.081	1.088	1.10914	9.5
1,2-Dichloroethane	0.493	0.445	0.448	0.454	0.449	0.46077	3.9
Trichloroethene	0.325	0.284	0.297	0.305	0.305	0.30745	7
Vinyl acetate	1.161	1.138	1.218	1.218	1.233	1.14297	7
1,2-Dichloropropane	* 0.377	0.341	0.347	0.349	0.354	0.34947	3.7 *
Dibromomethane	0.216	0.194	0.200	0.202	0.198	0.19941	3.8
Bromodichloromethane	0.407	0.373	0.380	0.388	0.389	0.38943	4.7
cis-1,3-Dichloropropene	0.449	0.413	0.428	0.436	0.434	0.41572	7.8
4-Methyl-2-pentanone	0.171	0.162	0.172	0.195	0.193	0.17072	10.2
Toluene	* 0.739	0.687	0.702	0.711	0.715	0.70035	6.4 *
trans-1,3-Dichloropropene	0.455	0.423	0.441	0.452	0.456	0.43112	5.7
Ethyl methacrylate	0.372	0.346	0.366	0.376	0.375	0.35575	6.5
1,1,2-Trichloroethane	0.312	0.279	0.283	0.285	0.285	0.28945	5.1
Tetrachloroethene	0.332	0.284	0.307	0.309	0.308	0.31126	6.6
2-Hexanone	0.406	0.392	0.419	0.462	0.459	0.41895	13.4

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D			
RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D			
COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dibromochloromethane	0.406	0.387	0.405	0.403	0.413	0.37903	11.2
1,2-Dibromoethane	0.395	0.359	0.373	0.371	0.370	0.37301	4.9
Chlorobenzene	# 1.106	0.989	1.012	1.022	1.026	1.05835	7.4 #
1,1,1,2-Tetrachloroethane	0.392	0.362	0.377	0.380	0.378	0.38098	5.3
Ethylbenzene	* 0.540	0.483	0.519	0.520	0.525	0.50762	6.7 *
Styrene	1.052	0.957	1.019	1.025	1.034	0.98073	6.8
Bromoform	# 0.292	0.283	0.306	0.305	0.309	0.29276	4.9 #
1,1,2,2-Tetrachloroethane	# 0.972	0.870	0.883	0.873	0.879	0.89324	10.7 #
1,2,3-Trichloropropane	0.294	0.258	0.267	0.268	0.269	0.27513	4.9
1,2-Dibromo-3-chloropropane	0.183	0.162	0.173	0.174	0.175	0.17228	5.7
1,4-Dichloro-2-butene	0.202	0.196	0.204	0.218	0.215	0.2047	5.7
Acetonitrile	0.109	0.101	0.104	0.108	0.105	0.10488	2.7
Allyl chloride	1.089	1.006	1.042	1.080	1.051	1.0628	4.5
1,4-Dioxane	0.002	0.002	0.002	0.003	0.003	0.00222	14.9
Isobutyl alcohol	0.006	0.005	0.005	0.005	0.005	0.00574	13
Methacrylonitrile	0.149	0.136	0.140	0.140	0.140	0.14078	4.5
Methyl methacrylate	0.210	0.195	0.210	0.207	0.208	0.20612	7.3
Propionitrile	0.070	0.064	0.068	0.068	0.066	0.06819	3.6
Chloroprene	0.496	0.449	0.486	0.504	0.504	0.48186	8.6
o-Xylene	1.405	1.278	1.348	1.378	1.383	1.31817	5.7
p,m-Xylene	0.667	0.614	0.639	0.660	0.662	0.62646	6.5
=====							
Dibromofluoromethane(SURR)	0.251	0.253	0.265	0.233	0.258	0.25015	4.6
Toluene-d8(SURR)	0.913	0.895	0.938	0.849	0.949	0.89762	5
4-Bromofluorobenzene(SURR)	0.755	0.742	0.766	0.675	0.752	0.74076	4.5
1,2-Dichloroethane-d4(SURR)	0.063	0.060	0.064	0.057	0.063	0.06033	5.9

Average Used: 7.1

7SSC
VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.21409	0.21333	0.4	AVRG
Chloromethane	# 0.41739	0.38337	8.2	AVRG #
Vinyl chloride	* 0.29359	0.30212	2.9	AVRG *
Bromomethane	50	47.7	4.6	LINR
Chloroethane	0.16851	0.16843	0.0	AVRG
Trichlorofluoromethane	0.18832	0.19726	4.7	AVRG
1,1-Dichloroethene	* 0.38923	0.36686	5.7	AVRG *
Acrolein	0.03756	0.03119	17.0	AVRG
Methyl iodide	50	45.6	8.8	LINR
Carbon disulfide	0.54402	0.52191	4.1	AVRG
Methylene chloride	50	46.5	7.0	LINR
trans-1,2-Dichloroethene	0.40803	0.38198	6.4	AVRG
Acrylonitrile	0.16913	0.16823	0.5	AVRG
1,1-Dichloroethane	# 0.5721	0.52598	8.1	AVRG #
Acetone	0.18711	0.18187	2.8	AVRG
2-Butanone	0.24092	0.22377	7.1	AVRG
Chloroform	* 0.4841	0.45393	6.2	AVRG *
1,1,1-Trichloroethane	0.40255	0.38696	3.9	AVRG
Carbon tetrachloride	0.35594	0.34864	2.1	AVRG
Benzene	1.10914	1.008	9.1	AVRG
1,2-Dichloroethane	0.46077	0.41892	9.1	AVRG
Trichloroethene	0.30745	0.28515	7.3	AVRG
Vinyl acetate	1.14297	1.132	1.0	AVRG
1,2-Dichloropropane	* 0.34947	0.32933	5.8	AVRG *
Dibromomethane	0.19941	0.18732	6.1	AVRG
Bromodichloromethane	0.38943	0.35793	8.1	AVRG
cis-1,3-Dichloropropene	0.41572	0.40441	2.7	AVRG
4-Methyl-2-pentanone	0.17072	0.16963	0.6	AVRG
Toluene	* 0.70035	0.66666	4.8	AVRG *
trans-1,3-Dichloropropene	0.43112	0.4155	3.6	AVRG
Ethyl methacrylate	0.35575	0.346	2.7	AVRG
1,1,2-Trichloroethane	0.28945	0.26999	6.7	AVRG
Tetrachloroethene	0.31126	0.29415	5.5	AVRG
2-Hexanone	0.41895	0.41517	0.9	AVRG
Dibromochloromethane	0.37903	0.38076	0.5	AVRG
1,2-Dibromoethane	0.37301	0.35035	6.1	AVRG

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.05835	0.96341	9.0	AVRG #
1,1,1,2-Tetrachloroethane	0.38098	0.35425	7.0	AVRG
Ethylbenzene	* 0.50762	0.49389	2.7	AVRG *
Styrene	0.98073	0.95526	2.6	AVRG
Bromoform	# 0.29276	0.27986	4.4	AVRG #
1,1,2,2-Tetrachloroethane	# 0.89324	0.83143	6.9	AVRG #
1,2,3-Trichloropropane	0.27513	0.25651	6.8	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.16323	5.3	AVRG
1,4-Dichloro-2-butene	0.2047	0.19851	3.0	AVRG
Acetonitrile	0.10488	0.09601	8.5	AVRG
Allyl chloride	1.0628	0.96009	9.7	AVRG
1,4-Dioxane	0.00222	0.00249	12.2	AVRG
Isobutyl alcohol	0.00574	0.00473	17.6	AVRG
Methacrylonitrile	0.14078	0.13171	6.4	AVRG
Methyl methacrylate	0.20612	0.19451	5.6	AVRG
Propionitrile	0.06819	0.062	9.1	AVRG
Chloroprene	0.48186	0.46902	2.7	AVRG
o-Xylene	1.31817	1.278	3.0	AVRG
p,m-Xylene	0.62646	0.61501	1.8	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.24471	2.2	AVRG
Toluene-d8(SURR)	0.89762	0.87451	2.6	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.72689	1.9	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06094	1.0	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: VMS01 CalibrationDate: 05/02/12 Time: 1911
 CCV ID: CCV1076321 Lab File ID: 50CCV14.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type	
Dichlorodifluoromethane	0.21409	0.14049	34.4	AVRG	<-
Chloromethane	# 0.41739	0.35238	15.6	AVRG #	
Vinyl chloride	* 0.29359	0.27244	7.2	AVRG *	
Bromomethane	50	38.8	22.4	LINR	<-
Chloroethane	0.16851	0.16762	0.5	AVRG	
Trichlorofluoromethane	0.18832	0.21074	11.9	AVRG	
1,1-Dichloroethene	* 0.38923	0.4207	8.1	AVRG *	
Acrolein	0.03756	0.06147	63.7	AVRG	<-
Methyl iodide	50	48.7	2.6	LINR	
Carbon disulfide	0.54402	0.60022	10.3	AVRG	
Methylene chloride	50	52.4	4.8	LINR	
trans-1,2-Dichloroethene	0.40803	0.42092	3.2	AVRG	
Acrylonitrile	0.16913	0.19301	14.1	AVRG	
1,1-Dichloroethane	# 0.5721	0.51955	9.2	AVRG #	
Acetone	0.18711	0.17514	6.4	AVRG	
2-Butanone	0.24092	0.25543	6.0	AVRG	
Chloroform	* 0.4841	0.51636	6.7	AVRG *	
1,1,1-Trichloroethane	0.40255	0.44899	11.5	AVRG	
Carbon tetrachloride	0.35594	0.40854	14.8	AVRG	
Benzene	1.10914	1.085	2.2	AVRG	
1,2-Dichloroethane	0.46077	0.48938	6.2	AVRG	
Trichloroethene	0.30745	0.31511	2.5	AVRG	
Vinyl acetate	1.14297	1.208	5.7	AVRG	
1,2-Dichloropropane	* 0.34947	0.36001	3.0	AVRG *	
Dibromomethane	0.19941	0.22232	11.5	AVRG	
Bromodichloromethane	0.38943	0.41708	7.1	AVRG	
cis-1,3-Dichloropropene	0.41572	0.41432	0.3	AVRG	
4-Methyl-2-pentanone	0.17072	0.19176	12.3	AVRG	
Toluene	* 0.70035	0.71324	1.8	AVRG *	
trans-1,3-Dichloropropene	0.43112	0.44923	4.2	AVRG	
Ethyl methacrylate	0.35575	0.36029	1.3	AVRG	
1,1,2-Trichloroethane	0.28945	0.29747	2.8	AVRG	
Tetrachloroethene	0.31126	0.31319	0.6	AVRG	
2-Hexanone	0.41895	0.46247	10.4	AVRG	
Dibromochloromethane	0.37903	0.4252	12.2	AVRG	
1,2-Dibromoethane	0.37301	0.37901	1.6	AVRG	

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: VMS01 Calibration Date: 05/02/12 Time: 1911
 CCV ID: CCV1076321 Lab File ID: 50CCV14.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.05835	1.037	2.0	AVRG #
1,1,1,2-Tetrachloroethane	0.38098	0.39335	3.2	AVRG
Ethylbenzene	* 0.50762	0.50367	0.8	AVRG *
Styrene	0.98073	1.01	3.0	AVRG
Bromoform	# 0.29276	0.32203	10.0	AVRG #
1,1,2,2-Tetrachloroethane	# 0.89324	0.91211	2.1	AVRG #
1,2,3-Trichloropropane	0.27513	0.28226	2.6	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.19046	10.6	AVRG
1,4-Dichloro-2-butene	0.2047	0.1872	8.5	AVRG
Acetonitrile	0.10488	0.11633	10.9	AVRG
Allyl chloride	1.0628	1.163	9.4	AVRG
1,4-Dioxane	0.00222	0.00275	23.9	AVRG <-
Isobutyl alcohol	0.00574	0.00577	0.5	AVRG
Methacrylonitrile	0.14078	0.15095	7.2	AVRG
Methyl methacrylate	0.20612	0.21204	2.9	AVRG
Propionitrile	0.06819	0.08284	21.5	AVRG <-
Chloroprene	0.48186	0.49509	2.7	AVRG
o-Xylene	1.31817	1.326	0.6	AVRG
p,m-Xylene	0.62646	0.64016	2.2	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.28064	12.2	AVRG
Toluene-d8(SURR)	0.89762	0.97394	8.5	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.70809	4.4	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06692	10.9	AVRG

Average Used: 8.5

8270 SIM Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D.

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik **Title:** Lab Director

SIGNED:
04/30/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Method: 8270 SIM

EPA Sample No	Lab Sample ID
<u>TFS-MW-03</u>	<u>350579401</u>
<u>TFS-MW-06</u>	<u>350579402</u>
<u>TFS-MW-FD1</u>	<u>350579403</u>
<u>TFS-MW-15</u>	<u>350579404</u>
<u>TFS-MW-16</u>	<u>350579405</u>

8270 SIM Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1102

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1125

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.17		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.036	J	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.08		0.02	0.041	0.051
86-73-7	Fluorene	0.021	J	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.023	J	0.02	0.041	0.051
129-00-0	Pyrene	0.042	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1149

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.18		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.04	J	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.084		0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.024	J	0.02	0.041	0.051
85-01-8	Phenanthrene	0.025	J	0.02	0.041	0.051
129-00-0	Pyrene	0.044	J	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1213

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	2.8		0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	2		0.02	0.041	0.051
83-32-9	Acenaphthene	2.4		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.1		0.02	0.041	0.051
120-12-7	Anthracene	0.78		0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.18		0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.094		0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	2.3		0.02	0.041	0.051
86-73-7	Fluorene	3.4		0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	2.9		0.02	0.041	0.051
85-01-8	Phenanthrene	3.5		0.02	0.041	0.051
129-00-0	Pyrene	1.3		0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1237

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

8270 SIM QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW 127232MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127232MB Lab File ID: 9187MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/26/12 Time: 1244

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.04	U	0.02	0.04	0.05
91-57-6	2-Methylnaphthalene	0.04	U	0.02	0.04	0.05
83-32-9	Acenaphthene	0.04	U	0.02	0.04	0.05
208-96-8	Acenaphthylene	0.04	U	0.02	0.04	0.05
120-12-7	Anthracene	0.04	U	0.02	0.04	0.05
56-55-3	Benzo(a)anthracene	0.04	U	0.02	0.04	0.05
50-32-8	Benzo(a)pyrene	0.04	U	0.02	0.04	0.05
205-99-2	Benzo(b)fluoranthene	0.04	U	0.02	0.04	0.05
191-24-2	Benzo(g,h,i)perylene	0.04	U	0.02	0.04	0.05
207-08-9	Benzo(k)fluoranthene	0.04	U	0.02	0.04	0.05
218-01-9	Chrysene	0.04	U	0.02	0.04	0.05
53-70-3	Dibenzo(a,h)anthracene	0.04	U	0.02	0.04	0.04
206-44-0	Fluoranthene	0.04	U	0.02	0.04	0.05
86-73-7	Fluorene	0.04	U	0.02	0.04	0.05
193-39-5	Indeno(1,2,3-cd)pyrene	0.04	U	0.02	0.04	0.05
91-20-3	Naphthalene	0.04	U	0.02	0.04	0.05
85-01-8	Phenanthrene	0.04	U	0.02	0.04	0.05
129-00-0	Pyrene	0.04	U	0.02	0.04	0.05

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West / Boca Chica / MW S EPA Sample No. 127232MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Lab File ID: 9187MB.D Lab Sample ID: 127232MB

Instrument ID: SMSD01 Date Extracted: 04/25/12

Matrix: WATER Date Analyzed: 04/26/12

Level:(low/med) LOW Time Analyzed: 1244

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816
2	TFS-MW-03	350579401	79401.D	04/30/12	1102
3	TFS-MW-06	350579402	79402.D	04/30/12	1125
4	TFS-MW-FD1	350579403	79403.D	04/30/12	1149
5	TFS-MW-15	350579404	79404.D	04/30/12	1213
6	TFS-MW-16	350579405	79405.D	04/30/12	1237

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/10/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0708
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.8
68	Less than 2.0% of mass 69	0.7 (1.64)1
69	Mass 69 relative abundance	44
70	Less than 2.0% of mass 69	0.3 (0.69)1
127	10.0 - 80.0% of mass 198	50.5
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.2
365	Greater than 1.0% of mass 198	3.2
441	0.0 - 24.0% of mass 442	8.7 (14.62)2
442	Greater than 50.0% of mass 198	59.6
443	15.0 - 24.0% of mass 442	11.4 (19.16)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1068090	45403	SIMCAL1.D	04/10/12	0755
2	STD1068089	45402	SIMCAL2.D	04/10/12	0819
3	STD1068088	45401	SIMCAL3.D	04/10/12	0843
4	STD1068087	45400	SIMCAL4.D	04/10/12	0906
5	STD1068086	45399	SIMCAL5.D	04/10/12	0930
6	STD1068091	45772	SIMCAL6.D	04/10/12	0954
7	STD1068085	45397	SIMCAL7.D	04/10/12	1017
8	STD1068084	45396	SIMCAL8.D	04/10/12	1041
9	STD1068094	45779	SIMCAL9R.D	04/10/12	1153
10	STD1068095	45782	SIMCAL10R.	04/10/12	1216
11	SSC1068079	44830	SIMSECA.D	04/10/12	1240

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/26/12
 Instrument ID: SMSD01 DFTPP Injection Time: 1043
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.4
68	Less than 2.0% of mass 69	0.6 (1.38)1
69	Mass 69 relative abundance	43.8
70	Less than 2.0% of mass 69	0.2 (0.43)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	28.1
365	Greater than 1.0% of mass 198	3.7
441	0.0 - 24.0% of mass 442	10.5 (14.56)2
442	Greater than 50.0% of mass 198	72.1
443	15.0 - 24.0% of mass 442	13.8 (19.07)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073972	45886	SIMCCV2.D	04/26/12	1127
2	127232MB	127232MB	9187MB.D	04/26/12	1244

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/27/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0705
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.3
68	Less than 2.0% of mass 69	0.7 (1.81)1
69	Mass 69 relative abundance	38.5
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	10.0 - 80.0% of mass 198	47.7
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	29.9
365	Greater than 1.0% of mass 198	4.2
441	0.0 - 24.0% of mass 442	13.4 (14.62)2
442	Greater than 50.0% of mass 198	91.9
443	15.0 - 24.0% of mass 442	17.3 (18.79)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073979	45886	SIMCCV2.D	04/27/12	0748
2	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/30/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0732
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	29
68	Less than 2.0% of mass 69	0.6 (1.65) ¹
69	Mass 69 relative abundance	39.2
70	Less than 2.0% of mass 69	0.2 (0.59) ¹
127	10.0 - 80.0% of mass 198	47.9
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	30.1
365	Greater than 1.0% of mass 198	3.9
441	0.0 - 24.0% of mass 442	12.9 (14.51) ²
442	Greater than 50.0% of mass 198	88.8
443	15.0 - 24.0% of mass 442	17.1 (19.3) ²

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1074880	45886	SIMCCV2.D	04/30/12	0849
2	TFS-MW-03	350579401	79401.D	04/30/12	1102
3	TFS-MW-06	350579402	79402.D	04/30/12	1125
4	TFS-MW-FD1	350579403	79403.D	04/30/12	1149
5	TFS-MW-15	350579404	79404.D	04/30/12	1213
6	TFS-MW-16	350579405	79405.D	04/30/12	1237

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	21723	4.34	83567	5.48	49021	7.18
UPPER LIMIT	43446	4.84	167134	5.98	98042	7.68
LOWER LIMIT	10861.5	3.84	41783.5	4.98	24510.5	6.68
EPA SAMPLE NO.						
1 127232MB	21581	4.28	77330	5.44	46861	7.13
2 127233LCS	23027	4.28	82721	5.44	50162	7.12
3 TFS-MW-03	19680	4.28	74375	5.44	44957	7.12
4 TFS-MW-06	20402	4.28	74297	5.43	45529	7.12
5 TFS-MW-FD1	19886	4.28	72790	5.43	44826	7.12
6 TFS-MW-15	18675	4.28	120948	5.44	42868	7.12
7 TFS-MW-16	18917	4.28	77013	5.43	42391	7.12

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT	
MID CAL STD	83459	8.63	88087	11.22	84480	12.53	
UPPER LIMIT	166918	9.13	176174	11.72	168960	13.03	
LOWER LIMIT	41729.5	8.13	44043.5	10.72	42240	12.03	
EPA SAMPLE NO.							
1	127232MB	87448	8.58	98731	11.17	86313	12.48
2	127233LCS	99161	8.58	114873	11.17	102928	12.48
3	TFS-MW-03	89046	8.58	103928	11.17	98394	12.48
4	TFS-MW-06	92132	8.58	112490	11.17	107013	12.48
5	TFS-MW-FD1	90962	8.58	109547	11.17	104442	12.48
6	TFS-MW-15	89826	8.58	108817	11.17	104804	12.48
7	TFS-MW-16	84853	8.57	105926	11.17	102119	12.48

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
			S1	S2		
			10.19	6.52		
CLIENT	LAB	LAB	DATE	TIME	S1	S2
SAMPLE NO	SAMPLE ID	FILE ID	ANALYZED	ANALYZED	RT	RT
					#	#
1	DFTPP1	44847	DFTPP1.D	04/10/12	0708	
2	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	0732	
3	STD1068090	45403	SIMCAL1.D	04/10/12	0755	10.22 6.57
4	STD1068089	45402	SIMCAL2.D	04/10/12	0819	10.21 6.55
5	STD1068088	45401	SIMCAL3.D	04/10/12	0843	10.21 6.55
6	STD1068087	45400	SIMCAL4.D	04/10/12	0906	10.21 6.56
7	STD1068086	45399	SIMCAL5.D	04/10/12	0930	10.2 6.54
8	STD1068091	45772	SIMCAL6.D	04/10/12	0954	10.19 6.52
9	STD1068085	45397	SIMCAL7.D	04/10/12	1017	10.19 6.52
10	STD1068084	45396	SIMCAL8.D	04/10/12	1041	10.19 6.52
11	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1105	
12	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1129	
13	STD1068094	45779	SIMCAL9R.D	04/10/12	1153	10.19 6.51
14	STD1068095	45782	SIMCAL10R.D	04/10/12	1216	10.19 6.51
15	SSC1068079	44830	SIMSECA.D	04/10/12	1240	10.19 6.52
16	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1304	
17	DFTPP1	45777	DFTPP1.D	04/26/12	1043	
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1104	
19	CCV1073972	45886	SIMCCV2.D	04/26/12	1127	10.14 6.47
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1157	
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1221	
22	127232MB	127232MB	9187MB.D	04/26/12	1244	10.14 6.48
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1308	
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1332	
25	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1356	
26	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1420	

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	04/26/12	1444		
28	ZZZZZZ	ZZZZZZ	04/26/12	1508		
29	ZZZZZZ	ZZZZZZ	04/26/12	1532		
30	ZZZZZZ	ZZZZZZ	04/26/12	1556		
31	ZZZZZZ	ZZZZZZ	04/26/12	1620		
32	ZZZZZZ	ZZZZZZ	04/26/12	1644		
33	ZZZZZZ	ZZZZZZ	04/26/12	1708		
34	ZZZZZZ	ZZZZZZ	04/26/12	1732		
35	ZZZZZZ	ZZZZZZ	04/26/12	1756		
36	ZZZZZZ	ZZZZZZ	04/26/12	1820		
37	ZZZZZZ	ZZZZZZ	04/26/12	1844		
38	ZZZZZZ	ZZZZZZ	04/26/12	1908		
39	ZZZZZZ	ZZZZZZ	04/26/12	1932		
40	ZZZZZZ	ZZZZZZ	04/26/12	1956		
41	ZZZZZZ	ZZZZZZ	04/26/12	2020		
42	ZZZZZZ	ZZZZZZ	04/26/12	2043		
43	ZZZZZZ	ZZZZZZ	04/26/12	2107		
44	ZZZZZZ	ZZZZZZ	04/26/12	2131		
45	ZZZZZZ	ZZZZZZ	04/26/12	2155		
46	ZZZZZZ	ZZZZZZ	04/26/12	2219		
47	ZZZZZZ	ZZZZZZ	04/26/12	2243		
48	ZZZZZZ	ZZZZZZ	04/26/12	2306		
49	DFTPP1	45777	DFTPP1.D	04/27/12	0705	
50	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	0725	
51	CCV1073979	45886	SIMCCV2.D	04/27/12	0748	10.14 6.47
52	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816	10.14 6.48

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
53	ZZZZZZ	ZZZZZZ	04/27/12	0840		
54	ZZZZZZ	ZZZZZZ	04/27/12	0903		
55	ZZZZZZ	ZZZZZZ	04/27/12	0927		
56	ZZZZZZ	ZZZZZZ	04/27/12	0951		
57	ZZZZZZ	ZZZZZZ	04/27/12	1015		
58	ZZZZZZ	ZZZZZZ	04/27/12	1039		
59	ZZZZZZ	ZZZZZZ	04/27/12	1103		
60	ZZZZZZ	ZZZZZZ	04/27/12	1127		
61	ZZZZZZ	ZZZZZZ	04/27/12	1151		
62	ZZZZZZ	ZZZZZZ	04/27/12	1214		
63	ZZZZZZ	ZZZZZZ	04/27/12	1238		
64	ZZZZZZ	ZZZZZZ	04/27/12	1302		
65	ZZZZZZ	ZZZZZZ	04/27/12	1326		
66	ZZZZZZ	ZZZZZZ	04/27/12	1350		
67	ZZZZZZ	ZZZZZZ	04/27/12	1414		
68	ZZZZZZ	ZZZZZZ	04/27/12	1438		
69	ZZZZZZ	ZZZZZZ	04/27/12	1502		
70	ZZZZZZ	ZZZZZZ	04/27/12	1532		
71	ZZZZZZ	ZZZZZZ	04/27/12	1557		
72	ZZZZZZ	ZZZZZZ	04/27/12	1621		
73	ZZZZZZ	ZZZZZZ	04/27/12	1645		
74	ZZZZZZ	ZZZZZZ	04/27/12	1710		
75	ZZZZZZ	ZZZZZZ	04/27/12	1735		
76	ZZZZZZ	ZZZZZZ	04/27/12	1759		
77	ZZZZZZ	ZZZZZZ	04/27/12	1824		
78	ZZZZZZ	ZZZZZZ	04/27/12	1848		

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
79	ZZZZZZ	ZZZZZZ	04/30/12	0715		
80	DFTPP2	45778	04/30/12	0732		
81	ZZZZZZ	ZZZZZZ	04/30/12	0752		
82	CCV1074880	45886	04/30/12	0849	10.14	6.47
83	ZZZZZZ	ZZZZZZ	04/30/12	0926		
84	ZZZZZZ	ZZZZZZ	04/30/12	0950		
85	ZZZZZZ	ZZZZZZ	04/30/12	1014		
86	ZZZZZZ	ZZZZZZ	04/30/12	1038		
87	TFS-MW-03	350579401	79401.D	04/30/12	1102	10.14 6.47
88	TFS-MW-06	350579402	79402.D	04/30/12	1125	10.14 6.47
89	TFS-MW-FD1	350579403	79403.D	04/30/12	1149	10.14 6.47
90	TFS-MW-15	350579404	79404.D	04/30/12	1213	10.14 6.47
91	TFS-MW-16	350579405	79405.D	04/30/12	1237	10.14 6.47
92	ZZZZZZ	ZZZZZZ	04/30/12	1301		
93	ZZZZZZ	ZZZZZZ	04/30/12	1325		
94	ZZZZZZ	ZZZZZZ	04/30/12	1349		
95	ZZZZZZ	ZZZZZZ	04/30/12	1413		
96	ZZZZZZ	ZZZZZZ	04/30/12	1437		
97	ZZZZZZ	ZZZZZZ	04/30/12	1501		
98	ZZZZZZ	ZZZZZZ	04/30/12	1525		
99	ZZZZZZ	ZZZZZZ	04/30/12	1550		

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127233LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.5	0.4	80.0			68 - 115
2-Methylnaphthalene	0.5	0.49	98.0			47 - 121
Acenaphthene	0.5	0.42	84.0			64 - 110
Acenaphthylene	0.5	0.47	94.0			45 - 115
Anthracene	0.5	0.4	80.0			61 - 108
Benzo(a)anthracene	0.5	0.52	104.0			53 - 110
Benzo(a)pyrene	0.5	0.52	104.0			55 - 109
Benzo(b)fluoranthene	0.5	0.5	100.0			65 - 110
Benzo(g,h,i)perylene	0.5	0.43	86.0			68 - 115
Benzo(k)fluoranthene	0.5	0.43	86.0			70 - 111
Chrysene	0.5	0.36	72.0			71 - 115
Dibenzo(a,h)anthracene	0.5	0.49	98.0			60 - 104
Fluoranthene	0.5	0.45	90.0			63 - 114
Fluorene	0.5	0.47	94.0			59 - 120
Indeno(1,2,3-cd)pyrene	0.5	0.45	90.0			66 - 110
Naphthalene	0.5	0.45	90.0			68 - 125
Phenanthrene	0.5	0.43	86.0			31 - 147
Pyrene	0.5	0.4	80.0			59 - 120

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8270 SIM Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

LAB FILE ID: RRF0.02 =SIMCAL1.D RRF0.05 =SIMCAL2.D							
RRF0.07 =SIMCAL3.D RRF0.1 =SIMCAL4.D RRF0.2 =SIMCAL5.D							
COMPOUND	RRF0.02	RRF0.05	RRF0.07	RRF0.1	RRF0.2	RRF	%RSD OR R^2
1-Methylnaphthalene	0.864	0.846	0.799	0.826	0.808		
2-Methylnaphthalene	0.537	0.553	0.533	0.544	0.571		
Acenaphthene	* 1.238	1.225	1.247	1.233	1.191		*
Acenaphthylene	1.591	1.614	1.557	1.570	1.552		
Anthracene	0.746	0.662	0.721	0.740	0.785		
Benzo(a)anthracene	0.640	0.622	0.639	0.638	0.653		
Benzo(a)pyrene	* 0.667	0.675	0.669	0.714	0.751		*
Benzo(b)fluoranthene	0.764	0.771	0.805	0.800	0.799		
Benzo(g,h,i)perylene	1.041	1.020	1.048	1.042	1.040		
Benzo(k)fluoranthene	1.573	1.459	1.428	1.459	1.476		
Chrysene	1.470	1.350	1.429	1.387	1.351		
Dibenzo(a,h)anthracene	0.755	0.832	0.847	0.915	0.877		
Fluoranthene	* 1.120	0.981	0.947	0.961	1.068		*
Fluorene	1.119	1.220	1.125	1.166	1.129		
Indeno(1,2,3-cd)pyrene	0.996	1.113	1.128	1.135	1.142		
Naphthalene	1.077	1.034	1.028	1.050	1.046		
Phenanthrene	0.943	0.901	0.902	0.902	0.971		
Pyrene	1.197	1.121	1.178	1.149	1.093		
=====							
p-Terphenyl-d14(SURR)	0.765	0.729	0.765	0.765	0.757		
2-Fluorobiphenyl(SURR)	1.341	1.337	1.289	1.421	1.345		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

COMPOUND	RRF0.5	RRF0.7	RRF1	RRF5	RRF10	RRF	%RSD OR R^2
LAB FILE ID: RRF0.5 =SIMCAL6.D RRF0.7 =SIMCAL7.D							
RRF1 =SIMCAL8.D RRF5 =SIMCAL9R.D RRF10 =SIMCAL10R.D							
1-Methylnaphthalene	0.800	0.742	0.787	0.715	0.731	0.79195	6.2
2-Methylnaphthalene	0.650	0.652	0.714	0.760	0.752	0.62663	14.5
Acenaphthene *	1.232	1.222	1.214	1.308	1.268	1.2378	2.6 *
Acenaphthylene	1.663	1.645	1.670	1.883	1.894	1.66378	7.5
Anthracene	0.797	0.796	0.810	0.898	0.910	0.78632	9.7
Benzo(a)anthracene	0.742	0.791	0.737	0.907		0.70768	13.5
Benzo(a)pyrene *	0.837	0.849	0.899	0.994		0.78373	14.9 *
Benzo(b)fluoranthene	0.938	0.894	0.927	1.118	1.107	0.89235	14.8
Benzo(g,h,i)perylene	1.199	1.138	1.195	1.431	1.235	1.13896	11.4
Benzo(k)fluoranthene	1.523	1.532	1.568	1.564	1.580	1.51612	3.7
Chrysene	1.485	1.415	1.390	1.209	1.153	1.3637	7.8
Dibenzo(a,h)anthracene	0.995	1.022	1.061	1.209		0.94593	14.7
Fluoranthene *	1.124	1.100	1.164	1.272	1.291	1.10271	10.8 *
Fluorene	1.190	1.156	1.240	1.392	1.377	1.21143	8.2
Indeno(1,2,3-cd)pyrene	1.233	1.230	1.271	1.422	1.453	1.21234	11.7
Naphthalene	1.071	1.044	1.120	1.037	1.055	1.05605	2.6
Phenanthrene	1.013	1.007	1.062	1.135	1.137	0.99734	9.1
Pyrene	1.103	1.132	1.070	1.075	1.065	1.11802	4.1
=====							
p-Terphenyl-d14(SURR)	0.795	0.769	0.736	0.744	0.746	0.75703	2.5
2-Fluorobiphenyl(SURR)	1.290	1.301	1.321	1.480	1.458	1.35833	5.1

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD01 Calibration Date: 04/10/12 Time: 1240
 CCV ID: SSC1068079 Lab File ID: SIMSECA.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.63707	19.6	AVRG
2-Methylnaphthalene	0.62663	0.62039	1.0	AVRG
Acenaphthene	* 1.2378	1.09	11.9	AVRG *
Acenaphthylene	1.66378	1.598	4.0	AVRG
Anthracene	0.78632	0.88909	13.1	AVRG
Benzo(a)anthracene	0.70768	0.80755	14.1	AVRG
Benzo(a)pyrene	* 0.78373	0.80289	2.4	AVRG *
Benzo(b)fluoranthene	0.89235	0.89937	0.8	AVRG
Benzo(g,h,i)perylene	1.13896	0.98912	13.2	AVRG
Benzo(k)fluoranthene	1.51612	1.348	11.1	AVRG
Chrysene	1.3637	1.125	17.5	AVRG
Dibenzo(a,h)anthracene	0.94593	0.89933	4.9	AVRG
Fluoranthene	* 1.10271	0.99771	9.5	AVRG *
Fluorene	1.21143	1.161	4.2	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.095	9.7	AVRG
Naphthalene	1.05605	0.96598	8.5	AVRG
Phenanthrene	0.99734	0.96523	3.2	AVRG
Pyrene	1.11802	1.064	4.8	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.72078	4.8	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.276	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD01 Calibration Date: 04/26/12 Time: 1127
 CCV ID: CCV1073972 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.70076	11.5	AVRG
2-Methylnaphthalene	0.62663	0.69265	10.5	AVRG
Acenaphthene	* 1.2378	1.205	2.6	AVRG *
Acenaphthylene	1.66378	1.82	9.4	AVRG
Anthracene	0.78632	0.77535	1.4	AVRG
Benzo(a)anthracene	0.70768	0.82897	17.1	AVRG
Benzo(a)pyrene	* 0.78373	0.87726	11.9	AVRG *
Benzo(b)fluoranthene	0.89235	0.92508	3.7	AVRG
Benzo(g,h,i)perylene	1.13896	1.081	5.1	AVRG
Benzo(k)fluoranthene	1.51612	1.44	5.0	AVRG
Chrysene	1.3637	1.114	18.3	AVRG
Dibenzo(a,h)anthracene	0.94593	0.94737	0.2	AVRG
Fluoranthene	* 1.10271	1.163	5.5	AVRG *
Fluorene	1.21143	1.291	6.6	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.172	3.3	AVRG
Naphthalene	1.05605	1.029	2.6	AVRG
Phenanthrene	0.99734	1.035	3.8	AVRG
Pyrene	1.11802	1.011	9.6	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.68614	9.4	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.486	9.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD01 CalibrationDate: 04/27/12 Time: 0748
 CCV ID: CCV1073979 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.71886	9.2	AVRG
2-Methylnaphthalene	0.62663	0.69046	10.2	AVRG
Acenaphthene	* 1.2378	1.205	2.6	AVRG *
Acenaphthylene	1.66378	1.818	9.3	AVRG
Anthracene	0.78632	0.77781	1.1	AVRG
Benzo(a)anthracene	0.70768	0.83305	17.7	AVRG
Benzo(a)pyrene	* 0.78373	0.90894	16.0	AVRG *
Benzo(b)fluoranthene	0.89235	1.027	15.1	AVRG
Benzo(g,h,i)perylene	1.13896	1.145	0.5	AVRG
Benzo(k)fluoranthene	1.51612	1.381	8.9	AVRG
Chrysene	1.3637	1.104	19.0	AVRG
Dibenzo(a,h)anthracene	0.94593	1.046	10.6	AVRG
Fluoranthene	* 1.10271	1.194	8.3	AVRG *
Fluorene	1.21143	1.301	7.4	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.268	4.6	AVRG
Naphthalene	1.05605	1.034	2.1	AVRG
Phenanthrene	0.99734	1.016	1.9	AVRG
Pyrene	1.11802	0.98743	11.7	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.68271	9.8	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.492	9.8	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD01 CalibrationDate: 04/30/12 Time: 0849
 CCV ID: CCV1074880 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.7322	7.5	AVRG
2-Methylnaphthalene	0.62663	0.69384	10.7	AVRG
Acenaphthene	* 1.2378	1.197	3.3	AVRG *
Acenaphthylene	1.66378	1.847	11.0	AVRG
Anthracene	0.78632	0.75092	4.5	AVRG
Benzo(a)anthracene	0.70768	0.83032	17.3	AVRG
Benzo(a)pyrene	* 0.78373	0.91663	17.0	AVRG *
Benzo(b)fluoranthene	0.89235	1.049	17.6	AVRG
Benzo(g,h,i)perylene	1.13896	1.082	5.0	AVRG
Benzo(k)fluoranthene	1.51612	1.327	12.5	AVRG
Chrysene	1.3637	1.123	17.7	AVRG
Dibenzo(a,h)anthracene	0.94593	0.90512	4.3	AVRG
Fluoranthene	* 1.10271	1.131	2.6	AVRG *
Fluorene	1.21143	1.292	6.7	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.152	5.0	AVRG
Naphthalene	1.05605	1.017	3.7	AVRG
Phenanthrene	0.99734	0.94728	5.0	AVRG
Pyrene	1.11802	0.98839	11.6	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.67979	10.2	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.474	8.5	AVRG

8270 Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: The following samples were re-prepped out of hold: TFS-MW-03RE1, TFS-MW-06RE1, TFS-MW-15RE1, TFS-MW-16RE1, TFS-MW-FD1RE1. The samples were originally extracted within hold, but were re-extracted due to LCS/LCSD recovery failures. Both analyses are reported.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyrilone (+1425%), 1,3,5-Trinitrobenzene (-43.6%). No further action was taken, since these compounds were not detected in any samples and were a result of a discrepancy between the primary and secondary standards. The secondary standard also used to spike the LCS and MS/MSD. Because of this difference, Methapyrilone exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since this compound was on the high side and was not detected in any samples.

CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepon (-27.4%). This

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met with the exception of:

Sample TFS-MW-15 was recovered below criteria for the following surrogate: Phenol-d5 at 7.5 % with criteria of (10-115). The sample was re-extracted (TFS-MW-15RE1) and was recovered below criteria for the following surrogate: Phenol-d5 at 7 % with criteria of (10-115). This sample contained a large concentration of non-target compounds, which likely interfered with surrogate recovery.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:

LCS 127054LCS was analyzed with the water samples extracted on 04/24/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 9.2 % with criteria of (28-143), a,a-Dimethylphenethylamine at 68.2 % with criteria of (70-130) and the following analytes were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 99 % with criteria of (57-95), Diallate (Avadex) at 103 % with criteria of (56-98), Isodrin at 118 % with criteria of (54-110), Safrole at 108 % with criteria of (52-100). The following analytes had marginal exceedance limit failures: 2-Naphthylamine at 47.2 % with criteria of (60-140), Hexachloropropene at 0 % with criteria of (7-119), Methapyriline at 1560 % with criteria of (0-105), Pentachloronitrobenzene(PCNB) at 112 % with criteria of (52.7-111.3), p-Phenylenediamine at 120 % with criteria of (49.8-115.2), Pronamide at 117 % with criteria of (52.3-105.7).

LCS 127055LCS was analyzed with the water samples extracted on 04/24/12. The following analytes were recovered above criteria: 1,3-Dinitrobenzene at 114 % with criteria of (61-112), Isophorone at 115 % with criteria of (50-110), Pentachloroethane at 100 % with criteria of (27-99), Phenacetin at 116 % with criteria of (57-114), Safrole at 106 % with criteria of (52-100). The following analyte exceeded RPD criteria: a,a-Dimethylphenethylamine at 200 % with criteria of (20). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 8.8 % with criteria of (8.83-162.2), 2-Naphthylamine at 49.8 % with criteria of (60-140), 7,12-Dimethylbenz(a)anthracene at 105 % with

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

criteria of (50.7-101.3), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Diallate (Avadex) at 112 % with criteria of (49-105), Hexachloropropene at 0 % with criteria of (7-119), Isodrin at 120 % with criteria of (44.7-119.3), Methapyriline at 1280 % with criteria of (0-105), Pentachloronitrobenzene(PCNB) at 114 % with criteria of (52.7-111.3), p-Phenylenediamine at 122 % with criteria of (49.8-115.2), Pronamide at 117 % with criteria of (52.3-105.7).

LCS 128810LCS was analyzed with the water samples re-extracted on 05/03/12. The following analytes were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 96.2 % with criteria of (57-95), Isophorone at 117 % with criteria of (50-110), Pentachloronitrobenzene(PCNB) at 108 % with criteria of (60-104), Pentachlorophenol at 120 % with criteria of (40-115). The following analytes had marginal exceedance limit failures: 1-Naphthylamine at 110 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140).

LCS 128811LCSD was analyzed with the water samples extracted on 05/03/12. The following analytes was recovered below criteria: p-Dimethylaminoazobenzene at 68.2 % with criteria of (70-130). The following analytes exceeded RPD criteria: 1,2-Dichlorobenzene at 23 % with criteria of (20), 1,3-Dichlorobenzene at 21.4 % with criteria of (20), 2-Picoline at 32 % with criteria of (20), Hexachlorocyclopentadiene at 20.6 % with criteria of (20), Methapyriline at 108.6 % with criteria of (20), Pyridine at 21.8 % with criteria of (20). The following analyte had marginal exceedance limit failures: 1-Naphthylamine at 108 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Methapyriline at 275 % with criteria of (0-105).

None of the above compounds that failed LCS/LCSD criteria were detected in any samples. Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:
05/04/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Method: 8270

EPA Sample No	Lab Sample ID
<u>TFS-MW-03</u>	<u>350579401</u>
<u>TFS-MW-03RE1</u>	<u>350579401RE1</u>
<u>TFS-MW-06</u>	<u>350579402</u>
<u>TFS-MW-06RE1</u>	<u>350579402RE1</u>
<u>TFS-MW-FD1</u>	<u>350579403</u>
<u>TFS-MW-FD1RE1</u>	<u>350579403RE1</u>
<u>TFS-MW-15</u>	<u>350579404</u>
<u>TFS-MW-15RE1</u>	<u>350579404RE1</u>
<u>TFS-MW-16</u>	<u>350579405</u>
<u>TFS-MW-16RE1</u>	<u>350579405RE1</u>

8270 Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 79401.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1315

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-03RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401RE1 Lab File ID 79401RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2135

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 79402.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1228

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-06RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402RE1 Lab File ID 79402RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2159

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 79403.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1252

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403RE1 Lab File ID 79403RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2222

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 79404.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1339

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15RE1

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-15RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404RE1 Lab File ID 79404RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2246

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 79405.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1402

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16RE1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-16RE1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405RE1 Lab File ID 79405RE.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 2309

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

8270 QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127053MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127053MB Lab File ID: 9170MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/24/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 0918

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.2	U	2.1	4.2	4.2
62-75-9	N-Nitrosodimethylamine	4.4	U	2.2	4.4	4.4
62-53-3	Aniline	5.6	U	2.8	5.6	5.6
111-44-4	Bis(2-chloroethyl)ether	6	U	3	6	6
108-95-2	Phenol	3.4	U	1.7	3.4	4
95-57-8	2-Chlorophenol	5.8	U	2.9	5.8	5.8
541-73-1	1,3-Dichlorobenzene	5.4	U	2.7	5.4	5.4
106-46-7	1,4-Dichlorobenzene	5.4	U	2.7	5.4	5.4
95-50-1	1,2-Dichlorobenzene	5.2	U	2.6	5.2	5.2
100-51-6	Benzyl alcohol	6.2	U	3.1	6.2	10
108-60-1	2,2'-Oxybis(1-chloropropane)	6.6	U	3.3	6.6	6.6
95-48-7	2-Methylphenol	5.2	U	2.6	5.2	5.2
67-72-1	Hexachloroethane	5.2	U	2.6	5.2	5.2
621-64-7	N-Nitroso-di-n-propylamine	6	U	3	6	6
106-44-5	4-Methylphenol	12.2	U	6.1	12.2	12.2
98-95-3	Nitrobenzene	2	U	1	2	4
78-59-1	Isophorone	7.6	U	3.8	7.6	7.6
88-75-5	2-Nitrophenol	1.5	U	0.77	1.5	4
105-67-9	2,4-Dimethylphenol	4.6	U	2.3	4.6	4.6
111-91-1	Bis(2-chloroethoxy)methane	7	U	3.5	7	7
120-83-2	2,4-Dichlorophenol	6.2	U	3.1	6.2	6.2
120-82-1	1,2,4-Trichlorobenzene	5.2	U	2.6	5.2	5.2
106-47-8	4-Chloroaniline	6	U	3	6	6
87-68-3	Hexachlorobutadiene	5	U	2.5	5	5
59-50-7	4-Chloro-3-methylphenol	5.4	U	2.7	5.4	5.4
77-47-4	Hexachlorocyclopentadiene	1.6	U	0.82	1.6	4
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.84	1.7	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127053MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127053MB Lab File ID: 9170MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/24/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 0918

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	6.8	U	3.4	6.8	6.8
91-58-7	2-Chloronaphthalene	5.6	U	2.8	5.6	5.6
88-74-4	2-Nitroaniline	6	U	3	6	6
131-11-3	Dimethylphthalate	6	U	3	6	6
606-20-2	2,6-Dinitrotoluene	5.6	U	2.8	5.6	5.6
99-09-2	3-Nitroaniline	5.6	U	2.8	5.6	5.6
51-28-5	2,4-Dinitrophenol	11.2	U	5.6	11.2	20
132-64-9	Dibenzofuran	5.4	U	2.7	5.4	5.4
121-14-2	2,4-Dinitrotoluene	5.6	U	2.8	5.6	5.6
100-02-7	4-Nitrophenol	8	U	4	8	8
7005-72-3	4-Chlorophenyl-phenylether	5	U	2.5	5	5
84-66-2	Diethylphthalate	5.6	U	2.8	5.6	5.6
100-01-6	4-Nitroaniline	3	U	1.5	3	4
534-52-1	4,6-Dinitro-2-methylphenol	8	U	4	8	8
86-30-6	N-Nitrosodiphenylamine	6.8	U	3.4	6.8	6.8
101-55-3	4-Bromophenyl-phenylether	4.6	U	2.3	4.6	4.6
118-74-1	Hexachlorobenzene	0.82	U	0.41	0.82	4
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10
84-74-2	Di-n-butylphthalate	1.7	U	0.86	1.7	4
85-68-7	Butylbenzylphthalate	6	U	3	6	6
91-94-1	3,3'-Dichlorobenzidine	5.4	U	2.7	5.4	5.4
117-81-7	Bis(2-ethylhexyl)phthalate	8.8	U	4.4	8.8	8.8
117-84-0	Di-n-octylphthalate	4	U	2	4	4
109-06-8	2-Picoline	8	U	4	8	8
10595-95-6	N-Nitrosomethylethylamine	5.4	U	2.7	5.4	5.4
55-18-5	N-Nitrosodiethylamine	6.2	U	3.1	6.2	6.2
66-27-3	Methylmethanesulfonate	3.8	U	1.9	3.8	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW 127053MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127053MB Lab File ID: 9170MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/24/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 0918

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	5	U	2.5	5	5
76-01-7	Pentachloroethane	5	U	2.5	5	20
930-55-2	N-Nitrosopyrrolidine	5.4	U	2.7	5.4	5.4
98-86-2	Acetophenone	8	U	4	8	8
59-89-2	N-Nitrosomorpholine	6	U	3	6	6
95-53-4	o-Toluidine	5.4	U	2.7	5.4	5.4
122-09-8	a,a-Dimethylphenethylamine	32	U	16	32	32
87-65-0	2,6-Dichlorophenol	7	U	3.5	7	7
1888-71-7	Hexachloropropene	4	U	2	4	4
924-16-3	N-Nitrosodibutylamine	5.4	U	2.7	5.4	5.4
120-58-1	Isosafrole	5.2	U	2.6	5.2	5.2
95-94-3	1,2,4,5-Tetrachlorobenzene	4.4	U	2.2	4.4	4.4
94-59-7	Safrole	5	U	2.5	5	5
130-15-4	1,4-Naphthoquinone	6.2	U	3.1	6.2	6.2
99-65-0	1,3-Dinitrobenzene	5	U	2.5	5	5
608-93-5	Pentachlorobenzene	4.4	U	2.2	4.4	4.4
134-32-7	1-Naphthylamine	3.6	U	1.8	3.6	4
91-59-8	2-Naphthylamine	5	U	2.5	5	5
58-90-2	2,3,4,6-Tetrachlorophenol	6	U	3	6	6
99-55-8	5-Nitro-o-toluidine	5.2	U	2.6	5.2	5.2
106-50-3	p-Phenylenediamine	4	U	2	4	4
62-44-2	Phenacetin	1.8	U	0.89	1.8	4
92-67-1	4-Aminobiphenyl	4	U	2	4	4
23950-58-5	Pronamide	1.6	U	0.81	1.6	4
82-68-8	Pentachloronitrobenzene(PCNB)	4	U	2	4	4
88-85-7	Dinoseb	8	U	4	8	8
56-57-5	4-Nitroquinoline-1-oxide	7.4	U	3.7	7.4	10

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127053MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127053MB Lab File ID: 9170MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/24/12

Concentrated Extract Volume: 1 Date Extracted: 04/24/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 0918

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	4.4	U	2.2	4.4	4.4
140-57-8	Aramite	8	U	4	8	8
60-11-7	p-Dimethylaminoazobenzene	1.2	U	0.62	1.2	4
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4
57-97-6	7,12-Dimethylbenz(a)anthracene	1.9	U	0.96	1.9	4
56-49-5	3-Methylcholanthrene	4.4	U	2.2	4.4	4.4
100-75-4	N-Nitrosopiperidine	5.6	U	2.8	5.6	5.6
99-35-4	1,3,5-Trinitrobenzene	4	U	2	4	4
2303-16-4	Diallate (Avadex)	1.7	U	0.84	1.7	4
465-73-6	Isodrin	5.2	U	2.6	5.2	5.2
510-15-6	Chlorobenzilate	1.6	U	0.78	1.6	4
143-50-0	Kepone	32	U	16	32	32
126-68-1	0,0,0-Triethylphosphorothioate	5.8	U	2.9	5.8	5.8

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128809MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 128809MB Lab File ID: 9295MB.D

Sample wt/vol: 1000 Units: ML Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1711

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.2	U	2.1	4.2	4.2
62-75-9	N-Nitrosodimethylamine	4.4	U	2.2	4.4	4.4
62-53-3	Aniline	5.6	U	2.8	5.6	5.6
111-44-4	Bis(2-chloroethyl)ether	6	U	3	6	6
108-95-2	Phenol	3.4	U	1.7	3.4	4
95-57-8	2-Chlorophenol	5.8	U	2.9	5.8	5.8
541-73-1	1,3-Dichlorobenzene	5.4	U	2.7	5.4	5.4
106-46-7	1,4-Dichlorobenzene	5.4	U	2.7	5.4	5.4
95-50-1	1,2-Dichlorobenzene	5.2	U	2.6	5.2	5.2
100-51-6	Benzyl alcohol	6.2	U	3.1	6.2	10
108-60-1	2,2'-Oxybis(1-chloropropane)	6.6	U	3.3	6.6	6.6
95-48-7	2-Methylphenol	5.2	U	2.6	5.2	5.2
67-72-1	Hexachloroethane	5.2	U	2.6	5.2	5.2
621-64-7	N-Nitroso-di-n-propylamine	6	U	3	6	6
106-44-5	4-Methylphenol	12.2	U	6.1	12.2	12.2
98-95-3	Nitrobenzene	2	U	1	2	4
78-59-1	Isophorone	7.6	U	3.8	7.6	7.6
88-75-5	2-Nitrophenol	1.5	U	0.77	1.5	4
105-67-9	2,4-Dimethylphenol	4.6	U	2.3	4.6	4.6
111-91-1	Bis(2-chloroethoxy)methane	7	U	3.5	7	7
120-83-2	2,4-Dichlorophenol	6.2	U	3.1	6.2	6.2
120-82-1	1,2,4-Trichlorobenzene	5.2	U	2.6	5.2	5.2
106-47-8	4-Chloroaniline	6	U	3	6	6
87-68-3	Hexachlorobutadiene	5	U	2.5	5	5
59-50-7	4-Chloro-3-methylphenol	5.4	U	2.7	5.4	5.4
77-47-4	Hexachlorocyclopentadiene	1.6	U	0.82	1.6	4
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.84	1.7	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128809MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 128809MB Lab File ID: 9295MB.D

Sample wt/vol: 1000 Units: ML Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1711

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	6.8	U	3.4	6.8	6.8
91-58-7	2-Chloronaphthalene	5.6	U	2.8	5.6	5.6
88-74-4	2-Nitroaniline	6	U	3	6	6
131-11-3	Dimethylphthalate	6	U	3	6	6
606-20-2	2,6-Dinitrotoluene	5.6	U	2.8	5.6	5.6
99-09-2	3-Nitroaniline	5.6	U	2.8	5.6	5.6
51-28-5	2,4-Dinitrophenol	11.2	U	5.6	11.2	20
132-64-9	Dibenzofuran	5.4	U	2.7	5.4	5.4
121-14-2	2,4-Dinitrotoluene	5.6	U	2.8	5.6	5.6
100-02-7	4-Nitrophenol	8	U	4	8	8
7005-72-3	4-Chlorophenyl-phenylether	5	U	2.5	5	5
84-66-2	Diethylphthalate	5.6	U	2.8	5.6	5.6
100-01-6	4-Nitroaniline	3	U	1.5	3	4
534-52-1	4,6-Dinitro-2-methylphenol	8	U	4	8	8
86-30-6	N-Nitrosodiphenylamine	6.8	U	3.4	6.8	6.8
101-55-3	4-Bromophenyl-phenylether	4.6	U	2.3	4.6	4.6
118-74-1	Hexachlorobenzene	0.82	U	0.41	0.82	4
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10
84-74-2	Di-n-butylphthalate	1.7	U	0.86	1.7	4
85-68-7	Butylbenzylphthalate	6	U	3	6	6
91-94-1	3,3'-Dichlorobenzidine	5.4	U	2.7	5.4	5.4
117-81-7	Bis(2-ethylhexyl)phthalate	8.8	U	4.4	8.8	8.8
117-84-0	Di-n-octylphthalate	4	U	2	4	4
109-06-8	2-Picoline	8	U	4	8	8
10595-95-6	N-Nitrosomethylethylamine	5.4	U	2.7	5.4	5.4
55-18-5	N-Nitrosodiethylamine	6.2	U	3.1	6.2	6.2
66-27-3	Methylmethanesulfonate	3.8	U	1.9	3.8	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128809MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 128809MB Lab File ID: 9295MB.D

Sample wt/vol: 1000 Units: ML Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1711

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	5	U	2.5	5	5
76-01-7	Pentachloroethane	5	U	2.5	5	20
930-55-2	N-Nitrosopyrrolidine	5.4	U	2.7	5.4	5.4
98-86-2	Acetophenone	8	U	4	8	8
59-89-2	N-Nitrosomorpholine	6	U	3	6	6
95-53-4	o-Toluidine	5.4	U	2.7	5.4	5.4
122-09-8	a,a-Dimethylphenethylamine	32	U	16	32	32
87-65-0	2,6-Dichlorophenol	7	U	3.5	7	7
1888-71-7	Hexachloropropene	4	U	2	4	4
924-16-3	N-Nitrosodibutylamine	5.4	U	2.7	5.4	5.4
120-58-1	Isosafrole	5.2	U	2.6	5.2	5.2
95-94-3	1,2,4,5-Tetrachlorobenzene	4.4	U	2.2	4.4	4.4
94-59-7	Safrole	5	U	2.5	5	5
130-15-4	1,4-Naphthoquinone	6.2	U	3.1	6.2	6.2
99-65-0	1,3-Dinitrobenzene	5	U	2.5	5	5
608-93-5	Pentachlorobenzene	4.4	U	2.2	4.4	4.4
134-32-7	1-Naphthylamine	3.6	U	1.8	3.6	4
91-59-8	2-Naphthylamine	5	U	2.5	5	5
58-90-2	2,3,4,6-Tetrachlorophenol	6	U	3	6	6
99-55-8	5-Nitro-o-toluidine	5.2	U	2.6	5.2	5.2
106-50-3	p-Phenylenediamine	4	U	2	4	4
62-44-2	Phenacetin	1.8	U	0.89	1.8	4
92-67-1	4-Aminobiphenyl	4	U	2	4	4
23950-58-5	Pronamide	1.6	U	0.81	1.6	4
82-68-8	Pentachloronitrobenzene(PCNB)	4	U	2	4	4
88-85-7	Dinoseb	8	U	4	8	8
56-57-5	4-Nitroquinoline-1-oxide	7.4	U	3.7	7.4	10

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
128809MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 128809MB Lab File ID: 9295MB.D

Sample wt/vol: 1000 Units: ML Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1711

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	4.4	U	2.2	4.4	4.4
140-57-8	Aramite	8	U	4	8	8
60-11-7	p-Dimethylaminoazobenzene	1.2	U	0.62	1.2	4
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4
57-97-6	7,12-Dimethylbenz(a)anthracene	1.9	U	0.96	1.9	4
56-49-5	3-Methylcholanthrene	4.4	U	2.2	4.4	4.4
100-75-4	N-Nitrosopiperidine	5.6	U	2.8	5.6	5.6
99-35-4	1,3,5-Trinitrobenzene	4	U	2	4	4
2303-16-4	Diallate (Avadex)	1.7	U	0.84	1.7	4
465-73-6	Isodrin	5.2	U	2.6	5.2	5.2
510-15-6	Chlorobenzilate	1.6	U	0.78	1.6	4
143-50-0	Kepone	32	U	16	32	32
126-68-1	0,0,0-Triethylphosphorothioate	5.8	U	2.9	5.8	5.8

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West / Boca Chica / MW S EPA Sample No. 127053MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Lab File ID: 9170MB.D Lab Sample ID: 127053MB

Instrument ID: SMSD03 Date Extracted: 04/24/12

Matrix: WATER Date Analyzed: 04/25/12

Level:(low/med) LOW Time Analyzed: 0918

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127054LCS	127054LCS	9170LCS.D	04/25/12	0943
2	127055LCSD	127055LCSD	9170LCSD.D	04/25/12	1007
3	TFS-MW-06	350579402	79402.D	04/25/12	1228
4	TFS-MW-FD1	350579403	79403.D	04/25/12	1252
5	TFS-MW-03	350579401	79401.D	04/25/12	1315
6	TFS-MW-15	350579404	79404.D	04/25/12	1339
7	TFS-MW-16	350579405	79405.D	04/25/12	1402

COMMENTS:

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West / Boca Chica / MW S EPA Sample No. 128809MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Lab File ID: 9295MB.D Lab Sample ID: 128809MB

Instrument ID: SMSD03 Date Extracted: 05/03/12

Matrix: WATER Date Analyzed: 05/03/12

Level:(low/med) LOW Time Analyzed: 1711

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128810LCS	128810LCS	9295LCS.D	05/03/12	1736
2	128811LCSD	128811LCSD	9295LCSD.D	05/03/12	1800
3	TFS-MW-03RE1	350579401RE1	79401RE.D	05/03/12	2135
4	TFS-MW-06RE1	350579402RE1	79402RE.D	05/03/12	2159
5	TFS-MW-FD1RE1	350579403RE1	79403RE.D	05/03/12	2222
6	TFS-MW-15RE1	350579404RE1	79404RE.D	05/03/12	2246
7	TFS-MW-16RE1	350579405RE1	79405RE.D	05/03/12	2309

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.2
68	Less than 2.0% of mass 69	0.6 (1.3)1
69	Mass 69 relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.83)1
127	10.0 - 80.0% of mass 198	45.1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	33
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.5 (14.69)2
442	Greater than 50.0% of mass 198	92
443	15.0 - 24.0% of mass 442	17.3 (18.77)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1072999	45921	8270CAL7.D	04/23/12	1023
2	STD1073000	45922	8270CAL6.D	04/23/12	1047
3	STD1073001	45923	8270CAL5.D	04/23/12	1110
4	STD1073002	45924	8270CAL4.D	04/23/12	1134
5	STD1073004	45925	8270CAL3.D	04/23/12	1158
6	STD1073005	45926	8270CAL2.D	04/23/12	1221
7	STD1073006	45927	8270CAL1.D	04/23/12	1245
8	SSC1072998	45872	8270SEC2.D	04/23/12	1333
9	STD1073007	45933	BSCAL7.D	04/23/12	1356
10	STD1073008	45934	BSCAL6.D	04/23/12	1420
11	STD1073009	45935	BSCAL5.D	04/23/12	1444
12	STD1073010	45936	BSCAL4.D	04/23/12	1507
13	STD1073012	45937	BSCAL3.D	04/23/12	1531
14	STD1073013	45938	BSCAL2.D	04/23/12	1555
15	STD1073014	45939	BSCAL1.D	04/23/12	1619
16	SSC1072994	44859	BSSEC.D	04/23/12	1642
17	STD1073015	45955	AP9CAL7.D	04/23/12	1706
18	STD1073016	45956	AP9CAL6.D	04/23/12	1730
19	STD1073017	45957	AP9CAL5.D	04/23/12	1753

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

20	STD1073018	45958	AP9CAL4.D	04/23/12	1817
21	STD1073020	45959	AP9CAL3.D	04/23/12	1841
22	STD1073021	45960	AP9CAL2.D	04/23/12	1904
23	STD1073022	45961	AP9CAL1.D	04/23/12	1928
24	SSC1072993	44612	AP9SEC2.D	04/23/12	2015

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No.: _____ SDG No.: 3505794
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/25/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0747
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	29.8
68	Less than 2.0% of mass 69	0.6 (1.34)1
69	Mass 69 relative abundance	47.7
70	Less than 2.0% of mass 69	0.3 (0.62)1
127	10.0 - 80.0% of mass 198	47.3
197	Less than 2.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	31.9
365	Greater than 1.0% of mass 198	5.9
441	0.0 - 24.0% of mass 442	14.4 (15.98)2
442	Greater than 50.0% of mass 198	90.2
443	15.0 - 24.0% of mass 442	17.8 (19.71)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073205	45924	8270CCV1.D	04/25/12	0807
2	CCV1073207	45936	BSCCV1.D	04/25/12	0831
3	CCV1073206	45958	AP9CCV1.D	04/25/12	0854
4	127053MB	127053MB	9170MB.D	04/25/12	0918
5	127054LCS	127054LCS	9170LCS.D	04/25/12	0943
6	127055LCSD	127055LCSD	9170LCSD.D	04/25/12	1007
7	TFS-MW-06	350579402	79402.D	04/25/12	1228
8	TFS-MW-FD1	350579403	79403.D	04/25/12	1252
9	TFS-MW-03	350579401	79401.D	04/25/12	1315
10	TFS-MW-15	350579404	79404.D	04/25/12	1339
11	TFS-MW-16	350579405	79405.D	04/25/12	1402

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Lab File ID: DFTPP2.D DFTPP Injection Date: 05/03/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1449
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31
68	Less than 2.0% of mass 69	0.3 (0.69)1
69	Mass 69 relative abundance	49
70	Less than 2.0% of mass 69	0 (0)1
127	10.0 - 80.0% of mass 198	46.2
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	33.7
365	Greater than 1.0% of mass 198	7.9
441	0.0 - 24.0% of mass 442	14.6 (14.36)2
442	Greater than 50.0% of mass 198	101.4
443	15.0 - 24.0% of mass 442	19.9 (19.6)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1076910	45924	8270CCV3.D	05/03/12	1510
2	CCV1076914	45936	BSCCV2.D	05/03/12	1534
3	CCV1076913	45958	AP9CCV3.D	05/03/12	1647
4	128809MB	128809MB	9295MB.D	05/03/12	1711
5	128810LCS	128810LCS	9295LCS.D	05/03/12	1736
6	128811LCSD	128811LCSD	9295LCSD.D	05/03/12	1800
7	TFS-MW-03RE1	350579401RE1	79401RE.D	05/03/12	2135
8	TFS-MW-06RE1	350579402RE1	79402RE.D	05/03/12	2159
9	TFS-MW-FD1RE1	350579403RE1	79403RE.D	05/03/12	2222
10	TFS-MW-15RE1	350579404RE1	79404RE.D	05/03/12	2246
11	TFS-MW-16RE1	350579405RE1	79405RE.D	05/03/12	2309

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
1 127053MB	237127	4.43	802276	5.59	549414	7.29
2 127054LCS	247868	4.43	811290	5.60	557282	7.29
3 127055LCSD	244762	4.44	820636	5.60	551636	7.29
4 TFS-MW-06	247410	4.43	830765	5.59	589139	7.29
5 TFS-MW-FD1	255930	4.43	867449	5.59	610077	7.29
6 TFS-MW-03	259738	4.43	841753	5.59	562800	7.29
7 TFS-MW-15	270746	4.43	1037938	5.60	818519	7.30
8 TFS-MW-16	277793	4.43	923412	5.59	635420	7.29
9 128809MB	216966	4.37	738659	5.53	521718	7.22
10 128810LCS	219939	4.37	726189	5.53	491954	7.23
11 128811LCSD	230491	4.37	756716	5.53	527391	7.23
12 TFS-MW-03RE1	267935	4.37	843613	5.53	600624	7.22
13 TFS-MW-06RE1	265011	4.37	848653	5.53	604465	7.22
14 TFS-MW-FD1RE1	256051	4.37	832738	5.53	591742	7.22
15 TFS-MW-15RE1	279391	4.37	1062245	5.54	853920	7.23
16 TFS-MW-16RE1	282650	4.37	943519	5.53	652197	7.22

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT	
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68	
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18	
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18	
EPA SAMPLE NO.							
1	127053MB	1104787	8.74	1523546	11.34	1557651	12.66
2	127054LCS	1090520	8.75	1713818	11.34	1495940	12.66
3	127055LCSD	1082756	8.75	1705962	11.34	1457428	12.67
4	TFS-MW-06	1179233	8.74	1574264	11.34	1600684	12.66
5	TFS-MW-FD1	1174464	8.74	1489066	11.34	1519401	12.66
6	TFS-MW-03	1117667	8.74	1466260	11.34	1494629	12.66
7	TFS-MW-15	1402482	8.75	1553197	11.34	1629335	12.66
8	TFS-MW-16	1195200	8.74	1571992	11.34	1583393	12.66
9	128809MB	998572	8.68	1366135	11.27	1424492	12.60
10	128810LCS	1022771	8.68	1717368	11.28	1454618	12.60
11	128811LCSD	1056029	8.68	1758674	11.28	1473605	12.60
12	TFS-MW-03RE1	1150878	8.68	1524844	11.27	1597185	12.59
13	TFS-MW-06RE1	1187608	8.68	1600456	11.27	1616273	12.59
14	TFS-MW-FD1RE1	1209394	8.68	1608999	11.27	1629777	12.59
15	TFS-MW-15RE1	1775294	8.69	1734456	11.28	1689518	12.60
16	TFS-MW-16RE1	1240833	8.68	1685592	11.27	1733699	12.59

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 3.38			S2: 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP2	45777	DFTPP2.D	04/23/12	1003	
2	STD1072999	45921	8270CAL7.D	04/23/12	1023	3.39 4.15
3	STD1073000	45922	8270CAL6.D	04/23/12	1047	3.38 4.14
4	STD1073001	45923	8270CAL5.D	04/23/12	1110	3.38 4.14
5	STD1073002	45924	8270CAL4.D	04/23/12	1134	3.38 4.14
6	STD1073004	45925	8270CAL3.D	04/23/12	1158	3.38 4.14
7	STD1073005	45926	8270CAL2.D	04/23/12	1221	3.39 4.14
8	STD1073006	45927	8270CAL1.D	04/23/12	1245	3.39 4.14
9	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1309	
10	SSC1072998	45872	8270SEC2.D	04/23/12	1333	3.38 4.14
11	STD1073007	45933	BSCAL7.D	04/23/12	1356	
12	STD1073008	45934	BSCAL6.D	04/23/12	1420	
13	STD1073009	45935	BSCAL5.D	04/23/12	1444	
14	STD1073010	45936	BSCAL4.D	04/23/12	1507	
15	STD1073012	45937	BSCAL3.D	04/23/12	1531	
16	STD1073013	45938	BSCAL2.D	04/23/12	1555	
17	STD1073014	45939	BSCAL1.D	04/23/12	1619	
18	SSC1072994	44859	BSSEC.D	04/23/12	1642	
19	STD1073015	45955	AP9CAL7.D	04/23/12	1706	
20	STD1073016	45956	AP9CAL6.D	04/23/12	1730	
21	STD1073017	45957	AP9CAL5.D	04/23/12	1753	
22	STD1073018	45958	AP9CAL4.D	04/23/12	1817	
23	STD1073020	45959	AP9CAL3.D	04/23/12	1841	
24	STD1073021	45960	AP9CAL2.D	04/23/12	1904	
25	STD1073022	45961	AP9CAL1.D	04/23/12	1928	
26	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1952	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 3.38			S2: 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	SSC1072993	44612	AP9SEC2.D	04/23/12	2015	
28	DFTPP1	45777	DFTPP1.D	04/25/12	0747	
29	CCV1073205	45924	8270CCV1.D	04/25/12	0807	3.37 4.12
30	CCV1073207	45936	BSCCV1.D	04/25/12	0831	
31	CCV1073206	45958	AP9CCV1.D	04/25/12	0854	
32	127053MB	127053MB	9170MB.D	04/25/12	0918	3.37 4.12
33	127054LCS	127054LCS	9170LCS.D	04/25/12	0943	3.37 4.12
34	127055LCSD	127055LCSD	9170LCSD.D	04/25/12	1007	3.37 4.12
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1030	
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1054	
37	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1118	
38	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1141	
39	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1205	
40	TFS-MW-06	350579402	79402.D	04/25/12	1228	3.37 4.12
41	TFS-MW-FD1	350579403	79403.D	04/25/12	1252	3.37 4.12
42	TFS-MW-03	350579401	79401.D	04/25/12	1315	3.37 4.12
43	TFS-MW-15	350579404	79404.D	04/25/12	1339	3.37 4.13
44	TFS-MW-16	350579405	79405.D	04/25/12	1402	3.37 4.12
45	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1426	
46	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1450	
47	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1513	
48	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1537	
49	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1601	
50	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1624	
51	DFTPP2	45777	DFTPP2.D	05/03/12	1449	
52	CCV1076910	45924	8270CCV3.D	05/03/12	1510	3.3 4.06

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 3.38			S2: 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
53	CCV1076914	45936	BSCCV2.D	05/03/12	1534	
54	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1558	
55	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1623	
56	CCV1076913	45958	AP9CCV3.D	05/03/12	1647	
57	128809MB	128809MB	9295MB.D	05/03/12	1711	3.29 4.05
58	128810LCS	128810LCS	9295LCS.D	05/03/12	1736	3.3 4.05
59	128811LCSD	128811LCSD	9295LCSD.D	05/03/12	1800	3.3 4.05
60	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1824	
61	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1848	
62	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1912	
63	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	1937	
64	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2001	
65	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2024	
66	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2048	
67	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2112	
68	TFS-MW-03RE1	350579401RE1	79401RE.D	05/03/12	2135	3.29 4.05
69	TFS-MW-06RE1	350579402RE1	79402RE.D	05/03/12	2159	3.29 4.05
70	TFS-MW-FD1RE1	350579403RE1	79403RE.D	05/03/12	2222	3.29 4.05
71	TFS-MW-15RE1	350579404RE1	79404RE.D	05/03/12	2246	3.3 4.06
72	TFS-MW-16RE1	350579405RE1	79405RE.D	05/03/12	2309	3.3 4.05
73	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2333	
74	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/03/12	2356	
75	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	0020	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127054LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	22.4	56.0			22 - 70
N-Nitrosodimethylamine	40	25.2	63.0			25 - 110
Aniline	40	28.6	71.5			14 - 99
Bis(2-chloroethyl)ether	40	40	100.0			35 - 110
Phenol	40	14.4	36.0			0 - 115
2-Chlorophenol	40	31.3	78.2			35 - 105
1,3-Dichlorobenzene	40	29.2	73.0			30 - 100
1,4-Dichlorobenzene	40	28.7	71.8			30 - 100
1,2-Dichlorobenzene	40	29.7	74.2			35 - 100
Benzyl alcohol	40	27.7	69.2			30 - 110
2,2'-Oxybis(1-chloropropane)	40	34	85.0			25 - 130
2-Methylphenol	40	25.7	64.2			40 - 110
Hexachloroethane	40	29.1	72.8			30 - 95
N-Nitroso-di-n-propylamine	40	42.4	106.0			35 - 130
4-Methylphenol	40	28	70.0			30 - 110
Nitrobenzene	40	34.2	85.5			45 - 110
Isophorone	40	43.1	108.0			50 - 110
2-Nitrophenol	40	34.3	85.8			40 - 115
2,4-Dimethylphenol	40	34	85.0			30 - 110
Bis(2-chloroethoxy)methane	40	38.2	95.5			45 - 105
2,4-Dichlorophenol	40	33	82.5			50 - 105
1,2,4-Trichlorobenzene	40	32.4	81.0			35 - 105
4-Chloroaniline	40	36	90.0			15 - 110
Hexachlorobutadiene	40	34.4	86.0			25 - 105
4-Chloro-3-methylphenol	40	32.1	80.2			45 - 110
Hexachlorocyclopentadiene	40	27.8	69.5			13 - 80
2,4,6-Trichlorophenol	40	35.3	88.2			50 - 115
2,4,5-Trichlorophenol	40	35	87.5			50 - 110
2-Chloronaphthalene	40	35	87.5			50 - 105
2-Nitroaniline	40	40.1	100.0			50 - 115
Dimethylphthalate	40	38.9	97.2			25 - 125
2,6-Dinitrotoluene	40	36.7	91.8			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127054LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	37.1	92.8			20 - 125
2,4-Dinitrophenol	80	76.3	95.4			15 - 140
Dibenzofuran	40	36.1	90.2			55 - 105
2,4-Dinitrotoluene	40	37.4	93.5			50 - 120
4-Nitrophenol	40	20.1	50.2			0 - 125
4-Chlorophenyl-phenylether	40	36.2	90.5			50 - 110
Diethylphthalate	40	39.3	98.2			40 - 120
4-Nitroaniline	40	43.2	108.0			35 - 120
4,6-Dinitro-2-methylphenol	40	32.3	80.8			40 - 130
N-Nitrosodiphenylamine	40	37.3	93.2			50 - 110
4-Bromophenyl-phenylether	40	35.5	88.8			50 - 115
Hexachlorobenzene	40	33.4	83.5			50 - 110
Pentachlorophenol	40	39.2	98.0			40 - 115
Di-n-butylphthalate	40	38.4	96.0			55 - 115
Butylbenzylphthalate	40	42.6	106.0			45 - 115
3,3'-Dichlorobenzidine	80	63.2	79.0			20 - 110
Bis(2-ethylhexyl)phthalate	40	41.5	104.0			40 - 125
Di-n-octylphthalate	40	41.5	104.0			35 - 135
2-Picoline	40	30.4	76.0			15 - 110
N-Nitrosomethylethylamine	40	34.8	87.0			25 - 131
N-Nitrosodiethylamine	40	38.2	95.5			46 - 111
Methylmethanesulfonate	40	26.8	67.0			15 - 103
Ethyl methanesulfonate	40	40.1	100.0			46 - 113
Pentachloroethane	40	36.7	91.8			27 - 99
N-Nitrosopyrrolidine	40	39.8	99.5			51 - 112
Acetophenone	80	76.8	96.0			45 - 118
N-Nitrosomorpholine	40	42.7	107.0			51 - 112
o-Toluidine	40	32	80.0			49 - 97
a,a-Dimethylphenethylamine	40	27.3	68.2 *			70 - 130
2,6-Dichlorophenol	40	40.6	102.0			50 - 135
Hexachloropropene	40	0	0.0 *			21 - 105
N-Nitrosodibutylamine	40	43.8	110.0			43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127054LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	38.8	97.0			70 - 130
1,2,4,5-Tetrachlorobenzene	40	38.5	96.2			40 - 100
Safrole	40	43	108.0 *			52 - 100
1,4-Naphthoquinone	40	3.7	9.2 *			28 - 143
1,3-Dinitrobenzene	40	43	108.0			61 - 112
Pentachlorobenzene	40	37.9	94.8			50 - 99
1-Naphthylamine	40	18.8	47.0			38 - 91
2-Naphthylamine	40	18.9	47.2 *			70 - 130
2,3,4,6-Tetrachlorophenol	40	37.7	94.2			55 - 122
5-Nitro-o-toluidine	40	40	100.0			70 - 130
p-Phenylenediamine	40	48	120.0 *			58 - 107
Phenacetin	40	44.6	112.0			57 - 114
4-Aminobiphenyl	40	34.7	86.8			49 - 103
Pronamide	40	46.8	117.0 *			59 - 99
Pentachloronitrobenzene(PCNB)	40	44.6	112.0 *			60 - 104
Dinoseb	40	41.9	105.0			44 - 142
4-Nitroquinoline-1-oxide	40	45.4	114.0			10 - 125
Methapyriline	40	624	1560.0 *			0 - 90
Aramite	40	38	95.0			41 - 127
p-Dimethylaminoazobenzene	40	37.2	93.0			70 - 130
2-Acetylaminofluorene	40	34.3	85.8			63 - 103
7,12-Dimethylbenz(a)anthracene	40	39.6	99.0 *			57 - 95
3-Methylcholanthrene	40	34.8	87.0			52 - 105
N-Nitrosopiperidine	40	41.1	103.0			53 - 112
1,3,5-Trinitrobenzene	40	22.5	56.2			29 - 163
Diallate (Avadex)	40	41.2	103.0 *			56 - 98
Isodrin	40	47.3	118.0 *			54 - 110
Chlorobenzilate	40	33.7	84.2			58 - 101
Kepone	40	34.7	86.8			0 - 165
0,0,0-Triethylphosphorothioate	40	39.3	98.2			50 - 106

Spike Recovery: 12 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127055LCSD

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	22.1	55.2	1.3	20	22 - 70
N-Nitrosodimethylamine	40	25.6	64.0	1.6	20	25 - 110
Aniline	40	29.4	73.5	2.8	20	14 - 99
Bis(2-chloroethyl)ether	40	43.6	109.0	8.6	20	35 - 110
Phenol	40	14.4	36.0	0.0	20	0 - 115
2-Chlorophenol	40	33.6	84.0	7.1	20	35 - 105
1,3-Dichlorobenzene	40	31.1	77.8	6.3	20	30 - 100
1,4-Dichlorobenzene	40	31	77.5	7.7	20	30 - 100
1,2-Dichlorobenzene	40	32.2	80.5	8.1	20	35 - 100
Benzyl alcohol	40	30.8	77.0	10.6	20	30 - 110
2,2'-Oxybis(1-chloropropane)	40	35.6	89.0	4.6	20	25 - 130
2-Methylphenol	40	26.9	67.2	4.6	20	40 - 110
Hexachloroethane	40	32	80.0	9.5	20	30 - 95
N-Nitroso-di-n-propylamine	40	46.2	116.0	8.6	20	35 - 130
4-Methylphenol	40	29.9	74.8	6.6	20	30 - 110
Nitrobenzene	40	37.8	94.5	10.0	20	45 - 110
Isophorone	40	46	115.0 *	6.5	20	50 - 110
2-Nitrophenol	40	35.7	89.2	4.0	20	40 - 115
2,4-Dimethylphenol	40	35.8	89.5	5.2	20	30 - 110
Bis(2-chloroethoxy)methane	40	40.1	100.0	4.9	20	45 - 105
2,4-Dichlorophenol	40	34.7	86.8	5.0	20	50 - 105
1,2,4-Trichlorobenzene	40	33	82.5	1.8	20	35 - 105
4-Chloroaniline	40	37.4	93.5	3.8	20	15 - 110
Hexachlorobutadiene	40	36.5	91.2	5.9	20	25 - 105
4-Chloro-3-methylphenol	40	32.8	82.0	2.2	20	45 - 110
Hexachlorocyclopentadiene	40	31.2	78.0	11.5	20	13 - 80
2,4,6-Trichlorophenol	40	37.9	94.8	7.1	20	50 - 115
2,4,5-Trichlorophenol	40	37.9	94.8	8.0	20	50 - 110
2-Chloronaphthalene	40	37.1	92.8	5.8	20	50 - 105
2-Nitroaniline	40	43.5	109.0	8.1	20	50 - 115
Dimethylphthalate	40	41.4	104.0	6.2	20	25 - 125
2,6-Dinitrotoluene	40	38.7	96.8	5.3	20	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127055LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	38.5	96.2	3.7	20	20 - 125
2,4-Dinitrophenol	80	86.4	108.0	12.4	20	15 - 140
Dibenzofuran	40	38.3	95.8	5.9	20	55 - 105
2,4-Dinitrotoluene	40	38.6	96.5	3.2	20	50 - 120
4-Nitrophenol	40	21.2	53.0	5.3	20	0 - 125
4-Chlorophenyl-phenylether	40	39.3	98.2	8.2	20	50 - 110
Diethylphthalate	40	41.9	105.0	6.4	20	40 - 120
4-Nitroaniline	40	45.8	114.0	5.8	20	35 - 120
4,6-Dinitro-2-methylphenol	40	34.9	87.2	7.7	20	40 - 130
N-Nitrosodiphenylamine	40	39	97.5	4.5	20	50 - 110
4-Bromophenyl-phenylether	40	37.4	93.5	5.2	20	50 - 115
Hexachlorobenzene	40	35.5	88.8	6.1	20	50 - 110
Pentachlorophenol	40	42.3	106.0	7.6	20	40 - 115
Di-n-butylphthalate	40	41.2	103.0	7.0	20	55 - 115
Butylbenzylphthalate	40	44.3	111.0	3.9	20	45 - 115
3,3'-Dichlorobenzidine	80	64.6	80.8	2.2	20	20 - 110
Bis(2-ethylhexyl)phthalate	40	44.3	111.0	6.5	20	40 - 125
Di-n-octylphthalate	40	44.3	111.0	6.5	20	35 - 135
2-Picoline	40	29.2	73.0	4.0	20	15 - 110
N-Nitrosomethylethylamine	40	35	87.5	0.6	20	25 - 131
N-Nitrosodiethylamine	40	38.9	97.2	1.8	20	46 - 111
Methylmethanesulfonate	40	27.1	67.8	1.1	20	15 - 103
Ethyl methanesulfonate	40	41.6	104.0	3.7	20	46 - 113
Pentachloroethane	40	40.1	100.0*	8.9	20	27 - 99
N-Nitrosopyrrolidine	40	40.6	102.0	2.0	20	51 - 112
Acetophenone	80	82.8	104.0	7.5	20	45 - 118
N-Nitrosomorpholine	40	41.4	104.0	3.1	20	51 - 112
o-Toluidine	40	32.2	80.5	0.6	20	49 - 97
a,a-Dimethylphenethylamine	40	0	0.0*	200.0*	20	70 - 130
2,6-Dichlorophenol	40	40.8	102.0	0.5	20	50 - 135
Hexachloropropene	40	0	0.0*		20	21 - 105
N-Nitrosodibutylamine	40	42.2	106.0	3.7	20	43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127055LCSD

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	40	100.0	3.0	20	70 - 130
1,2,4,5-Tetrachlorobenzene	40	39.5	98.8	2.6	20	40 - 100
Safrole	40	42.6	106.0 *	0.9	20	52 - 100
1,4-Naphthoquinone	40	3.5	8.8 *	5.6	20	28 - 143
1,3-Dinitrobenzene	40	45.5	114.0 *	5.6	20	61 - 112
Pentachlorobenzene	40	38.5	96.2	1.6	20	50 - 99
1-Naphthylamine	40	18.4	46.0	2.2	20	38 - 91
2-Naphthylamine	40	19.9	49.8 *	5.2	20	70 - 130
2,3,4,6-Tetrachlorophenol	40	38.8	97.0	2.9	20	55 - 122
5-Nitro-o-toluidine	40	39.9	99.8	0.3	20	70 - 130
p-Phenylenediamine	40	48.7	122.0 *	1.4	20	58 - 107
Phenacetin	40	46.6	116.0 *	4.4	20	57 - 114
4-Aminobiphenyl	40	35.4	88.5	2.0	20	49 - 103
Pronamide	40	46.8	117.0 *	0.0	20	59 - 99
Pentachloronitrobenzene(PCNB)	40	45.5	114.0 *	2.0	20	60 - 104
Dinoseb	40	45	112.0	7.1	20	44 - 142
4-Nitroquinoline-1-oxide	40	39.4	98.5	14.2	20	10 - 125
Methapyriline	40	512	1280.0 *	19.7	20	0 - 90
Aramite	40	38.7	96.8	1.8	20	41 - 127
p-Dimethylaminoazobenzene	40	37.4	93.5	0.5	20	70 - 130
2-Acetylaminofluorene	40	34.6	86.5	0.9	20	63 - 103
7,12-Dimethylbenz(a)anthracene	40	42	105.0 *	5.9	20	57 - 95
3-Methylcholanthrene	40	36.9	92.2	5.9	20	52 - 105
N-Nitrosopiperidine	40	42	105.0	2.2	20	53 - 112
1,3,5-Trinitrobenzene	40	23.8	59.5	5.6	20	29 - 163
Diallate (Avadex)	40	44.8	112.0 *	8.4	20	56 - 98
Isodrin	40	48.2	120.0 *	1.9	20	54 - 110
Chlorobenzilate	40	33.3	83.2	1.2	20	58 - 101
Kepone	40	33.6	84.0	3.2	20	0 - 165
0,0,0-Triethylphosphorothioate	40	42.1	105.0	6.9	20	50 - 106

Spike Recovery: 16 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128810LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	9.4	23.5			22 - 70
N-Nitrosodimethylamine	40	28.2	70.5			25 - 110
Aniline	40	24.8	62.0			14 - 99
Bis(2-chloroethyl)ether	40	40.6	102.0			35 - 110
Phenol	40	13.5	33.8			0 - 115
2-Chlorophenol	40	31	77.5			35 - 105
1,3-Dichlorobenzene	40	26.4	66.0			30 - 100
1,4-Dichlorobenzene	40	26.3	65.8			30 - 100
1,2-Dichlorobenzene	40	27.2	68.0			35 - 100
Benzyl alcohol	40	27	67.5			30 - 110
2,2'-Oxybis(1-chloropropane)	40	33.8	84.5			25 - 130
2-Methylphenol	40	27.1	67.8			40 - 110
Hexachloroethane	40	26.6	66.5			30 - 95
N-Nitroso-di-n-propylamine	40	48.3	121.0			35 - 130
4-Methylphenol	40	30.7	76.8			30 - 110
Nitrobenzene	40	37.3	93.2			45 - 110
Isophorone	40	46.9	117.0 *			50 - 110
2-Nitrophenol	40	35.7	89.2			40 - 115
2,4-Dimethylphenol	40	36.7	91.8			30 - 110
Bis(2-chloroethoxy)methane	40	39.4	98.5			45 - 105
2,4-Dichlorophenol	40	35	87.5			50 - 105
1,2,4-Trichlorobenzene	40	28.5	71.2			35 - 105
4-Chloroaniline	40	37.6	94.0			15 - 110
Hexachlorobutadiene	40	29.7	74.2			25 - 105
4-Chloro-3-methylphenol	40	35.3	88.2			45 - 110
Hexachlorocyclopentadiene	40	22.5	56.2			13 - 80
2,4,6-Trichlorophenol	40	37.4	93.5			50 - 115
2,4,5-Trichlorophenol	40	43.4	108.0			50 - 110
2-Chloronaphthalene	40	33.3	83.2			50 - 105
2-Nitroaniline	40	45.4	114.0			50 - 115
Dimethylphthalate	40	42.3	106.0			25 - 125
2,6-Dinitrotoluene	40	39.1	97.8			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128810LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	37.6	94.0			20 - 125
2,4-Dinitrophenol	80	99.2	124.0			15 - 140
Dibenzofuran	40	38.9	97.2			55 - 105
2,4-Dinitrotoluene	40	41.9	105.0			50 - 120
4-Nitrophenol	40	20.2	50.5			0 - 125
4-Chlorophenyl-phenylether	40	39.5	98.8			50 - 110
Diethylphthalate	40	43.9	110.0			40 - 120
4-Nitroaniline	40	45.3	113.0			35 - 120
4,6-Dinitro-2-methylphenol	40	36.5	91.2			40 - 130
N-Nitrosodiphenylamine	40	37.8	94.5			50 - 110
4-Bromophenyl-phenylether	40	37	92.5			50 - 115
Hexachlorobenzene	40	35.2	88.0			50 - 110
Pentachlorophenol	40	48	120.0 *			40 - 115
Di-n-butylphthalate	40	42.5	106.0			55 - 115
Butylbenzylphthalate	40	39.5	98.8			45 - 115
3,3'-Dichlorobenzidine	80	65.8	82.2			20 - 110
Bis(2-ethylhexyl)phthalate	40	43	108.0			40 - 125
Di-n-octylphthalate	40	44.1	110.0			35 - 135
2-Picoline	40	9.2	23.0			15 - 110
N-Nitrosomethylethylamine	40	27.9	69.8			25 - 131
N-Nitrosodiethylamine	40	30.1	75.2			46 - 111
Methylmethanesulfonate	40	26.2	65.5			15 - 103
Ethyl methanesulfonate	40	36.2	90.5			46 - 113
Pentachloroethane	40	24.7	61.8			27 - 99
N-Nitrosopyrrolidine	40	32.6	81.5			51 - 112
Acetophenone	80	73.6	92.0			45 - 118
N-Nitrosomorpholine	40	34.9	87.2			51 - 112
o-Toluidine	40	27.7	69.2			49 - 97
a,a-Dimethylphenethylamine	40	0	0.0 *			70 - 130
2,6-Dichlorophenol	40	37.8	94.5			50 - 135
Hexachloropropene	40	17.2	43.0			21 - 105
N-Nitrosodibutylamine	40	34	85.0			43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128810LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	31.2	78.0			70 - 130
1,2,4,5-Tetrachlorobenzene	40	27.4	68.5			40 - 100
Safrole	40	37.1	92.8			52 - 100
1,4-Naphthoquinone	40	24.4	61.0			28 - 143
1,3-Dinitrobenzene	40	40.2	100.0			61 - 112
Pentachlorobenzene	40	33.4	83.5			50 - 99
1-Naphthylamine	40	44.2	110.0 *			38 - 91
2-Naphthylamine	40	35.2	88.0			70 - 130
2,3,4,6-Tetrachlorophenol	40	35.4	88.5			55 - 122
5-Nitro-o-toluidine	40	34.7	86.8			70 - 130
p-Phenylenediamine	40	36.9	92.2			58 - 107
Phenacetin	40	33.5	83.8			57 - 114
4-Aminobiphenyl	40	39.2	98.0			49 - 103
Pronamide	40	37	92.5			59 - 99
Pentachloronitrobenzene(PCNB)	40	43.4	108.0 *			60 - 104
Dinoseb	40	41.7	104.0			44 - 142
4-Nitroquinoline-1-oxide	40	24.5	61.2			10 - 125
Methapyriline	40	32.6	81.5			0 - 90
Aramite	40	29.3	73.2			41 - 127
p-Dimethylaminoazobenzene	40	29.5	73.8			70 - 130
2-Acetylaminofluorene	40	27.5	68.8			63 - 103
7,12-Dimethylbenz(a)anthracene	40	38.5	96.2 *			57 - 95
3-Methylcholanthrene	40	35.5	88.8			52 - 105
N-Nitrosopiperidine	40	33.7	84.2			53 - 112
1,3,5-Trinitrobenzene	40	23.7	59.2			29 - 163
Diallate (Avadex)	40	34.4	86.0			56 - 98
Isodrin	40	38.2	95.5			54 - 110
Chlorobenzilate	40	28.5	71.2			58 - 101
Kepone	40	19	47.5			0 - 165
0,0,0-Triethylphosphorothioate	40	33.2	83.0			50 - 106

Spike Recovery: 6 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128811LCSD

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	11.7	29.2	21.8*	20	22 - 70
N-Nitrosodimethylamine	40	26.5	66.2	6.2	20	25 - 110
Aniline	40	26.7	66.8	7.4	20	14 - 99
Bis(2-chloroethyl)ether	40	37.8	94.5	7.1	20	35 - 110
Phenol	40	13	32.5	3.8	20	0 - 115
2-Chlorophenol	40	29.3	73.2	5.6	20	35 - 105
1,3-Dichlorobenzene	40	21.3	53.2	21.4*	20	30 - 100
1,4-Dichlorobenzene	40	22	55.0	17.8	20	30 - 100
1,2-Dichlorobenzene	40	21.6	54.0	23.0*	20	35 - 100
Benzyl alcohol	40	26.2	65.5	3.0	20	30 - 110
2,2'-Oxybis(1-chloropropane)	40	31.3	78.2	7.7	20	25 - 130
2-Methylphenol	40	24.9	62.2	8.5	20	40 - 110
Hexachloroethane	40	22.4	56.0	17.1	20	30 - 95
N-Nitroso-di-n-propylamine	40	43.4	108.0	10.7	20	35 - 130
4-Methylphenol	40	28.5	71.2	7.4	20	30 - 110
Nitrobenzene	40	34.2	85.5	8.7	20	45 - 110
Isophorone	40	43.8	110.0	6.8	20	50 - 110
2-Nitrophenol	40	31.7	79.2	11.9	20	40 - 115
2,4-Dimethylphenol	40	33.1	82.8	10.3	20	30 - 110
Bis(2-chloroethoxy)methane	40	36.7	91.8	7.1	20	45 - 105
2,4-Dichlorophenol	40	33.3	83.2	5.0	20	50 - 105
1,2,4-Trichlorobenzene	40	23.5	58.8	19.2	20	35 - 105
4-Chloroaniline	40	38.8	97.0	3.1	20	15 - 110
Hexachlorobutadiene	40	25.8	64.5	14.1	20	25 - 105
4-Chloro-3-methylphenol	40	31.9	79.8	10.1	20	45 - 110
Hexachlorocyclopentadiene	40	18.3	45.8	20.6*	20	13 - 80
2,4,6-Trichlorophenol	40	32.9	82.2	12.8	20	50 - 115
2,4,5-Trichlorophenol	40	38.5	96.2	12.0	20	50 - 110
2-Chloronaphthalene	40	28	70.0	17.3	20	50 - 105
2-Nitroaniline	40	40.4	101.0	11.7	20	50 - 115
Dimethylphthalate	40	37.7	94.2	11.5	20	25 - 125
2,6-Dinitrotoluene	40	35	87.5	11.1	20	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128811LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	36	90.0	4.3	20	20 - 125
2,4-Dinitrophenol	80	84.3	105.0	16.2	20	15 - 140
Dibenzofuran	40	33	82.5	16.4	20	55 - 105
2,4-Dinitrotoluene	40	36	90.0	15.1	20	50 - 120
4-Nitrophenol	40	17.8	44.5	12.6	20	0 - 125
4-Chlorophenyl-phenylether	40	33	82.5	17.9	20	50 - 110
Diethylphthalate	40	38.3	95.8	13.6	20	40 - 120
4-Nitroaniline	40	41.1	103.0	9.7	20	35 - 120
4,6-Dinitro-2-methylphenol	40	32.3	80.8	12.2	20	40 - 130
N-Nitrosodiphenylamine	40	34.1	85.2	10.3	20	50 - 110
4-Bromophenyl-phenylether	40	33.6	84.0	9.6	20	50 - 115
Hexachlorobenzene	40	32	80.0	9.5	20	50 - 110
Pentachlorophenol	40	42.3	106.0	12.6	20	40 - 115
Di-n-butylphthalate	40	36.8	92.0	14.4	20	55 - 115
Butylbenzylphthalate	40	37	92.5	6.5	20	45 - 115
3,3'-Dichlorobenzidine	80	61.3	76.6	7.1	20	20 - 110
Bis(2-ethylhexyl)phthalate	40	39	97.5	9.8	20	40 - 125
Di-n-octylphthalate	40	38.5	96.2	13.6	20	35 - 135
2-Picoline	40	12.7	31.8	32.0 *	20	15 - 110
N-Nitrosomethylethylamine	40	27.5	68.8	1.4	20	25 - 131
N-Nitrosodiethylamine	40	30.3	75.8	0.7	20	46 - 111
Methylmethanesulfonate	40	25.8	64.5	1.5	20	15 - 103
Ethyl methanesulfonate	40	34.8	87.0	3.9	20	46 - 113
Pentachloroethane	40	26.3	65.8	6.3	20	27 - 99
N-Nitrosopyrrolidine	40	33	82.5	1.2	20	51 - 112
Acetophenone	80	73.4	91.8	0.3	20	45 - 118
N-Nitrosomorpholine	40	34.5	86.2	1.2	20	51 - 112
o-Toluidine	40	29.6	74.0	6.6	20	49 - 97
a,a-Dimethylphenethylamine	40	0	0.0 *		20	70 - 130
2,6-Dichlorophenol	40	36	90.0	4.9	20	50 - 135
Hexachloropropene	40	16.6	41.5	3.6	20	21 - 105
N-Nitrosodibutylamine	40	32.3	80.8	5.1	20	43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

128811LCSD

Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	30.6	76.5	1.9	20	70 - 130
1,2,4,5-Tetrachlorobenzene	40	25.6	64.0	6.8	20	40 - 100
Safrole	40	35.1	87.8	5.5	20	52 - 100
1,4-Naphthoquinone	40	22.5	56.2	8.1	20	28 - 143
1,3-Dinitrobenzene	40	37.2	93.0	7.8	20	61 - 112
Pentachlorobenzene	40	29	72.5	14.1	20	50 - 99
1-Naphthylamine	40	43	108.0 *	2.8	20	38 - 91
2-Naphthylamine	40	36.4	91.0	3.4	20	70 - 130
2,3,4,6-Tetrachlorophenol	40	33.8	84.5	4.6	20	55 - 122
5-Nitro-o-toluidine	40	32	80.0	8.1	20	70 - 130
p-Phenylenediamine	40	34.3	85.8	7.3	20	58 - 107
Phenacetin	40	33.4	83.5	0.3	20	57 - 114
4-Aminobiphenyl	40	40.4	101.0	3.0	20	49 - 103
Pronamide	40	34.5	86.2	7.0	20	59 - 99
Pentachloronitrobenzene(PCNB)	40	39.6	99.0	9.2	20	60 - 104
Dinoseb	40	38.5	96.2	8.0	20	44 - 142
4-Nitroquinoline-1-oxide	40	25.5	63.8	4.0	20	10 - 125
Methapyriline	40	110	275.0 *	108.6 *	20	0 - 90
Aramite	40	27.4	68.5	6.7	20	41 - 127
p-Dimethylaminoazobenzene	40	27.3	68.2 *	7.7	20	70 - 130
2-Acetylaminofluorene	40	25.4	63.5	7.9	20	63 - 103
7,12-Dimethylbenz(a)anthracene	40	34.7	86.8	10.4	20	57 - 95
3-Methylcholanthrene	40	32.8	82.0	7.9	20	52 - 105
N-Nitrosopiperidine	40	32	80.0	5.2	20	53 - 112
1,3,5-Trinitrobenzene	40	21.1	52.8	11.6	20	29 - 163
Diallate (Avadex)	40	33	82.5	4.2	20	56 - 98
Isodrin	40	36.3	90.8	5.1	20	54 - 110
Chlorobenzilate	40	26.8	67.0	6.1	20	58 - 101
Kepone	40	16.7	41.8	12.9	20	0 - 165
0,0,0-Triethylphosphorothioate	40	31.6	79.0	4.9	20	50 - 106

Spike Recovery: 4 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8270 Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D		RRF10 =8270CAL2.D			
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D		RRF60 =8270CAL5.D			
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
Pyridine	1.430	1.447	1.524	1.547	1.528		
N-Nitrosodimethylamine	0.687	0.700	0.680	0.683	0.676		
Aniline	1.738	1.770	1.908	1.938	1.891		
Bis(2-chloroethyl)ether	1.059	1.079	1.103	1.131	1.124		
Phenol	* 1.631	1.590	1.687	1.797	1.829		*
2-Chlorophenol	1.119	1.054	1.148	1.201	1.191		
1,3-Dichlorobenzene	1.399	1.287	1.420	1.458	1.471		
1,4-Dichlorobenzene	* 1.484	1.425	1.469	1.519	1.522		*
1,2-Dichlorobenzene	1.304	1.323	1.355	1.379	1.380		
Benzyl alcohol	0.738	0.712	0.751	0.795	0.848		
2,2'-Oxybis(1-chloropropane)	0.780	0.709	0.750	0.790	0.777		
2-Methylphenol	0.952	0.955	0.991	1.091	1.089		
Hexachloroethane	0.583	0.553	0.574	0.609	0.598		
N-Nitroso-di-n-propylamine	# 1.113	1.088	1.136	1.235	1.214		#
4-Methylphenol	1.362	1.406	1.475	1.554	1.571		
Nitrobenzene	0.526	0.524	0.528	0.543	0.527		
Isophorone	0.611	0.617	0.633	0.653	0.643		
2-Nitrophenol	* 0.179	0.188	0.197	0.197	0.203		*
2,4-Dimethylphenol	0.303	0.290	0.299	0.305	0.303		
Bis(2-chloroethoxy)methane	0.428	0.419	0.433	0.445	0.439		
2,4-Dichlorophenol	* 0.319	0.347	0.350	0.364	0.374		*
1,2,4-Trichlorobenzene	0.452	0.431	0.429	0.446	0.453		
4-Chloroaniline	0.430	0.409	0.428	0.438	0.436		
Hexachlorobutadiene	* 0.330	0.315	0.340	0.344	0.349		*
4-Chloro-3-methylphenol	* 0.330	0.321	0.342	0.354	0.350		*
Hexachlorocyclopentadiene	# 0.544	0.573	0.624	0.650	0.667		#
2,4,6-Trichlorophenol	* 0.442	0.463	0.486	0.517	0.525		*
2,4,5-Trichlorophenol	0.399	0.438	0.453	0.468	0.483		
2-Chloronaphthalene	1.087	1.104	1.169	1.216	1.205		
2-Nitroaniline	0.354	0.388	0.407	0.422	0.422		
Dimethylphthalate	1.307	1.314	1.378	1.403	1.374		
2,6-Dinitrotoluene	0.266	0.286	0.300	0.319	0.323		
3-Nitroaniline	0.254	0.255	0.276	0.278	0.274		
2,4-Dinitrophenol	#	0.095	0.142	0.195	0.210		#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW SaLab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(%) = 0.05Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D	RRF10 =8270CAL2.D					
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D	RRF60 =8270CAL5.D					
COMPOUND		RRF4	RRF10	RRF20	RRF45	RRF60	$\overline{\text{RRF}}$	%RSD OR R^2
Dibenzofuran		1.688	1.639	1.683	1.774	1.743		
2,4-Dinitrotoluene		0.377	0.399	0.411	0.433	0.446		
4-Nitrophenol	#	0.232	0.281	0.304	0.314	0.309		#
4-Chlorophenyl-phenylether		0.764	0.787	0.822	0.925	0.954		
Diethylphthalate		1.243	1.225	1.226	1.281	1.266		
4-Nitroaniline		0.265	0.217	0.216	0.222	0.238		
4,6-Dinitro-2-methylphenol		0.093	0.122	0.142	0.171	0.174		
N-Nitrosodiphenylamine	*	0.482	0.488	0.500	0.509	0.504		*
4-Bromophenyl-phenylether		0.269	0.272	0.283	0.301	0.298		
Hexachlorobenzene		0.316	0.301	0.315	0.344	0.348		
Pentachlorophenol	*		0.155	0.183	0.205	0.210		*
Di-n-butylphthalate		0.999	1.047	1.099	1.143	1.113		
Butylbenzylphthalate		0.335	0.346	0.355	0.354	0.343		
3,3'-Dichlorobenzidine		0.391	0.416	0.444	0.493	0.488		
Bis(2-ethylhexyl)phthalate		0.565	0.570	0.609	0.633	0.621		
Di-n-octylphthalate	*	0.763	0.818	0.876	0.936	0.916		*
2-Picoline		1.437	1.331	1.456	1.476	1.476		
N-Nitrosomethylethylamine		0.571	0.596	0.635	0.627	0.640		
N-Nitrosodiethylamine		0.536	0.581	0.603	0.631	0.648		
Methylmethanesulfonate		1.028	0.997	1.035	1.046	1.042		
Ethyl methanesulfonate		0.987	1.038	1.099	1.091	1.067		
Pentachloroethane		0.575	0.546	0.600	0.625	0.629		
N-Nitrosopyrrolidine		0.552	0.578	0.633	0.675	0.670		
Acetophenone		0.562	0.554	0.578	0.613	0.623		
N-Nitrosomorpholine		0.605	0.600	0.661	0.685	0.686		
o-Toluidine		1.906	1.922	2.072	2.209	2.202		
a,a-Dimethylphenethylamine		0.504	0.572	0.610	0.641	0.632		
2,6-Dichlorophenol		0.297	0.297	0.320	0.343	0.350		
Hexachloropropene		0.408	0.423	0.410	0.448	0.465		
N-Nitrosodibutylamine		0.280	0.278	0.310	0.330	0.335		
Isosafrole		0.282	0.303	0.303	0.324	0.334		
1,2,4,5-Tetrachlorobenzene		0.701	0.686	0.718	0.771	0.792		
Safrole		0.242	0.292	0.277	0.317	0.325		
1,4-Naphthoquinone		0.367	0.373	0.422	0.440	0.458		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(%) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID: RRF4 =8270CAL1.D RRF10 =8270CAL2.D							
RRF20 =8270CAL3.D RRF45 =8270CAL4.D RRF60 =8270CAL5.D							
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
1,3-Dinitrobenzene	0.170	0.186	0.191	0.211	0.214		
Pentachlorobenzene	0.673	0.670	0.702	0.747	0.778		
1-Naphthylamine	0.648	0.663	0.681	0.708	0.725		
2-Naphthylamine	0.806	0.879	0.915	0.932	0.950		
2,3,4,6-Tetrachlorophenol	0.334	0.366	0.392	0.421	0.426		
5-Nitro-o-toluidine	0.315	0.317	0.343	0.367	0.377		
p-Phenylenediamine	0.255	0.283	0.304	0.313	0.327		
Phenacetin	0.275	0.285	0.271	0.269	0.279		
4-Aminobiphenyl	0.649	0.680	0.701	0.688	0.713		
Pronamide	0.315	0.312	0.346	0.347	0.362		
Pentachloronitrobenzene(PCNB)	0.121	0.135	0.141	0.145	0.153		
Dinoseb	0.123	0.159	0.193	0.226	0.231		
4-Nitroquinoline-1-oxide	0.008	0.012	0.012	0.010	0.009		
Methapyriline	0.011	0.011	0.013	0.015	0.014		
Aramite	0.081	0.091	0.095	0.098	0.099		
p-Dimethylaminoazobenzene	0.200	0.209	0.222	0.240	0.248		
2-Acetylaminofluorene	0.321	0.356	0.383	0.430	0.441		
7,12-Dimethylbenz(a)anthracene	0.480	0.503	0.535	0.576	0.603		
3-Methylcholanthrene	0.562	0.580	0.618	0.652	0.674		
N-Nitrosopiperidine	0.158	0.164	0.160	0.183	0.178		
1,3,5-Trinitrobenzene	0.617	0.745	0.835	0.942	0.961		
Diallate (Avadex)	0.408	0.445	0.471	0.499	0.517		
Isodrin	0.116	0.117	0.124	0.121	0.124		
Chlorobenzilate	0.318	0.314	0.337	0.369	0.384		
Kepone	0.046	0.061	0.066	0.068	0.067		
0,0,0-Triethylphosphorothioate	0.874	0.849	0.901	0.964	1.014		
=====							
2-Fluorophenol(SURR)	1.109	1.085	1.161	1.193	1.186		
Phenol-d5(SURR)	1.464	1.441	1.516	1.613	1.619		
Nitrobenzene-d5(SURR)	0.527	0.515	0.536	0.553	0.547		
2-Fluorobiphenyl(SURR)	1.504	1.477	1.534	1.626	1.585		
2,4,6-Tribromophenol(SURR)	0.232	0.261	0.273	0.289	0.292		
p-Terphenyl-d14(SURR)	0.904	0.818	0.821	0.757	0.689		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D				
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
Pyridine	1.527	1.517				1.50266	3
N-Nitrosodimethylamine	0.660	0.671				0.67937	1.9
Aniline	1.881	1.925				1.86438	4.2
Bis(2-chloroethyl)ether	1.107	1.136				1.10557	2.6
Phenol	* 1.855	1.926				1.75904	7.1 *
2-Chlorophenol	1.175	1.208				1.15668	4.7
1,3-Dichlorobenzene	1.437	1.460				1.41871	4.5
1,4-Dichlorobenzene	* 1.518	1.530				1.49525	2.5 *
1,2-Dichlorobenzene	1.381	1.408				1.36142	2.7
Benzyl alcohol	0.838	0.864				0.79242	7.5
2,2'-Oxybis(1-chloropropane)	0.775	0.829				0.77294	4.7
2-Methylphenol	1.096	1.160				1.04767	7.8
Hexachloroethane	0.602	0.615				0.59057	3.7
N-Nitroso-di-n-propylamine	# 1.205	1.250				1.17738	5.4 #
4-Methylphenol	1.604	1.633				1.51461	6.8
Nitrobenzene	0.538	0.540				0.53215	1.4
Isophorone	0.653					0.63498	0.99986
2-Nitrophenol	* 0.203	0.211				0.19693	5.3 *
2,4-Dimethylphenol	0.310	0.313				0.30321	2.5
Bis(2-chloroethoxy)methane	0.456	0.456				0.43959	3.2
2,4-Dichlorophenol	* 0.368	0.382				0.35774	5.9 *
1,2,4-Trichlorobenzene	0.457	0.463				0.44729	2.9
4-Chloroaniline	0.443	0.438				0.43162	2.6
Hexachlorobutadiene	* 0.355	0.360				0.34168	4.5 *
4-Chloro-3-methylphenol	* 0.349	0.363				0.34436	4.2 *
Hexachlorocyclopentadiene	# 0.670	0.689				0.63111	8.6 #
2,4,6-Trichlorophenol	* 0.517	0.534				0.49778	7 *
2,4,5-Trichlorophenol	0.486	0.494				0.46015	7.2
2-Chloronaphthalene	1.219	1.207				1.17243	4.7
2-Nitroaniline	0.414	0.421				0.40396	6.2
Dimethylphthalate	1.345	1.307				1.347	2.9
2,6-Dinitrotoluene	0.322	0.315				0.30449	7
3-Nitroaniline	0.278	0.279				0.27047	4.1
2,4-Dinitrophenol	# 0.215	0.219				0.17918	0.9995 #

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D				
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
Dibenzofuran	1.740	1.714				1.71164	2.6
2,4-Dinitrotoluene	0.456	0.467				0.42698	7.7
4-Nitrophenol	# 0.308	0.310				0.29402	10 #
4-Chlorophenyl-phenylether	0.977	0.994				0.8889	10.8
Diethylphthalate	1.242	1.221				1.24358	1.8
4-Nitroaniline	0.237	0.244				0.23414	7.5
4,6-Dinitro-2-methylphenol	0.179	0.187				0.15268	0.99853
N-Nitrosodiphenylamine	* 0.520	0.524				0.50383	3.1 *
4-Bromophenyl-phenylether	0.307	0.316				0.29225	6.2
Hexachlorobenzene	0.357	0.371				0.33604	7.6
Pentachlorophenol	* 0.211	0.222				0.1975	12.5 *
Di-n-butylphthalate	1.105	1.052				1.07969	4.6
Butylbenzylphthalate	0.338	0.340				0.34424	2.3
3,3'-Dichlorobenzidine	0.502	0.507				0.46301	10
Bis(2-ethylhexyl)phthalate	0.608	0.559				0.59501	5
Di-n-octylphthalate	* 0.898	0.826				0.86193	7.2 *
2-Picoline	1.525	1.549				1.46426	4.8
N-Nitrosomethylethylamine	0.645	0.656				0.62435	4.8
N-Nitrosodiethylamine	0.654	0.680				0.6188	8
Methylmethanesulfonate	1.024	1.053				1.03228	1.8
Ethyl methanesulfonate	1.105	1.113				1.07144	4.2
Pentachloroethane	0.639	0.667				0.61152	6.7
N-Nitrosopyrrolidine	0.710	0.749				0.65232	10.7
Acetophenone	0.628	0.654				0.60177	6.2
N-Nitrosomorpholine	0.692	0.746				0.66788	7.7
o-Toluidine	2.225	2.356				2.12749	7.9
a,a-Dimethylphenethylamine	0.649	0.658				0.60958	9
2,6-Dichlorophenol	0.362	0.375				0.33474	9.2
Hexachloropropene	0.476	0.488				0.44551	7.3
N-Nitrosodibutylamine	0.359	0.364				0.32224	10.7
Isosafrole	0.360	0.364				0.32423	9.4
1,2,4,5-Tetrachlorobenzene	0.816	0.822				0.75792	7.4
Safrole	0.329	0.348				0.30436	11.8
1,4-Naphthoquinone	0.460	0.475				0.42786	10

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code: PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(##) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D			
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
1,3-Dinitrobenzene	0.219	0.226				0.20234	10
Pentachlorobenzene	0.789	0.815				0.73904	7.9
1-Naphthylamine	0.739	0.732				0.69942	5.1
2-Naphthylamine	0.968	0.968				0.91679	6.4
2,3,4,6-Tetrachlorophenol	0.436	0.467				0.40598	11.1
5-Nitro-o-toluidine	0.386	0.388				0.35606	8.8
p-Phenylenediamine	0.331	0.323				0.30516	9.1
Phenacetin	0.286	0.286				0.27867	2.5
4-Aminobiphenyl	0.710	0.696				0.6911	3.2
Pronamide	0.362	0.362				0.34374	6.3
Pentachloronitrobenzene(PCNB)	0.157	0.153				0.1436	8.6
Dinoseb	0.235	0.239				0.2009	0.99959
4-Nitroquinoline-1-oxide	0.008	0.007				0.00936	0.9988
Methapyriline	0.014	0.015				0.01339	11.8
Aramite	0.103	0.102				0.09549	8.1
p-Dimethylaminoazobenzene	0.262	0.268				0.23538	11.1
2-Acetylaminofluorene	0.465	0.490				0.41224	14.8
7,12-Dimethylbenz(a)anthracene	0.635	0.653				0.56938	11.6
3-Methylcholanthrene	0.681	0.723				0.64128	9
N-Nitrosopiperidine	0.185	0.190				0.17391	7.5
1,3,5-Trinitrobenzene	0.987	1.040				0.87534	0.99799
Diallate (Avadex)	0.550	0.588				0.49675	12.4
Isodrin	0.125	0.127				0.1219	3.4
Chlorobenzilate	0.409	0.417				0.36387	11.6
Kepone	0.067	0.061				0.06225	12.3
0,0,0-Triethylphosphorothioate	1.030	1.098				0.96135	9.5
=====							
2-Fluorophenol(SURR)	1.171	1.186				1.15589	3.6
Phenol-d5(SURR)	1.608	1.585				1.54937	4.9
Nitrobenzene-d5(SURR)	0.549	0.552				0.53982	2.7
2-Fluorobiphenyl(SURR)	1.580	1.529				1.54784	3.3
2,4,6-Tribromophenol(SURR)	0.299	0.311				0.27947	9.5
p-Terphenyl-d14(SURR)	0.671	0.622				0.75461	13.2

Average Used: 6.3

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.459	2.9	AVRG
N-Nitrosodimethylamine	0.67937	0.69377	2.1	AVRG
Aniline	1.86438	1.791	3.9	AVRG
Bis(2-chloroethyl)ether	1.10557	1.19	7.6	AVRG
Phenol	* 1.75904	1.767	0.5	AVRG *
2-Chlorophenol	1.15668	1.15	0.6	AVRG
1,3-Dichlorobenzene	1.41871	1.424	0.4	AVRG
1,4-Dichlorobenzene	* 1.49525	1.509	0.9	AVRG *
1,2-Dichlorobenzene	1.36142	1.362	0.0	AVRG
Benzyl alcohol	0.79242	0.73825	6.8	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.80115	3.6	AVRG
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58903	0.3	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.244	5.7	AVRG #
4-Methylphenol	1.51461	1.54	1.7	AVRG
Nitrobenzene	0.53215	0.52704	1.0	AVRG
Isophorone	45	56.2	24.9	LINR
2-Nitrophenol	* 0.19693	0.19603	0.5	AVRG *
2,4-Dimethylphenol	0.30321	0.32693	7.8	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46869	6.6	AVRG
2,4-Dichlorophenol	* 0.35774	0.35146	1.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.44124	1.4	AVRG
4-Chloroaniline	0.43162	0.45571	5.6	AVRG
Hexachlorobutadiene	* 0.34168	0.37423	9.5	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.34325	0.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.66526	5.4	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.51405	3.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47926	4.2	AVRG
2-Chloronaphthalene	1.17243	1.21	3.2	AVRG
2-Nitroaniline	0.40396	0.43684	8.1	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.31835	4.6	AVRG
3-Nitroaniline	0.27047	0.29706	9.8	AVRG
2,4-Dinitrophenol	# 45	49.6	10.2	LINR #
Dibenzofuran	1.71164	1.795	4.9	AVRG
2,4-Dinitrotoluene	0.42698	0.44249	3.6	AVRG

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.31262	6.3	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.93795	5.5	AVRG
Diethylphthalate	1.24358	1.303	4.8	AVRG
4-Nitroaniline	0.23414	0.25728	9.9	AVRG
4,6-Dinitro-2-methylphenol	45	43.7	2.9	LINR
N-Nitrosodiphenylamine	* 0.50383	0.55994	11.1	AVRG *
4-Bromophenyl-phenylether	0.29225	0.31014	6.1	AVRG
Hexachlorobenzene	0.33604	0.34736	3.4	AVRG
Pentachlorophenol	* 0.1975	0.20129	1.9	AVRG *
Di-n-butylphthalate	1.07969	1.167	8.1	AVRG
Butylbenzylphthalate	0.34424	0.38811	12.7	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.69176	16.3	AVRG
Di-n-octylphthalate	* 0.86193	0.98898	14.7	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.205	4.2	AVRG
Phenol-d5(SURR)	1.54937	1.48	4.5	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.51104	5.3	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.521	1.7	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28828	3.2	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.72682	3.7	AVRG

Average Used: 5.2

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1642
 CCV ID: SSC1072994 Lab File ID: BSSEC.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.47412	2.4	AVRG
Acetophenone	0.60177	0.55437	7.9	AVRG

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.382	5.6	AVRG
N-Nitrosomethylethylamine	0.62435	0.5569	10.8	AVRG
N-Nitrosodiethylamine	0.6188	0.57695	6.8	AVRG
Methylmethanesulfonate	1.03228	0.91616	11.2	AVRG
Ethyl methanesulfonate	1.07144	1.184	10.5	AVRG
Pentachloroethane	0.61152	0.57889	5.3	AVRG
N-Nitrosopyrrolidine	0.65232	0.65475	0.4	AVRG
Acetophenone	0.60177	0.55655	7.5	AVRG
N-Nitrosomorpholine	0.66788	0.67921	1.7	AVRG
o-Toluidine	2.12749	1.942	8.7	AVRG
a,a-Dimethylphenethylamine	0.60958	0.66908	9.8	AVRG
2,6-Dichlorophenol	0.33474	0.3387	1.2	AVRG
Hexachloropropene	0.44551	0.4091	8.2	AVRG
N-Nitrosodibutylamine	0.32224	0.31635	1.8	AVRG
Isosafrole	0.32423	0.33158	2.3	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.71394	5.8	AVRG
Safrole	0.30436	0.34282	12.6	AVRG
1,4-Naphthoquinone	0.42786	0.42484	0.7	AVRG
1,3-Dinitrobenzene	0.20234	0.21355	5.5	AVRG
Pentachlorobenzene	0.73904	0.72588	1.8	AVRG
1-Naphthylamine	0.69942	0.92682	32.5	AVRG
2-Naphthylamine	0.91679	1.124	22.6	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.37542	7.5	AVRG
5-Nitro-o-toluidine	0.35606	0.3347	6.0	AVRG
p-Phenylenediamine	0.30516	0.30466	0.2	AVRG
Phenacetin	0.27867	0.26573	4.6	AVRG
4-Aminobiphenyl	0.6911	0.65241	5.6	AVRG
Pronamide	0.34374	0.35236	2.5	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14392	0.2	AVRG
Dinoseb	45	46.2	2.7	LINR
4-Nitroquinoline-1-oxide	45	42.8	4.9	2ORD
Methapyriline	0.01339	0.20423	1425.2	AVRG
Aramite	0.09549	0.09236	3.3	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23703	0.7	AVRG
2-Acetylaminofluorene	0.41224	0.39744	3.6	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.59118	3.8	AVRG

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7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64437	0.5	AVRG
N-Nitrosopiperidine	0.17391	0.17104	1.7	AVRG
1,3,5-Trinitrobenzene	45	25.4	43.6	LINR
Diallate (Avadex)	0.49675	0.48038	3.3	AVRG
Isodrin	0.1219	0.13008	6.7	AVRG
Chlorobenzilate	0.36387	0.35124	3.5	AVRG
Kepone	0.06225	0.06098	2.0	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.92383	3.9	AVRG

Average Used: 38.8

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 04/25/12 Time: 0807
 CCV ID: CCV1073205 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.618	7.7	AVRG
N-Nitrosodimethylamine	0.67937	0.72948	7.4	AVRG
Aniline	1.86438	1.913	2.6	AVRG
Bis(2-chloroethyl)ether	1.10557	1.156	4.6	AVRG
Phenol	* 1.75904	1.81	2.9	AVRG *
2-Chlorophenol	1.15668	1.207	4.4	AVRG
1,3-Dichlorobenzene	1.41871	1.454	2.5	AVRG
1,4-Dichlorobenzene	* 1.49525	1.542	3.1	AVRG *
1,2-Dichlorobenzene	1.36142	1.414	3.9	AVRG
Benzyl alcohol	0.79242	0.83539	5.4	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.77409	0.1	AVRG
2-Methylphenol	1.04767	1.077	2.8	AVRG
Hexachloroethane	0.59057	0.60371	2.2	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.271	8.0	AVRG #
4-Methylphenol	1.51461	1.591	5.0	AVRG
Nitrobenzene	0.53215	0.55613	4.5	AVRG
Isophorone	45	48.2	7.1	LINR
2-Nitrophenol	* 0.19693	0.2093	6.3	AVRG *
2,4-Dimethylphenol	0.30321	0.31323	3.3	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.45842	4.3	AVRG
2,4-Dichlorophenol	* 0.35774	0.37225	4.1	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.45774	2.3	AVRG
4-Chloroaniline	0.43162	0.44392	2.8	AVRG
Hexachlorobutadiene	* 0.34168	0.3446	0.9	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.3592	4.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.62491	1.0	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.51111	2.7	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47518	3.3	AVRG
2-Chloronaphthalene	1.17243	1.22	4.1	AVRG
2-Nitroaniline	0.40396	0.42491	5.2	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.32553	6.9	AVRG
3-Nitroaniline	0.27047	0.28278	4.6	AVRG
2,4-Dinitrophenol	# 45	38.5	14.4	LINR #
Dibenzofuran	1.71164	1.758	2.7	AVRG
2,4-Dinitrotoluene	0.42698	0.44072	3.2	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 04/25/12 Time: 0807
 CCV ID: CCV1073205 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.33089	12.5	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.91847	3.3	AVRG
Diethylphthalate	1.24358	1.319	6.1	AVRG
4-Nitroaniline	0.23414	0.22929	2.1	AVRG
4,6-Dinitro-2-methylphenol	45	41.6	7.6	LINR
N-Nitrosodiphenylamine	* 0.50383	0.51795	2.8	AVRG *
4-Bromophenyl-phenylether	0.29225	0.30213	3.4	AVRG
Hexachlorobenzene	0.33604	0.34836	3.7	AVRG
Pentachlorophenol	* 0.1975	0.1994	1.0	AVRG *
Di-n-butylphthalate	1.07969	1.218	12.8	AVRG
Butylbenzylphthalate	0.34424	0.36936	7.3	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.65678	10.4	AVRG
Di-n-octylphthalate	* 0.86193	0.97186	12.8	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.181	2.2	AVRG
Phenol-d5(SURR)	1.54937	1.602	3.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.57053	5.7	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.575	1.8	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28382	1.6	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.79497	5.3	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0831
 CCV ID: CCV1073207 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50368	8.8	AVRG
Acetophenone	0.60177	0.63877	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 04/25/12 Time: 0854
 CCV ID: CCV1073206 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.498	2.3	AVRG
N-Nitrosomethylethylamine	0.62435	0.65104	4.3	AVRG
N-Nitrosodiethylamine	0.6188	0.64202	3.8	AVRG
Methylmethanesulfonate	1.03228	1.058	2.5	AVRG
Ethyl methanesulfonate	1.07144	1.09	1.7	AVRG
Pentachloroethane	0.61152	0.65218	6.6	AVRG
N-Nitrosopyrrolidine	0.65232	0.67498	3.5	AVRG
Acetophenone	0.60177	0.56499	6.1	AVRG
N-Nitrosomorpholine	0.66788	0.68347	2.3	AVRG
o-Toluidine	2.12749	2.183	2.6	AVRG
a,a-Dimethylphenethylamine	0.60958	0.66097	8.4	AVRG
2,6-Dichlorophenol	0.33474	0.3465	3.5	AVRG
Hexachloropropene	0.44551	0.42693	4.2	AVRG
N-Nitrosodibutylamine	0.32224	0.33329	3.4	AVRG
Isosafrole	0.32423	0.32534	0.3	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.7566	0.2	AVRG
Safrole	0.30436	0.31711	4.2	AVRG
1,4-Naphthoquinone	0.42786	0.47884	11.9	AVRG
1,3-Dinitrobenzene	0.20234	0.22085	9.1	AVRG
Pentachlorobenzene	0.73904	0.73711	0.3	AVRG
1-Naphthylamine	0.69942	0.72386	3.5	AVRG
2-Naphthylamine	0.91679	0.95926	4.6	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.45662	12.5	AVRG
5-Nitro-o-toluidine	0.35606	0.38258	7.4	AVRG
p-Phenylenediamine	0.30516	0.35368	15.9	AVRG
Phenacetin	0.27867	0.30599	9.8	AVRG
4-Aminobiphenyl	0.6911	0.70117	1.5	AVRG
Pronamide	0.34374	0.36541	6.3	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14588	1.6	AVRG
Dinoseb	45	38.3	14.9	LINR
4-Nitroquinoline-1-oxide	45	45	0.0	2ORD
Methapyriline	0.01339	0.01541	15.1	AVRG
Aramite	0.09549	0.09713	1.7	AVRG
p-Dimethylaminoazobenzene	0.23538	0.24214	2.9	AVRG
2-Acetylaminofluorene	0.41224	0.45066	9.3	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.57451	0.9	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 04/25/12 Time: 0854
 CCV ID: CCV1073206 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.65326	1.9	AVRG
N-Nitrosopiperidine	0.17391	0.17845	2.6	AVRG
1,3,5-Trinitrobenzene	45	44.9	0.2	LINR
Diallate (Avadex)	0.49675	0.51295	3.3	AVRG
Isodrin	0.1219	0.1218	0.1	AVRG
Chlorobenzilate	0.36387	0.3761	3.4	AVRG
Kepone	0.06225	0.06088	2.2	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.96241	0.1	AVRG

Average Used: 4.6

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1510
 CCV ID: CCV1076910 Lab File ID: 8270CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.494	0.6	AVRG
N-Nitrosodimethylamine	0.67937	0.78731	15.9	AVRG
Aniline	1.86438	1.76	5.6	AVRG
Bis(2-chloroethyl)ether	1.10557	1.089	1.5	AVRG
Phenol	* 1.75904	1.754	0.3	AVRG *
2-Chlorophenol	1.15668	1.175	1.6	AVRG
1,3-Dichlorobenzene	1.41871	1.455	2.6	AVRG
1,4-Dichlorobenzene	* 1.49525	1.556	4.1	AVRG *
1,2-Dichlorobenzene	1.36142	1.415	3.9	AVRG
Benzyl alcohol	0.79242	0.81677	3.1	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.73516	4.9	AVRG
2-Methylphenol	1.04767	1.04	0.7	AVRG
Hexachloroethane	0.59057	0.64156	8.6	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.284	9.1	AVRG #
4-Methylphenol	1.51461	1.621	7.0	AVRG
Nitrobenzene	0.53215	0.56439	6.1	AVRG
Isophorone	45	46.6	3.6	LINR
2-Nitrophenol	* 0.19693	0.20408	3.6	AVRG *
2,4-Dimethylphenol	0.30321	0.31302	3.2	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.44701	1.7	AVRG
2,4-Dichlorophenol	* 0.35774	0.37617	5.2	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.47179	5.5	AVRG
4-Chloroaniline	0.43162	0.42598	1.3	AVRG
Hexachlorobutadiene	* 0.34168	0.38147	11.6	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.37003	7.5	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.68536	8.6	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.48784	2.0	AVRG *
2,4,5-Trichlorophenol	0.46015	0.52813	14.8	AVRG
2-Chloronaphthalene	1.17243	1.218	3.9	AVRG
2-Nitroaniline	0.40396	0.42859	6.1	AVRG
Dimethylphthalate	1.347	1.435	6.5	AVRG
2,6-Dinitrotoluene	0.30449	0.31594	3.8	AVRG
3-Nitroaniline	0.27047	0.26339	2.6	AVRG
2,4-Dinitrophenol	# 45	42.9	4.7	LINR #
Dibenzofuran	1.71164	1.815	6.0	AVRG
2,4-Dinitrotoluene	0.42698	0.44915	5.2	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1510
 CCV ID: CCV1076910 Lab File ID: 8270CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.32484	10.5	AVRG #
4-Chlorophenyl-phenylether	0.8889	0.99263	11.7	AVRG
Diethylphthalate	1.24358	1.325	6.5	AVRG
4-Nitroaniline	0.23414	0.22226	5.1	AVRG
4,6-Dinitro-2-methylphenol	45	42.9	4.7	LINR
N-Nitrosodiphenylamine	* 0.50383	0.49781	1.2	AVRG *
4-Bromophenyl-phenylether	0.29225	0.29331	0.4	AVRG
Hexachlorobenzene	0.33604	0.35514	5.7	AVRG
Pentachlorophenol	* 0.1975	0.21578	9.3	AVRG *
Di-n-butylphthalate	1.07969	1.175	8.8	AVRG
Butylbenzylphthalate	0.34424	0.32387	5.9	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.62392	4.9	AVRG
Di-n-octylphthalate	* 0.86193	0.92191	7.0	AVRG *
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2-Fluorophenol(SURR)	1.15589	1.165	0.8	AVRG
Phenol-d5(SURR)	1.54937	1.618	4.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.58422	8.2	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.598	3.2	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.32692	17.0	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.73681	2.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1534
 CCV ID: CCV1076914 Lab File ID: BSCCV2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50062	8.1	AVRG
Acetophenone	0.60177	0.64027	6.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 Calibration Date: 05/03/12 Time: 1647
 CCV ID: CCV1076913 Lab File ID: AP9CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.419	3.1	AVRG
N-Nitrosomethylethylamine	0.62435	0.60934	2.4	AVRG
N-Nitrosodiethylamine	0.6188	0.60822	1.7	AVRG
Methylmethanesulfonate	1.03228	1.013	1.9	AVRG
Ethyl methanesulfonate	1.07144	1.052	1.8	AVRG
Pentachloroethane	0.61152	0.64036	4.7	AVRG
N-Nitrosopyrrolidine	0.65232	0.6319	3.1	AVRG
Acetophenone	0.60177	0.57945	3.7	AVRG
N-Nitrosomorpholine	0.66788	0.67426	1.0	AVRG
o-Toluidine	2.12749	2.083	2.1	AVRG
a,a-Dimethylphenethylamine	0.60958	0.61742	1.3	AVRG
2,6-Dichlorophenol	0.33474	0.33993	1.6	AVRG
Hexachloropropene	0.44551	0.48264	8.3	AVRG
N-Nitrosodibutylamine	0.32224	0.33819	4.9	AVRG
Isosafrole	0.32423	0.33722	4.0	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.76409	0.8	AVRG
Safrole	0.30436	0.31693	4.1	AVRG
1,4-Naphthoquinone	0.42786	0.45573	6.5	AVRG
1,3-Dinitrobenzene	0.20234	0.20962	3.6	AVRG
Pentachlorobenzene	0.73904	0.77902	5.4	AVRG
1-Naphthylamine	0.69942	0.68053	2.7	AVRG
2-Naphthylamine	0.91679	0.92069	0.4	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.42934	5.8	AVRG
5-Nitro-o-toluidine	0.35606	0.35907	0.8	AVRG
p-Phenylenediamine	0.30516	0.32075	5.1	AVRG
Phenacetin	0.27867	0.27859	0.0	AVRG
4-Aminobiphenyl	0.6911	0.6883	0.4	AVRG
Pronamide	0.34374	0.35696	3.8	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14999	4.4	AVRG
Dinoseb	45	44.4	1.3	LINR
4-Nitroquinoline-1-oxide	45	41	8.9	2ORD
Methapyriline	0.01339	0.01354	1.1	AVRG
Aramite	0.09549	0.09651	1.1	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23616	0.3	AVRG
2-Acetylaminofluorene	0.41224	0.41906	1.7	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.57149	0.4	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1647
 CCV ID: CCV1076913 Lab File ID: AP9CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64214	0.1	AVRG
N-Nitrosopiperidine	0.17391	0.17609	1.3	AVRG
1,3,5-Trinitrobenzene	45	49.4	9.8	LINR
Diallate (Avadex)	0.49675	0.50731	2.1	AVRG
Isodrin	0.1219	0.117	4.0	AVRG
Chlorobenzilate	0.36387	0.36219	0.5	AVRG
Kepone	0.06225	0.03784	39.2	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.98715	2.7	AVRG

Average Used: 3.7

FL-PRO Organics

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Florida DEP/FL PRO

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for FL-PRO semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample TFS-MW-15 was recovered below criteria for the following surrogate: o-Terphenyl Surrogate at 70.6 % with criteria of (82-142). The most probable cause for this recovery is matrix interference near the elution of the surrogate since there was a positive result for TPH at 22400ug/L. The sample required a 5X dilution.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

This method does not require the use of internal standards.

F. Samples:

Sample analysis proceeded normally.

Sample TFS-MW-15 required a 5X dilution due to high concentration of the following analyte: TPH.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 05/02/2012

FL-PRO ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Method: FL-PRO

EPA Sample No	Lab Sample ID
<u>TFS-MW-03</u>	<u>350579401</u>
<u>TFS-MW-06</u>	<u>350579402</u>
<u>TFS-MW-FD1</u>	<u>350579403</u>
<u>TFS-MW-15</u>	<u>350579404</u>
<u>TFS-MW-16</u>	<u>350579405</u>

FL-PRO Sample Data

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-03

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579401 Lab File ID 794-1.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1626

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-06

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579402 Lab File ID 794-2.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1649

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	920		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-FD1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579403 Lab File ID 794-3.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1711

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	900		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-15

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579404 Lab File ID 794-4D5.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/26/12 Time: 0728

PercentSolids: 0 decanted : _____ Dilution Factor: 5

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	22400		1280	2550	2550

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / TFS-MW-16

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 350579405 Lab File ID 794-5.D

Sample wt/vol: 980 Units: ML Date Received: 04/20/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1756

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	320	J	255	510	510

FL-PRO QC Summary

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW 127231MB

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Lab Sample ID: 127231MB Lab File ID: 9186MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1542

PercentSolids: 0 decanted: _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	500	U	250	500	500

FL-PRO ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West / Boca Chica / MW S EPA Sample No. 127231MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Lab File ID: 9186MB.D Lab Sample ID: 127231MB

Instrument ID: SFID01 Date Extracted: 04/25/12

Matrix: WATER Date Analyzed: 04/25/12

Level:(low/med) LOW Time Analyzed: 1542

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127230LCS	127230LCS	9186LCS.D	04/25/12	1604
2	TFS-MW-03	350579401	794-1.D	04/25/12	1626
3	TFS-MW-06	350579402	794-2.D	04/25/12	1649
4	TFS-MW-FD1	350579403	794-3.D	04/25/12	1711
5	TFS-MW-16	350579405	794-5.D	04/25/12	1756
6	TFS-MW-15	350579404	794-4D5.D	04/26/12	0728

COMMENTS:

2A

WATER FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

Lab Code : PEL Case No. SAS No: SDG NO.: 3505794

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127230LCS	97.0	93.3					0
127231MB	93.0	93.3					0
TFS-MW-03	85.3	78.4					0
TFS-MW-06	84.3	78.4					0
TFS-MW-15	70.6 *	52.3					1
TFS-MW-16	91.2	85.0					0
TFS-MW-FD1	91.2	85.0					0

Control Limits

S1 = o-Terphenyl Surrogate 82 - 142
S2 = Nonatriacontane (C-39) 42 - 193

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

110512.1723

FL-PRO ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date: 03/28/12
 Instrument ID: SFID01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 4.16			S2 : 10.58				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	STD1064818	45519	PROCAL7.D	03/28/12	1416	4.17	10.63
2	STD1064817	45520	PROCAL6.D	03/28/12	1438	4.17	10.59
3	STD1064816	45521	PROCAL5.D	03/28/12	1501	4.16	10.54
4	STD1064815	45522	PROCAL4.D	03/28/12	1523	4.16	10.58
5	STD1064814	45523	PROCAL3.D	03/28/12	1545	4.14	10.5
6	STD1064813	45524	PROCAL2.D	03/28/12	1608	4.16	10.54
7	STD1064812	45525	PROCAL1.D	03/28/12	1630	4.13	10.5
8	SSC1064821	45526	PROSEC.D	03/28/12	1652	4.13	10.44
9	CCV1073386	45522	PROCCV1.D	04/25/12	1341	4.12	10.34
10	127231MB	127231MB	9186MB.D	04/25/12	1542	4.28	10.85
11	127230LCS	127230LCS	9186LCS.D	04/25/12	1604	4.16	10.53
12	TFS-MW-03	350579401	794-1.D	04/25/12	1626	4.13	10.42
13	TFS-MW-06	350579402	794-2.D	04/25/12	1649	4.16	10.46
14	TFS-MW-FD1	350579403	794-3.D	04/25/12	1711	4.12	10.36
15	TFS-MW-16	350579405	794-5.D	04/25/12	1756	4.1	10.32
16	ZZZZZ	ZZZZZ	ZZZZZ	04/25/12	1818		
17	ZZZZZ	ZZZZZ	ZZZZZ	04/25/12	1903		
18	CCV1073387	45522	PROCCV2.D	04/25/12	1935	4.08	10.23
19	ZZZZZ	ZZZZZ	ZZZZZ	04/25/12	1958		
20	CCV1073388	45522	PROCCV3.D	04/25/12	2159	4.08	10.22
21	TFS-MW-15	350579404	794-4D5.D	04/26/12	0728	4.21	10.57
22	CCV1073389	45522	PROCCV4.D	04/26/12	0801	4.09	10.29

QC LIMITS

S1 = o-Terphenyl Surrogate (+/- 0.2 MINUTES)
 S2 = Nonatriacontane (C-39) (+/- 0.46 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / EPA Sample No. 127230LCS
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	3400	2900	85.3			55 - 118

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO Standards Data

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:	RRF0.17 =PROCAL1.D	RRF0.34 =PROCAL2.D			
RRF0.85 =PROCAL3.D	RRF1.7 =PROCAL4.D	RRF2.55 =PROCAL5.D			
COMPOUND	RRF0.17	RRF0.34	RRF0.85	RRF1.7	RRF2.55
TPH	11892200	8905905.882	7673328.235	7746596.471	6757141.176
=====					
Nonatriacontane (C-39)(SURR)	5045493.333	5107080	5812986.667	5564053.333	5221266.667
o-Terphenyl Surrogate(SURR)	6862940	6760680	7635860	8031980	6886480

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:		RRF3.4 =PROCAL6.D	RRF5.1 =PROCAL7.D			
COMPOUND	RRF3.4	RRF5.1				
TPH	6619844.118	6701392.157				
=====						
Nonatriacontane (C-39)(SURR)	5110173.333	4655386.667				
o-Terphenyl Surrogate(SURR)	7013080	6544620				

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
TPH	LINR	-0.16196821	1.54514E-07	0.99787
=====				
Nonatriacontane (C-39)(SURR)	AVRG		5216634.286	7.2
o-Terphenyl Surrogate(SURR)	AVRG		7105091.429	7.5

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PROCAL1.D		RT2: PROCAL2.D			
RT3: PROCAL3.D		RT4: PROCAL4.D		RT5: PROCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
TPH	6.202	6.357	6.357	6.357	6.357		
=====							
Nonatriacontane (C-39)(SURR)	10.497	10.543	10.503	10.583	10.543		
o-Terphenyl Surrogate(SURR)	4.130	4.157	4.140	4.160	4.157		

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sa
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID: RT6: PROCAL6.D RT7: PROCAL7.D								
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW	
							FROM	TO
TPH	6.357	6.357				6.357	0.908	11.805
=====								
Nonatriacontane (C-39)(SURR)	10.587	10.630				10.583	10.123	11.043
o-Terphenyl Surrogate(SURR)	4.167	4.173				4.160	3.960	4.360

7SSC

FL-PRO ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SFID01 CalibrationDate: 03/28/12 Time: 1652
 CCV ID: SSC1064821 Lab File ID: PROSEC.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.65	2.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5339786.667	2.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7346880	3.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 1341
 CCV ID: CCV1073386 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.88	10.6	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5634560	8.0	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7626040	7.3	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 1935
 CCV ID: CCV1073387 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.74	2.4	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5255320	0.7	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6963900	2.0	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 2159
 CCV ID: CCV1073388 Lab File ID: PROCCV3.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.76	3.5	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5345653.333	2.5	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7087780	0.2	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampling
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505794
 Instrument ID: SFID01 CalibrationDate: 04/26/12 Time: 0801
 CCV ID: CCV1073389 Lab File ID: PROCCV4.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.95	14.7	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5981586.667	14.7	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	8054900	13.4	AVRG

Inorganics

Inorganic Data Qualifiers

C (Concentration) Qualifier - Entries and their meanings are:

- J** The reported value obtained was less than the RL but greater than or equal to the MDL.
- E** The reported value obtained was over calibration or linear range.
- U** The reported value obtained was less than the MDL or was not detected.

Q Qualifier - Entries and their meanings are:

- U** The reported value is estimated because of interference. An explanatory comment must be included under "Comments" on the Cover Page if the problem applies to all samples in this data package or on the individual FORM 1 if it is an isolated problem.
- M** Duplicate injection precision was not met (two analyses of the same sample did not agree).
- N** Spiked sample recovery not within control limits.
- E** Serial Dilution percent difference not within control limits.
- S** The reported value was determined by the Method of Standard Additions (MSA).
- W** Post-digestion spike for Furnace AA analysis is out of control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
- *** Duplicate analysis not within control limits.
- +** Correlation coefficient for the MSA is less than 0.995.
- X** The data is flagged as rejected by analyst utilizing analytical judgement.

Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field.

M (Method) Qualifier - Enter one of the following:

- P** ICP
- A** Flame AA
- F** Furnace AA
- CV** Manual Cold Vapor AA
- TC** Total Organic Carbon
- AS** Semi-Automated Spectrophotometric
- CA** Midi-Distillation Spectrophotometric
- T** Titrimetric
- C** Manual Spectrophotometric
- GR** Gravimetric
- NR** Analyte was not required by your lab

Inorganic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for inorganic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).
- A** Post Digestion Spike.
- L** Serial Dilution.

Wet Chemistry Data Package

CASE NARRATIVE
Anions by Ion Chromatography

PEL Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: There is no preparation step for this method.

B. Sample Analysis: The following samples were analyzed out of hold: TFS-MW-03 the sample was set up on to be analyzed the day it went out of hold. It was analyzed approximately 7 hours out of hold. TFS-MW-03RE1 the sample was re-analyzed approximately 2 days out of hold due to the CCV's exceeding limits. Both sets of data are reported for this sample. TFS-MW-06 this sample was received one day later due to FedEx issues and was analyzed approximately 2 days out of hold.

III. METHOD

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 300.1.

IV. PREPARATION

There is no preparation step for this method.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS):

CASE NARRATIVE
Anions by Ion Chromatography

PEL Lab Reference No./SDG: 3505794

Client: CH2M Hill

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

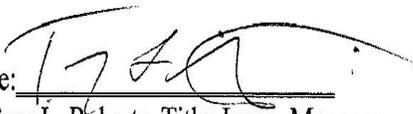
E. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/08/2012

**CASE NARRATIVE
ALKALINITY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 310.1 / SM2320B.

IV. ANALYSIS

A. Blanks:

1. Method Blanks:

All acceptance criteria were met.

B. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

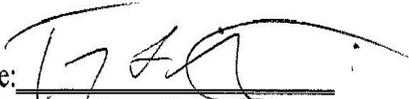
Sample analysis proceeded normally.
Sample TFS-MW-03 required a 5X dilution due to high concentration of the following analyte(s): Alkalinity (Total).
Sample TFS-MW-06 required a 5X dilution due to high concentration of the following analyte(s): Alkalinity (Total).

**CASE NARRATIVE
ALKALINITY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/26/2012

**CASE NARRATIVE
SULFIDE**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 376.1 / SM4500-S F.

IV. ANALYSIS

A. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

B. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

Sample analysis proceeded normally.

**CASE NARRATIVE
SULFIDE**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/24/2012

**CASE NARRATIVE
TOTAL ORGANIC CARBON**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA SW846 Method 9060 / SM5310B.

IV. PREPARATION

There is no preparation step for this method.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

D. Duplicate:

**CASE NARRATIVE
TOTAL ORGANIC CARBON**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505794

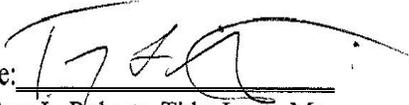
Client: CH2M Hill

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/26/2012

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi
Lab Code : PEL Case No.: _____ SDG No.: 3505794
SOW No.: _____

EPA Sample No	Lab Sample ID
<u>TFS-MW-03</u>	<u>350579401</u>
<u>TFS-MW-03RE1</u>	<u>350579401RE1</u>
<u>TFS-MW-06</u>	<u>350579402</u>

Comments:

Wet Chemistry Sample Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M

TFS-MW-03

 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 350579401
 Level:(low/med) LOW Date Received: 4/20/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
47752-0-60-0	Alkalinity (Total)	175			IS	2.5	5	5
25-90-0	Nitrate-N	0.14			IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.2			IC	0.031	0.062	0.1
3-03-5	Sulfate	36.7			IC	0.32	0.64	1
18496-25-8	Sulfide	0.6	J		T	0.08	0.16	2
1012_5	TOC	2.15			TC	0.31	0.62	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	96.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M TFS-MW-03RE1
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 350579401RE1
 Level:(low/med) LOW Date Received: 4/20/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.13			IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	36.8			IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	98.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M

TFS-MW-06

 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 350579402
 Level:(low/med) LOW Date Received: 4/20/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
47752-0-60-0	Alkalinity (Total)	275			IS	2.5	5	5
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	27.1			IC	0.32	0.64	1
18496-25-8	Sulfide	3.61			T	0.08	0.16	2
1012_5	TOC	7.48			TC	0.31	0.62	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	98.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Wet Chemistry QC Summary Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 042112MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 042112MB
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	0.64	U		IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	104.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 042312MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 042312MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	0.64	U		IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	100.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 126865MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 126865MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 126871MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 126871MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 126872MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 126872MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 127167MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 127167MB
 Level:(low/med) LOW Date Received: 4/24/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
47752-0-60-0	Alkalinity (Total)	1	U		IS	0.5	1	1

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / M 127316MB
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: WATER Lab Sample ID: 127316MB
 Level:(low/med) LOW Date Received: 4/24/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
1012_5	TOC	0.62	U		TC	0.31	0.62	1

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

2-CC

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / B
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Concentration Units: (MG/L)

Analyte	Initial Calibration				Continuing Calibration						M	
	Source Used	True	Found	%R (1)	Source Used	True	Found	%R (1)	Found	%R (1)		
Alkalinity (Total)												IS
Nitrate-N	45021	1	1.000	100.0	45021	1	1.100	110.0				IC
Nitrite-N	45021	1	1.000	100.0	45021	1	1.200	120.0				IC
Sulfate	45021	8	7.700	96.2	45021	8	10.100	126.2				IC
Sulfide												T
TOC	44460	2.5	2.370	94.8	34386	2.5	2.520	100.8	2.600	104.0		TC

ICV IDs: IC= ICV1078178, TC= 127314ICV

CCV1 IDs: IC= CCV1078176, TC= 127319CCV

CCV2 IDs: TC= 127321CCV

(1) Control Limits: TOC: 75-125

Comments:

U.S. EPA - CLP

2-CC

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / B
 Lab Code : PEL Case No. SAS No: SDG No.: 3505794

Concentration Units: (MG/L)

Analyte	Initial Calibration				Continuing Calibration						M
	Source Used	True	Found	%R (1)	Source Used	True	Found	%R (1)	Found	%R (1)	
Alkalinity (Total)											IS
Nitrate-N	45021	1	1.000	100.0	45021	1	1.000	100.0			IC
Nitrite-N	45021	1	1.100	110.0	45021	1	1.100	110.0			IC
Sulfate	45021	8	8.000	100.0	45021	8	8.100	101.2			IC
Sulfide											T
TOC											TC

ICV IDs: IC= ICV1072873

CCV1 IDs: IC= CCV1072869

CCV2 IDs:

(1) Control Limits: TOC: 75-125

Comments:

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampli
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Preparation Blank Matrix (water/soil): WATER
WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L
Percent R

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)				Preparation Blank		
	(MG/L)	C	C	C	C	C	C	M	
Alkalinity (Total)							1	U	IS
Nitrate-N	0.036	U	0.036	U			0.072	U	IC
Nitrite-N	0.031	U	0.031	U			0.062	U	IC
Sulfate	0.32	U	0.32	U			0.64	U	IC
Sulfide							0.16	U	T
TOC	0.31	U	0.31	U	0.31	U	0.62	U	TC

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	104.0	90 - 115	

ICB IDs: IC= ICB1078177, TC= 127315ICB
 CCB1 IDs: IC= CCB1078175, TC= 127320CCB
 CCB2 IDs: TC= 127322CCB
 CCB3 IDs:

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampli
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Preparation Blank Matrix (water/soil): WATER
WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L
Percent R

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)						Preparation Blank		M
	(MG/L)	C	C	C	C	C	C	C	C		
Alkalinity (Total)											IS
Nitrate-N	0.036	U	0.036	U					0.072	U	IC
Nitrite-N	0.031	U	0.031	U					0.062	U	IC
Sulfate	0.32	U	0.32	U					0.64	U	IC
Sulfide									0.16	U	T
TOC											TC

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	100.0	90 - 115	

ICB IDs: IC= ICB1072872

CCB1 IDs: IC= CCB1072866

CCB2 IDs:

CCB3 IDs:

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampli
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Preparation Blank Matrix (water/soil): WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)				Preparation Blank		M
		C	C	C	C	C	C		
Alkalinity (Total)									IS
Nitrate-N									IC
Nitrite-N									IC
Sulfate									IC
Sulfide							0.16	U	T
TOC									TC

ICB IDs:

CCB1 IDs:

CCB2 IDs:

CCB3 IDs:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

042112LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Nitrate-N	20	0.99		0.98		1.0		IC
Nitrite-N	20	1		1.1		9.5		IC
Sulfate	20	8		7.9		1.3		IC

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

042312LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Nitrate-N	20	1		1		0.0		IC
Nitrite-N	20	1.1		1.1		0.0		IC
Sulfate	20	8.1		8.1		0.0		IC

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

126868LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Sulfide	20	5.01		5.21		3.9		T

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127170LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Alkalinity (Total)	20	50.5		49		3.0		IS

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica /

127318LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TOC	20	2.42		2.43		0.4		TC

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

042112LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	0.99	99	
Nitrite-N	45021	IC	75	125	1	1	100	
Sulfate	45021	IC	75	125	8	8	100	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

042112LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	0.98	98	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	7.9	98.8	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

042312LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	1	100	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	8.1	101.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

042312LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	1	100	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	8.1	101.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

126867LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Sulfide	45931	T	80	120	5	5.01	100.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

126868LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Sulfide	45931	T	80	120	5	5.21	104.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

127169LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Alkalinity (Total)	44425	IS	80	120	50	50.5	101	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

127170LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Alkalinity (Total)	44425	IS	80	120	50	49	98	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

127317LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
TOC	44460	TC	80	120	2.5	2.42	96.8	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chi

127318LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505794

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
TOC	44460	TC	80	120	2.5	2.43	97.2	

Comments:

U.S. EPA - CLP

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METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW Sampli
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505794
 Matrix: Water
 Concentration Units: mg/L

PARAMETER	M	INSTRUMENT ID	DATE	CRDL	MDL	Raw MDL (UG/L)
Alkalinity (Total)	IS	HACH	1/10/2007	1	0.5	0.5
Nitrate-N	IC	IC	1/17/2012	0.1	0.036	0.036
Nitrite-N	IC	IC	1/17/2012	0.1	0.031	0.031
Sulfate	IC	IC	1/17/2012	1	0.32	0.32
Sulfide	T	HACH	5/1/2006	2	0.08	0.08
TOC	TC	TOC	1/23/2012	1	0.31	0.31

Comments:

110512 1723

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Instrument ID Number: IC Method: IC
 Start Date: 2/15/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
OICAL1	1	17:14		X
OICAL2	1	17:36		X
OICAL3	1	17:58		X
OICAL4	1	18:20		X
OICAL5	1	18:42		X
OICAL6	1	19:04		X
OICAL7	1	19:26		X
ICV1078178	1	14:23		X
ICB1078177	1	14:45		X
042112MB	1	15:07		X
042112LCS	1	15:29		X
042112LCSD	1	15:51		X
TFS-MW-03	1	16:13		X
ZZZZZZ	1	16:35		
ZZZZZZ	1	16:57		
ZZZZZZ	1	17:19		
ZZZZZZ	1	17:41		
CCV1078176	1	18:03		X
CCB1078175	1	18:25		X
ICV1072873	1	17:52		X
ICB1072872	1	18:14		X
042312MB	1	18:36		X
042312LCS	1	18:58		X
042312LCSD	1	19:20		X
TFS-MW-03RE1	1	19:42		X
TFS-MW-06	1	20:04		X
ZZZZZZ	1	20:26		
ZZZZZZ	1	20:48		
ZZZZZZ	1	21:10		
CCV1072869	1	21:32		X
CCB1072866	1	21:54		X
ZZZZZZ	1	22:16		
ZZZZZZ	1	22:38		
ZZZZZZ	1	23:00		
ZZZZZZ	1	23:22		
ZZZZZZ	1	23:44		
ZZZZZZ	1	0:06		

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Instrument ID Number: IC Method: IC
 Start Date: 2/15/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
ZZZZZZ	1	0:28		
ZZZZZZ	1	0:49		
ZZZZZZ	1	1:11		
ZZZZZZ	1	1:33		
ZZZZZZ	1	1:55		
ZZZZZZ	1	2:17		
ZZZZZZ	1	2:39		
ZZZZZZ	1	3:01		
ZZZZZZ	1	3:23		
ZZZZZZ	1	3:45		
ZZZZZZ	1	4:07		
ZZZZZZ	1	4:29		
ZZZZZZ	5	4:51		
ZZZZZZ	5	5:13		
ZZZZZZ	1	5:35		
ZZZZZZ	1	5:57		

- * Nitrite-N
- * Dichloroacetate - DCA
- * Nitrate-N
- * Sulfate

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Instrument ID Number: HACH Method: IS
 Start Date: 4/24/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
ZZZZZZ	1	13:25		
ZZZZZZ	1	13:28		
127167MB	1	13:31		X
127169LCS	1	13:34		X
127170LCSD	1	13:37		X
ZZZZZZ	10	13:40		
ZZZZZZ	10	13:43		
ZZZZZZ	10	13:46		
ZZZZZZ	10	13:49		
ZZZZZZ	10	13:52		
ZZZZZZ	10	13:55		
ZZZZZZ	10	13:58		
ZZZZZZ	10	14:01		
ZZZZZZ	10	14:04		
ZZZZZZ	1	14:07		
127174CCB	1	14:10		X
ZZZZZZ	1	14:13		
ZZZZZZ	1	14:16		
ZZZZZZ	1	14:19		
ZZZZZZ	1	14:22		
ZZZZZZ	1	14:25		
ZZZZZZ	1	14:28		
ZZZZZZ	1	14:31		
TFS-MW-03	5	14:34		X
TFS-MW-06	5	14:37		X
ZZZZZZ	1	14:40		
127176CCB	1	14:43		X
ZZZZZZ	10	14:46		
ZZZZZZ	1	14:49		

* Alkalinity (Total)

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Instrument ID Number: HACH Method: T
 Start Date: 4/23/2012 End Date: 4/23/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
<u>ZZZZZZ</u>	1	11:48		
126865MB	1	11:51		X
126867LCS	1	11:54		X
126868LCSD	1	11:57		X
<u>ZZZZZZ</u>	1	12:00		
<u>ZZZZZZ</u>	1	12:03		
<u>ZZZZZZ</u>	1	12:06		
<u>ZZZZZZ</u>	1	12:09		
<u>ZZZZZZ</u>	1	12:12		
<u>ZZZZZZ</u>	1	12:15		
<u>ZZZZZZ</u>	1	12:18		
<u>ZZZZZZ</u>	1	12:21		
<u>ZZZZZZ</u>	1	12:24		
<u>ZZZZZZ</u>	1	12:27		
126871MB	1	12:30		X
TFS-MW-03	1	12:33		X
TFS-MW-06	1	12:36		X
<u>ZZZZZZ</u>	1	12:39		
<u>ZZZZZZ</u>	10	12:42		
126872MB	1	12:45		X

* Sulfide

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West / Boca Chica / MW S
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505794

Instrument ID Number: TOC Method: TC
 Start Date: 4/24/2012 End Date: 4/25/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
CAL01	1	8:50		X
CAL02	2	9:07		X
CAL03	4	9:26		X
CAL04	5	9:44		X
CAL05	10	10:02		X
CAL06	1	10:16		X
127314ICV	1	20:33		X
127315ICB	1	20:48		X
127316MB	1	21:04		X
127317LCS	1	21:20		X
127318LCSD	1	21:37		X
ZZZZZZ	1	21:54		
ZZZZZZ	1	22:15		
ZZZZZZ	1	22:32		
ZZZZZZ	1	22:51		
ZZZZZZ	1	23:09		
ZZZZZZ	1	23:26		
ZZZZZZ	1	23:45		
ZZZZZZ	1	0:03		
127319CCV	1	1:01		X
127320CCB	1	1:18		X
ZZZZZZ	1	3:11		
ZZZZZZ	1	3:30		
TFS-MW-03	1	3:48		X
TFS-MW-06	1	4:06		X
ZZZZZZ	1	4:26		
127321CCV	1	4:46		X
127322CCB	1	5:03		X

* TOC

Chain of Custody Documentation



CHAIN-OF-CUSTODY RECORD

3505794 NY

COC NUMBER

426847-04-19-12-01

LAB NAME AND CONTACT: PEL/W. Swinderson
RECIPIENT 1 (Name and Company): Northpark 400, 1000 Abernethy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
LAB NO NUMBER: 813-888-9507 x242
RECIPIENT 2 (Name and Company): Bethany Garvey
PROJECT NUMBER: 426847
RECIPIENT 3 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernethy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
CTO OR DO NUMBER:
RECIPIENT 1 (Address, Tel No., and Fax No.):
PROJECT TEL NO AND FAX NO.:
RECIPIENT 2 (Address, Tel No., and Fax No.):
PROJECT CONTACT: Greg Rowell
RECIPIENT 3 (Address, Tel No., and Fax No.):

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX	DATE COLLECTED		TIME COLLECTED	DATA PRO LEVEL	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)						LAB ID (for 50's use)
				(see codes on SOP)	(see codes on SOP)				FERRO	SULFUR	SILICA	NIKE/N/A	ALK	TOL	
1	TFS-MW-03		GW	4-19-12	4-19-12	1115	3	3	2	X	X	X	X	3	10-
2	TFS-MW-06		GW	4-19-12	4-19-12	1115	3	3	2	X	X	X	X	3	02-
3	TFS-MW-FD1		GW	4-19-12	4-19-12	1326	3	3	2	X	X	X	X	3	03-
4	TFS-MW-15		GW	4-19-12	4-19-12	1326	3	3	2	X	X	X	X	3	04-
5	TFS-MW-16		GW	4-19-12	4-19-12	1400	3	3	2	X	X	X	X	3	05-
6	TFS-MW-TB2		W	4-19-12	4-19-12		2	2	2					2	06-
7															
8															
9															
10															

SAMPLER(S) AND COMPANY (Include print)
COURIER AND SHIPPING NUMBER: FEDEX
TEMPERATURE AND CONTAINER RECEIPT (for lab's use)
PH 29 5m 4500 S-21
Temp 4.6C 3.1C 4.8C 4.0C 4.0C 4.0C
RECEIVED BY: Nike Monroe / Miller
DATE: 4-19-12
TIME: 1615
PRINTED NAME AND SIGNATURE: Nike Monroe / Miller
DATE: 4-19-12
TIME: 1615
PRINTED NAME AND SIGNATURE: Nike Monroe / Miller
DATE: 4-20-12
TIME: 0855
PRINTED NAME AND SIGNATURE: Nike Monroe / Miller
DATE: 4-20-12
TIME: 0855

From: (678) 530-4212
Paul Lively
CH2M HILL
1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

Origin ID: TMAA



Ship Date: 20APR12
ActWgt: 50.5 LB
CAD: 6290545/WBUS0200
Dims: 24 X 16 X 16 IN

SHIP TO: (813) 476-7021
Mark Gudnason
PEL Analytical Services
8405 Benjamin Rd
Suite A
Tampa, FL 33634

BILL SENDER

Delivery Address Bar Code



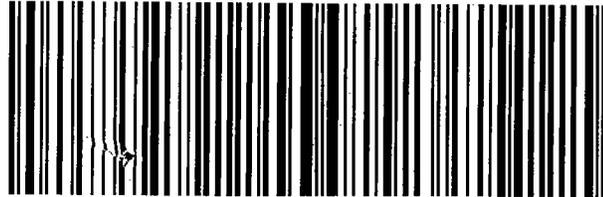
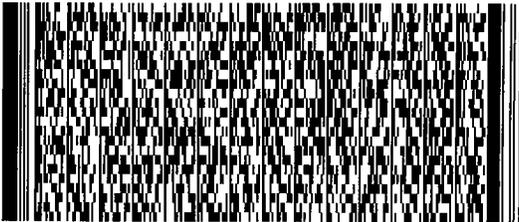
Ref # 426847.pp.fw.06/AAB00073223
Invoice #
PO #
Dept #

SATURDAY ### A1
PRIORITY OVERNIGHT

TRK# 7983 0824 7836
0201

33634
FL-US
TPA

X0 TPFA



512G11/C44D/A278

FEDEx SHIPPING LABEL

To prepare your package for shipment, you need to do the following:

1. Use the Print button in your browser to print this page to your laser printer.
2. Fold the first printed page in half and use as the shipping label. The second page is for your records, and contains both the terms and conditions of shipping, and information useful for tracking your package.
3. After printing the label, place it in a waybill pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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PH LOG SHEET

WO#: 3505794

Client/Project NAS Key West

SampNumber	Method	Matrix	pH	Containers	Temp	Acid
350579401	FL-PRO	W	< 2	(2)		H2SO4 nlabus 20-Apr-12
350579401	SM4500S-2F	W	> 9	(1)		ZnAc/NaOH nlabus 20-Apr-12
350579401	SM5310B	W	< 2	(3)		HCL nlabus 20-Apr-12
350579401	8260	W	< 2	(3)		HCL nlabus 20-Apr-12
350579402	SM5310B	W	< 2	(3)		HCL nlabus 20-Apr-12
350579402	8260	W	< 2	(3)		HCL nlabus 20-Apr-12
350579402	SM4500S-2F	W	> 9	(1)		ZnAc/NaOH nlabus 20-Apr-12
350579402	FL-PRO	W	< 2	(2)		H2SO4 nlabus 20-Apr-12
350579403	SM5310B	W	< 2	(3)		HCL nlabus 20-Apr-12
350579403	SM4500S-2F	W	> 9	(1)		ZnAc/NaOH nlabus 20-Apr-12

SampNumber	Method	Matrix	pH	Containers	Temp	Acid
350579403	FL-PRO	W	< 2	(2)		H2SO4 nlabus 20-Apr-12
350579403	8260	W	< 2	(3)		HCL nlabus 20-Apr-12
350579404	FL-PRO	W	< 2	(2)		H2SO4 nlabus 20-Apr-12
350579404	8260	W	< 2	(3)		HCL nlabus 20-Apr-12
350579405	8260	W	< 2	(3)		HCL nlabus 20-Apr-12
350579405	FL-PRO	W	< 2	(2)		H2SO4 nlabus 20-Apr-12
350579406	8260	W	< 2	(3)		HCL nlabus 20-Apr-12

SAMPLE RECEIPT CONFIRMATION SHEET

Client Information			
SDG:	3505794	Req:	91013
Client:	CH2M Hill	Project:	Boca Chica Truck Fill Stand - JP-5
Level:	4	Date Rec'd:	4/20/2012 9:55:00 AM
Rec'd via:	Fed-Ex	Due Date:	5/4/2012

Sample Verification			
Samples/Cooler Secure?	<input type="text" value="Yes"/>	All Samples on COC accounted For?	<input type="text" value="Yes"/>
Temperature of Samples(Celsius)	<input type="text" value="3.14.24.6"/>	All Samples Rec'd Intact?	<input type="text" value="Yes"/>
pH Verified?	<input type="text" value="Yes"/>	Sample Vol. Sufficient For Analysis	<input type="text" value="Yes"/>
pH WNL?	<input type="text" value="Yes"/>	Samples Rec'd W/ Hold Time?	<input type="text" value="No"/>
Soil Origin (Domestic/Foreign):	<input type="text"/>	Are All Samples to be Analyzed?	<input type="text" value="Yes"/>
Site Location/Project on COC?	<input type="text" value="Yes"/>	Correct Sample Containers?	<input type="text" value="Yes"/>
Client Project # on COC?	<input type="text" value="Yes"/>	COC Comments written on COC?	<input type="text" value="Yes"/>
Project Mgr. Indicated on COC?	<input type="text" value="Yes"/>	Samplers Initials on COC?	<input type="text" value="Yes"/>
COC relinquished/Dated by Client?	<input type="text" value="Yes"/>	Sample Date/Time Indicated?	<input type="text" value="No"/>
COC Received/Dated by SA?	<input type="text" value="Yes"/>	TAT Requested:	<input type="text" value="STD"/>
Specific Subcontract Indicated?	<input type="text" value="No"/>	Client Requests Verbal Results?	<input type="text" value="No"/>
Samples Received By	<input type="text" value="Fed-Ex"/>	Client Requests Faxed Results?	<input type="text" value="No"/>
SA to Conduct ALL Analyses?	<input type="text" value="Yes"/>		
Radioactivity Check?	<input type="text" value="No"/>		
COC Present?	<input type="text" value="Yes"/>		

LABEL REVIEW



PEER REVIEW



Client: CH2M Hill

WONo: 3505794

Profile Name: NAS Key West

Profile #: 91013

MATRIX W

Sample #	Bottle	Parameter	Check	Received	Date
01	011	300.1 Determination of Inorganic Anions by Ion Chromatography	In	Marianna Keohane	4/21/2012 10:17:52 AM
01	011	300.1 Determination of Inorganic Anions by Ion Chromatography	Out	Devon Thompson	4/21/2012 1:25:10 PM
01	011	300.1 Determination of Inorganic Anions by Ion Chromatography	In	Devon Thompson	4/21/2012 1:59:33 PM
01	002	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:08 AM
01	003	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:13 AM
01	001	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:15 AM
01	003	8260 Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:49:49 PM
01	004	8270 GCMS semivolatiles	In	Marianna Keohane	4/20/2012 9:55:00 AM
01	005	8270 GCMS semivolatiles	In	Marianna Keohane	4/21/2012 10:18:50 AM
01	005	8270 GCMS semivolatiles	Consumed	Duffie Young	4/24/2012 10:16:52 AM
01	004	8270 GCMS semivolatiles	Consumed	Ryan Bennett	5/3/2012 10:49:34 AM
01	006	8270_SIM GCMS semivolatiles SIM	In	Marianna Keohane	4/20/2012 9:55:00 AM
01	007	8270_SIM GCMS semivolatiles SIM	In	Marianna Keohane	4/21/2012 10:18:39 AM
01	006	8270_SIM GCMS semivolatiles SIM	Consumed	Ryan Bennett	4/25/2012 11:07:13 AM
01	009	FL-PRO Petroleum Hydrocarbons	In	Marianna Keohane	4/21/2012 10:18:28 AM
01	009	FL-PRO Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:09:28 AM
01	011	SM2320B Alkalinity (Total)	In	Marianna Keohane	4/21/2012 10:17:54 AM
01	011	SM2320B Alkalinity (Total)	Out	Devon Thompson	4/24/2012 2:33:18 PM
01	011	SM2320B Alkalinity (Total)	In	Devon Thompson	4/24/2012 3:54:17 PM
01	010	SM4500S-2F Sulfide	In	Marianna Keohane	4/21/2012 10:18:14 AM
01	010	SM4500S-2F Sulfide	Out	Devon Thompson	4/23/2012 8:26:32 AM
01	010	SM4500S-2F Sulfide	In	Devon Thompson	4/23/2012 7:36:18 PM

WONo: 3505794

Profile Name: NAS Key West

Profile #: 91013

01	014	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:17:35 AM
01	013	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:17:37 AM
01	012	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:17:37 AM
01	013	SM5310B	Total Organic Carbon	Out	Devon Thompson	4/24/2012 3:09:42 PM
01	012	SM5310B	Total Organic Carbon	Out	Devon Thompson	4/24/2012 3:09:51 PM
01	013	SM5310B	Total Organic Carbon	In	Devon Thompson	4/24/2012 3:51:34 PM
01	012	SM5310B	Total Organic Carbon	In	Devon Thompson	4/25/2012 8:30:13 AM
02	005	300.1	Determination of Inorganic Anions by Ion Chromatography	In	Nicole Labus	4/20/2012 2:45:22 PM
02	005	300.1	Determination of Inorganic Anions by Ion Chromatography	Out	Troy Roberts	4/21/2012 1:25:34 PM
02	005	300.1	Determination of Inorganic Anions by Ion Chromatography	In	Troy Roberts	4/21/2012 1:59:45 PM
02	007	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:15 AM
02	008	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:16 AM
02	009	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:16 AM
02	009	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:49:52 PM
02	004	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 9:55:00 AM
02	011	8270	GCMS semivolatile	In	Marianna Keohane	4/21/2012 10:22:48 AM
02	010	8270	GCMS semivolatile	In	Marianna Keohane	4/21/2012 10:22:51 AM
02	004	8270	GCMS semivolatile	Consumed	Duffie Young	4/24/2012 10:16:50 AM
02	011	8270	GCMS semivolatile	Consumed	Ryan Bennett	5/3/2012 10:49:55 AM
02	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:42 PM
02	003	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:44 PM
02	003	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:19 AM
02	002	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:52 PM
02	001	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:53 PM
02	001	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:09:40 AM

WONo: 3505794

Profile Name: NAS Key West

Profile #: 91013

02	005	SM2320B	Alkalinity (Total)	In	Nicole Labus	4/20/2012 2:45:22 PM
02	005	SM2320B	Alkalinity (Total)	Out	Devon Thompson	4/24/2012 2:33:20 PM
02	005	SM2320B	Alkalinity (Total)	In	Devon Thompson	4/24/2012 3:54:20 PM
02	006	SM4500S-2F	Sulfide	In	Nicole Labus	4/20/2012 2:45:14 PM
02	006	SM4500S-2F	Sulfide	Out	Devon Thompson	4/23/2012 8:26:35 AM
02	006	SM4500S-2F	Sulfide	In	Devon Thompson	4/23/2012 7:36:21 PM
02	014	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:23:02 AM
02	013	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:23:04 AM
02	012	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 10:23:05 AM
02	013	SM5310B	Total Organic Carbon	Out	Devon Thompson	4/24/2012 3:52:22 PM
02	013	SM5310B	Total Organic Carbon	In	Devon Thompson	4/25/2012 8:30:16 AM
03	009	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:17 AM
03	008	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:17 AM
03	007	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:17 AM
03	007	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:49:57 PM
03	006	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:33 PM
03	005	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:35 PM
03	003	8270	GCMS semivolatile	Consumed	Duffie Young	4/24/2012 10:16:48 AM
03	005	8270	GCMS semivolatile	Consumed	Ryan Bennett	5/3/2012 10:50:01 AM
03	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:44 PM
03	003	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:44 PM
03	004	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:22 AM
03	002	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:54 PM
03	001	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:55 PM
03	002	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:09:45 AM
04	009	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:18 AM
04	007	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:18 AM
04	008	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:18 AM

WONo: 3505794

Profile Name: NAS Key West

Profile #: 91013

04	007	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:50:02 PM
04	005	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:35 PM
04	006	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:35 PM
04	003	8270	GCMS semivolatile	Consumed	Duffie Young	4/24/2012 10:16:45 AM
04	005	8270	GCMS semivolatile	Consumed	Ryan Bennett	5/3/2012 10:50:03 AM
04	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:45 PM
04	003	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:45 PM
04	004	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:32 AM
04	002	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:55 PM
04	001	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:55 PM
04	002	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:09:48 AM
05	007	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:19 AM
05	008	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:19 AM
05	009	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:20 AM
05	008	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:50:07 PM
05	005	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:36 PM
05	006	8270	GCMS semivolatile	In	Nicole Labus	4/20/2012 2:45:36 PM
05	006	8270	GCMS semivolatile	Consumed	Duffie Young	4/24/2012 10:16:54 AM
05	002	8270	GCMS semivolatile	Consumed	Ryan Bennett	5/3/2012 12:06:48 PM
05	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:45 PM
05	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/20/2012 2:45:46 PM
05	004	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:35 AM
05	002	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:56 PM
05	001	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/20/2012 2:45:56 PM
05	001	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:09:53 AM
06	002	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:20 AM
06	001	8260	Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 10:17:20 AM
06	002	8260	Volatile Organic Compounds	Consumed	Viviane Wenzel	5/2/2012 1:49:44 PM

Addendum

Letter of Acceptance

Customer Name: CH2M Hill
Date and Time Received: 4/20/2012 9:55:00 AM
Date to be Reported: 5/4/2012
Laboratory Submission Number/SDG: 3505794

Project: NAS Key West / Boca Chica / MW Sampling

Samples: The submission consisted of 6 samples, including QC, with sample identification shown in the attached data tables.

Tests: The Samples will be analyzed for EPA methods: 300.1, 8260, 8270, 8270_SIM, FL-PRO, SM2320B, SM4500S-2F, SM5310B.

Sample Custody/COC discrepancies:

MNA parameters were marked for analysis on the FD but not needed.

Notes:

Temp 4.6C, 3.1C, 4.2C
pH<2 8260, FLPRO, TOC
pH>9 SM4500S-2F

One of the 3 coolers was received Saturday 4/21/2012 at 9:15 AM and contained the VOCs and the nitrate/nitrite container for TFS-MW-03. The nitrate/nitrite for sample TFS-MW-03 was collected 4/19/12 at 9:30 AM and will be run out of hold.

Distribution of Report to:

CH2M Hill
Attn: Greg Rowell

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. Spectrum Analytical letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar materials.

Log-in Report

Level: 4

Total of: 29 analyses on 13 samples (including QC)

25-Apr-12

Report/SDG #: 3505794

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-03	350579401		W	4/19/2012 9:30:00 AM	4/20/2012 9:55:00 AM

Method

300.1	Determination of Inorganic Anions by Ion	300.1
8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO
SM2320B	Alkalinity (Total)	SM2320B
SM4500S-2F	Sulfide	376.1
SM5310B	Total Organic Carbon	SM5310B

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-06	350579402		W	4/19/2012 11:15:00 AM	4/20/2012 9:55:00 AM

Method

300.1	Determination of Inorganic Anions by Ion	300.1
8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO
SM2320B	Alkalinity (Total)	SM2320B
SM4500S-2F	Sulfide	376.1
SM5310B	Total Organic Carbon	SM5310B

Report/SDG #: 3505794

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-FD1	350579403		W	4/19/2012	4/20/2012 9:55:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-15	350579404		W	4/19/2012 1:26:00 PM	4/20/2012 9:55:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-16	350579405		W	4/19/2012 2:20:00 PM	4/20/2012 9:55:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-TB2	350579406		W	4/19/2012	4/20/2012 9:55:00 AM

Method

8260	Volatile Organic Compounds	8260
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Mark Gudnason [Tampa]

From: Greg.Rowell@CH2M.com
Sent: Monday, April 23, 2012 2:01 PM
To: Mark Gudnason [Tampa]
Cc: Nicole.Monroe@CH2M.com
Subject: RE: Missing cooler - NAS Key West

There should not be any MNA parameters associated with the dup.

From: Mark Gudnason [Tampa] [mailto:mgudnason@pelab.com]
 Sent: Monday, April 23, 2012 1:53 PM
 To: Rowell, Greg/ATL
 Cc: Monroe, Nicole/NWO
 Subject: RE: Missing cooler - NAS Key West

Yes,
 We received this in good condition but the FD had the MNA parameters listed on the COC but no containers received for it.

Please advise.

Mark

From: Greg.Rowell@CH2M.com [mailto:Greg.Rowell@CH2M.com]
 Sent: Monday, April 23, 2012 1:45 PM
 To: Mark Gudnason [Tampa]
 Cc: Nicole.Monroe@CH2M.com
 Subject: RE: Missing cooler - NAS Key West

I assume the 3rd cooler was received on Saturday along with whatever was shipped from the site on Friday?

From: Mark Gudnason [Tampa] [mailto:mgudnason@pelab.com]
 Sent: Friday, April 20, 2012 8:01 PM
 To: Rowell, Greg/ATL; Garvey, Bethany/ATL; Robinson, Camden/ATL; Monroe, Nicole/NWO
 Subject: RE: Missing cooler - NAS Key West

Please see the attached COC. The circled items were received today. We will receive the 3rd cooler tomorrow.

Mark

From: Mark Gudnason [Tampa]
 Sent: Friday, April 20, 2012 10:50 AM
 To: 'Greg.Rowell@CH2M.com'; Bethany.Garvey@CH2M.com; Camden.Robinson@CH2M.com; Nicole.Monroe@CH2M.com
 Subject: RE: Missing cooler - NAS Key West

Good morning,

We received 2 of the 3 coolers. The missing cooler has the COCs.

Would it be possible to fax or email the COCs?

Mark Gudnason
 Senior Project Manager
 Spectrum Analytical, Inc. Featuring Hanibal Technology, Florida Division
 8405-A Benjamin Road
 Tampa FL 33634
 phone: 813-888-9507 ext. 242
 fax: 813-889-7128
 email: mgudnason@spectrum-analytical.com
 Visit our website at www.spectrum-analytical.com

Due to rising cost of rush shipments, Spectrum Analytical requests that you allow sufficient time for all kit requests, 3 days notice at a minimum. If you need an expedited kit request Spectrum Analytical will provide the kit but will require that you pay for the shipping. Spectrum Analytical will continue to pay for all shipping previously agreed to, given proper notification. Thank you for your understanding and cooperation.

This e-mail is intended for the named addressee(s) and may contain information that is confidential and proprietary. If this information is received by anyone other than the named addressee(s), the recipient(s) should immediately notify the sender by e-mail and promptly delete the transmitted material. In no event shall this material be read, used, stored, or retained by anyone other than the named addressee(s) without the express written consent of the sender or the named addressee(s).

From: Nicole Labus [Tampa]
 Sent: Friday, April 20, 2012 10:32 AM
 To: Nicole Labus [Tampa]; Project Managers [PEL]
 Cc: LogIn [PEL]
 Subject: RE: Missing cooler

Here's the master tracking number, that's probably easier to look up...899371676135

From: Nicole Labus [Tampa]
 Sent: Friday, April 20, 2012 10:27 AM
 To: Project Managers [PEL]
 Cc: LogIn [PEL]



1000 Abernethy Rd. Ste. 1005
Atlanta, GA 30328
Tel No: (770) 604-9152
Fax No: (770) 604-9282

MAS Key West TFS

PROJECT NUMBER: 20647

LAB NAME AND CONTACT:
PEL/M. Suddas & Co

FAX AND MAIL REPORTS TO:
RECIPIENT 1 (Name and Company)

RECIPIENT 1 (Address, Tel No., and Fax No.):
Northpark 400, 1000 Abernethy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone

COC NUMBER

426247-04-19-12-01

PROJECT PHASE/TASK:

MW Sampling

PROJECT CONTACT:
Greg Rowell

greg.rowell@ch2m.com

C/O OR D/O NUMBER:

LAB NO NUMBER:
813-888-9507 x242

FAX AND MAIL REPORTS TO:
RECIPIENT 2 (Name and Company)
Bethany Garvey

RECIPIENT 2 (Address, Tel No., and Fax No.):
Northpark 400, 1000 Abernethy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone

PROJECT TEL NO AND FAX NO:

FAX AND MAIL REPORTS TO:
RECIPIENT 3 (Name and Company)
Greg Rowell

RECIPIENT 3 (Address, Tel No., and Fax No.):
Northpark 400, 1000 Abernethy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PLO LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSIS REQUIRED (Include Method Numbers)						SAMPLE TYPE (see codes on SOP)	COMMENTS/SCREENING RESULTS	LAB ID (for 303 use)
								B200 VOL	B200/SIM	FLPRO	SAFTE	SAIBK	Nickel/Ni			
1	TFS-MW-03		GM	4-19-12				3	2	X	X	X	X	2		
2	TFS-MW-06		GM	4-19-12				3	2	X	X	X	X	2		
3	TFS-MW-FD1		GM	4-19-12				3	2	X	X	X	X	2		
4	TFS-MW-15		GM	4-19-12				3	2	X	X	X	X	2		
5	TFS-MW-16		GM	4-19-12				3	2	X	X	X	X	2		
6	TFS-MW-TB2		W	4-19-12				2						2		
7																
8																
9																
10																

11 SAMPLES TEMPERATURE AND CONTAMINATION UPON RECEIPT (for lab's use)

CARRIER AND SHIPPING NUMBER

SAUPHRS AND COMPANY (please print)

PEDEX

RELABORATED BY

Nikk Moore / Miller

Printed Name and Signature

DATE

4-19-12

TIME

1015

Printed Name and Signature

PEDEX

Printed Name and Signature

DATE

4-19-12

TIME

1015

Form C7001f, Rev 06/04

Distribution: Original - Laboratory (To be returned with Analytical Report) | Copy 1 - Project File | Copy 2 - PMO

Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Friday, May 04, 2012 8:18 PM
To: 'Greg.Rowell@CH2M.com'
Cc: 'Bethany.Garvey@CH2M.com'; Camden.Robinson@CH2M.com
Subject: FW: 3505794-8270-NAS
[3505858](#)

I. HOLDING TIMES

- A. Sample Preparation:** The following samples were re-prepped out of hold: TFS-MW-03RE1, TFS-MW-06RE1, TFS-MW-15RE1, TFS-MW-16RE1, TFS-MW-FD1RE1. The samples were originally extracted within hold, but were re-extracted due to LCS/LCSD recovery failures. Both analyses are reported.
- B. Sample Analysis:** All holding times were met.

II. METHODS

EPA SW846 8270D

III. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

IV. ANALYSIS**A. Calibration:**

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyriline (+1425%), 1,3,5-Trinitrobenzene (+/-43.6%). No further action was taken, since these compounds were not detected in any samples and were a result of a discrepancy between the primary and secondary standards. The secondary standard also used to spike the LCS and MS/MSD. Because of this difference, Methapyriline exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since this compound was on the high side and was not detected in any samples.

CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepone (+/-39.2%). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met with the exception of:

Sample TFS-MW-15 was recovered below criteria for the following surrogate: Phenol-d5 at 7.5 % with criteria of (10-115). The sample was re-extracted (TFS-MW-15RE1) and was recovered below criteria for the following surrogate: Phenol-d5 at 7 % with criteria of (10-115). This sample contained a large concentration of non-target compounds, which likely interfered with surrogate recovery.

Samples coded accordingly.

D. Spikes:**1. Laboratory Control Spikes (LCS)**

All acceptance criteria were met with the exception of:

LCS 127054LCS was analyzed with the water samples extracted on 04/24/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 9.2 % with criteria of (28-143), a,a-Dimethylphenethylamine at 68.2 % with criteria of (70-130) and the following analytes were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 99 % with criteria of (57-95), Diallate (Avadex) at 103 % with criteria of (56-98), Isodrin at 118 % with criteria of (54-110), Safrole at 108 % with criteria of (52-100). The following analytes had marginal exceedance limit failures: 2-Naphthylamine at 47.2 % with criteria of (60-140), Hexachloropropene at 0 % with criteria of (7-119), Methapyriline at 1560 % with criteria of (0-105), Pentachloronitrobenzene(PCNB) at 112 % with criteria of (52.7-111.3), p-Phenylenediamine at 120 % with criteria of (49.8-115.2), Pronamide at 117 % with criteria of (52.3-105.7).

LCS 127055LCS was analyzed with the water samples extracted on 04/24/12. The following analytes were recovered above criteria: 1,3-Dinitrobenzene at 114 % with criteria of (61-112), Isophorone at 115 % with criteria of (50-110), Pentachloroethane at 100 % with criteria of (27-99), Phenacetin at 116 % with criteria of (57-114), Safrole at 106 % with criteria of (52-100). The following analyte exceeded RPD criteria: a,a-Dimethylphenethylamine at 200 % with criteria of (20). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 8.8 % with criteria of (8.83-162.2), 2-Naphthylamine at 49.8 % with criteria of (60-140), 7,12-Dimethylbenz(a)anthracene at 105 % with criteria of (50.7-101.3), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Diallate (Avadex) at 112 % with criteria of (49-105), Hexachloropropene at 0 % with criteria of (7-119), Isodrin at 120 % with criteria of (44.7-119.3), Methapyriline at 1280 % with criteria of (0-105), Pentachloronitrobenzene(PCNB) at 114 % with criteria of (52.7-111.3), p-Phenylenediamine at 122 % with criteria of (49.8-115.2), Pronamide at 117 % with criteria of (52.3-105.7).

LCS 128810LCS was analyzed with the water samples re-extracted on 05/03/12. The following analytes were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 96.2 % with criteria of (57-95), Isophorone at 117 % with criteria of (50-110), Pentachloronitrobenzene(PCNB) at 108 % with criteria of (60-104), Pentachlorophenol at 120 % with criteria of (40-115). The following analytes had marginal exceedance limit failures: 1-Naphthylamine at 110 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140).

LCS 128811LCS was analyzed with the water samples extracted on 05/03/12. The following analytes were recovered below criteria: p-Dimethylaminoazobenzene at 68.2 % with criteria of (70-130). The following analytes exceeded RPD criteria: 1,2-Dichlorobenzene at 23 % with criteria of (20), 1,3-Dichlorobenzene at 21.4 % with criteria of (20), 2-Picoline at 32 % with criteria of (20), Hexachlorocyclopentadiene at 20.6 % with criteria of (20), Methapyriline at 108.6 % with criteria of (20), Pyridine at 21.8 % with criteria of (20). The following analyte had marginal exceedance limit failures: 1-Naphthylamine at 108 % with criteria of (29.2-99.83), a,a-Dimethylphenethylamine at 0 % with criteria of (60-140), Methapyriline at 275 % with criteria of (0-105).

None of the above compounds that failed LCS/LCSD criteria were detected in any samples. Samples coded accordingly.

Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Tuesday, May 08, 2012 7:45 PM
To: 'Greg.Rowell@CH2M.com'
Cc: Bethany.Garvey@CH2M.com; 'Camden.Robinson@CH2M.com'
Subject: FW: 3505794 / NAS Key West / 300.1

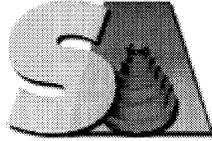
Good afternoon.

This will be in the case narrative for the referenced method and SDG.

- A. Sample Analysis:** The following samples were analyzed out of hold: TFS-MW-03 the sample was set up on to be analyzed the day it went out of hold. It was analyzed approximately 7 hours out of hold. TFS-MW-03RE1 the sample was re-analyzed approximately 2 days out of hold due to the CCV's exceeding limits. Both sets of data are reported for this sample. TFS-MW-06 this sample was received one day later due to FedEx issues and was analyzed approximately 2 days out of hold.

End Of Report

Date Reported:
11-May-12



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

- Final Report
- Re-Issued Report
- Revised Report

Laboratory Report

CH2M Hill
115 Perimeter Center Place, NE
Suite 700
Atlanta, GA 30346-1278

Project # 3505806
Project: NAS Key West /Boca Chica/ MW Sampling 426847

Attn: Greg Rowell

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
350580601	TFS-MW-17	W	20-Apr-12 11:05	21-Apr-12 9:15
350580602	TFS-MW-17-RS	W	20-Apr-12 10:25	21-Apr-12 9:15
350580603	TFS-MW-17-MS	W	20-Apr-12 11:10	21-Apr-12 9:15
350580604	TFS-MW-17-MSD	W	20-Apr-12 11:10	21-Apr-12 9:15
350580605	TFS-MW-TB3	W	20-Apr-12 0:00	21-Apr-12 9:15

The samples were analyzed for the methods listed on the attached table of contents. See the attached data tables for results.

Soil samples are reported on dry weight basis, unless otherwise noted.

Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis.

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met unless noted in the case narrative.

Spectrum Analytical is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Florida	E84207
Texas	T104704408-11
South Carolina	96011001
North Dakota	R-178
California	07253CA
Louisiana	02025
Kansas	E-10385
Arkansas	11-036-1



Certificate # L2259 Testing

Respectfully Submitted,

Brian Spann
Laboratory Director
Spectrum Analytical, Inc. Florida Division

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EXECUTIVE SUMMARY - Detection Highlights

3505806

SAMPLE ID: TFS-MW-17

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Nitrite-N	1.40	0.100	MG/L	E300.1
Carbon disulfide	2.70	1.0	UG/L	SW8260B
1-Methylnaphthalene	0.0260 J	0.051	UG/L	SW8270D-SIM
2-Methylnaphthalene	0.0220 J	0.051	UG/L	SW8270D-SIM
Acenaphthene	1.20	0.051	UG/L	SW8270D-SIM
Acenaphthylene	0.0230 J	0.051	UG/L	SW8270D-SIM
Fluoranthene	0.0450 J	0.051	UG/L	SW8270D-SIM
Fluorene	0.0430 J	0.051	UG/L	SW8270D-SIM
Naphthalene	0.0550	0.051	UG/L	SW8270D-SIM
TPH	1700	510	UG/L	FL-PRO
Alkalinity (Total)	550	10.0	MG/L	A2320
Sulfide	22.0	20.0	MG/L	E376.1
TOC	8.98	1.00	MG/L	SW9060

SAMPLE ID: TFS-MW-17DL1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Sulfate	170	5.00	MG/L	E300.1

SAMPLE ID: TFS-MW-17R1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Nitrite-N	0.160	0.100	MG/L	E300.1
Sulfate	192 E	1.00	MG/L	E300.1

SAMPLE ID: TFS-MW-17-RS

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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EXECUTIVE SUMMARY - Detection Highlights

3505806

2-Butanone	2.10 J	4.0	UG/L	SW8260B
Acetone	11.8	10	UG/L	SW8260B

SAMPLE ID: TFS-MW-TB3

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Acetone	2.90 J	10	UG/L	SW8260B

Organics

Organic Data Qualifiers

- U** Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.
- J** Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.
- B** Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.
- E** Indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.
- D** Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C** The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.
- P** This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns.
- N** This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.
- A** This qualifier indicates that a TIC is a suspected aldol-condensation product.
- X** Data flagged as rejected by analyst utilizing analytical judgement.

Organic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

8260 Volatile Organics

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met. The low calibration standard is 10 ug/L for the following analyte(s): Acrylonitrile.

B. Blanks:

All acceptance criteria were met with the exception of:
Blank 050412BLK12 was analyzed with the water samples on 05/04/12. The following analyte(s) were detected below RL: Acetone at 2.3 ug/L, Chloromethane at 0.44 ug/L. Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample TFS-MW-17 was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 116 % with criteria of (85-115).

Sample TFS-MW-17-MSD was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 119 % with criteria of (85-115).

Sample TFS-MW-17-RS was recovered above criteria for the following surrogate(s): 1,2-Dichloroethane-d4 at 124 % with criteria of (70-120), Dibromofluoromethane at 122 % with criteria of (85-115).

Samples coded accordingly.

D. Spikes:

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:
LCS 050412LCS11D was analyzed with the water samples on 05/04/12.
The following analyte(s) were recovered above criteria: Acrolein at 164 % with criteria of (31-148). The following analyte(s) exceeded RPD criteria: Acetone at 20.5 % with criteria of (20).

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met with the exception of:
MS - TFS-MW-17-MS was analyzed with the water samples on 05/04/12.
The following analyte(s) were recovered below criteria: 1,4-Dichloro-2-butene at 47.5 % with criteria of (68-115) and the following analyte(s) were recovered above criteria: 2-Hexanone at 183 % with criteria of (55-130), 4-Methyl-2-pentanone at 136 % with criteria of (60-135).

SD - TFS-MW-17-MSD was analyzed with the water samples on 05/04/12. The following analyte(s) were recovered above criteria: 2-Hexanone at 188 % with criteria of (55-130), 4-Methyl-2-pentanone at 140 % with criteria of (60-135), Chloroethane at 438 % with criteria of (60-135). The following analyte(s) exceeded RPD criteria: 1,4-Dichloro-2-butene at 36.9 % with criteria of (20), Chloroethane at 130.3 % with criteria of (20).

Samples coded accordingly.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

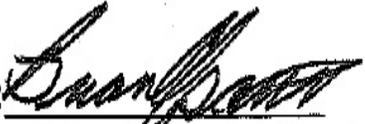
Sample analysis proceeded normally.
Analytes were detected in Trip Blank TFS-MW-TB3. The following analyte(s) were detected below RL: Acetone at 2.9 ug/L. Client specified reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

Signature: 
Name: Brian C. Spanik **Title:** Lab Director

SIGNED:

DATE: 05/11/2012

VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Method: 8260

EPA Sample No	Lab Sample ID
<u>TFS-MW-17</u>	<u>350580601</u>
<u>TFS-MW-17-RS</u>	<u>350580602</u>
<u>TFS-MW-TB3</u>	<u>350580605</u>

8260 Sample Data

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	2.7		0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.6	U	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 580601.D
 Sample wt/vol: 5 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 5 Date Extracted: _____
 Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1106
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: PURGETRAP Station ID: _____ Method: 8260
 GPC Cleanup : (Y/N) _____ pH: _____
 Column(1): DB-624 ID: 0.18 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: rinsate Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	11.8		1.3	2.6	10
78-93-3	2-Butanone	2.1	J	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No.
TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: rinsate Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 580602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1043

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: rinsate Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-TB3

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: TB3 Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.64	U	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.9	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-TB3

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: TB3 Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-TB3

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580605 Lab File ID: 580605.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0959

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: TB3 Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

8260 QC Summary

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 050412BLK12

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 050412BLK12 Lab File ID: BLK12.D

Sample wt/vol: 5 Units: ML Date Received: 05/04/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0931

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	1.2	U	0.6	1.2	1.2
74-87-3	Chloromethane	0.44	J	0.32	0.64	1
75-01-4	Vinyl chloride	0.36	U	0.18	0.36	1
74-83-9	Bromomethane	0.86	U	0.43	0.86	1
75-00-3	Chloroethane	1.4	U	0.72	1.4	1.4
75-69-4	Trichlorofluoromethane	0.8	U	0.4	0.8	1
75-35-4	1,1-Dichloroethene	0.38	U	0.19	0.38	0.5
107-02-8	Acrolein	8	U	4	8	10
74-88-4	Methyl iodide	1.5	U	0.74	1.5	1.5
75-15-0	Carbon disulfide	0.38	U	0.19	0.38	1
75-09-2	Methylene chloride	1.3	U	0.66	1.3	5
156-60-5	trans-1,2-Dichloroethene	0.66	U	0.33	0.66	0.66
107-13-1	Acrylonitrile	4	U	2	4	4
75-34-3	1,1-Dichloroethane	1	U	0.5	1	1
67-64-1	Acetone	2.3	J	1.3	2.6	10
78-93-3	2-Butanone	4	U	2	4	4
67-66-3	Chloroform	0.32	U	0.16	0.32	0.5
71-55-6	1,1,1-Trichloroethane	0.28	U	0.14	0.28	1
56-23-5	Carbon tetrachloride	0.28	U	0.14	0.28	0.5
71-43-2	Benzene	0.34	U	0.17	0.34	0.5
107-06-2	1,2-Dichloroethane	0.3	U	0.15	0.3	0.5
79-01-6	Trichloroethene	0.38	U	0.19	0.38	0.5
108-05-4	Vinyl acetate	0.36	U	0.18	0.36	1
78-87-5	1,2-Dichloropropane	0.3	U	0.15	0.3	1
74-95-3	Dibromomethane	0.8	U	0.4	0.8	1
75-27-4	Bromodichloromethane	0.3	U	0.15	0.3	0.5
10061-01-5	cis-1,3-Dichloropropene	0.8	U	0.4	0.8	1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 050412BLK12

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 050412BLK12 Lab File ID: BLK12.D

Sample wt/vol: 5 Units: ML Date Received: 05/04/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0931

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
108-10-1	4-Methyl-2-pentanone	2	U	1	2	4
108-88-3	Toluene	0.28	U	0.14	0.28	1
10061-02-6	trans-1,3-Dichloropropene	0.6	U	0.3	0.6	1
97-63-2	Ethyl methacrylate	1	U	0.5	1	1
79-00-5	1,1,2-Trichloroethane	0.4	U	0.2	0.4	1
127-18-4	Tetrachloroethene	0.42	U	0.21	0.42	0.5
591-78-6	2-Hexanone	0.96	U	0.48	0.96	4
124-48-1	Dibromochloromethane	0.26	U	0.13	0.26	0.5
106-93-4	1,2-Dibromoethane	0.22	U	0.11	0.22	1
108-90-7	Chlorobenzene	0.32	U	0.16	0.32	0.5
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	0.14	0.28	0.5
100-41-4	Ethylbenzene	0.44	U	0.22	0.44	0.5
100-42-5	Styrene	0.24	U	0.12	0.24	1
75-25-2	Bromoform	0.38	U	0.19	0.38	1
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.13	0.26	0.26
96-18-4	1,2,3-Trichloropropane	0.7	U	0.35	0.7	1
96-12-8	1,2-Dibromo-3-chloropropane	2	U	1	2	2
110-57-6	1,4-Dichloro-2-butene	4	U	2	4	4
75-05-8	Acetonitrile	20	U	10	20	20
107-05-1	Allyl chloride	0.48	U	0.24	0.48	1
123-91-1	1,4-Dioxane	20	U	10	20	40
78-83-1	Isobutyl alcohol	40	U	20	40	40
126-98-7	Methacrylonitrile	2	U	1	2	10
80-62-6	Methyl methacrylate	0.36	U	0.18	0.36	1
107-12-0	Propionitrile	20	U	10	20	20
126-99-8	Chloroprene	0.4	U	0.2	0.4	1
1330-20-7	Xylene (total)	1	U	0.5	1	2

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 050412BLK12

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Lab File ID: BLK12.D Lab Sample ID: 050412BLK12

Instrument ID: VMS01 Date Extracted: _____

Matrix: WATER Date Analyzed: 05/04/12

Level:(low/med) LOW Time Analyzed: 0931

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810
2	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832
3	TFS-MW-TB3	350580605	580605.D	05/04/12	0959
4	TFS-MW-17-RS	350580602	580602.D	05/04/12	1043
5	TFS-MW-17	350580601	580601.D	05/04/12	1106
6	TFS-MW-17-MS	350580603	580603MS.D	05/04/12	1128
7	TFS-MW-17-MSD	350580604	580604SD.D	05/04/12	1150

COMMENTS:

2A

WATER VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505806

Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
050412BLK12	115.0	109.0	98.8	118.0			0
050412LCS11	105.0	102.0	96.8	105.0			0
050412LCS11D	112.0	109.0	102.0	109.0			0
TFS-MW-17	116.0 *	112.0	108.0	112.0			1
TFS-MW-17-MS	115.0	111.0	104.0	112.0			0
TFS-MW-17-MSD	119.0 *	115.0	109.0	114.0			1
TFS-MW-17-RS	122.0 *	113.0	106.0	124.0 *			2
TFS-MW-TB3	105.0	99.4	92.6	108.0			0

Control Limits

- S1 = Dibromofluoromethane 85 - 115
- S2 = Toluene-d8 85 - 120
- S3 = 4-Bromofluorobenzene 75 - 120
- S4 = 1,2-Dichloroethane-d4 70 - 120

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: bfb02.D BFB Injection Date: 04/27/12
 Instrument ID: VMS01 BFB Injection Time: 1652
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.4
75	30.0 - 60.0% of mass 95	48
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.9 (1.08)1
174	50.0 - 100.0% of mass 95	86.2
175	5.0 - 9.0% of mass 174	6.3 (7.36)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.4 (96.69)1
177	5.0 - 9.0% of mass 176	5.4 (6.49)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1075199	200PPT	200PPT.D	04/27/12	1743
2	STD1075232	500PPT	500PPT.D	04/27/12	1806
3	STD1075198	1PPB	1PPB.D	04/27/12	1828
4	STD1075201	2PPB	2PPB.D	04/27/12	1850
5	STD1075234	5PPB	5PPB.D	04/27/12	1913
6	STD1075197	10PPB	10PPB.D	04/27/12	1935
7	STD1075200	20PPB	20PPB.D	04/27/12	1957
8	STD1075233	50PPB	50PPB.D	04/27/12	2020
9	STD1075235	60PPB	60PPB.D	04/27/12	2042
10	STD1075236	80PPB	80PPB.D	04/27/12	2104
11	SSC1075238	SEC12	SEC12.D	04/27/12	2149

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: BFB11.D BFB Injection Date: 05/04/12
 Instrument ID: VMS01 BFB Injection Time: 0610
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23
75	30.0 - 60.0% of mass 95	49
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.8 (0.95)1
174	50.0 - 100.0% of mass 95	86.1
175	5.0 - 9.0% of mass 174	6.4 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.9 (98.62)1
177	5.0 - 9.0% of mass 176	5.2 (6.11)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1077341	050412CCV12	50CCV12.D	05/04/12	0730
2	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810
3	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832
4	050412BLK12	050412BLK12	BLK12.D	05/04/12	0931
5	TFS-MW-TB3	350580605	580605.D	05/04/12	0959
6	TFS-MW-17-RS	350580602	580602.D	05/04/12	1043
7	TFS-MW-17	350580601	580601.D	05/04/12	1106
8	TFS-MW-17-MS	350580603	580603MS.D	05/04/12	1128
9	TFS-MW-17-MSD	350580604	580604SD.D	05/04/12	1150

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Lab File ID (Standard): 50PPB.D Date Analyzed: 4/27/2012
 Instrument ID: VMS01 Time Analyzed: 20:20
 GC Column: DB-624 ID: 0.18 (mm)
 Matrix: (soil/water) W Heated Purge: (Y/N) No

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	1480488	6.62	1194948	9.14	721940	10.54
UPPER LIMIT	2960976	7.12	2389896	9.64	1443880	11.04
LOWER LIMIT	740244	6.12	597474	8.64	360970	10.04
EPA SAMPLE NO.						
1 050412LCS11	1472220	6.62	1198396	9.14	720683	10.54
2 050412LCS11D	1395016	6.62	1156331	9.14	697849	10.54
3 050412BLK12	1259496	6.62	1051438	9.14	608525	10.54
4 TFS-MW-TB3	1428420	6.62	1183887	9.14	674986	10.54
5 TFS-MW-17-RS	1175866	6.62	976993	9.14	548773	10.54
6 TFS-MW-17	1233885	6.62	1020939	9.14	575545	10.54
7 TFS-MW-17-MS	1273129	6.62	1058541	9.14	639204	10.54
8 TFS-MW-17-MSD	1254652	6.62	1036709	9.14	614309	10.54

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 5.89			S2 : 8.12				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	042712BFB02	042712BFB02	bfb02.D	04/27/12	1652		
2	STD1075199	200PPT	200PPT.D	04/27/12	1743		
3	STD1075232	500PPT	500PPT.D	04/27/12	1806		
4	STD1075198	1PPB	1PPB.D	04/27/12	1828		
5	STD1075201	2PPB	2PPB.D	04/27/12	1850		
6	STD1075234	5PPB	5PPB.D	04/27/12	1913	5.89	8.12
7	STD1075197	10PPB	10PPB.D	04/27/12	1935	5.89	8.12
8	STD1075200	20PPB	20PPB.D	04/27/12	1957	5.89	8.12
9	STD1075233	50PPB	50PPB.D	04/27/12	2020	5.89	8.12
10	STD1075235	60PPB	60PPB.D	04/27/12	2042	5.89	8.12
11	STD1075236	80PPB	80PPB.D	04/27/12	2104	5.89	8.12
12	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2127		
13	SSC1075238	SEC12	SEC12.D	04/27/12	2149	5.89	8.12
14	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2211		
15	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2233		
16	050412BFB11	050412BFB11	BFB11.D	05/04/12	0610		
17	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	0649		
18	CCV1077341	050412CCV12	50CCV12.D	05/04/12	0730	5.88	8.12
19	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810	5.88	8.12
20	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832	5.89	8.12
21	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	0908		
22	050412BLK12	050412BLK12	BLK12.D	05/04/12	0931	5.88	8.12
23	TFS-MW-TB3	350580605	580605.D	05/04/12	0959	5.88	8.12
24	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	1021		
25	TFS-MW-17-RS	350580602	580602.D	05/04/12	1043	5.89	8.12
26	TFS-MW-17	350580601	580601.D	05/04/12	1106	5.89	8.12

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 5.89			S2 : 8.12			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	TFS-MW-17-MS	350580603	580603MS.D	05/04/12	1128	5.89 8.12
28	TFS-MW-17-MSD	350580604	580604SD.D	05/04/12	1150	5.89 8.12
29	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1235	
30	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1309	
31	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1331	
32	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1353	
33	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1416	
34	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1438	
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1500	
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1715	
37	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/04/12	1737	

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	18.5	92.5			30 - 155
Chloromethane	20	17.5	87.5			40 - 125
Vinyl chloride	20	19.2	96.0			50 - 145
Bromomethane	20	15	75.0			30 - 145
Chloroethane	20	20	100.0			60 - 135
Trichlorofluoromethane	20	21.7	108.0			60 - 145
1,1-Dichloroethene	20	20.4	102.0			70 - 130
Acrolein	40	58	145.0			31 - 148
Methyl iodide	20	19.4	97.0			75 - 152
Carbon disulfide	20	21.2	106.0			35 - 160
Methylene chloride	20	20.2	101.0			55 - 140
trans-1,2-Dichloroethene	20	20.2	101.0			60 - 140
Acrylonitrile	40	37.8	94.5			55 - 126
1,1-Dichloroethane	20	19.9	99.5			70 - 135
Acetone	40	28	70.0			40 - 140
2-Butanone	40	32.6	81.5			30 - 150
Chloroform	20	20.5	102.0			65 - 135
1,1,1-Trichloroethane	20	20.9	104.0			65 - 130
Carbon tetrachloride	20	21.9	110.0			65 - 140
Benzene	20	19.3	96.5			80 - 120
1,2-Dichloroethane	20	20.5	102.0			70 - 130
Trichloroethene	20	20.6	103.0			70 - 125
Vinyl acetate	20	20.9	104.0			77 - 150
1,2-Dichloropropane	20	20	100.0			75 - 125
Dibromomethane	20	20.5	102.0			75 - 125
Bromodichloromethane	20	20.1	100.0			75 - 120
cis-1,3-Dichloropropene	20	20.6	103.0			70 - 130
4-Methyl-2-pentanone	40	33.4	83.5			60 - 135
Toluene	20	20.4	102.0			75 - 120
trans-1,3-Dichloropropene	20	20	100.0			55 - 140
Ethyl methacrylate	20	18	90.0			73 - 121
1,1,2-Trichloroethane	20	18.9	94.5			75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	20.2	101.0			45 - 150
2-Hexanone	40	35.7	89.2			55 - 130
Dibromochloromethane	20	21.2	106.0			60 - 135
1,2-Dibromoethane	20	19.6	98.0			80 - 120
Chlorobenzene	20	19.9	99.5			80 - 120
1,1,1,2-Tetrachloroethane	20	20.2	101.0			80 - 130
Ethylbenzene	20	20.1	100.0			75 - 125
Styrene	20	20.1	100.0			65 - 135
Bromoform	20	19.9	99.5			70 - 130
1,1,2,2-Tetrachloroethane	20	18.3	91.5			65 - 130
1,2,3-Trichloropropane	20	17.9	89.5			75 - 125
1,2-Dibromo-3-chloropropane	20	18.8	94.0			50 - 130
1,4-Dichloro-2-butene	40	30.9	77.2			68 - 115
Acetonitrile	200	194	97.0			37 - 122
Allyl chloride	20	19.1	95.5			70 - 130
1,4-Dioxane	400	507	127.0			0 - 167
Isobutyl alcohol	400	374	93.5			70 - 130
Methacrylonitrile	200	182	91.0			70 - 130
Methyl methacrylate	20	17.3	86.5			33 - 172
Propionitrile	200	188	94.0			70 - 130
Chloroprene	20	19.9	99.5			70 - 130
Xylene (total)	60	60.7	101.0			82 - 124

Spike Recovery: 0 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	18.6	93.0	0.5	20	30 - 155
Chloromethane	20	17.5	87.5	0.0	20	40 - 125
Vinyl chloride	20	18.6	93.0	3.2	20	50 - 145
Bromomethane	20	14.3	71.5	4.8	20	30 - 145
Chloroethane	20	19.7	98.5	1.5	20	60 - 135
Trichlorofluoromethane	20	21.4	107.0	1.4	20	60 - 145
1,1-Dichloroethene	20	20.8	104.0	1.9	20	70 - 130
Acrolein	40	65.6	164.0*	12.3	20	31 - 148
Methyl iodide	20	20.1	100.0	3.5	20	75 - 152
Carbon disulfide	20	20.8	104.0	1.9	20	35 - 160
Methylene chloride	20	20.8	104.0	2.9	20	55 - 140
trans-1,2-Dichloroethene	20	20.2	101.0	0.0	20	60 - 140
Acrylonitrile	40	41.2	103.0	8.6	20	55 - 126
1,1-Dichloroethane	20	20.2	101.0	1.5	20	70 - 135
Acetone	40	34.4	86.0	20.5*	20	40 - 140
2-Butanone	40	39	97.5	17.9	20	30 - 150
Chloroform	20	20.8	104.0	1.5	20	65 - 135
1,1,1-Trichloroethane	20	21.2	106.0	1.4	20	65 - 130
Carbon tetrachloride	20	21.8	109.0	0.5	20	65 - 140
Benzene	20	19.4	97.0	0.5	20	80 - 120
1,2-Dichloroethane	20	21.3	106.0	3.8	20	70 - 130
Trichloroethene	20	20.4	102.0	1.0	20	70 - 125
Vinyl acetate	20	22.1	110.0	5.6	20	77 - 150
1,2-Dichloropropane	20	20.4	102.0	2.0	20	75 - 125
Dibromomethane	20	21.7	108.0	5.7	20	75 - 125
Bromodichloromethane	20	20.7	104.0	2.9	20	75 - 120
cis-1,3-Dichloropropene	20	20.5	102.0	0.5	20	70 - 130
4-Methyl-2-pentanone	40	39.2	98.0	16.0	20	60 - 135
Toluene	20	20.7	104.0	1.5	20	75 - 120
trans-1,3-Dichloropropene	20	20.4	102.0	2.0	20	55 - 140
Ethyl methacrylate	20	19.1	95.5	5.9	20	73 - 121
1,1,2-Trichloroethane	20	20	100.0	5.7	20	75 - 125

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11D

Lab Code : PEL Case No. SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Tetrachloroethene	20	20.1	100.0	0.5	20	45 - 150
2-Hexanone	40	40	100.0	11.4	20	55 - 130
Dibromochloromethane	20	21.5	108.0	1.4	20	60 - 135
1,2-Dibromoethane	20	19.9	99.5	1.5	20	80 - 120
Chlorobenzene	20	19.6	98.0	1.5	20	80 - 120
1,1,1,2-Tetrachloroethane	20	20.6	103.0	2.0	20	80 - 130
Ethylbenzene	20	19.9	99.5	1.0	20	75 - 125
Styrene	20	19.8	99.0	1.5	20	65 - 135
Bromoform	20	20.4	102.0	2.5	20	70 - 130
1,1,2,2-Tetrachloroethane	20	19.6	98.0	6.9	20	65 - 130
1,2,3-Trichloropropane	20	19.6	98.0	9.1	20	75 - 125
1,2-Dibromo-3-chloropropane	20	19.5	97.5	3.7	20	50 - 130
1,4-Dichloro-2-butene	40	34.6	86.5	11.3	20	68 - 115
Acetonitrile	200	209	104.0	7.4	20	37 - 122
Allyl chloride	20	20.6	103.0	7.6	20	70 - 130
1,4-Dioxane	400	497	124.0	2.0	20	0 - 167
Isobutyl alcohol	400	389	97.2	3.9	20	70 - 130
Methacrylonitrile	200	202	101.0	10.4	20	70 - 130
Methyl methacrylate	20	19.7	98.5	13.0	20	33 - 172
Propionitrile	200	221	110.0	16.1	20	70 - 130
Chloroprene	20	20.3	102.0	2.0	20	70 - 130
Xylene (total)	60	60.7	101.0	0.0	20	82 - 124

Spike Recovery: 1 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Dichlorodifluoromethane	20	0	18	89.0	30 - 155
Chloromethane	20	0	18	89.0	40 - 125
Vinyl chloride	20	0	21	104.0	50 - 145
Bromomethane	20	0	13	65.5	30 - 145
Chloroethane	20	0	18	92.5	60 - 135
Trichlorofluoromethane	20	0	24	118.0	60 - 145
1,1-Dichloroethene	20	0	22	110.0	70 - 130
Acrolein	40	0	55	138.0	31 - 148
Methyl iodide	20	0	24	121.0	75 - 152
Carbon disulfide	20	2.7	25	110.0	35 - 160
Methylene chloride	20	0	24	122.0	55 - 140
trans-1,2-Dichloroethene	20	0	21	105.0	60 - 140
Acrylonitrile	40	0	42	106.0	55 - 126
1,1-Dichloroethane	20	0	22	108.0	70 - 135
Acetone	40	0	34	84.2	40 - 140
2-Butanone	40	0	42	106.0	30 - 150
Chloroform	20	0	24	118.0	65 - 135
1,1,1-Trichloroethane	20	0	23	113.0	65 - 130
Carbon tetrachloride	20	0	24	118.0	65 - 140
Benzene	20	0	21	104.0	80 - 120
1,2-Dichloroethane	20	0	22	110.0	70 - 130
Trichloroethene	20	0	21	104.0	70 - 125
Vinyl acetate	20	0	23	116.0	77 - 150
1,2-Dichloropropane	20	0	22	108.0	75 - 125
Dibromomethane	20	0	23	113.0	75 - 125
Bromodichloromethane	20	0	22	112.0	75 - 120
cis-1,3-Dichloropropene	20	0	21	106.0	70 - 130
4-Methyl-2-pentanone	40	0	55	136.0*	60 - 135
Toluene	20	0	22	110.0	75 - 120
trans-1,3-Dichloropropene	20	0	21	105.0	55 - 140

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Ethyl methacrylate	20	0	21	107.0	73 - 121
1,1,2-Trichloroethane	20	0	21	106.0	75 - 125
Tetrachloroethene	20	0	22	110.0	45 - 150
2-Hexanone	40	0	73	183.0*	55 - 130
Dibromochloromethane	20	0	23	116.0	60 - 135
1,2-Dibromoethane	20	0	22	108.0	80 - 120
Chlorobenzene	20	0	21	104.0	80 - 120
1,1,1,2-Tetrachloroethane	20	0	22	108.0	80 - 130
Ethylbenzene	20	0	21	107.0	75 - 125
Styrene	20	0	21	104.0	65 - 135
Bromoform	20	0	22	108.0	70 - 130
1,1,2,2-Tetrachloroethane	20	0	21	107.0	65 - 130
1,2,3-Trichloropropane	20	0	22	108.0	75 - 125
1,2-Dibromo-3-chloropropane	20	0	23	113.0	50 - 130
1,4-Dichloro-2-butene	40	0	19	47.5*	68 - 115
Acetonitrile	200	0	230	115.0	37 - 122
Allyl chloride	20	0	23	114.0	70 - 130
1,4-Dioxane	400	0	530	134.0	0 - 167
Isobutyl alcohol	400	0	410	104.0	70 - 130
Methacrylonitrile	200	0	220	110.0	70 - 130
Methyl methacrylate	20	0	20	102.0	33 - 172
Propionitrile	200	0	250	124.0	70 - 130
Chloroprene	20	0	20	99.0	70 - 130
Xylene (total)	60	0	63	105.0	82 - 124

Spike Recovery: 3 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	20	19	94.5	6.0	20	30 - 155
Chloromethane	20	18	92.5	3.9	20	40 - 125
Vinyl chloride	20	22	108.0	3.8	20	50 - 145
Bromomethane	20	14	69.0	5.2	20	30 - 145
Chloroethane	20	88	438.0*	130.3*	20	60 - 135
Trichlorofluoromethane	20	24	118.0	0.4	20	60 - 145
1,1-Dichloroethene	20	23	115.0	4.0	20	70 - 130
Acrolein	40	56	140.0	0.9	20	31 - 148
Methyl iodide	20	26	132.0	8.3	20	75 - 152
Carbon disulfide	20	26	116.0	5.1	20	35 - 160
Methylene chloride	20	25	126.0	2.8	20	55 - 140
trans-1,2-Dichloroethene	20	22	112.0	6.0	20	60 - 140
Acrylonitrile	40	45	113.0	5.9	20	55 - 126
1,1-Dichloroethane	20	22	111.0	3.2	20	70 - 135
Acetone	40	36	91.0	7.7	20	40 - 140
2-Butanone	40	43	107.0	0.5	20	30 - 150
Chloroform	20	25	123.0	4.6	20	65 - 135
1,1,1-Trichloroethane	20	23	116.0	3.1	20	65 - 130
Carbon tetrachloride	20	24	122.0	2.9	20	65 - 140
Benzene	20	21	107.0	3.3	20	80 - 120
1,2-Dichloroethane	20	23	114.0	3.6	20	70 - 130
Trichloroethene	20	22	110.0	5.6	20	70 - 125
Vinyl acetate	20	24	120.0	3.4	20	77 - 150
1,2-Dichloropropane	20	22	112.0	3.2	20	75 - 125
Dibromomethane	20	24	119.0	5.2	20	75 - 125
Bromodichloromethane	20	23	114.0	1.8	20	75 - 120
cis-1,3-Dichloropropene	20	22	110.0	3.2	20	70 - 130
4-Methyl-2-pentanone	40	56	140.0*	2.2	20	60 - 135
Toluene	20	22	112.0	2.7	20	75 - 120
trans-1,3-Dichloropropene	20	22	110.0	4.2	20	55 - 140

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Ethyl methacrylate	20	22	111.0	3.7	20	73 - 121
1,1,2-Trichloroethane	20	23	113.0	6.4	20	75 - 125
Tetrachloroethene	20	22	111.0	1.4	20	45 - 150
2-Hexanone	40	75	188.0*	2.8	20	55 - 130
Dibromochloromethane	20	24	120.0	3.4	20	60 - 135
1,2-Dibromoethane	20	22	112.0	4.1	20	80 - 120
Chlorobenzene	20	21	107.0	2.4	20	80 - 120
1,1,1,2-Tetrachloroethane	20	22	112.0	3.7	20	80 - 130
Ethylbenzene	20	22	108.0	1.4	20	75 - 125
Styrene	20	22	109.0	5.2	20	65 - 135
Bromoform	20	23	113.0	5.0	20	70 - 130
1,1,1,2,2-Tetrachloroethane	20	22	111.0	3.7	20	65 - 130
1,2,3-Trichloropropane	20	22	111.0	2.3	20	75 - 125
1,2-Dibromo-3-chloropropane	20	24	118.0	4.3	20	50 - 130
1,4-Dichloro-2-butene	40	28	69.0	36.9*	20	68 - 115
Acetonitrile	200	240	119.0	3.4	20	37 - 122
Allyl chloride	20	24	118.0	3.5	20	70 - 130
1,4-Dioxane	400	620	154.0	14.4	20	0 - 167
Isobutyl alcohol	400	420	105.0	1.4	20	70 - 130
Methacrylonitrile	200	220	112.0	2.2	20	70 - 130
Methyl methacrylate	20	20	102.0	0.0	20	33 - 172
Propionitrile	200	250	126.0	1.6	20	70 - 130
Chloroprene	20	21	105.0	5.9	20	70 - 130
Xylene (total)	60	66	111.0	5.6	20	82 - 124

RPD: 2 out of 54 outside limits

Spike Recovery: 3 out of 54 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8260 Standards Data

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND		RRF0.2	RRF0.5	RRF1	RRF2	RRF5	%RSD OR R^2
Dichlorodifluoromethane				0.201	0.193	0.195	
Chloromethane	#		0.559	0.448	0.391	0.380	#
Vinyl chloride	*		0.329	0.274	0.249	0.258	*
Bromomethane				0.243	0.203	0.190	
Chloroethane				0.161	0.156	0.169	
Trichlorofluoromethane				0.182	0.163	0.180	
1,1-Dichloroethene	*		0.429	0.408	0.350	0.370	*
Acrolein					0.046	0.045	
Methyl iodide				0.106	0.090	0.140	
Carbon disulfide				0.623	0.504	0.510	
Methylene chloride				1.005	0.618	0.560	
trans-1,2-Dichloroethene			0.434	0.445	0.364	0.395	
Acrylonitrile						0.173	
1,1-Dichloroethane	#			0.645	0.548	0.539	#
Acetone						0.245	
2-Butanone				0.293	0.257	0.235	
Chloroform	*	0.445	0.506	0.520	0.449	0.498	*
1,1,1-Trichloroethane			0.414	0.403	0.352	0.393	
Carbon tetrachloride			0.346	0.370	0.311	0.332	
Benzene		1.324	1.229	1.152	0.966	1.034	
1,2-Dichloroethane			0.455	0.491	0.456	0.456	
Trichloroethene			0.343	0.331	0.280	0.296	
Vinyl acetate				1.060	1.011	1.105	
1,2-Dichloropropane	*	0.344	0.339	0.365	0.333	0.345	*
Dibromomethane				0.198	0.193	0.194	
Bromodichloromethane		0.403	0.389	0.426	0.373	0.367	
cis-1,3-Dichloropropene		0.343	0.417	0.450	0.396	0.392	
4-Methyl-2-pentanone				0.170	0.141	0.161	
Toluene	*		0.702	0.774	0.622	0.651	*
trans-1,3-Dichloropropene			0.411	0.448	0.390	0.406	
Ethyl methacrylate				0.364	0.311	0.335	
1,1,2-Trichloroethane			0.283	0.315	0.271	0.292	
Tetrachloroethene			0.332	0.344	0.298	0.288	
2-Hexanone				0.496	0.406	0.312	

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND	RRF0.2	RRF0.5	RRF1	RRF2	RRF5	RRF	%RSD OR R^2
Dibromochloromethane	0.277	0.353	0.414	0.354	0.379		
1,2-Dibromoethane			0.401	0.343	0.372		
Chlorobenzene	#	1.144	1.214	0.993	1.019		#
1,1,1,2-Tetrachloroethane		0.412	0.410	0.356	0.363		
Ethylbenzene	*	0.509	0.544	0.435	0.494		*
Styrene			0.979	0.854	0.926		
Bromoform	#		0.301	0.272	0.276		#
1,1,2,2-Tetrachloroethane	# 0.695	0.847	1.065	0.889	0.960		#
1,2,3-Trichloropropane			0.291	0.267	0.287		
1,2-Dibromo-3-chloropropane				0.183	0.157		
1,4-Dichloro-2-butene			0.218	0.187	0.196		
Acetonitrile				0.103	0.104		
Allyl chloride			1.161	1.033	1.041		
1,4-Dioxane			0.002	0.002	0.002		
Isobutyl alcohol			0.006	0.007	0.006		
Methacrylonitrile			0.149	0.130	0.142		
Methyl methacrylate			0.237	0.189	0.192		
Propionitrile			0.072	0.068	0.070		
Chloroprene			0.552	0.426	0.439		
o-Xylene		1.217	1.378	1.211	1.265		
p,m-Xylene	0.648	0.588	0.645	0.538	0.604		
=====							
Dibromofluoromethane(SURR)					0.241		
Toluene-d8(SURR)					0.842		
4-Bromofluorobenzene(SURR)					0.755		
1,2-Dichloroethane-d4(SURR)					0.056		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW SamLab Code : PEL Case No. SAS No: SDG No.: 3505806Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104Min RRF for SPCC(#) = 0.1Max %RSD for CCC(*) = 30 %

COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dichlorodifluoromethane	0.212	0.210	0.235	0.241	0.226	0.21409	8.5
Chloromethane	# 0.393	0.363	0.398	0.428	0.397	0.41739	14.1 #
Vinyl chloride	* 0.284	0.274	0.310	0.347	0.316	0.29359	11.4 *
Bromomethane	0.186	0.128	0.120	0.134	0.123	0.16585	0.99441
Chloroethane	0.167	0.157	0.170	0.191	0.177	0.16851	6.8
Trichlorofluoromethane	0.199	0.177	0.201	0.199	0.205	0.18832	8
1,1-Dichloroethene	* 0.416	0.363	0.383	0.393	0.390	0.38923	6.6 *
Acrolein	0.040	0.036	0.033	0.030	0.033	0.03756	16.2 <-
Methyl iodide	0.190	0.234	0.298	0.316	0.326	0.21248	0.99613
Carbon disulfide	0.555	0.505	0.535	0.559	0.561	0.54402	7.4
Methylene chloride	0.569	0.488	0.491	0.491	0.483	0.58791	0.99973
trans-1,2-Dichloroethene	0.429	0.390	0.397	0.406	0.412	0.40803	6.2
Acrylonitrile	0.169	0.158	0.173	0.170	0.172	0.16913	3.4
1,1-Dichloroethane	# 0.604	0.547	0.554	0.570	0.570	0.5721	6.2 #
Acetone	0.178	0.136	0.139	0.212	0.212	0.18711	23.5 <-
2-Butanone	0.221	0.201	0.213	0.257	0.251	0.24092	12.3
Chloroform	* 0.523	0.469	0.470	0.481	0.480	0.4841	5.6 *
1,1,1-Trichloroethane	0.431	0.391	0.404	0.415	0.421	0.40255	5.7
Carbon tetrachloride	0.386	0.338	0.367	0.374	0.379	0.35594	7.1
Benzene	1.137	1.031	1.049	1.081	1.088	1.10914	9.5
1,2-Dichloroethane	0.493	0.445	0.448	0.454	0.449	0.46077	3.9
Trichloroethene	0.325	0.284	0.297	0.305	0.305	0.30745	7
Vinyl acetate	1.161	1.138	1.218	1.218	1.233	1.14297	7
1,2-Dichloropropane	* 0.377	0.341	0.347	0.349	0.354	0.34947	3.7 *
Dibromomethane	0.216	0.194	0.200	0.202	0.198	0.19941	3.8
Bromodichloromethane	0.407	0.373	0.380	0.388	0.389	0.38943	4.7
cis-1,3-Dichloropropene	0.449	0.413	0.428	0.436	0.434	0.41572	7.8
4-Methyl-2-pentanone	0.171	0.162	0.172	0.195	0.193	0.17072	10.2
Toluene	* 0.739	0.687	0.702	0.711	0.715	0.70035	6.4 *
trans-1,3-Dichloropropene	0.455	0.423	0.441	0.452	0.456	0.43112	5.7
Ethyl methacrylate	0.372	0.346	0.366	0.376	0.375	0.35575	6.5
1,1,2-Trichloroethane	0.312	0.279	0.283	0.285	0.285	0.28945	5.1
Tetrachloroethene	0.332	0.284	0.307	0.309	0.308	0.31126	6.6
2-Hexanone	0.406	0.392	0.419	0.462	0.459	0.41895	13.4

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D		RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D	
COMPOUND		RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2			
Dibromochloromethane		0.406	0.387	0.405	0.403	0.413	0.37903	11.2			
1,2-Dibromoethane		0.395	0.359	0.373	0.371	0.370	0.37301	4.9			
Chlorobenzene	#	1.106	0.989	1.012	1.022	1.026	1.05835	7.4	#		
1,1,1,2-Tetrachloroethane		0.392	0.362	0.377	0.380	0.378	0.38098	5.3			
Ethylbenzene	*	0.540	0.483	0.519	0.520	0.525	0.50762	6.7	*		
Styrene		1.052	0.957	1.019	1.025	1.034	0.98073	6.8			
Bromoform	#	0.292	0.283	0.306	0.305	0.309	0.29276	4.9	#		
1,1,2,2-Tetrachloroethane	#	0.972	0.870	0.883	0.873	0.879	0.89324	10.7	#		
1,2,3-Trichloropropane		0.294	0.258	0.267	0.268	0.269	0.27513	4.9			
1,2-Dibromo-3-chloropropane		0.183	0.162	0.173	0.174	0.175	0.17228	5.7			
1,4-Dichloro-2-butene		0.202	0.196	0.204	0.218	0.215	0.2047	5.7			
Acetonitrile		0.109	0.101	0.104	0.108	0.105	0.10488	2.7			
Allyl chloride		1.089	1.006	1.042	1.080	1.051	1.0628	4.5			
1,4-Dioxane		0.002	0.002	0.002	0.003	0.003	0.00222	14.9			
Isobutyl alcohol		0.006	0.005	0.005	0.005	0.005	0.00574	13			
Methacrylonitrile		0.149	0.136	0.140	0.140	0.140	0.14078	4.5			
Methyl methacrylate		0.210	0.195	0.210	0.207	0.208	0.20612	7.3			
Propionitrile		0.070	0.064	0.068	0.068	0.066	0.06819	3.6			
Chloroprene		0.496	0.449	0.486	0.504	0.504	0.48186	8.6			
o-Xylene		1.405	1.278	1.348	1.378	1.383	1.31817	5.7			
p,m-Xylene		0.667	0.614	0.639	0.660	0.662	0.62646	6.5			
=====											
Dibromofluoromethane(SURR)		0.251	0.253	0.265	0.233	0.258	0.25015	4.6			
Toluene-d8(SURR)		0.913	0.895	0.938	0.849	0.949	0.89762	5			
4-Bromofluorobenzene(SURR)		0.755	0.742	0.766	0.675	0.752	0.74076	4.5			
1,2-Dichloroethane-d4(SURR)		0.063	0.060	0.064	0.057	0.063	0.06033	5.9			

Average Used: 7.1

7SSC
VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.21409	0.21333	0.4	AVRG
Chloromethane	# 0.41739	0.38337	8.2	AVRG#
Vinyl chloride	* 0.29359	0.30212	2.9	AVRG*
Bromomethane	50	47.7	4.6	LINR
Chloroethane	0.16851	0.16843	0.0	AVRG
Trichlorofluoromethane	0.18832	0.19726	4.7	AVRG
1,1-Dichloroethene	* 0.38923	0.36686	5.7	AVRG*
Acrolein	0.03756	0.03119	17.0	AVRG
Methyl iodide	50	45.6	8.8	LINR
Carbon disulfide	0.54402	0.52191	4.1	AVRG
Methylene chloride	50	46.5	7.0	LINR
trans-1,2-Dichloroethene	0.40803	0.38198	6.4	AVRG
Acrylonitrile	0.16913	0.16823	0.5	AVRG
1,1-Dichloroethane	# 0.5721	0.52598	8.1	AVRG#
Acetone	0.18711	0.18187	2.8	AVRG
2-Butanone	0.24092	0.22377	7.1	AVRG
Chloroform	* 0.4841	0.45393	6.2	AVRG*
1,1,1-Trichloroethane	0.40255	0.38696	3.9	AVRG
Carbon tetrachloride	0.35594	0.34864	2.1	AVRG
Benzene	1.10914	1.008	9.1	AVRG
1,2-Dichloroethane	0.46077	0.41892	9.1	AVRG
Trichloroethene	0.30745	0.28515	7.3	AVRG
Vinyl acetate	1.14297	1.132	1.0	AVRG
1,2-Dichloropropane	* 0.34947	0.32933	5.8	AVRG*
Dibromomethane	0.19941	0.18732	6.1	AVRG
Bromodichloromethane	0.38943	0.35793	8.1	AVRG
cis-1,3-Dichloropropene	0.41572	0.40441	2.7	AVRG
4-Methyl-2-pentanone	0.17072	0.16963	0.6	AVRG
Toluene	* 0.70035	0.66666	4.8	AVRG*
trans-1,3-Dichloropropene	0.43112	0.4155	3.6	AVRG
Ethyl methacrylate	0.35575	0.346	2.7	AVRG
1,1,2-Trichloroethane	0.28945	0.26999	6.7	AVRG
Tetrachloroethene	0.31126	0.29415	5.5	AVRG
2-Hexanone	0.41895	0.41517	0.9	AVRG
Dibromochloromethane	0.37903	0.38076	0.5	AVRG
1,2-Dibromoethane	0.37301	0.35035	6.1	AVRG

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.05835	0.96341	9.0	AVRG#
1,1,1,2-Tetrachloroethane	0.38098	0.35425	7.0	AVRG
Ethylbenzene	* 0.50762	0.49389	2.7	AVRG*
Styrene	0.98073	0.95526	2.6	AVRG
Bromoform	# 0.29276	0.27986	4.4	AVRG#
1,1,2,2-Tetrachloroethane	# 0.89324	0.83143	6.9	AVRG#
1,2,3-Trichloropropane	0.27513	0.25651	6.8	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.16323	5.3	AVRG
1,4-Dichloro-2-butene	0.2047	0.19851	3.0	AVRG
Acetonitrile	0.10488	0.09601	8.5	AVRG
Allyl chloride	1.0628	0.96009	9.7	AVRG
1,4-Dioxane	0.00222	0.00249	12.2	AVRG
Isobutyl alcohol	0.00574	0.00473	17.6	AVRG
Methacrylonitrile	0.14078	0.13171	6.4	AVRG
Methyl methacrylate	0.20612	0.19451	5.6	AVRG
Propionitrile	0.06819	0.062	9.1	AVRG
Chloroprene	0.48186	0.46902	2.7	AVRG
o-Xylene	1.31817	1.278	3.0	AVRG
p,m-Xylene	0.62646	0.61501	1.8	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.24471	2.2	AVRG
Toluene-d8(SURR)	0.89762	0.87451	2.6	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.72689	1.9	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06094	1.0	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: VMS01 CalibrationDate: 05/04/12 Time: 0730
 CCV ID: CCV1077341 Lab File ID: 50CCV12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type	
Dichlorodifluoromethane	0.21409	0.2431	13.6	AVRG	
Chloromethane	# 0.41739	0.4021	3.7	AVRG#	
Vinyl chloride	* 0.29359	0.32213	9.7	AVRG*	
Bromomethane	50	38.7	22.6	LINR	<-
Chloroethane	0.16851	0.18814	11.6	AVRG	
Trichlorofluoromethane	0.18832	0.23285	23.6	AVRG	<-
1,1-Dichloroethene	* 0.38923	0.40281	3.5	AVRG*	
Acrolein	0.03756	0.05745	53.0	AVRG	<-
Methyl iodide	50	49.3	1.4	LINR	
Carbon disulfide	0.54402	0.56514	3.9	AVRG	
Methylene chloride	50	48.5	3.0	LINR	
trans-1,2-Dichloroethene	0.40803	0.39379	3.5	AVRG	
Acrylonitrile	0.16913	0.1601	5.3	AVRG	
1,1-Dichloroethane	# 0.5721	0.54852	4.1	AVRG#	
Acetone	0.18711	0.15334	18.0	AVRG	
2-Butanone	0.24092	0.19823	17.7	AVRG	
Chloroform	* 0.4841	0.469	3.1	AVRG*	
1,1,1-Trichloroethane	0.40255	0.41519	3.1	AVRG	
Carbon tetrachloride	0.35594	0.38263	7.5	AVRG	
Benzene	1.10914	1.026	7.5	AVRG	
1,2-Dichloroethane	0.46077	0.44878	2.6	AVRG	
Trichloroethene	0.30745	0.29323	4.6	AVRG	
Vinyl acetate	1.14297	1.228	7.4	AVRG	
1,2-Dichloropropane	* 0.34947	0.33835	3.2	AVRG*	
Dibromomethane	0.19941	0.19591	1.8	AVRG	
Bromodichloromethane	0.38943	0.378	2.9	AVRG	
cis-1,3-Dichloropropene	0.41572	0.41635	0.2	AVRG	
4-Methyl-2-pentanone	0.17072	0.14401	15.6	AVRG	
Toluene	* 0.70035	0.6788	3.1	AVRG*	
trans-1,3-Dichloropropene	0.43112	0.42432	1.6	AVRG	
Ethyl methacrylate	0.35575	0.31752	10.7	AVRG	
1,1,2-Trichloroethane	0.28945	0.26623	8.0	AVRG	
Tetrachloroethene	0.31126	0.3037	2.4	AVRG	
2-Hexanone	0.41895	0.34676	17.2	AVRG	
Dibromochloromethane	0.37903	0.3889	2.6	AVRG	
1,2-Dibromoethane	0.37301	0.34496	7.5	AVRG	

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: VMS01 Calibration Date: 05/04/12 Time: 0730
 CCV ID: CCV1077341 Lab File ID: 50CCV12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlorobenzene	# 1.05835	0.96907	8.4	AVRG#
1,1,1,2-Tetrachloroethane	0.38098	0.36726	3.6	AVRG
Ethylbenzene	* 0.50762	0.49155	3.2	AVRG*
Styrene	0.98073	0.95061	3.1	AVRG
Bromoform	# 0.29276	0.28121	3.9	AVRG#
1,1,2,2-Tetrachloroethane	# 0.89324	0.77568	13.2	AVRG#
1,2,3-Trichloropropane	0.27513	0.24183	12.1	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.14612	15.2	AVRG
1,4-Dichloro-2-butene	0.2047	0.16065	21.5	AVRG
Acetonitrile	0.10488	0.09969	4.9	AVRG
Allyl chloride	1.0628	0.99688	6.2	AVRG
1,4-Dioxane	0.00222	0.0022	0.9	AVRG
Isobutyl alcohol	0.00574	0.00503	12.4	AVRG
Methacrylonitrile	0.14078	0.12294	12.7	AVRG
Methyl methacrylate	0.20612	0.18147	12.0	AVRG
Propionitrile	0.06819	0.06256	8.3	AVRG
Chloroprene	0.48186	0.48399	0.4	AVRG
o-Xylene	1.31817	1.261	4.3	AVRG
p,m-Xylene	0.62646	0.61644	1.6	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.26566	6.2	AVRG
Toluene-d8(SURR)	0.89762	0.9376	4.5	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.71365	3.7	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06282	4.1	AVRG

Average Used: 8.1

8270 SIM Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D.

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed. All percent recovery and relative percent difference (RPD) criteria were met.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik **Title:** Lab Director

SIGNED:
05/01/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Method: 8270 SIM

EPA Sample No	Lab Sample ID
<u>TFS-MW-17</u>	<u>350580601</u>
<u>TFS-MW-17-RS</u>	<u>350580602</u>

8270 SIM Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1214

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.026	J	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.022	J	0.02	0.041	0.051
83-32-9	Acenaphthene	1.2		0.02	0.041	0.051
208-96-8	Acenaphthylene	0.023	J	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.045	J	0.02	0.041	0.051
86-73-7	Fluorene	0.043	J	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.055		0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1238

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.041	U	0.02	0.041	0.051
91-57-6	2-Methylnaphthalene	0.041	U	0.02	0.041	0.051
83-32-9	Acenaphthene	0.041	U	0.02	0.041	0.051
208-96-8	Acenaphthylene	0.041	U	0.02	0.041	0.051
120-12-7	Anthracene	0.041	U	0.02	0.041	0.051
56-55-3	Benzo(a)anthracene	0.041	U	0.02	0.041	0.051
50-32-8	Benzo(a)pyrene	0.041	U	0.02	0.041	0.051
205-99-2	Benzo(b)fluoranthene	0.041	U	0.02	0.041	0.051
191-24-2	Benzo(g,h,i)perylene	0.041	U	0.02	0.041	0.051
207-08-9	Benzo(k)fluoranthene	0.041	U	0.02	0.041	0.051
218-01-9	Chrysene	0.041	U	0.02	0.041	0.051
53-70-3	Dibenzo(a,h)anthracene	0.041	U	0.02	0.041	0.041
206-44-0	Fluoranthene	0.041	U	0.02	0.041	0.051
86-73-7	Fluorene	0.041	U	0.02	0.041	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	U	0.02	0.041	0.051
91-20-3	Naphthalene	0.041	U	0.02	0.041	0.051
85-01-8	Phenanthrene	0.041	U	0.02	0.041	0.051
129-00-0	Pyrene	0.041	U	0.02	0.041	0.051

8270 SIM QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127232MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127232MB Lab File ID: 9187MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/26/12 Time: 1244

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 SIM

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
90-12-0	1-Methylnaphthalene	0.04	U	0.02	0.04	0.05
91-57-6	2-Methylnaphthalene	0.04	U	0.02	0.04	0.05
83-32-9	Acenaphthene	0.04	U	0.02	0.04	0.05
208-96-8	Acenaphthylene	0.04	U	0.02	0.04	0.05
120-12-7	Anthracene	0.04	U	0.02	0.04	0.05
56-55-3	Benzo(a)anthracene	0.04	U	0.02	0.04	0.05
50-32-8	Benzo(a)pyrene	0.04	U	0.02	0.04	0.05
205-99-2	Benzo(b)fluoranthene	0.04	U	0.02	0.04	0.05
191-24-2	Benzo(g,h,i)perylene	0.04	U	0.02	0.04	0.05
207-08-9	Benzo(k)fluoranthene	0.04	U	0.02	0.04	0.05
218-01-9	Chrysene	0.04	U	0.02	0.04	0.05
53-70-3	Dibenzo(a,h)anthracene	0.04	U	0.02	0.04	0.04
206-44-0	Fluoranthene	0.04	U	0.02	0.04	0.05
86-73-7	Fluorene	0.04	U	0.02	0.04	0.05
193-39-5	Indeno(1,2,3-cd)pyrene	0.04	U	0.02	0.04	0.05
91-20-3	Naphthalene	0.04	U	0.02	0.04	0.05
85-01-8	Phenanthrene	0.04	U	0.02	0.04	0.05
129-00-0	Pyrene	0.04	U	0.02	0.04	0.05

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127232MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Lab File ID: 9187MB.D Lab Sample ID: 127232MB

Instrument ID: SMSD01 Date Extracted: 04/25/12

Matrix: WATER Date Analyzed: 04/26/12

Level:(low/med) LOW Time Analyzed: 1244

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816
2	TFS-MW-17	350580601	80601.D	04/27/12	1214
3	TFS-MW-17-RS	350580602	80602.D	04/27/12	1238
4	TFS-MW-17-MS	350580603	80603.D	04/27/12	1302
5	TFS-MW-17-MSD	350580604	80604.D	04/27/12	1326

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/10/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0708
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.8
68	Less than 2.0% of mass 69	0.7 (1.64)1
69	Mass 69 relative abundance	44
70	Less than 2.0% of mass 69	0.3 (0.69)1
127	10.0 - 80.0% of mass 198	50.5
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.2
365	Greater than 1.0% of mass 198	3.2
441	0.0 - 24.0% of mass 442	8.7 (14.62)2
442	Greater than 50.0% of mass 198	59.6
443	15.0 - 24.0% of mass 442	11.4 (19.16)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1068090	45403	SIMCAL1.D	04/10/12	0755
2	STD1068089	45402	SIMCAL2.D	04/10/12	0819
3	STD1068088	45401	SIMCAL3.D	04/10/12	0843
4	STD1068087	45400	SIMCAL4.D	04/10/12	0906
5	STD1068086	45399	SIMCAL5.D	04/10/12	0930
6	STD1068091	45772	SIMCAL6.D	04/10/12	0954
7	STD1068085	45397	SIMCAL7.D	04/10/12	1017
8	STD1068084	45396	SIMCAL8.D	04/10/12	1041
9	STD1068094	45779	SIMCAL9R.D	04/10/12	1153
10	STD1068095	45782	SIMCAL10R.	04/10/12	1216
11	SSC1068079	44830	SIMSECA.D	04/10/12	1240

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/26/12
 Instrument ID: SMSD01 DFTPP Injection Time: 1043
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.4
68	Less than 2.0% of mass 69	0.6 (1.38)1
69	Mass 69 relative abundance	43.8
70	Less than 2.0% of mass 69	0.2 (0.43)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	28.1
365	Greater than 1.0% of mass 198	3.7
441	0.0 - 24.0% of mass 442	10.5 (14.56)2
442	Greater than 50.0% of mass 198	72.1
443	15.0 - 24.0% of mass 442	13.8 (19.07)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073972	45886	SIMCCV2.D	04/26/12	1127
2	127232MB	127232MB	9187MB.D	04/26/12	1244

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/27/12
 Instrument ID: SMSD01 DFTPP Injection Time: 0705
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.3
68	Less than 2.0% of mass 69	0.7 (1.81)1
69	Mass 69 relative abundance	38.5
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	10.0 - 80.0% of mass 198	47.7
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	29.9
365	Greater than 1.0% of mass 198	4.2
441	0.0 - 24.0% of mass 442	13.4 (14.62)2
442	Greater than 50.0% of mass 198	91.9
443	15.0 - 24.0% of mass 442	17.3 (18.79)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1073979	45886	SIMCCV2.D	04/27/12	0748
2	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816
3	TFS-MW-17	350580601	80601.D	04/27/12	1214
4	TFS-MW-17-RS	350580602	80602.D	04/27/12	1238
5	TFS-MW-17-MS	350580603	80603.D	04/27/12	1302
6	TFS-MW-17-MSD	350580604	80604.D	04/27/12	1326

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	21723	4.34	83567	5.48	49021	7.18
UPPER LIMIT	43446	4.84	167134	5.98	98042	7.68
LOWER LIMIT	10861.5	3.84	41783.5	4.98	24510.5	6.68
EPA SAMPLE NO.						
1 127232MB	21581	4.28	77330	5.44	46861	7.13
2 127233LCS	23027	4.28	82721	5.44	50162	7.12
3 TFS-MW-17	18650	4.28	83291	5.43	43122	7.12
4 TFS-MW-17-RS	19481	4.28	71467	5.44	44083	7.12
5 TFS-MW-17-MS	19244	4.28	83462	5.43	43862	7.12
6 TFS-MW-17-MSD	18478	4.28	77937	5.43	43158	7.12

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Lab File ID (Standard): SIMCAL6.D Date Analyzed: 4/10/2012
 Instrument ID: SMSD01 Time Analyzed: 9:54
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT	
MID CAL STD	83459	8.63	88087	11.22	84480	12.53	
UPPER LIMIT	166918	9.13	176174	11.72	168960	13.03	
LOWER LIMIT	41729.5	8.13	44043.5	10.72	42240	12.03	
EPA SAMPLE NO.							
1	127232MB	87448	8.58	98731	11.17	86313	12.48
2	127233LCS	99161	8.58	114873	11.17	102928	12.48
3	TFS-MW-17	84835	8.58	103674	11.17	97744	12.48
4	TFS-MW-17-RS	86969	8.58	98719	11.17	91770	12.48
5	TFS-MW-17-MS	87736	8.58	104486	11.17	99207	12.48
6	TFS-MW-17-MSD	85660	8.58	106500	11.17	101203	12.48

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 10.19			S2 : 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP1	44847	DFTPP1.D	04/10/12	0708	
2	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	0732	
3	STD1068090	45403	SIMCAL1.D	04/10/12	0755	10.22 6.57
4	STD1068089	45402	SIMCAL2.D	04/10/12	0819	10.21 6.55
5	STD1068088	45401	SIMCAL3.D	04/10/12	0843	10.21 6.55
6	STD1068087	45400	SIMCAL4.D	04/10/12	0906	10.21 6.56
7	STD1068086	45399	SIMCAL5.D	04/10/12	0930	10.2 6.54
8	STD1068091	45772	SIMCAL6.D	04/10/12	0954	10.19 6.52
9	STD1068085	45397	SIMCAL7.D	04/10/12	1017	10.19 6.52
10	STD1068084	45396	SIMCAL8.D	04/10/12	1041	10.19 6.52
11	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1105	
12	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1129	
13	STD1068094	45779	SIMCAL9.D	04/10/12	1153	10.19 6.51
14	STD1068095	45782	SIMCAL10R.D	04/10/12	1216	10.19 6.51
15	SSC1068079	44830	SIMSECA.D	04/10/12	1240	10.19 6.52
16	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/10/12	1304	
17	DFTPP1	45777	DFTPP1.D	04/26/12	1043	
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1104	
19	CCV1073972	45886	SIMCCV2.D	04/26/12	1127	10.14 6.47
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1157	
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1221	
22	127232MB	127232MB	9187MB.D	04/26/12	1244	10.14 6.48
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1308	
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1332	
25	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1356	
26	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/26/12	1420	

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	04/26/12	1444		
28	ZZZZZZ	ZZZZZZ	04/26/12	1508		
29	ZZZZZZ	ZZZZZZ	04/26/12	1532		
30	ZZZZZZ	ZZZZZZ	04/26/12	1556		
31	ZZZZZZ	ZZZZZZ	04/26/12	1620		
32	ZZZZZZ	ZZZZZZ	04/26/12	1644		
33	ZZZZZZ	ZZZZZZ	04/26/12	1708		
34	ZZZZZZ	ZZZZZZ	04/26/12	1732		
35	ZZZZZZ	ZZZZZZ	04/26/12	1756		
36	ZZZZZZ	ZZZZZZ	04/26/12	1820		
37	ZZZZZZ	ZZZZZZ	04/26/12	1844		
38	ZZZZZZ	ZZZZZZ	04/26/12	1908		
39	ZZZZZZ	ZZZZZZ	04/26/12	1932		
40	ZZZZZZ	ZZZZZZ	04/26/12	1956		
41	ZZZZZZ	ZZZZZZ	04/26/12	2020		
42	ZZZZZZ	ZZZZZZ	04/26/12	2043		
43	ZZZZZZ	ZZZZZZ	04/26/12	2107		
44	ZZZZZZ	ZZZZZZ	04/26/12	2131		
45	ZZZZZZ	ZZZZZZ	04/26/12	2155		
46	ZZZZZZ	ZZZZZZ	04/26/12	2219		
47	ZZZZZZ	ZZZZZZ	04/26/12	2243		
48	ZZZZZZ	ZZZZZZ	04/26/12	2306		
49	DFTPP1	45777	DFTPP1.D	04/27/12	0705	
50	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	0725	
51	CCV1073979	45886	SIMCCV2.D	04/27/12	0748	10.14 6.47
52	127233LCS	127233LCS	9187LCSR.D	04/27/12	0816	10.14 6.48

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/10/12
 Instrument ID: SMSD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 10.19			S2: 6.52			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
53	ZZZZZZ	ZZZZZZ	04/27/12	0840		
54	ZZZZZZ	ZZZZZZ	04/27/12	0903		
55	ZZZZZZ	ZZZZZZ	04/27/12	0927		
56	ZZZZZZ	ZZZZZZ	04/27/12	0951		
57	ZZZZZZ	ZZZZZZ	04/27/12	1015		
58	ZZZZZZ	ZZZZZZ	04/27/12	1039		
59	ZZZZZZ	ZZZZZZ	04/27/12	1103		
60	ZZZZZZ	ZZZZZZ	04/27/12	1127		
61	ZZZZZZ	ZZZZZZ	04/27/12	1151		
62	TFS-MW-17	350580601	80601.D	04/27/12	1214	10.14 6.47
63	TFS-MW-17-RS	350580602	80602.D	04/27/12	1238	10.14 6.48
64	TFS-MW-17-MS	350580603	80603.D	04/27/12	1302	10.14 6.47
65	TFS-MW-17-MSD	350580604	80604.D	04/27/12	1326	10.14 6.47
66	ZZZZZZ	ZZZZZZ	04/27/12	1350		
67	ZZZZZZ	ZZZZZZ	04/27/12	1414		
68	ZZZZZZ	ZZZZZZ	04/27/12	1438		
69	ZZZZZZ	ZZZZZZ	04/27/12	1502		
70	ZZZZZZ	ZZZZZZ	04/27/12	1532		
71	ZZZZZZ	ZZZZZZ	04/27/12	1557		
72	ZZZZZZ	ZZZZZZ	04/27/12	1621		
73	ZZZZZZ	ZZZZZZ	04/27/12	1645		
74	ZZZZZZ	ZZZZZZ	04/27/12	1710		
75	ZZZZZZ	ZZZZZZ	04/27/12	1735		
76	ZZZZZZ	ZZZZZZ	04/27/12	1759		
77	ZZZZZZ	ZZZZZZ	04/27/12	1824		
78	ZZZZZZ	ZZZZZZ	04/27/12	1848		

QC LIMITS

S1 = p-Terphenyl-d14 (+/- 0.67 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.43 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127233LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.5	0.4	80.0			68 - 115
2-Methylnaphthalene	0.5	0.49	98.0			47 - 121
Acenaphthene	0.5	0.42	84.0			64 - 110
Acenaphthylene	0.5	0.47	94.0			45 - 115
Anthracene	0.5	0.4	80.0			61 - 108
Benzo(a)anthracene	0.5	0.52	104.0			53 - 110
Benzo(a)pyrene	0.5	0.52	104.0			55 - 109
Benzo(b)fluoranthene	0.5	0.5	100.0			65 - 110
Benzo(g,h,i)perylene	0.5	0.43	86.0			68 - 115
Benzo(k)fluoranthene	0.5	0.43	86.0			70 - 111
Chrysene	0.5	0.36	72.0			71 - 115
Dibenzo(a,h)anthracene	0.5	0.49	98.0			60 - 104
Fluoranthene	0.5	0.45	90.0			63 - 114
Fluorene	0.5	0.47	94.0			59 - 120
Indeno(1,2,3-cd)pyrene	0.5	0.45	90.0			66 - 110
Naphthalene	0.5	0.45	90.0			68 - 125
Phenanthrene	0.5	0.43	86.0			31 - 147
Pyrene	0.5	0.4	80.0			59 - 120

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
1-Methylnaphthalene	0.51	0.026	0.31	55.7	36 - 138
2-Methylnaphthalene	0.51	0.022	0.43	80.0	34 - 141
Acenaphthene	0.51	1.2	1.6	78.4	47 - 128
Acenaphthylene	0.51	0.023	0.48	89.6	32 - 153
Anthracene	0.51	0	0.39	76.5	53 - 128
Benzo(a)anthracene	0.51	0	0.59	116.0	59 - 166
Benzo(a)pyrene	0.51	0	0.50	98.0	43 - 146
Benzo(b)fluoranthene	0.51	0	0.47	92.2	56 - 173
Benzo(g,h,i)perylene	0.51	0	0.39	76.5	25 - 174
Benzo(k)fluoranthene	0.51	0	0.38	74.5	56 - 158
Chrysene	0.51	0	0.33	64.7	55 - 128
Dibenzo(a,h)anthracene	0.51	0	0.41	80.4	21 - 207
Fluoranthene	0.51	0.045	0.50	89.2	55 - 155
Fluorene	0.51	0.043	0.51	91.6	40 - 151
Indeno(1,2,3-cd)pyrene	0.51	0	0.41	80.4	19 - 166
Naphthalene	0.51	0.055	0.39	65.7	38 - 139
Phenanthrene	0.51	0	0.43	84.3	65 - 120
Pyrene	0.51	0	0.38	74.5	49 - 158

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	0.51	0.34	61.6	9.2	20	36 - 138
2-Methylnaphthalene	0.51	0.44	82.0	2.3	20	34 - 141
Acenaphthene	0.51	1.8	118.0	11.8	20	47 - 128
Acenaphthylene	0.51	0.51	95.5	6.1	20	32 - 153
Anthracene	0.51	0.41	80.4	5.0	20	53 - 128
Benzo(a)anthracene	0.51	0.62	122.0	5.0	20	59 - 166
Benzo(a)pyrene	0.51	0.52	102.0	3.9	20	43 - 146
Benzo(b)fluoranthene	0.51	0.53	104.0	12.0	20	56 - 173
Benzo(g,h,i)perylene	0.51	0.40	78.4	2.5	20	25 - 174
Benzo(k)fluoranthene	0.51	0.37	72.5	2.7	20	56 - 158
Chrysene	0.51	0.35	68.6	5.9	20	55 - 128
Dibenzo(a,h)anthracene	0.51	0.34	66.7	18.7	20	21 - 207
Fluoranthene	0.51	0.53	95.1	5.8	20	55 - 155
Fluorene	0.51	0.52	93.5	1.9	20	40 - 151
Indeno(1,2,3-cd)pyrene	0.51	0.41	80.4	0.0	20	19 - 166
Naphthalene	0.51	0.43	73.5	9.8	20	38 - 139
Phenanthrene	0.51	0.46	90.2	6.7	19	65 - 120
Pyrene	0.51	0.40	78.4	5.1	17	49 - 158

RPD: 0 out of 18 outside limits

Spike Recovery: 0 out of 18 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8270 SIM Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW SamLab Code : PEL Case No. SAS No: SDG No.: 3505806Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

LAB FILE ID: RRF0.02 =SIMCAL1.D RRF0.05 =SIMCAL2.D							
RRF0.07 =SIMCAL3.D RRF0.1 =SIMCAL4.D RRF0.2 =SIMCAL5.D							
COMPOUND	RRF0.02	RRF0.05	RRF0.07	RRF0.1	RRF0.2	<u>RRF</u>	%RSD OR R^2
1-Methylnaphthalene	0.864	0.846	0.799	0.826	0.808		
2-Methylnaphthalene	0.537	0.553	0.533	0.544	0.571		
Acenaphthene	* 1.238	1.225	1.247	1.233	1.191		*
Acenaphthylene	1.591	1.614	1.557	1.570	1.552		
Anthracene	0.746	0.662	0.721	0.740	0.785		
Benzo(a)anthracene	0.640	0.622	0.639	0.638	0.653		
Benzo(a)pyrene	* 0.667	0.675	0.669	0.714	0.751		*
Benzo(b)fluoranthene	0.764	0.771	0.805	0.800	0.799		
Benzo(g,h,i)perylene	1.041	1.020	1.048	1.042	1.040		
Benzo(k)fluoranthene	1.573	1.459	1.428	1.459	1.476		
Chrysene	1.470	1.350	1.429	1.387	1.351		
Dibenzo(a,h)anthracene	0.755	0.832	0.847	0.915	0.877		
Fluoranthene	* 1.120	0.981	0.947	0.961	1.068		*
Fluorene	1.119	1.220	1.125	1.166	1.129		
Indeno(1,2,3-cd)pyrene	0.996	1.113	1.128	1.135	1.142		
Naphthalene	1.077	1.034	1.028	1.050	1.046		
Phenanthrene	0.943	0.901	0.902	0.902	0.971		
Pyrene	1.197	1.121	1.178	1.149	1.093		
=====							
p-Terphenyl-d14(SURR)	0.765	0.729	0.765	0.765	0.757		
2-Fluorobiphenyl(SURR)	1.341	1.337	1.289	1.421	1.345		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD01 Calibration Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 755 End: 1216
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 15 %

LAB FILE ID:		RRF0.5 =SIMCAL6.D		RRF0.7 =SIMCAL7.D			
RRF1 =SIMCAL8.D		RRF5 =SIMCAL9R.D		RRF10 =SIMCAL10R.D			
COMPOUND	RRF0.5	RRF0.7	RRF1	RRF5	RRF10	RRF	%RSD OR R^2
1-Methylnaphthalene	0.800	0.742	0.787	0.715	0.731	0.79195	6.2
2-Methylnaphthalene	0.650	0.652	0.714	0.760	0.752	0.62663	14.5
Acenaphthene	* 1.232	1.222	1.214	1.308	1.268	1.2378	2.6 *
Acenaphthylene	1.663	1.645	1.670	1.883	1.894	1.66378	7.5
Anthracene	0.797	0.796	0.810	0.898	0.910	0.78632	9.7
Benzo(a)anthracene	0.742	0.791	0.737	0.907		0.70768	13.5
Benzo(a)pyrene	* 0.837	0.849	0.899	0.994		0.78373	14.9 *
Benzo(b)fluoranthene	0.938	0.894	0.927	1.118	1.107	0.89235	14.8
Benzo(g,h,i)perylene	1.199	1.138	1.195	1.431	1.235	1.13896	11.4
Benzo(k)fluoranthene	1.523	1.532	1.568	1.564	1.580	1.51612	3.7
Chrysene	1.485	1.415	1.390	1.209	1.153	1.3637	7.8
Dibenzo(a,h)anthracene	0.995	1.022	1.061	1.209		0.94593	14.7
Fluoranthene	* 1.124	1.100	1.164	1.272	1.291	1.10271	10.8 *
Fluorene	1.190	1.156	1.240	1.392	1.377	1.21143	8.2
Indeno(1,2,3-cd)pyrene	1.233	1.230	1.271	1.422	1.453	1.21234	11.7
Naphthalene	1.071	1.044	1.120	1.037	1.055	1.05605	2.6
Phenanthrene	1.013	1.007	1.062	1.135	1.137	0.99734	9.1
Pyrene	1.103	1.132	1.070	1.075	1.065	1.11802	4.1
=====							
p-Terphenyl-d14(SURR)	0.795	0.769	0.736	0.744	0.746	0.75703	2.5
2-Fluorobiphenyl(SURR)	1.290	1.301	1.321	1.480	1.458	1.35833	5.1

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD01 CalibrationDate: 04/10/12 Time: 1240
 CCV ID: SSC1068079 Lab File ID: SIMSECA.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.63707	19.6	AVRG
2-Methylnaphthalene	0.62663	0.62039	1.0	AVRG
Acenaphthene *	1.2378	1.09	11.9	AVRG *
Acenaphthylene	1.66378	1.598	4.0	AVRG
Anthracene	0.78632	0.88909	13.1	AVRG
Benzo(a)anthracene	0.70768	0.80755	14.1	AVRG
Benzo(a)pyrene *	0.78373	0.80289	2.4	AVRG *
Benzo(b)fluoranthene	0.89235	0.89937	0.8	AVRG
Benzo(g,h,i)perylene	1.13896	0.98912	13.2	AVRG
Benzo(k)fluoranthene	1.51612	1.348	11.1	AVRG
Chrysene	1.3637	1.125	17.5	AVRG
Dibenzo(a,h)anthracene	0.94593	0.89933	4.9	AVRG
Fluoranthene *	1.10271	0.99771	9.5	AVRG *
Fluorene	1.21143	1.161	4.2	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.095	9.7	AVRG
Naphthalene	1.05605	0.96598	8.5	AVRG
Phenanthrene	0.99734	0.96523	3.2	AVRG
Pyrene	1.11802	1.064	4.8	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.72078	4.8	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.276	6.1	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD01 CalibrationDate: 04/26/12 Time: 1127
 CCV ID: CCV1073972 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.70076	11.5	AVRG
2-Methylnaphthalene	0.62663	0.69265	10.5	AVRG
Acenaphthene *	1.2378	1.205	2.6	AVRG *
Acenaphthylene	1.66378	1.82	9.4	AVRG
Anthracene	0.78632	0.77535	1.4	AVRG
Benzo(a)anthracene	0.70768	0.82897	17.1	AVRG
Benzo(a)pyrene *	0.78373	0.87726	11.9	AVRG *
Benzo(b)fluoranthene	0.89235	0.92508	3.7	AVRG
Benzo(g,h,i)perylene	1.13896	1.081	5.1	AVRG
Benzo(k)fluoranthene	1.51612	1.44	5.0	AVRG
Chrysene	1.3637	1.114	18.3	AVRG
Dibenzo(a,h)anthracene	0.94593	0.94737	0.2	AVRG
Fluoranthene *	1.10271	1.163	5.5	AVRG *
Fluorene	1.21143	1.291	6.6	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.172	3.3	AVRG
Naphthalene	1.05605	1.029	2.6	AVRG
Phenanthrene	0.99734	1.035	3.8	AVRG
Pyrene	1.11802	1.011	9.6	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.68614	9.4	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.486	9.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD01 CalibrationDate: 04/27/12 Time: 0748
 CCV ID: CCV1073979 Lab File ID: SIMCCV2.D Init. Calib. Date Begin: 04/10/12 End: 04/10/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1-Methylnaphthalene	0.79195	0.71886	9.2	AVRG
2-Methylnaphthalene	0.62663	0.69046	10.2	AVRG
Acenaphthene *	1.2378	1.205	2.6	AVRG *
Acenaphthylene	1.66378	1.818	9.3	AVRG
Anthracene	0.78632	0.77781	1.1	AVRG
Benzo(a)anthracene	0.70768	0.83305	17.7	AVRG
Benzo(a)pyrene *	0.78373	0.90894	16.0	AVRG *
Benzo(b)fluoranthene	0.89235	1.027	15.1	AVRG
Benzo(g,h,i)perylene	1.13896	1.145	0.5	AVRG
Benzo(k)fluoranthene	1.51612	1.381	8.9	AVRG
Chrysene	1.3637	1.104	19.0	AVRG
Dibenzo(a,h)anthracene	0.94593	1.046	10.6	AVRG
Fluoranthene *	1.10271	1.194	8.3	AVRG *
Fluorene	1.21143	1.301	7.4	AVRG
Indeno(1,2,3-cd)pyrene	1.21234	1.268	4.6	AVRG
Naphthalene	1.05605	1.034	2.1	AVRG
Phenanthrene	0.99734	1.016	1.9	AVRG
Pyrene	1.11802	0.98743	11.7	AVRG
=====				
p-Terphenyl-d14(SURR)	0.75703	0.68271	9.8	AVRG
2-Fluorobiphenyl(SURR)	1.35833	1.492	9.8	AVRG

8270 Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyrilone (+1425%), 1,3,5-Trinitrobenzene (-43.6%). No further action was taken, since these compounds were not detected in any samples and were a result of a discrepancy between the primary and secondary standards. The secondary standard also used to spike the LCS and MS/MSD. Because of this difference, Methapyrilone exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since this compound was on the high side and was not detected in any samples.

CCV1074505 was the continuing calibration verification standard analyzed on 04/27/12. The %D was over the 20% limit for the following compound: Kepone (-29.5%).

CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepone (-27.4%). This

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:

LCS 127787LCS was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1-Naphthylamine at 35.8 % with criteria of (38-91), a,a-Dimethylphenethylamine at 62 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 0 % with criteria of (8.83-162.2), 2-Naphthylamine at 36 % with criteria of (60-140), Hexachloropropene at 0 % with criteria of (7-119), Methapyriline at 1230 % with criteria of (0-105). None of the analytes that failed LCS recoveries were detected in the samples

No further action was taken. Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-MW-17-MS was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), 1-Naphthylamine at 31.4 % with criteria of (38-91), 2-Naphthylamine at 29.7 % with criteria of (70-130), 4-Aminobiphenyl at 45.8 % with criteria of (49-103), 4-Nitroquinoline-1-oxide at 0 % with criteria of (10-125), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Hexachloropropene at 0 % with criteria of (21-105), Isodrin at 44.9 % with criteria of (54-110) and the following analyte(s) were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 96.3 % with criteria of (57-95), Diallylate (Avadex) at 99 % with criteria of (56-98), Methapyriline at 948 % with criteria of (0-90), Pentachloronitrobenzene(PCNB) at 109 % with criteria of (60-104), Pronamide at 104 % with criteria of (59-99).

SD - TFS-MW-17-MSD was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), 1-Naphthylamine at

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

26.2 % with criteria of (38-91), 2-Naphthylamine at 22.5 % with criteria of (70-130), 4-Aminobiphenyl at 42.6 % with criteria of (49-103), 4-Nitroquinoline-1-oxide at 0 % with criteria of (10-125), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Hexachloropropene at 0 % with criteria of (21-105), Isodrin at 47.8 % with criteria of (54-110), p-Dimethylaminoazobenzene at 61.3 % with criteria of (70-130) and the following analyte(s) were recovered above criteria: Methapyriline at 833 % with criteria of (0-90). The following analytes exceeded RPD criteria: 0,0,0-Triethylphosphorothioate at 22 % with criteria of (20), 1,2,4,5-Tetrachlorobenzene at 26.8 % with criteria of (20), 1,2,4-Trichlorobenzene at 25.7 % with criteria of (20), 1,2-Dichlorobenzene at 24.4 % with criteria of (20), 1,3-Dinitrobenzene at 20.1 % with criteria of (20), 1,4-Dichlorobenzene at 24.6 % with criteria of (20), 2,2'-Oxybis(1-chloropropane) at 28.2 % with criteria of (20), 2,3,4,6-Tetrachlorophenol at 26 % with criteria of (20), 2,4,5-Trichlorophenol at 23.6 % with criteria of (20), 2,4,6-Trichlorophenol at 22.3 % with criteria of (20), 2,4-Dichlorophenol at 20.2 % with criteria of (20), 2,4-Dinitrophenol at 25.7 % with criteria of (20), 2,4-Dinitrotoluene at 33.6 % with criteria of (20), 2,6-Dichlorophenol at 21.8 % with criteria of (20), 2,6-Dinitrotoluene at 23.5 % with criteria of (20), 2-Chloronaphthalene at 25.6 % with criteria of (20), 2-Chlorophenol at 25.3 % with criteria of (20), 2-Methylphenol at 26.2 % with criteria of (20), 2-Naphthylamine at 27.2 % with criteria of (20), 2-Nitroaniline at 24.5 % with criteria of (20), 2-Nitrophenol at 21.3 % with criteria of (20), 2-Picoline at 24 % with criteria of (20), 3-Methylcholanthrene at 23.2 % with criteria of (20), 3-Nitroaniline at 29.3 % with criteria of (20), 4-Bromophenyl-phenylether at 21.5 % with criteria of (20), 4-Chloro-3-methylphenol at 22.3 % with criteria of (20), 4-Chloroaniline at 24.5 % with criteria of (20), 4-Methylphenol at 25.8 % with criteria of (20), 4-Nitroaniline at 32.1 % with criteria of (20), 4-Nitrophenol at 33.2 % with criteria of (20), 5-Nitro-o-toluidine at 27.5 % with criteria of (20), 7,12-Dimethylbenz(a)anthracene at 23 % with criteria of (20), Acetophenone at 24.9 % with criteria of (20), Aniline at 26.9 % with criteria of (20), Aramite at 21.5 % with criteria of (20), Benzyl alcohol at 26.3 % with criteria of (20), Bis(2-chloroethyl)ether at 24.4 % with criteria of (20), Butylbenzylphthalate at 25 % with criteria of (20), Diellate (Avadex) at 22.9 % with criteria of (20), Dibenzofuran at 23.1 % with criteria of (20), Diethylphthalate at 22.7 % with criteria of (20), Dimethylphthalate at 24.5 % with criteria of (20), Di-n-octylphthalate at 24.8 % with criteria of (20), Ethyl methanesulfonate at 27.3 % with criteria of (20), Hexachlorobenzene at 23.1 % with criteria of (20), Hexachlorobutadiene at 23.5 % with criteria of (20), Hexachlorocyclopentadiene at 81.5 % with criteria of (20), Hexachloroethane at 30 % with criteria of (20), Isophorone at 20.5 % with criteria of (20), Isosafrole at 21.4 % with criteria of (20), Methylmethanesulfonate at 20.3 % with criteria of (20), Nitrobenzene at 22.4 % with criteria of (20), N-Nitrosodibutylamine at 23.5 % with criteria of (20), N-Nitrosodiethylamine at 20.6 % with criteria of (20), N-Nitrosodimethylamine at 23.1 % with criteria of (20), N-Nitroso-di-n-propylamine at 24.7 % with criteria of (20), N-Nitrosodiphenylamine at 22.4 % with criteria of (20), N-Nitrosomethylethylamine at 21.3 % with criteria of (20), N-

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

Nitrosomorpholine at 21.3 % with criteria of (20), N-Nitrosopiperidine at 20.1 % with criteria of (20), N-Nitrosopyrrolidine at 23.3 % with criteria of (20), o-Toluidine at 23.9 % with criteria of (20), Pentachlorobenzene at 22.1 % with criteria of (20), Pentachloroethane at 26.5 % with criteria of (20), Pentachloronitrobenzene(PCNB) at 21.6 % with criteria of (20), Phenacetin at 21 % with criteria of (20), Phenol at 22.2 % with criteria of (20), Pyridine at 21.8 % with criteria of (20), Safrole at 20.7 % with criteria of (20).

Samples coded accordingly.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanf Title: Lab Director

SIGNED:
05/07/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Method: 8270

EPA Sample No	Lab Sample ID
<u>TFS-MW-17</u>	<u>350580601</u>
<u>TFS-MW-17-RS</u>	<u>350580602</u>

8270 Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 80601.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1909

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.3	U	2.1	4.3	4.3
62-75-9	N-Nitrosodimethylamine	4.5	U	2.2	4.5	4.5
62-53-3	Aniline	5.7	U	2.8	5.7	5.7
111-44-4	Bis(2-chloroethyl)ether	6.1	U	3.1	6.1	6.1
108-95-2	Phenol	3.5	U	1.7	3.5	4.1
95-57-8	2-Chlorophenol	5.9	U	3	5.9	5.9
541-73-1	1,3-Dichlorobenzene	5.5	U	2.8	5.5	5.5
106-46-7	1,4-Dichlorobenzene	5.5	U	2.8	5.5	5.5
95-50-1	1,2-Dichlorobenzene	5.3	U	2.6	5.3	5.3
100-51-6	Benzyl alcohol	6.3	U	3.2	6.3	10.2
108-60-1	2,2'-Oxybis(1-chloropropane)	6.7	U	3.4	6.7	6.7
95-48-7	2-Methylphenol	5.3	U	2.6	5.3	5.3
67-72-1	Hexachloroethane	5.3	U	2.6	5.3	5.3
621-64-7	N-Nitroso-di-n-propylamine	6.1	U	3.1	6.1	6.1
106-44-5	4-Methylphenol	12.4	U	6.2	12.4	12.4
98-95-3	Nitrobenzene	2	U	1	2	4.1
78-59-1	Isophorone	7.8	U	3.9	7.8	7.8
88-75-5	2-Nitrophenol	1.6	U	0.78	1.6	4.1
105-67-9	2,4-Dimethylphenol	4.7	U	2.3	4.7	4.7
111-91-1	Bis(2-chloroethoxy)methane	7.1	U	3.6	7.1	7.1
120-83-2	2,4-Dichlorophenol	6.3	U	3.2	6.3	6.3
120-82-1	1,2,4-Trichlorobenzene	5.3	U	2.6	5.3	5.3
106-47-8	4-Chloroaniline	6.1	U	3.1	6.1	6.1
87-68-3	Hexachlorobutadiene	5.1	U	2.6	5.1	5.1
59-50-7	4-Chloro-3-methylphenol	5.5	U	2.8	5.5	5.5
77-47-4	Hexachlorocyclopentadiene	1.7	U	0.84	1.7	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17-RS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.86	1.7	4.1
95-95-4	2,4,5-Trichlorophenol	6.9	U	3.5	6.9	6.9
91-58-7	2-Chloronaphthalene	5.7	U	2.8	5.7	5.7
88-74-4	2-Nitroaniline	6.1	U	3.1	6.1	6.1
131-11-3	Dimethylphthalate	6.1	U	3.1	6.1	6.1
606-20-2	2,6-Dinitrotoluene	5.7	U	2.8	5.7	5.7
99-09-2	3-Nitroaniline	5.7	U	2.8	5.7	5.7
51-28-5	2,4-Dinitrophenol	11.4	U	5.7	11.4	20.4
132-64-9	Dibenzofuran	5.5	U	2.8	5.5	5.5
121-14-2	2,4-Dinitrotoluene	5.7	U	2.8	5.7	5.7
100-02-7	4-Nitrophenol	8.2	U	4.1	8.2	8.2
7005-72-3	4-Chlorophenyl-phenylether	5.1	U	2.6	5.1	5.1
84-66-2	Diethylphthalate	5.7	U	2.8	5.7	5.7
100-01-6	4-Nitroaniline	3.1	U	1.5	3.1	4.1
534-52-1	4,6-Dinitro-2-methylphenol	8.2	U	4.1	8.2	8.2
86-30-6	N-Nitrosodiphenylamine	6.9	U	3.5	6.9	6.9
101-55-3	4-Bromophenyl-phenylether	4.7	U	2.3	4.7	4.7
118-74-1	Hexachlorobenzene	0.84	U	0.42	0.84	4.1
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10.2
84-74-2	Di-n-butylphthalate	1.8	U	0.88	1.8	4.1
85-68-7	Butylbenzylphthalate	6.1	U	3.1	6.1	6.1
91-94-1	3,3'-Dichlorobenzidine	5.5	U	2.8	5.5	5.5
117-81-7	Bis(2-ethylhexyl)phthalate	9	U	4.5	9	9
117-84-0	Di-n-octylphthalate	4.1	U	2	4.1	4.1
109-06-8	2-Picoline	8.2	U	4.1	8.2	8.2
10595-95-6	N-Nitrosomethylethylamine	5.5	U	2.8	5.5	5.5

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
55-18-5	N-Nitrosodiethylamine	6.3	U	3.2	6.3	6.3
66-27-3	Methylmethanesulfonate	3.9	U	1.9	3.9	4.1
62-50-0	Ethyl methanesulfonate	5.1	U	2.6	5.1	5.1
76-01-7	Pentachloroethane	5.1	U	2.6	5.1	20.4
930-55-2	N-Nitrosopyrrolidine	5.5	U	2.8	5.5	5.5
98-86-2	Acetophenone	8.2	U	4.1	8.2	8.2
59-89-2	N-Nitrosomorpholine	6.1	U	3.1	6.1	6.1
95-53-4	o-Toluidine	5.5	U	2.8	5.5	5.5
122-09-8	a,a-Dimethylphenethylamine	32.6	U	16.3	32.6	32.6
87-65-0	2,6-Dichlorophenol	7.1	U	3.6	7.1	7.1
1888-71-7	Hexachloropropene	4.1	U	2	4.1	4.1
924-16-3	N-Nitrosodibutylamine	5.5	U	2.8	5.5	5.5
120-58-1	Isosafrole	5.3	U	2.6	5.3	5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U	2.2	4.5	4.5
94-59-7	Safrole	5.1	U	2.6	5.1	5.1
130-15-4	1,4-Naphthoquinone	6.3	U	3.2	6.3	6.3
99-65-0	1,3-Dinitrobenzene	5.1	U	2.6	5.1	5.1
608-93-5	Pentachlorobenzene	4.5	U	2.2	4.5	4.5
134-32-7	1-Naphthylamine	3.7	U	1.8	3.7	4.1
91-59-8	2-Naphthylamine	5.1	U	2.6	5.1	5.1
58-90-2	2,3,4,6-Tetrachlorophenol	6.1	U	3.1	6.1	6.1
99-55-8	5-Nitro-o-toluidine	5.3	U	2.6	5.3	5.3
106-50-3	p-Phenylenediamine	4.1	U	2	4.1	4.1
62-44-2	Phenacetin	1.8	U	0.91	1.8	4.1
92-67-1	4-Aminobiphenyl	4.1	U	2	4.1	4.1
23950-58-5	Pronamide	1.6	U	0.83	1.6	4.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
TFS-MW-17-RS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 80602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1932

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: rinsate Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
82-68-8	Pentachloronitrobenzene(PCNB)	4.1	U	2	4.1	4.1
88-85-7	Dinoseb	8.2	U	4.1	8.2	8.2
56-57-5	4-Nitroquinoline-1-oxide	7.6	U	3.8	7.6	10.2
91-80-5	Methapyriline	4.5	U	2.2	4.5	4.5
140-57-8	Aramite	8.2	U	4.1	8.2	8.2
60-11-7	p-Dimethylaminoazobenzene	1.3	U	0.63	1.3	4.1
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4.1
57-97-6	7,12-Dimethylbenz(a)anthracene	2	U	0.98	2	4.1
56-49-5	3-Methylcholanthrene	4.5	U	2.2	4.5	4.5
100-75-4	N-Nitrosopiperidine	5.7	U	2.8	5.7	5.7
99-35-4	1,3,5-Trinitrobenzene	4.1	U	2	4.1	4.1
2303-16-4	Diallate (Avadex)	1.7	U	0.86	1.7	4.1
465-73-6	Isodrin	5.3	U	2.6	5.3	5.3
510-15-6	Chlorobenzilate	1.6	U	0.8	1.6	4.1
143-50-0	Kepone	32.6	U	16.3	32.6	32.6
126-68-1	0,0,0-Triethylphosphorothioate	5.9	U	3	5.9	5.9

8270 QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 127786MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	4.2	U	2.1	4.2	4.2
62-75-9	N-Nitrosodimethylamine	4.4	U	2.2	4.4	4.4
62-53-3	Aniline	5.6	U	2.8	5.6	5.6
111-44-4	Bis(2-chloroethyl)ether	6	U	3	6	6
108-95-2	Phenol	3.4	U	1.7	3.4	4
95-57-8	2-Chlorophenol	5.8	U	2.9	5.8	5.8
541-73-1	1,3-Dichlorobenzene	5.4	U	2.7	5.4	5.4
106-46-7	1,4-Dichlorobenzene	5.4	U	2.7	5.4	5.4
95-50-1	1,2-Dichlorobenzene	5.2	U	2.6	5.2	5.2
100-51-6	Benzyl alcohol	6.2	U	3.1	6.2	10
108-60-1	2,2'-Oxybis(1-chloropropane)	6.6	U	3.3	6.6	6.6
95-48-7	2-Methylphenol	5.2	U	2.6	5.2	5.2
67-72-1	Hexachloroethane	5.2	U	2.6	5.2	5.2
621-64-7	N-Nitroso-di-n-propylamine	6	U	3	6	6
106-44-5	4-Methylphenol	12.2	U	6.1	12.2	12.2
98-95-3	Nitrobenzene	2	U	1	2	4
78-59-1	Isophorone	7.6	U	3.8	7.6	7.6
88-75-5	2-Nitrophenol	1.5	U	0.77	1.5	4
105-67-9	2,4-Dimethylphenol	4.6	U	2.3	4.6	4.6
111-91-1	Bis(2-chloroethoxy)methane	7	U	3.5	7	7
120-83-2	2,4-Dichlorophenol	6.2	U	3.1	6.2	6.2
120-82-1	1,2,4-Trichlorobenzene	5.2	U	2.6	5.2	5.2
106-47-8	4-Chloroaniline	6	U	3	6	6
87-68-3	Hexachlorobutadiene	5	U	2.5	5	5
59-50-7	4-Chloro-3-methylphenol	5.4	U	2.7	5.4	5.4
77-47-4	Hexachlorocyclopentadiene	1.6	U	0.82	1.6	4
88-06-2	2,4,6-Trichlorophenol	1.7	U	0.84	1.7	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 127786MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
95-95-4	2,4,5-Trichlorophenol	6.8	U	3.4	6.8	6.8
91-58-7	2-Chloronaphthalene	5.6	U	2.8	5.6	5.6
88-74-4	2-Nitroaniline	6	U	3	6	6
131-11-3	Dimethylphthalate	6	U	3	6	6
606-20-2	2,6-Dinitrotoluene	5.6	U	2.8	5.6	5.6
99-09-2	3-Nitroaniline	5.6	U	2.8	5.6	5.6
51-28-5	2,4-Dinitrophenol	11.2	U	5.6	11.2	20
132-64-9	Dibenzofuran	5.4	U	2.7	5.4	5.4
121-14-2	2,4-Dinitrotoluene	5.6	U	2.8	5.6	5.6
100-02-7	4-Nitrophenol	8	U	4	8	8
7005-72-3	4-Chlorophenyl-phenylether	5	U	2.5	5	5
84-66-2	Diethylphthalate	5.6	U	2.8	5.6	5.6
100-01-6	4-Nitroaniline	3	U	1.5	3	4
534-52-1	4,6-Dinitro-2-methylphenol	8	U	4	8	8
86-30-6	N-Nitrosodiphenylamine	6.8	U	3.4	6.8	6.8
101-55-3	4-Bromophenyl-phenylether	4.6	U	2.3	4.6	4.6
118-74-1	Hexachlorobenzene	0.82	U	0.41	0.82	4
87-86-5	Pentachlorophenol	2.8	U	1.4	2.8	10
84-74-2	Di-n-butylphthalate	1.7	U	0.86	1.7	4
85-68-7	Butylbenzylphthalate	6	U	3	6	6
91-94-1	3,3'-Dichlorobenzidine	5.4	U	2.7	5.4	5.4
117-81-7	Bis(2-ethylhexyl)phthalate	8.8	U	4.4	8.8	8.8
117-84-0	Di-n-octylphthalate	4	U	2	4	4
109-06-8	2-Picoline	8	U	4	8	8
10595-95-6	N-Nitrosomethylethylamine	5.4	U	2.7	5.4	5.4
55-18-5	N-Nitrosodiethylamine	6.2	U	3.1	6.2	6.2
66-27-3	Methylmethanesulfonate	3.8	U	1.9	3.8	4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127786MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
62-50-0	Ethyl methanesulfonate	5	U	2.5	5	5
76-01-7	Pentachloroethane	5	U	2.5	5	20
930-55-2	N-Nitrosopyrrolidine	5.4	U	2.7	5.4	5.4
98-86-2	Acetophenone	8	U	4	8	8
59-89-2	N-Nitrosomorpholine	6	U	3	6	6
95-53-4	o-Toluidine	5.4	U	2.7	5.4	5.4
122-09-8	a,a-Dimethylphenethylamine	32	U	16	32	32
87-65-0	2,6-Dichlorophenol	7	U	3.5	7	7
1888-71-7	Hexachloropropene	4	U	2	4	4
924-16-3	N-Nitrosodibutylamine	5.4	U	2.7	5.4	5.4
120-58-1	Isosafrole	5.2	U	2.6	5.2	5.2
95-94-3	1,2,4,5-Tetrachlorobenzene	4.4	U	2.2	4.4	4.4
94-59-7	Safrole	5	U	2.5	5	5
130-15-4	1,4-Naphthoquinone	6.2	U	3.1	6.2	6.2
99-65-0	1,3-Dinitrobenzene	5	U	2.5	5	5
608-93-5	Pentachlorobenzene	4.4	U	2.2	4.4	4.4
134-32-7	1-Naphthylamine	3.6	U	1.8	3.6	4
91-59-8	2-Naphthylamine	5	U	2.5	5	5
58-90-2	2,3,4,6-Tetrachlorophenol	6	U	3	6	6
99-55-8	5-Nitro-o-toluidine	5.2	U	2.6	5.2	5.2
106-50-3	p-Phenylenediamine	4	U	2	4	4
62-44-2	Phenacetin	1.8	U	0.89	1.8	4
92-67-1	4-Aminobiphenyl	4	U	2	4	4
23950-58-5	Pronamide	1.6	U	0.81	1.6	4
82-68-8	Pentachloronitrobenzene(PCNB)	4	U	2	4	4
88-85-7	Dinoseb	8	U	4	8	8
56-57-5	4-Nitroquinoline-1-oxide	7.4	U	3.7	7.4	10

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127786MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-80-5	Methapyriline	4.4	U	2.2	4.4	4.4
140-57-8	Aramite	8	U	4	8	8
60-11-7	p-Dimethylaminoazobenzene	1.2	U	0.62	1.2	4
53-96-3	2-Acetylaminofluorene	2.2	U	1.1	2.2	4
57-97-6	7,12-Dimethylbenz(a)anthracene	1.9	U	0.96	1.9	4
56-49-5	3-Methylcholanthrene	4.4	U	2.2	4.4	4.4
100-75-4	N-Nitrosopiperidine	5.6	U	2.8	5.6	5.6
99-35-4	1,3,5-Trinitrobenzene	4	U	2	4	4
2303-16-4	Diallate (Avadex)	1.7	U	0.84	1.7	4
465-73-6	Isodrin	5.2	U	2.6	5.2	5.2
510-15-6	Chlorobenzilate	1.6	U	0.78	1.6	4
143-50-0	Kepone	32	U	16	32	32
126-68-1	0,0,0-Triethylphosphorothioate	5.8	U	2.9	5.8	5.8

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127786MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Lab File ID: 9225MB.D Lab Sample ID: 127786MB

Instrument ID: SMSD03 Date Extracted: 04/27/12

Matrix: WATER Date Analyzed: 04/27/12

Level:(low/med) LOW Time Analyzed: 1643

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127787LCS	127787LCS	9225LCS.D	04/27/12	1707
2	TFS-MW-17	350580601	80601.D	04/27/12	1909
3	TFS-MW-17-RS	350580602	80602.D	04/27/12	1932
4	TFS-MW-17-MS	350580603	80603.D	04/27/12	1956
5	TFS-MW-17-MSD	350580604	80604R.D	05/03/12	2048

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.2
68	Less than 2.0% of mass 69	0.6 (1.3)1
69	Mass 69 relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.83)1
127	10.0 - 80.0% of mass 198	45.1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	33
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.5 (14.69)2
442	Greater than 50.0% of mass 198	92
443	15.0 - 24.0% of mass 442	17.3 (18.77)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1072999	45921	8270CAL7.D	04/23/12	1023
2	STD1073000	45922	8270CAL6.D	04/23/12	1047
3	STD1073001	45923	8270CAL5.D	04/23/12	1110
4	STD1073002	45924	8270CAL4.D	04/23/12	1134
5	STD1073004	45925	8270CAL3.D	04/23/12	1158
6	STD1073005	45926	8270CAL2.D	04/23/12	1221
7	STD1073006	45927	8270CAL1.D	04/23/12	1245
8	SSC1072998	45872	8270SEC2.D	04/23/12	1333
9	STD1073007	45933	BSCAL7.D	04/23/12	1356
10	STD1073008	45934	BSCAL6.D	04/23/12	1420
11	STD1073009	45935	BSCAL5.D	04/23/12	1444
12	STD1073010	45936	BSCAL4.D	04/23/12	1507
13	STD1073012	45937	BSCAL3.D	04/23/12	1531
14	STD1073013	45938	BSCAL2.D	04/23/12	1555
15	STD1073014	45939	BSCAL1.D	04/23/12	1619
16	SSC1072994	44859	BSSEC.D	04/23/12	1642
17	STD1073015	45955	AP9CAL7.D	04/23/12	1706
18	STD1073016	45956	AP9CAL6.D	04/23/12	1730
19	STD1073017	45957	AP9CAL5.D	04/23/12	1753

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

20	STD1073018	45958	AP9CAL4.D	04/23/12	1817
21	STD1073020	45959	AP9CAL3.D	04/23/12	1841
22	STD1073021	45960	AP9CAL2.D	04/23/12	1904
23	STD1073022	45961	AP9CAL1.D	04/23/12	1928
24	SSC1072993	44612	AP9SEC2.D	04/23/12	2015

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/27/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1455
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.1
68	Less than 2.0% of mass 69	0.4 (0.85)1
69	Mass 69 relative abundance	45.5
70	Less than 2.0% of mass 69	0.1 (0.29)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	33.9
365	Greater than 1.0% of mass 198	6
441	0.0 - 24.0% of mass 442	14 (14.13)2
442	Greater than 50.0% of mass 198	99
443	15.0 - 24.0% of mass 442	19.5 (19.68)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1074504	45924	8270CCV1.D	04/27/12	1519
2	CCV1074506	45936	BSCCV1.D	04/27/12	1542
3	CCV1074505	45958	AP9CCV1.D	04/27/12	1606
4	127786MB	127786MB	9225MB.D	04/27/12	1643
5	127787LCS	127787LCS	9225LCS.D	04/27/12	1707
6	TFS-MW-17	350580601	80601.D	04/27/12	1909
7	TFS-MW-17-RS	350580602	80602.D	04/27/12	1932
8	TFS-MW-17-MS	350580603	80603.D	04/27/12	1956

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Lab File ID: DFTPP2.D DFTPP Injection Date: 05/03/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1449
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31
68	Less than 2.0% of mass 69	0.3 (0.69)1
69	Mass 69 relative abundance	49
70	Less than 2.0% of mass 69	0 (0)1
127	10.0 - 80.0% of mass 198	46.2
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	33.7
365	Greater than 1.0% of mass 198	7.9
441	0.0 - 24.0% of mass 442	14.6 (14.36)2
442	Greater than 50.0% of mass 198	101.4
443	15.0 - 24.0% of mass 442	19.9 (19.6)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1076910	45924	8270CCV3.D	05/03/12	1510
2	CCV1076914	45936	BSCCV2.D	05/03/12	1534
3	CCV1076913	45958	AP9CCV3.D	05/03/12	1647
4	TFS-MW-17-MSD	350580604	80604R.D	05/03/12	2048

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
1 127786MB	313979	4.41	1012472	5.57	687469	7.27
2 127787LCS	322392	4.41	1074655	5.57	731454	7.27
3 TFS-MW-17	278896	4.41	980856	5.57	667918	7.27
4 TFS-MW-17-RS	290117	4.41	967045	5.57	670674	7.26
5 TFS-MW-17-MS	280395	4.41	962809	5.57	649142	7.27
6 TFS-MW-17-MSD	351874	4.37	1182920	5.53	820808	7.23

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18
EPA SAMPLE NO.						
1 127786MB	1317444	8.72	1698973	11.32	1793483	12.66
2 127787LCS	1427761	8.72	2061660	11.32	1814437	12.65
3 TFS-MW-17	1266781	8.72	1636989	11.32	1635465	12.64
4 TFS-MW-17-RS	1252321	8.72	1656073	11.32	1722000	12.64
5 TFS-MW-17-MS	1308301	8.72	1964134	11.32	1606238	12.64
6 TFS-MW-17-MSD	1598883	8.68	2441543	11.28	2045036	12.60

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP2	45777	DFTPP2.D	04/23/12	1003	
2	STD1072999	45921	8270CAL7.D	04/23/12	1023	3.39 4.15
3	STD1073000	45922	8270CAL6.D	04/23/12	1047	3.38 4.14
4	STD1073001	45923	8270CAL5.D	04/23/12	1110	3.38 4.14
5	STD1073002	45924	8270CAL4.D	04/23/12	1134	3.38 4.14
6	STD1073004	45925	8270CAL3.D	04/23/12	1158	3.38 4.14
7	STD1073005	45926	8270CAL2.D	04/23/12	1221	3.39 4.14
8	STD1073006	45927	8270CAL1.D	04/23/12	1245	3.39 4.14
9	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1309	
10	SSC1072998	45872	8270SEC2.D	04/23/12	1333	3.38 4.14
11	STD1073007	45933	BSCAL7.D	04/23/12	1356	
12	STD1073008	45934	BSCAL6.D	04/23/12	1420	
13	STD1073009	45935	BSCAL5.D	04/23/12	1444	
14	STD1073010	45936	BSCAL4.D	04/23/12	1507	
15	STD1073012	45937	BSCAL3.D	04/23/12	1531	
16	STD1073013	45938	BSCAL2.D	04/23/12	1555	
17	STD1073014	45939	BSCAL1.D	04/23/12	1619	
18	SSC1072994	44859	BSSEC.D	04/23/12	1642	
19	STD1073015	45955	AP9CAL7.D	04/23/12	1706	
20	STD1073016	45956	AP9CAL6.D	04/23/12	1730	
21	STD1073017	45957	AP9CAL5.D	04/23/12	1753	
22	STD1073018	45958	AP9CAL4.D	04/23/12	1817	
23	STD1073020	45959	AP9CAL3.D	04/23/12	1841	
24	STD1073021	45960	AP9CAL2.D	04/23/12	1904	
25	STD1073022	45961	AP9CAL1.D	04/23/12	1928	
26	ZZZZZ	ZZZZZ	ZZZZZ	04/23/12	1952	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	SSC1072993	44612	AP9SEC2.D	04/23/12	2015	
28	DFTPP1	45777	DFTPP1.D	04/27/12	1455	
29	CCV1074504	45924	8270CCV1.D	04/27/12	1519	3.34 4.1
30	CCV1074506	45936	BSCCV1.D	04/27/12	1542	
31	CCV1074505	45958	AP9CCV1.D	04/27/12	1606	
32	127786MB	127786MB	9225MB.D	04/27/12	1643	3.34 4.09
33	127787LCS	127787LCS	9225LCS.D	04/27/12	1707	3.34 4.1
34	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1732	
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1756	
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1820	
37	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1845	
38	TFS-MW-17	350580601	80601.D	04/27/12	1909	3.34 4.09
39	TFS-MW-17-RS	350580602	80602.D	04/27/12	1932	3.34 4.09
40	TFS-MW-17-MS	350580603	80603.D	04/27/12	1956	3.34 4.1
41	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2020	
42	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2043	
43	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2107	
44	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2130	
45	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2154	
46	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2217	
47	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2241	
48	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2305	
49	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2328	
50	DFTPP2	45777	DFTPP2.D	05/03/12	1449	
51	CCV1076910	45924	8270CCV3.D	05/03/12	1510	3.3 4.06
52	CCV1076914	45936	BSCCV2.D	05/03/12	1534	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
53	ZZZZZZ	ZZZZZZ	05/03/12	1558		
54	ZZZZZZ	ZZZZZZ	05/03/12	1623		
55	CCV1076913	45958	AP9CCV3.D	05/03/12	1647	
56	ZZZZZZ	ZZZZZZ	05/03/12	1711		
57	ZZZZZZ	ZZZZZZ	05/03/12	1736		
58	ZZZZZZ	ZZZZZZ	05/03/12	1800		
59	ZZZZZZ	ZZZZZZ	05/03/12	1824		
60	ZZZZZZ	ZZZZZZ	05/03/12	1848		
61	ZZZZZZ	ZZZZZZ	05/03/12	1912		
62	ZZZZZZ	ZZZZZZ	05/03/12	1937		
63	ZZZZZZ	ZZZZZZ	05/03/12	2001		
64	ZZZZZZ	ZZZZZZ	05/03/12	2024		
65	TFS-MW-17-MSD	350580604	80604R.D	05/03/12	2048	3.3 4.06
66	ZZZZZZ	ZZZZZZ	05/03/12	2112		
67	ZZZZZZ	ZZZZZZ	05/03/12	2135		
68	ZZZZZZ	ZZZZZZ	05/03/12	2159		
69	ZZZZZZ	ZZZZZZ	05/03/12	2222		
70	ZZZZZZ	ZZZZZZ	05/03/12	2246		
71	ZZZZZZ	ZZZZZZ	05/03/12	2309		
72	ZZZZZZ	ZZZZZZ	05/03/12	2333		
73	ZZZZZZ	ZZZZZZ	05/03/12	2356		
74	ZZZZZZ	ZZZZZZ	05/04/12	0020		

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127787LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	40	20.8	52.0			22 - 70
N-Nitrosodimethylamine	40	22.1	55.2			25 - 110
Aniline	40	27.2	68.0			14 - 99
Bis(2-chloroethyl)ether	40	37.4	93.5			35 - 110
Phenol	40	12.8	32.0			0 - 115
2-Chlorophenol	40	28.3	70.8			35 - 105
1,3-Dichlorobenzene	40	28.5	71.2			30 - 100
1,4-Dichlorobenzene	40	27.8	69.5			30 - 100
1,2-Dichlorobenzene	40	28.6	71.5			35 - 100
Benzyl alcohol	40	27.2	68.0			30 - 110
2,2'-Oxybis(1-chloropropane)	40	31.2	78.0			25 - 130
2-Methylphenol	40	23.9	59.8			40 - 110
Hexachloroethane	40	27.2	68.0			30 - 95
N-Nitroso-di-n-propylamine	40	38.8	97.0			35 - 130
4-Methylphenol	40	26.2	65.5			30 - 110
Nitrobenzene	40	33.9	84.8			45 - 110
Isophorone	40	39.4	98.5			50 - 110
2-Nitrophenol	40	31.4	78.5			40 - 115
2,4-Dimethylphenol	40	30.7	76.8			30 - 110
Bis(2-chloroethoxy)methane	40	34	85.0			45 - 105
2,4-Dichlorophenol	40	30.2	75.5			50 - 105
1,2,4-Trichlorobenzene	40	29.6	74.0			35 - 105
4-Chloroaniline	40	33.7	84.2			15 - 110
Hexachlorobutadiene	40	30.9	77.2			25 - 105
4-Chloro-3-methylphenol	40	30	75.0			45 - 110
Hexachlorocyclopentadiene	40	24.7	61.8			13 - 80
2,4,6-Trichlorophenol	40	30	75.0			50 - 115
2,4,5-Trichlorophenol	40	34.7	86.8			50 - 110
2-Chloronaphthalene	40	32.1	80.2			50 - 105
2-Nitroaniline	40	36.7	91.8			50 - 115
Dimethylphthalate	40	35	87.5			25 - 125
2,6-Dinitrotoluene	40	32.8	82.0			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127787LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	40	33.2	83.0			20 - 125
2,4-Dinitrophenol	80	76.1	95.1			15 - 140
Dibenzofuran	40	33.3	83.2			55 - 105
2,4-Dinitrotoluene	40	34	85.0			50 - 120
4-Nitrophenol	40	16	40.0			0 - 125
4-Chlorophenyl-phenylether	40	33	82.5			50 - 110
Diethylphthalate	40	36.6	91.5			40 - 120
4-Nitroaniline	40	40.2	100.0			35 - 120
4,6-Dinitro-2-methylphenol	40	31.2	78.0			40 - 130
N-Nitrosodiphenylamine	40	33.3	83.2			50 - 110
4-Bromophenyl-phenylether	40	31.6	79.0			50 - 115
Hexachlorobenzene	40	29.9	74.8			50 - 110
Pentachlorophenol	40	40.8	102.0			40 - 115
Di-n-butylphthalate	40	33.9	84.8			55 - 115
Butylbenzylphthalate	40	40.5	101.0			45 - 115
3,3'-Dichlorobenzidine	80	61	76.2			20 - 110
Bis(2-ethylhexyl)phthalate	40	39.8	99.5			40 - 125
Di-n-octylphthalate	40	38.4	96.0			35 - 135
2-Picoline	40	26.4	66.0			15 - 110
N-Nitrosomethylethylamine	40	30.5	76.2			25 - 131
N-Nitrosodiethylamine	40	34.9	87.2			46 - 111
Methylmethanesulfonate	40	21.7	54.2			15 - 103
Ethyl methanesulfonate	40	35.4	88.5			46 - 113
Pentachloroethane	40	32.1	80.2			27 - 99
N-Nitrosopyrrolidine	40	36.9	92.2			51 - 112
Acetophenone	80	69.2	86.5			45 - 118
N-Nitrosomorpholine	40	36.4	91.0			51 - 112
o-Toluidine	40	28.6	71.5			49 - 97
a,a-Dimethylphenethylamine	40	24.8	62.0*			70 - 130
2,6-Dichlorophenol	40	36.2	90.5			50 - 135
Hexachloropropene	40	0	0.0*			21 - 105
N-Nitrosodibutylamine	40	35	87.5			43 - 130

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127787LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Isosafrole	40	33.2	83.0			70 - 130
1,2,4,5-Tetrachlorobenzene	40	33	82.5			40 - 100
Safrole	40	38.4	96.0			52 - 100
1,4-Naphthoquinone	40	0	0.0*			28 - 143
1,3-Dinitrobenzene	40	39.7	99.2			61 - 112
Pentachlorobenzene	40	33.9	84.8			50 - 99
1-Naphthylamine	40	14.3	35.8*			38 - 91
2-Naphthylamine	40	14.4	36.0*			70 - 130
2,3,4,6-Tetrachlorophenol	40	34.1	85.2			55 - 122
5-Nitro-o-toluidine	40	36.7	91.8			70 - 130
p-Phenylenediamine	40	40.6	102.0			58 - 107
Phenacetin	40	37.2	93.0			57 - 114
4-Aminobiphenyl	40	30.6	76.5			49 - 103
Pronamide	40	38.2	95.5			59 - 99
Pentachloronitrobenzene(PCNB)	40	39.8	99.5			60 - 104
Dinoseb	40	39.7	99.2			44 - 142
4-Nitroquinoline-1-oxide	40	29.1	72.8			10 - 125
Methapyriline	40	492	1230.0*			0 - 90
Aramite	40	34.2	85.5			41 - 127
p-Dimethylaminoazobenzene	40	32.9	82.2			70 - 130
2-Acetylaminofluorene	40	32.2	80.5			63 - 103
7,12-Dimethylbenz(a)anthracene	40	36.4	91.0			57 - 95
3-Methylcholanthrene	40	32.1	80.2			52 - 105
N-Nitrosopiperidine	40	36.2	90.5			53 - 112
1,3,5-Trinitrobenzene	40	19.4	48.5			29 - 163
Diallate (Avadex)	40	37.1	92.8			56 - 98
Isodrin	40	40.4	101.0			54 - 110
Chlorobenzilate	40	30.2	75.5			58 - 101
Kepone	40	22.4	56.0			0 - 165
0,0,0-Triethylphosphorothioate	40	35.6	89.0			50 - 106

Spike Recovery: 6 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Pyridine	41	0	16	38.7	22 - 70
N-Nitrosodimethylamine	41	0	23	56.9	25 - 110
Aniline	41	0	24	60.0	14 - 99
Bis(2-chloroethyl)ether	41	0	40	97.1	35 - 110
Phenol	41	0	13	31.9	0 - 115
2-Chlorophenol	41	0	30	74.3	35 - 105
1,3-Dichlorobenzene	41	0	27	66.9	30 - 100
1,4-Dichlorobenzene	41	0	28	69.4	30 - 100
1,2-Dichlorobenzene	41	0	29	72.1	35 - 100
Benzyl alcohol	41	0	28	68.6	30 - 110
2,2'-Oxybis(1-chloropropane)	41	0	33	81.4	25 - 130
2-Methylphenol	41	0	26	62.5	40 - 110
Hexachloroethane	41	0	30	72.3	30 - 95
N-Nitroso-di-n-propylamine	41	0	44	107.0	35 - 130
4-Methylphenol	41	0	28	67.6	30 - 110
Nitrobenzene	41	0	35	85.3	45 - 110
Isophorone	41	0	42	104.0	50 - 110
2-Nitrophenol	41	0	33	81.4	40 - 115
2,4-Dimethylphenol	41	0	33	80.9	30 - 110
Bis(2-chloroethoxy)methane	41	0	35	86.5	45 - 105
2,4-Dichlorophenol	41	0	33	80.1	50 - 105
1,2,4-Trichlorobenzene	41	0	31	76.5	35 - 105
4-Chloroaniline	41	0	32	78.7	15 - 110
Hexachlorobutadiene	41	0	33	81.6	25 - 105
4-Chloro-3-methylphenol	41	0	31	77.0	45 - 110
Hexachlorocyclopentadiene	41	0	24	58.8	13 - 80
2,4,6-Trichlorophenol	41	0	33	80.6	50 - 115
2,4,5-Trichlorophenol	41	0	39	95.1	50 - 110
2-Chloronaphthalene	41	0	35	85.3	50 - 105
2-Nitroaniline	41	0	39	96.6	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Dimethylphthalate	41	0	38	94.4	25 - 125
2,6-Dinitrotoluene	41	0	36	88.5	50 - 115
3-Nitroaniline	41	0	36	87.3	20 - 125
2,4-Dinitrophenol	82	0	98	121.0	15 - 140
Dibenzofuran	41	0	37	90.0	55 - 105
2,4-Dinitrotoluene	41	0	35	86.0	50 - 120
4-Nitrophenol	41	0	21	52.5	0 - 125
4-Chlorophenyl-phenylether	41	0	34	84.3	50 - 110
Diethylphthalate	41	0	40	97.3	40 - 120
4-Nitroaniline	41	0	43	105.0	35 - 120
4,6-Dinitro-2-methylphenol	41	0	35	84.8	40 - 130
N-Nitrosodiphenylamine	41	0	37	90.2	50 - 110
4-Bromophenyl-phenylether	41	0	35	85.8	50 - 115
Hexachlorobenzene	41	0	32	79.4	50 - 110
Pentachlorophenol	41	0	45	111.0	40 - 115
Di-n-butylphthalate	41	0	35	86.5	55 - 115
Butylbenzylphthalate	41	0	39	94.9	45 - 115
3,3'-Dichlorobenzidine	82	0	37	45.1	20 - 110
Bis(2-ethylhexyl)phthalate	41	0	50	122.0	40 - 125
Di-n-octylphthalate	41	0	43	104.0	35 - 135
2-Picoline	41	0	20	50.2	15 - 110
N-Nitrosomethylethylamine	41	0	30	73.8	25 - 131
N-Nitrosodiethylamine	41	0	34	83.8	46 - 111
Methylmethanesulfonate	41	0	23	55.9	15 - 103
Ethyl methanesulfonate	41	0	39	94.9	46 - 113
Pentachloroethane	41	0	33	81.6	27 - 99
N-Nitrosopyrrolidine	41	0	38	92.6	51 - 112
Acetophenone	82	0	74	90.1	45 - 118
N-Nitrosomorpholine	41	0	38	92.9	51 - 112
o-Toluidine	41	0	27	66.7	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: SAS No.: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
a,a-Dimethylphenethylamine	41	0	0	0.0 *	70 - 130
2,6-Dichlorophenol	41	0	39	95.8	50 - 135
Hexachloropropene	41	0	0	0.0 *	21 - 105
N-Nitrosodibutylamine	41	0	38	92.2	43 - 130
Isosafrole	41	0	37	90.0	70 - 130
1,2,4,5-Tetrachlorobenzene	41	0	36	89.2	40 - 100
Safrole	41	0	40	98.0	52 - 100
1,4-Naphthoquinone	41	0	0	0.0 *	28 - 143
1,3-Dinitrobenzene	41	0	42	102.0	61 - 112
Pentachlorobenzene	41	0	36	88.7	50 - 99
1-Naphthylamine	41	0	13	31.4 *	38 - 91
2-Naphthylamine	41	0	12	29.7 *	70 - 130
2,3,4,6-Tetrachlorophenol	41	0	42	103.0	55 - 122
5-Nitro-o-toluidine	41	0	38	92.4	70 - 130
p-Phenylenediamine	41	0	42	104.0	58 - 107
Phenacetin	41	0	42	102.0	57 - 114
4-Aminobiphenyl	41	0	19	45.8 *	49 - 103
Pronamide	41	0	43	104.0 *	59 - 99
Pentachloronitrobenzene(PCNB)	41	0	45	109.0 *	60 - 104
Dinoseb	41	0	43	105.0	44 - 142
4-Nitroquinoline-1-oxide	41	0	0	0.0 *	10 - 125
Methapyriline	41	0	390	948.0 *	0 - 90
Aramite	41	0	35	86.0	41 - 127
p-Dimethylaminoazobenzene	41	0	30	72.5	70 - 130
2-Acetylaminofluorene	41	0	32	78.4	63 - 103
7,12-Dimethylbenz(a)anthracene	41	0	39	96.3 *	57 - 95
3-Methylcholanthrene	41	0	34	83.8	52 - 105
N-Nitrosopiperidine	41	0	43	105.0	53 - 112
1,3,5-Trinitrobenzene	41	0	18	44.4	29 - 163
Diallate (Avadex)	41	0	40	99.0 *	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS:

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C

TFS-MW-17-MS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Isodrin	41	0	18	44.9*	54 - 110
Chlorobenzilate	41	0	31	75.5	58 - 101
Kepone	41	0	0	0.0	0 - 165
0,0,0-Triethylphosphorothioate	41	0	38	94.1	50 - 106

Spike Recovery: 13 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Pyridine	41	13	31.1	21.8 *	20	22 - 70
N-Nitrosodimethylamine	41	18	45.1	23.1 *	20	25 - 110
Aniline	41	19	45.8	26.9 *	20	14 - 99
Bis(2-chloroethyl)ether	41	31	76.0	24.4 *	20	35 - 110
Phenol	41	10	25.5	22.2 *	20	0 - 115
2-Chlorophenol	41	24	57.6	25.3 *	20	35 - 105
1,3-Dichlorobenzene	41	22	55.1	19.3	20	30 - 100
1,4-Dichlorobenzene	41	22	54.2	24.6 *	20	30 - 100
1,2-Dichlorobenzene	41	23	56.4	24.4 *	20	35 - 100
Benzyl alcohol	41	22	52.7	26.3 *	20	30 - 110
2,2'-Oxybis(1-chloropropane)	41	25	61.3	28.2 *	20	25 - 130
2-Methylphenol	41	20	48.0	26.2 *	20	40 - 110
Hexachloroethane	41	22	53.4	30.0 *	20	30 - 95
N-Nitroso-di-n-propylamine	41	34	83.6	24.7 *	20	35 - 130
4-Methylphenol	41	21	52.2	25.8 *	20	30 - 110
Nitrobenzene	41	28	68.1	22.4 *	20	45 - 110
Isophorone	41	34	84.6	20.5 *	20	50 - 110
2-Nitrophenol	41	27	65.7	21.3 *	20	40 - 115
2,4-Dimethylphenol	41	27	66.9	18.9	20	30 - 110
Bis(2-chloroethoxy)methane	41	29	71.8	18.6	20	45 - 105
2,4-Dichlorophenol	41	27	65.4	20.2 *	20	50 - 105
1,2,4-Trichlorobenzene	41	24	59.1	25.7 *	20	35 - 105
4-Chloroaniline	41	25	61.5	24.5 *	20	15 - 110
Hexachlorobutadiene	41	26	64.5	23.5 *	20	25 - 105
4-Chloro-3-methylphenol	41	25	61.5	22.3 *	20	45 - 110
Hexachlorocyclopentadiene	41	10	24.8	81.5 *	20	13 - 80
2,4,6-Trichlorophenol	41	26	64.5	22.3 *	20	50 - 115
2,4,5-Trichlorophenol	41	31	75.0	23.6 *	20	50 - 110
2-Chloronaphthalene	41	27	65.9	25.6 *	20	50 - 105
2-Nitroaniline	41	31	75.5	24.5 *	20	50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Dimethylphthalate	41	30	73.8	24.5 *	20	25 - 125
2,6-Dinitrotoluene	41	28	69.9	23.5 *	20	50 - 115
3-Nitroaniline	41	26	65.0	29.3 *	20	20 - 125
2,4-Dinitrophenol	82	76	93.3	25.7 *	20	15 - 140
Dibenzofuran	41	29	71.3	23.1 *	20	55 - 105
2,4-Dinitrotoluene	41	25	61.3	33.6 *	20	50 - 120
4-Nitrophenol	41	15	37.5	33.2 *	20	0 - 125
4-Chlorophenyl-phenylether	41	29	70.3	18.1	20	50 - 110
Diethylphthalate	41	32	77.5	22.7 *	20	40 - 120
4-Nitroaniline	41	31	75.7	32.1 *	20	35 - 120
4,6-Dinitro-2-methylphenol	41	29	70.8	18.0	20	40 - 130
N-Nitrosodiphenylamine	41	29	72.1	22.4 *	20	50 - 110
4-Bromophenyl-phenylether	41	28	69.1	21.5 *	20	50 - 115
Hexachlorobenzene	41	26	63.0	23.1 *	20	50 - 110
Pentachlorophenol	41	38	92.2	18.8	20	40 - 115
Di-n-butylphthalate	41	30	73.0	16.9	20	55 - 115
Butylbenzylphthalate	41	30	73.8	25.0 *	20	45 - 115
3,3'-Dichlorobenzidine	82	32	39.2	14.0	20	20 - 110
Bis(2-ethylhexyl)phthalate	41	42	102.0	17.8	20	40 - 125
Di-n-octylphthalate	41	33	81.4	24.8 *	20	35 - 135
2-Picoline	41	16	39.5	24.0 *	20	15 - 110
N-Nitrosomethylethylamine	41	24	59.6	21.3 *	20	25 - 131
N-Nitrosodiethylamine	41	28	68.1	20.6 *	20	46 - 111
Methylmethanesulfonate	41	19	45.6	20.3 *	20	15 - 103
Ethyl methanesulfonate	41	29	72.1	27.3 *	20	46 - 113
Pentachloroethane	41	26	62.5	26.5 *	20	27 - 99
N-Nitrosopyrrolidine	41	30	73.3	23.3 *	20	51 - 112
Acetophenone	82	57	70.1	24.9 *	20	45 - 118
N-Nitrosomorpholine	41	31	75.0	21.3 *	20	51 - 112
o-Toluidine	41	21	52.5	23.9 *	20	49 - 97

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
a,a-Dimethylphenethylamine	41	0	0.0*		20	70 - 130
2,6-Dichlorophenol	41	31	77.0	21.8 *	20	50 - 135
Hexachloropropene	41	0	0.0*		20	21 - 105
N-Nitrosodibutylamine	41	30	72.8	23.5 *	20	43 - 130
Isosafrole	41	30	72.5	21.4 *	20	70 - 130
1,2,4,5-Tetrachlorobenzene	41	28	68.1	26.8 *	20	40 - 100
Safrole	41	32	79.7	20.7 *	20	52 - 100
1,4-Naphthoquinone	41	0	0.0*		20	28 - 143
1,3-Dinitrobenzene	41	34	83.3	20.1 *	20	61 - 112
Pentachlorobenzene	41	29	71.1	22.1 *	20	50 - 99
1-Naphthylamine	41	11	26.2*	17.9	20	38 - 91
2-Naphthylamine	41	9.2	22.5*	27.2 *	20	70 - 130
2,3,4,6-Tetrachlorophenol	41	32	79.4	26.0 *	20	55 - 122
5-Nitro-o-toluidine	41	29	70.1	27.5 *	20	70 - 130
p-Phenylenediamine	41	36	88.0	16.8	20	58 - 107
Phenacetin	41	34	82.4	21.0 *	20	57 - 114
4-Aminobiphenyl	41	17	42.6*	7.2	20	49 - 103
Pronamide	41	35	86.0	19.3	20	59 - 99
Pentachloronitrobenzene(PCNB)	41	36	88.0	21.6 *	20	60 - 104
Dinoseb	41	38	92.2	13.2	20	44 - 142
4-Nitroquinoline-1-oxide	41	0	0.0*		20	10 - 125
Methapyriline	41	340	833.0*	12.9	20	0 - 90
Aramite	41	28	69.4	21.5 *	20	41 - 127
p-Dimethylaminoazobenzene	41	25	61.3*	16.8	20	70 - 130
2-Acetylaminofluorene	41	26	64.5	19.6	20	63 - 103
7,12-Dimethylbenz(a)anthracene	41	31	76.5	23.0 *	20	57 - 95
3-Methylcholanthrene	41	27	66.4	23.2 *	20	52 - 105
N-Nitrosopiperidine	41	35	85.8	20.1 *	20	53 - 112
1,3,5-Trinitrobenzene	41	17	42.2	5.1	20	29 - 163
Diallate (Avadex)	41	32	78.7	22.9 *	20	56 - 98

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

SEMI-VOLATILE ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Isodrin	41	20	47.8 *	6.3	20	54 - 110
Chlorobenzilate	41	25	62.0	19.6	20	58 - 101
Kepone	41	0	0.0		20	0 - 165
0,0,0-Triethylphosphorothioate	41	31	75.5	22.0 *	20	50 - 106

RPD: 69 out of 94 outside limits

Spike Recovery: 10 out of 94 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

8270 Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW SamLab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928Min RRF for SPCC(#) = 0.05Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D		RRF10 =8270CAL2.D			
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D		RRF60 =8270CAL5.D			
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	RRF	%RSD OR R^2
Pyridine	1.430	1.447	1.524	1.547	1.528		
N-Nitrosodimethylamine	0.687	0.700	0.680	0.683	0.676		
Aniline	1.738	1.770	1.908	1.938	1.891		
Bis(2-chloroethyl)ether	1.059	1.079	1.103	1.131	1.124		
Phenol	* 1.631	1.590	1.687	1.797	1.829		*
2-Chlorophenol	1.119	1.054	1.148	1.201	1.191		
1,3-Dichlorobenzene	1.399	1.287	1.420	1.458	1.471		
1,4-Dichlorobenzene	* 1.484	1.425	1.469	1.519	1.522		*
1,2-Dichlorobenzene	1.304	1.323	1.355	1.379	1.380		
Benzyl alcohol	0.738	0.712	0.751	0.795	0.848		
2,2'-Oxybis(1-chloropropane)	0.780	0.709	0.750	0.790	0.777		
2-Methylphenol	0.952	0.955	0.991	1.091	1.089		
Hexachloroethane	0.583	0.553	0.574	0.609	0.598		
N-Nitroso-di-n-propylamine	# 1.113	1.088	1.136	1.235	1.214		#
4-Methylphenol	1.362	1.406	1.475	1.554	1.571		
Nitrobenzene	0.526	0.524	0.528	0.543	0.527		
Isophorone	0.611	0.617	0.633	0.653	0.643		
2-Nitrophenol	* 0.179	0.188	0.197	0.197	0.203		*
2,4-Dimethylphenol	0.303	0.290	0.299	0.305	0.303		
Bis(2-chloroethoxy)methane	0.428	0.419	0.433	0.445	0.439		
2,4-Dichlorophenol	* 0.319	0.347	0.350	0.364	0.374		*
1,2,4-Trichlorobenzene	0.452	0.431	0.429	0.446	0.453		
4-Chloroaniline	0.430	0.409	0.428	0.438	0.436		
Hexachlorobutadiene	* 0.330	0.315	0.340	0.344	0.349		*
4-Chloro-3-methylphenol	* 0.330	0.321	0.342	0.354	0.350		*
Hexachlorocyclopentadiene	# 0.544	0.573	0.624	0.650	0.667		#
2,4,6-Trichlorophenol	* 0.442	0.463	0.486	0.517	0.525		*
2,4,5-Trichlorophenol	0.399	0.438	0.453	0.468	0.483		
2-Chloronaphthalene	1.087	1.104	1.169	1.216	1.205		
2-Nitroaniline	0.354	0.388	0.407	0.422	0.422		
Dimethylphthalate	1.307	1.314	1.378	1.403	1.374		
2,6-Dinitrotoluene	0.266	0.286	0.300	0.319	0.323		
3-Nitroaniline	0.254	0.255	0.276	0.278	0.274		
2,4-Dinitrophenol	#	0.095	0.142	0.195	0.210		#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D	RRF10 =8270CAL2.D					
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D	RRF60 =8270CAL5.D					
COMPOUND		RRF4	RRF10	RRF20	RRF45	RRF60	$\overline{\text{RRF}}$	%RSD OR R^2
Dibenzofuran		1.688	1.639	1.683	1.774	1.743		
2,4-Dinitrotoluene		0.377	0.399	0.411	0.433	0.446		
4-Nitrophenol	#	0.232	0.281	0.304	0.314	0.309		#
4-Chlorophenyl-phenylether		0.764	0.787	0.822	0.925	0.954		
Diethylphthalate		1.243	1.225	1.226	1.281	1.266		
4-Nitroaniline		0.265	0.217	0.216	0.222	0.238		
4,6-Dinitro-2-methylphenol		0.093	0.122	0.142	0.171	0.174		
N-Nitrosodiphenylamine	*	0.482	0.488	0.500	0.509	0.504		*
4-Bromophenyl-phenylether		0.269	0.272	0.283	0.301	0.298		
Hexachlorobenzene		0.316	0.301	0.315	0.344	0.348		
Pentachlorophenol	*		0.155	0.183	0.205	0.210		*
Di-n-butylphthalate		0.999	1.047	1.099	1.143	1.113		
Butylbenzylphthalate		0.335	0.346	0.355	0.354	0.343		
3,3'-Dichlorobenzidine		0.391	0.416	0.444	0.493	0.488		
Bis(2-ethylhexyl)phthalate		0.565	0.570	0.609	0.633	0.621		
Di-n-octylphthalate	*	0.763	0.818	0.876	0.936	0.916		*
2-Picoline		1.437	1.331	1.456	1.476	1.476		
N-Nitrosomethylethylamine		0.571	0.596	0.635	0.627	0.640		
N-Nitrosodiethylamine		0.536	0.581	0.603	0.631	0.648		
Methylmethanesulfonate		1.028	0.997	1.035	1.046	1.042		
Ethyl methanesulfonate		0.987	1.038	1.099	1.091	1.067		
Pentachloroethane		0.575	0.546	0.600	0.625	0.629		
N-Nitrosopyrrolidine		0.552	0.578	0.633	0.675	0.670		
Acetophenone		0.562	0.554	0.578	0.613	0.623		
N-Nitrosomorpholine		0.605	0.600	0.661	0.685	0.686		
o-Toluidine		1.906	1.922	2.072	2.209	2.202		
a,a-Dimethylphenethylamine		0.504	0.572	0.610	0.641	0.632		
2,6-Dichlorophenol		0.297	0.297	0.320	0.343	0.350		
Hexachloropropene		0.408	0.423	0.410	0.448	0.465		
N-Nitrosodibutylamine		0.280	0.278	0.310	0.330	0.335		
Isosafrole		0.282	0.303	0.303	0.324	0.334		
1,2,4,5-Tetrachlorobenzene		0.701	0.686	0.718	0.771	0.792		
Safrole		0.242	0.292	0.277	0.317	0.325		
1,4-Naphthoquinone		0.367	0.373	0.422	0.440	0.458		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID: RRF4 =8270CAL1.D RRF10 =8270CAL2.D							
RRF20 =8270CAL3.D RRF45 =8270CAL4.D RRF60 =8270CAL5.D							
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	<u>RRF</u>	%RSD OR R^2
1,3-Dinitrobenzene	0.170	0.186	0.191	0.211	0.214		
Pentachlorobenzene	0.673	0.670	0.702	0.747	0.778		
1-Naphthylamine	0.648	0.663	0.681	0.708	0.725		
2-Naphthylamine	0.806	0.879	0.915	0.932	0.950		
2,3,4,6-Tetrachlorophenol	0.334	0.366	0.392	0.421	0.426		
5-Nitro-o-toluidine	0.315	0.317	0.343	0.367	0.377		
p-Phenylenediamine	0.255	0.283	0.304	0.313	0.327		
Phenacetin	0.275	0.285	0.271	0.269	0.279		
4-Aminobiphenyl	0.649	0.680	0.701	0.688	0.713		
Pronamide	0.315	0.312	0.346	0.347	0.362		
Pentachloronitrobenzene(PCNB)	0.121	0.135	0.141	0.145	0.153		
Dinoseb	0.123	0.159	0.193	0.226	0.231		
4-Nitroquinoline-1-oxide	0.008	0.012	0.012	0.010	0.009		
Methapyriline	0.011	0.011	0.013	0.015	0.014		
Aramite	0.081	0.091	0.095	0.098	0.099		
p-Dimethylaminoazobenzene	0.200	0.209	0.222	0.240	0.248		
2-Acetylaminofluorene	0.321	0.356	0.383	0.430	0.441		
7,12-Dimethylbenz(a)anthracene	0.480	0.503	0.535	0.576	0.603		
3-Methylcholanthrene	0.562	0.580	0.618	0.652	0.674		
N-Nitrosopiperidine	0.158	0.164	0.160	0.183	0.178		
1,3,5-Trinitrobenzene	0.617	0.745	0.835	0.942	0.961		
Diallate (Avadex)	0.408	0.445	0.471	0.499	0.517		
Isodrin	0.116	0.117	0.124	0.121	0.124		
Chlorobenzilate	0.318	0.314	0.337	0.369	0.384		
Kepone	0.046	0.061	0.066	0.068	0.067		
0,0,0-Triethylphosphorothioate	0.874	0.849	0.901	0.964	1.014		
=====							
2-Fluorophenol(SURR)	1.109	1.085	1.161	1.193	1.186		
Phenol-d5(SURR)	1.464	1.441	1.516	1.613	1.619		
Nitrobenzene-d5(SURR)	0.527	0.515	0.536	0.553	0.547		
2-Fluorobiphenyl(SURR)	1.504	1.477	1.534	1.626	1.585		
2,4,6-Tribromophenol(SURR)	0.232	0.261	0.273	0.289	0.292		
p-Terphenyl-d14(SURR)	0.904	0.818	0.821	0.757	0.689		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D			
COMPOUND	RRF75	RRF100			RRF	%RSD OR R^2	
Pyridine	1.527	1.517			1.50266	3	
N-Nitrosodimethylamine	0.660	0.671			0.67937	1.9	
Aniline	1.881	1.925			1.86438	4.2	
Bis(2-chloroethyl)ether	1.107	1.136			1.10557	2.6	
Phenol	* 1.855	1.926			1.75904	7.1	*
2-Chlorophenol	1.175	1.208			1.15668	4.7	
1,3-Dichlorobenzene	1.437	1.460			1.41871	4.5	
1,4-Dichlorobenzene	* 1.518	1.530			1.49525	2.5	*
1,2-Dichlorobenzene	1.381	1.408			1.36142	2.7	
Benzyl alcohol	0.838	0.864			0.79242	7.5	
2,2'-Oxybis(1-chloropropane)	0.775	0.829			0.77294	4.7	
2-Methylphenol	1.096	1.160			1.04767	7.8	
Hexachloroethane	0.602	0.615			0.59057	3.7	
N-Nitroso-di-n-propylamine	# 1.205	1.250			1.17738	5.4	#
4-Methylphenol	1.604	1.633			1.51461	6.8	
Nitrobenzene	0.538	0.540			0.53215	1.4	
Isophorone	0.653				0.63498	0.99986	
2-Nitrophenol	* 0.203	0.211			0.19693	5.3	*
2,4-Dimethylphenol	0.310	0.313			0.30321	2.5	
Bis(2-chloroethoxy)methane	0.456	0.456			0.43959	3.2	
2,4-Dichlorophenol	* 0.368	0.382			0.35774	5.9	*
1,2,4-Trichlorobenzene	0.457	0.463			0.44729	2.9	
4-Chloroaniline	0.443	0.438			0.43162	2.6	
Hexachlorobutadiene	* 0.355	0.360			0.34168	4.5	*
4-Chloro-3-methylphenol	* 0.349	0.363			0.34436	4.2	*
Hexachlorocyclopentadiene	# 0.670	0.689			0.63111	8.6	#
2,4,6-Trichlorophenol	* 0.517	0.534			0.49778	7	*
2,4,5-Trichlorophenol	0.486	0.494			0.46015	7.2	
2-Chloronaphthalene	1.219	1.207			1.17243	4.7	
2-Nitroaniline	0.414	0.421			0.40396	6.2	
Dimethylphthalate	1.345	1.307			1.347	2.9	
2,6-Dinitrotoluene	0.322	0.315			0.30449	7	
3-Nitroaniline	0.278	0.279			0.27047	4.1	
2,4-Dinitrophenol	# 0.215	0.219			0.17918	0.9995	#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D			
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
Dibenzofuran	1.740	1.714				1.71164	2.6
2,4-Dinitrotoluene	0.456	0.467				0.42698	7.7
4-Nitrophenol	# 0.308	0.310				0.29402	10 #
4-Chlorophenyl-phenylether	0.977	0.994				0.8889	10.8
Diethylphthalate	1.242	1.221				1.24358	1.8
4-Nitroaniline	0.237	0.244				0.23414	7.5
4,6-Dinitro-2-methylphenol	0.179	0.187				0.15268	0.99853
N-Nitrosodiphenylamine	* 0.520	0.524				0.50383	3.1 *
4-Bromophenyl-phenylether	0.307	0.316				0.29225	6.2
Hexachlorobenzene	0.357	0.371				0.33604	7.6
Pentachlorophenol	* 0.211	0.222				0.1975	12.5 *
Di-n-butylphthalate	1.105	1.052				1.07969	4.6
Butylbenzylphthalate	0.338	0.340				0.34424	2.3
3,3'-Dichlorobenzidine	0.502	0.507				0.46301	10
Bis(2-ethylhexyl)phthalate	0.608	0.559				0.59501	5
Di-n-octylphthalate	* 0.898	0.826				0.86193	7.2 *
2-Picoline	1.525	1.549				1.46426	4.8
N-Nitrosomethylethylamine	0.645	0.656				0.62435	4.8
N-Nitrosodiethylamine	0.654	0.680				0.6188	8
Methylmethanesulfonate	1.024	1.053				1.03228	1.8
Ethyl methanesulfonate	1.105	1.113				1.07144	4.2
Pentachloroethane	0.639	0.667				0.61152	6.7
N-Nitrosopyrrolidine	0.710	0.749				0.65232	10.7
Acetophenone	0.628	0.654				0.60177	6.2
N-Nitrosomorpholine	0.692	0.746				0.66788	7.7
o-Toluidine	2.225	2.356				2.12749	7.9
a,a-Dimethylphenethylamine	0.649	0.658				0.60958	9
2,6-Dichlorophenol	0.362	0.375				0.33474	9.2
Hexachloropropene	0.476	0.488				0.44551	7.3
N-Nitrosodibutylamine	0.359	0.364				0.32224	10.7
Isosafrole	0.360	0.364				0.32423	9.4
1,2,4,5-Tetrachlorobenzene	0.816	0.822				0.75792	7.4
Safrole	0.329	0.348				0.30436	11.8
1,4-Naphthoquinone	0.460	0.475				0.42786	10

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1928
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D				
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
1,3-Dinitrobenzene	0.219	0.226				0.20234	10
Pentachlorobenzene	0.789	0.815				0.73904	7.9
1-Naphthylamine	0.739	0.732				0.69942	5.1
2-Naphthylamine	0.968	0.968				0.91679	6.4
2,3,4,6-Tetrachlorophenol	0.436	0.467				0.40598	11.1
5-Nitro-o-toluidine	0.386	0.388				0.35606	8.8
p-Phenylenediamine	0.331	0.323				0.30516	9.1
Phenacetin	0.286	0.286				0.27867	2.5
4-Aminobiphenyl	0.710	0.696				0.6911	3.2
Pronamide	0.362	0.362				0.34374	6.3
Pentachloronitrobenzene(PCNB)	0.157	0.153				0.1436	8.6
Dinoseb	0.235	0.239				0.2009	0.99959
4-Nitroquinoline-1-oxide	0.008	0.007				0.00936	0.9988
Methapyriline	0.014	0.015				0.01339	11.8
Aramite	0.103	0.102				0.09549	8.1
p-Dimethylaminoazobenzene	0.262	0.268				0.23538	11.1
2-Acetylaminofluorene	0.465	0.490				0.41224	14.8
7,12-Dimethylbenz(a)anthracene	0.635	0.653				0.56938	11.6
3-Methylcholanthrene	0.681	0.723				0.64128	9
N-Nitrosopiperidine	0.185	0.190				0.17391	7.5
1,3,5-Trinitrobenzene	0.987	1.040				0.87534	0.99799
Diallate (Avadex)	0.550	0.588				0.49675	12.4
Isodrin	0.125	0.127				0.1219	3.4
Chlorobenzilate	0.409	0.417				0.36387	11.6
Kepone	0.067	0.061				0.06225	12.3
0,0,0-Triethylphosphorothioate	1.030	1.098				0.96135	9.5
=====							
2-Fluorophenol(SURR)	1.171	1.186				1.15589	3.6
Phenol-d5(SURR)	1.608	1.585				1.54937	4.9
Nitrobenzene-d5(SURR)	0.549	0.552				0.53982	2.7
2-Fluorobiphenyl(SURR)	1.580	1.529				1.54784	3.3
2,4,6-Tribromophenol(SURR)	0.299	0.311				0.27947	9.5
p-Terphenyl-d14(SURR)	0.671	0.622				0.75461	13.2

Average Used: 6.3

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.459	2.9	AVRG
N-Nitrosodimethylamine	0.67937	0.69377	2.1	AVRG
Aniline	1.86438	1.791	3.9	AVRG
Bis(2-chloroethyl)ether	1.10557	1.19	7.6	AVRG
Phenol	* 1.75904	1.767	0.5	AVRG *
2-Chlorophenol	1.15668	1.15	0.6	AVRG
1,3-Dichlorobenzene	1.41871	1.424	0.4	AVRG
1,4-Dichlorobenzene	* 1.49525	1.509	0.9	AVRG *
1,2-Dichlorobenzene	1.36142	1.362	0.0	AVRG
Benzyl alcohol	0.79242	0.73825	6.8	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.80115	3.6	AVRG
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58903	0.3	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.244	5.7	AVRG#
4-Methylphenol	1.51461	1.54	1.7	AVRG
Nitrobenzene	0.53215	0.52704	1.0	AVRG
Isophorone	45	56.2	24.9	LINR
2-Nitrophenol	* 0.19693	0.19603	0.5	AVRG *
2,4-Dimethylphenol	0.30321	0.32693	7.8	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46869	6.6	AVRG
2,4-Dichlorophenol	* 0.35774	0.35146	1.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.44124	1.4	AVRG
4-Chloroaniline	0.43162	0.45571	5.6	AVRG
Hexachlorobutadiene	* 0.34168	0.37423	9.5	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.34325	0.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.66526	5.4	AVRG#
2,4,6-Trichlorophenol	* 0.49778	0.51405	3.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47926	4.2	AVRG
2-Chloronaphthalene	1.17243	1.21	3.2	AVRG
2-Nitroaniline	0.40396	0.43684	8.1	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.31835	4.6	AVRG
3-Nitroaniline	0.27047	0.29706	9.8	AVRG
2,4-Dinitrophenol	# 45	49.6	10.2	LINR #
Dibenzofuran	1.71164	1.795	4.9	AVRG
2,4-Dinitrotoluene	0.42698	0.44249	3.6	AVRG

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 Calibration Date: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.31262	6.3	AVRG#
4-Chlorophenyl-phenylether	0.8889	0.93795	5.5	AVRG
Diethylphthalate	1.24358	1.303	4.8	AVRG
4-Nitroaniline	0.23414	0.25728	9.9	AVRG
4,6-Dinitro-2-methylphenol	45	43.7	2.9	LINR
N-Nitrosodiphenylamine	* 0.50383	0.55994	11.1	AVRG*
4-Bromophenyl-phenylether	0.29225	0.31014	6.1	AVRG
Hexachlorobenzene	0.33604	0.34736	3.4	AVRG
Pentachlorophenol	* 0.1975	0.20129	1.9	AVRG*
Di-n-butylphthalate	1.07969	1.167	8.1	AVRG
Butylbenzylphthalate	0.34424	0.38811	12.7	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.69176	16.3	AVRG
Di-n-octylphthalate	* 0.86193	0.98898	14.7	AVRG*
=====				
2-Fluorophenol(SURR)	1.15589	1.205	4.2	AVRG
Phenol-d5(SURR)	1.54937	1.48	4.5	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.51104	5.3	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.521	1.7	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28828	3.2	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.72682	3.7	AVRG

Average Used: 5.2

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1642
 CCV ID: SSC1072994 Lab File ID: BSSEC.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.47412	2.4	AVRG
Acetophenone	0.60177	0.55437	7.9	AVRG

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SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.382	5.6	AVRG
N-Nitrosomethylethylamine	0.62435	0.5569	10.8	AVRG
N-Nitrosodiethylamine	0.6188	0.57695	6.8	AVRG
Methylmethanesulfonate	1.03228	0.91616	11.2	AVRG
Ethyl methanesulfonate	1.07144	1.184	10.5	AVRG
Pentachloroethane	0.61152	0.57889	5.3	AVRG
N-Nitrosopyrrolidine	0.65232	0.65475	0.4	AVRG
Acetophenone	0.60177	0.55655	7.5	AVRG
N-Nitrosomorpholine	0.66788	0.67921	1.7	AVRG
o-Toluidine	2.12749	1.942	8.7	AVRG
a,a-Dimethylphenethylamine	0.60958	0.66908	9.8	AVRG
2,6-Dichlorophenol	0.33474	0.3387	1.2	AVRG
Hexachloropropene	0.44551	0.4091	8.2	AVRG
N-Nitrosodibutylamine	0.32224	0.31635	1.8	AVRG
Isosafrole	0.32423	0.33158	2.3	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.71394	5.8	AVRG
Safrole	0.30436	0.34282	12.6	AVRG
1,4-Naphthoquinone	0.42786	0.42484	0.7	AVRG
1,3-Dinitrobenzene	0.20234	0.21355	5.5	AVRG
Pentachlorobenzene	0.73904	0.72588	1.8	AVRG
1-Naphthylamine	0.69942	0.92682	32.5	AVRG
2-Naphthylamine	0.91679	1.124	22.6	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.37542	7.5	AVRG
5-Nitro-o-toluidine	0.35606	0.3347	6.0	AVRG
p-Phenylenediamine	0.30516	0.30466	0.2	AVRG
Phenacetin	0.27867	0.26573	4.6	AVRG
4-Aminobiphenyl	0.6911	0.65241	5.6	AVRG
Pronamide	0.34374	0.35236	2.5	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14392	0.2	AVRG
Dinoseb	45	46.2	2.7	LINR
4-Nitroquinoline-1-oxide	45	42.8	4.9	2ORD
Methapyriline	0.01339	0.20423	1425.2	AVRG
Aramite	0.09549	0.09236	3.3	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23703	0.7	AVRG
2-Acetylaminofluorene	0.41224	0.39744	3.6	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.59118	3.8	AVRG

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SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 2015
 CCV ID: SSC1072993 Lab File ID: AP9SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64437	0.5	AVRG
N-Nitrosopiperidine	0.17391	0.17104	1.7	AVRG
1,3,5-Trinitrobenzene	45	25.4	43.6	LINR
Diallate (Avadex)	0.49675	0.48038	3.3	AVRG
Isodrin	0.1219	0.13008	6.7	AVRG
Chlorobenzilate	0.36387	0.35124	3.5	AVRG
Kepone	0.06225	0.06098	2.0	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.92383	3.9	AVRG

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Average Used: 38.8

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1519
 CCV ID: CCV1074504 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.617	7.6	AVRG
N-Nitrosodimethylamine	0.67937	0.72649	6.9	AVRG
Aniline	1.86438	1.896	1.7	AVRG
Bis(2-chloroethyl)ether	1.10557	1.123	1.6	AVRG
Phenol	* 1.75904	1.802	2.4	AVRG *
2-Chlorophenol	1.15668	1.194	3.2	AVRG
1,3-Dichlorobenzene	1.41871	1.451	2.3	AVRG
1,4-Dichlorobenzene	* 1.49525	1.549	3.6	AVRG *
1,2-Dichlorobenzene	1.36142	1.398	2.7	AVRG
Benzyl alcohol	0.79242	0.83428	5.3	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.77573	0.4	AVRG
2-Methylphenol	1.04767	1.07	2.1	AVRG
Hexachloroethane	0.59057	0.61378	3.9	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.241	5.4	AVRG#
4-Methylphenol	1.51461	1.596	5.4	AVRG
Nitrobenzene	0.53215	0.55335	4.0	AVRG
Isophorone	45	47	4.4	LINR
2-Nitrophenol	* 0.19693	0.21172	7.5	AVRG *
2,4-Dimethylphenol	0.30321	0.31507	3.9	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46196	5.1	AVRG
2,4-Dichlorophenol	* 0.35774	0.37834	5.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.45571	1.9	AVRG
4-Chloroaniline	0.43162	0.44756	3.7	AVRG
Hexachlorobutadiene	* 0.34168	0.35676	4.4	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.36778	6.8	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.64176	1.7	AVRG#
2,4,6-Trichlorophenol	* 0.49778	0.48395	2.8	AVRG *
2,4,5-Trichlorophenol	0.46015	0.52432	13.9	AVRG
2-Chloronaphthalene	1.17243	1.224	4.4	AVRG
2-Nitroaniline	0.40396	0.41953	3.9	AVRG
Dimethylphthalate	1.347	1.431	6.2	AVRG
2,6-Dinitrotoluene	0.30449	0.32271	6.0	AVRG
3-Nitroaniline	0.27047	0.27363	1.2	AVRG
2,4-Dinitrophenol	# 45	44.5	1.1	LINR #
Dibenzofuran	1.71164	1.788	4.5	AVRG
2,4-Dinitrotoluene	0.42698	0.43987	3.0	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1519
 CCV ID: CCV1074504 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.32787	11.5	AVRG#
4-Chlorophenyl-phenylether	0.8889	0.91595	3.0	AVRG
Diethylphthalate	1.24358	1.321	6.2	AVRG
4-Nitroaniline	0.23414	0.23716	1.3	AVRG
4,6-Dinitro-2-methylphenol	45	43.1	4.2	LINR
N-Nitrosodiphenylamine	* 0.50383	0.48995	2.8	AVRG*
4-Bromophenyl-phenylether	0.29225	0.28335	3.0	AVRG
Hexachlorobenzene	0.33604	0.33307	0.9	AVRG
Pentachlorophenol	* 0.1975	0.21869	10.7	AVRG*
Di-n-butylphthalate	1.07969	1.15	6.5	AVRG
Butylbenzylphthalate	0.34424	0.3554	3.2	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.64944	9.1	AVRG
Di-n-octylphthalate	* 0.86193	0.94683	9.8	AVRG*
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2-Fluorophenol(SURR)	1.15589	1.199	3.7	AVRG
Phenol-d5(SURR)	1.54937	1.571	1.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.56091	3.9	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.613	4.2	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.29254	4.7	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.74791	0.9	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1542
 CCV ID: CCV1074506 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50218	8.5	AVRG
Acetophenone	0.60177	0.61719	2.6	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1606
 CCV ID: CCV1074505 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.456	0.6	AVRG
N-Nitrosomethylethylamine	0.62435	0.61864	0.9	AVRG
N-Nitrosodiethylamine	0.6188	0.6384	3.2	AVRG
Methylmethanesulfonate	1.03228	1.01	2.2	AVRG
Ethyl methanesulfonate	1.07144	1.044	2.6	AVRG
Pentachloroethane	0.61152	0.62669	2.5	AVRG
N-Nitrosopyrrolidine	0.65232	0.65186	0.1	AVRG
Acetophenone	0.60177	0.56386	6.3	AVRG
N-Nitrosomorpholine	0.66788	0.65784	1.5	AVRG
o-Toluidine	2.12749	2.105	1.1	AVRG
a,a-Dimethylphenethylamine	0.60958	0.62788	3.0	AVRG
2,6-Dichlorophenol	0.33474	0.35742	6.8	AVRG
Hexachloropropene	0.44551	0.42519	4.6	AVRG
N-Nitrosodibutylamine	0.32224	0.32044	0.6	AVRG
Isosafrole	0.32423	0.33241	2.5	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.75276	0.7	AVRG
Safrole	0.30436	0.31213	2.6	AVRG
1,4-Naphthoquinone	0.42786	0.4585	7.2	AVRG
1,3-Dinitrobenzene	0.20234	0.21495	6.2	AVRG
Pentachlorobenzene	0.73904	0.74341	0.6	AVRG
1-Naphthylamine	0.69942	0.71701	2.5	AVRG
2-Naphthylamine	0.91679	0.95272	3.9	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.4331	6.7	AVRG
5-Nitro-o-toluidine	0.35606	0.38041	6.8	AVRG
p-Phenylenediamine	0.30516	0.33916	11.1	AVRG
Phenacetin	0.27867	0.29177	4.7	AVRG
4-Aminobiphenyl	0.6911	0.71096	2.9	AVRG
Pronamide	0.34374	0.3606	4.9	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14357	0.0	AVRG
Dinoseb	45	43.3	3.8	LINR
4-Nitroquinoline-1-oxide	45	38.5	14.4	2ORD
Methapyriline	0.01339	0.01554	16.1	AVRG
Aramite	0.09549	0.10058	5.3	AVRG
p-Dimethylaminoazobenzene	0.23538	0.24378	3.6	AVRG
2-Acetylaminofluorene	0.41224	0.44732	8.5	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.56693	0.4	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1606
 CCV ID: CCV1074505 Lab File ID: AP9CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.63689	0.7	AVRG
N-Nitrosopiperidine	0.17391	0.17976	3.4	AVRG
1,3,5-Trinitrobenzene	45	44.3	1.6	LINR
Diallate (Avadex)	0.49675	0.50915	2.5	AVRG
Isodrin	0.1219	0.12255	0.5	AVRG
Chlorobenzilate	0.36387	0.37082	1.9	AVRG
Kepone	0.06225	0.04085	34.4	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.93126	3.1	AVRG

Average Used: 4.5

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1510
 CCV ID: CCV1076910 Lab File ID: 8270CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.494	0.6	AVRG
N-Nitrosodimethylamine	0.67937	0.78731	15.9	AVRG
Aniline	1.86438	1.76	5.6	AVRG
Bis(2-chloroethyl)ether	1.10557	1.089	1.5	AVRG
Phenol	* 1.75904	1.754	0.3	AVRG *
2-Chlorophenol	1.15668	1.175	1.6	AVRG
1,3-Dichlorobenzene	1.41871	1.455	2.6	AVRG
1,4-Dichlorobenzene	* 1.49525	1.556	4.1	AVRG *
1,2-Dichlorobenzene	1.36142	1.415	3.9	AVRG
Benzyl alcohol	0.79242	0.81677	3.1	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.73516	4.9	AVRG
2-Methylphenol	1.04767	1.04	0.7	AVRG
Hexachloroethane	0.59057	0.64156	8.6	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.284	9.1	AVRG#
4-Methylphenol	1.51461	1.621	7.0	AVRG
Nitrobenzene	0.53215	0.56439	6.1	AVRG
Isophorone	45	46.6	3.6	LINR
2-Nitrophenol	* 0.19693	0.20408	3.6	AVRG *
2,4-Dimethylphenol	0.30321	0.31302	3.2	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.44701	1.7	AVRG
2,4-Dichlorophenol	* 0.35774	0.37617	5.2	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.47179	5.5	AVRG
4-Chloroaniline	0.43162	0.42598	1.3	AVRG
Hexachlorobutadiene	* 0.34168	0.38147	11.6	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.37003	7.5	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.68536	8.6	AVRG#
2,4,6-Trichlorophenol	* 0.49778	0.48784	2.0	AVRG *
2,4,5-Trichlorophenol	0.46015	0.52813	14.8	AVRG
2-Chloronaphthalene	1.17243	1.218	3.9	AVRG
2-Nitroaniline	0.40396	0.42859	6.1	AVRG
Dimethylphthalate	1.347	1.435	6.5	AVRG
2,6-Dinitrotoluene	0.30449	0.31594	3.8	AVRG
3-Nitroaniline	0.27047	0.26339	2.6	AVRG
2,4-Dinitrophenol	# 45	42.9	4.7	LINR #
Dibenzofuran	1.71164	1.815	6.0	AVRG
2,4-Dinitrotoluene	0.42698	0.44915	5.2	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1510
 CCV ID: CCV1076910 Lab File ID: 8270CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.32484	10.5	AVRG#
4-Chlorophenyl-phenylether	0.8889	0.99263	11.7	AVRG
Diethylphthalate	1.24358	1.325	6.5	AVRG
4-Nitroaniline	0.23414	0.22226	5.1	AVRG
4,6-Dinitro-2-methylphenol	45	42.9	4.7	LINR
N-Nitrosodiphenylamine	* 0.50383	0.49781	1.2	AVRG*
4-Bromophenyl-phenylether	0.29225	0.29331	0.4	AVRG
Hexachlorobenzene	0.33604	0.35514	5.7	AVRG
Pentachlorophenol	* 0.1975	0.21578	9.3	AVRG*
Di-n-butylphthalate	1.07969	1.175	8.8	AVRG
Butylbenzylphthalate	0.34424	0.32387	5.9	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.62392	4.9	AVRG
Di-n-octylphthalate	* 0.86193	0.92191	7.0	AVRG*
=====				
2-Fluorophenol(SURR)	1.15589	1.165	0.8	AVRG
Phenol-d5(SURR)	1.54937	1.618	4.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.58422	8.2	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.598	3.2	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.32692	17.0	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.73681	2.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1534
 CCV ID: CCV1076914 Lab File ID: BSCCV2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50062	8.1	AVRG
Acetophenone	0.60177	0.64027	6.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1647
 CCV ID: CCV1076913 Lab File ID: AP9CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2-Picoline	1.46426	1.419	3.1	AVRG
N-Nitrosomethylethylamine	0.62435	0.60934	2.4	AVRG
N-Nitrosodiethylamine	0.6188	0.60822	1.7	AVRG
Methylmethanesulfonate	1.03228	1.013	1.9	AVRG
Ethyl methanesulfonate	1.07144	1.052	1.8	AVRG
Pentachloroethane	0.61152	0.64036	4.7	AVRG
N-Nitrosopyrrolidine	0.65232	0.6319	3.1	AVRG
Acetophenone	0.60177	0.57945	3.7	AVRG
N-Nitrosomorpholine	0.66788	0.67426	1.0	AVRG
o-Toluidine	2.12749	2.083	2.1	AVRG
a,a-Dimethylphenethylamine	0.60958	0.61742	1.3	AVRG
2,6-Dichlorophenol	0.33474	0.33993	1.6	AVRG
Hexachloropropene	0.44551	0.48264	8.3	AVRG
N-Nitrosodibutylamine	0.32224	0.33819	4.9	AVRG
Isosafrole	0.32423	0.33722	4.0	AVRG
1,2,4,5-Tetrachlorobenzene	0.75792	0.76409	0.8	AVRG
Safrole	0.30436	0.31693	4.1	AVRG
1,4-Naphthoquinone	0.42786	0.45573	6.5	AVRG
1,3-Dinitrobenzene	0.20234	0.20962	3.6	AVRG
Pentachlorobenzene	0.73904	0.77902	5.4	AVRG
1-Naphthylamine	0.69942	0.68053	2.7	AVRG
2-Naphthylamine	0.91679	0.92069	0.4	AVRG
2,3,4,6-Tetrachlorophenol	0.40598	0.42934	5.8	AVRG
5-Nitro-o-toluidine	0.35606	0.35907	0.8	AVRG
p-Phenylenediamine	0.30516	0.32075	5.1	AVRG
Phenacetin	0.27867	0.27859	0.0	AVRG
4-Aminobiphenyl	0.6911	0.6883	0.4	AVRG
Pronamide	0.34374	0.35696	3.8	AVRG
Pentachloronitrobenzene(PCNB)	0.1436	0.14999	4.4	AVRG
Dinoseb	45	44.4	1.3	LINR
4-Nitroquinoline-1-oxide	45	41	8.9	2ORD
Methapyriline	0.01339	0.01354	1.1	AVRG
Aramite	0.09549	0.09651	1.1	AVRG
p-Dimethylaminoazobenzene	0.23538	0.23616	0.3	AVRG
2-Acetylaminofluorene	0.41224	0.41906	1.7	AVRG
7,12-Dimethylbenz(a)anthracene	0.56938	0.57149	0.4	AVRG

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SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SMSD03 CalibrationDate: 05/03/12 Time: 1647
 CCV ID: CCV1076913 Lab File ID: AP9CCV3.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3-Methylcholanthrene	0.64128	0.64214	0.1	AVRG
N-Nitrosopiperidine	0.17391	0.17609	1.3	AVRG
1,3,5-Trinitrobenzene	45	49.4	9.8	LINR
Diallate (Avadex)	0.49675	0.50731	2.1	AVRG
Isodrin	0.1219	0.117	4.0	AVRG
Chlorobenzilate	0.36387	0.36219	0.5	AVRG
Kepone	0.06225	0.03784	39.2	AVRG
0,0,0-Triethylphosphorothioate	0.96135	0.98715	2.7	AVRG

Average Used: 3.7

<-

FL-PRO Organics

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Florida DEP/FL PRO

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for FL-PRO semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

**CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 05/02/2012

FL-PRO ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Method: FL-PRO

EPA Sample No	Lab Sample ID
<u>TFS-MW-17</u>	<u>350580601</u>
<u>TFS-MW-17-RS</u>	<u>350580602</u>

FL-PRO Sample Data

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601 Lab File ID: 806-1.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/25/12
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1818
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: _____ Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	1700		255	510	510

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No.
TFS-MW-17-RS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580602 Lab File ID: 806-2.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/25/12
 Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1840
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: rinsate Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	510	U	255	510	510

FL-PRO QC Summary

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127231MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Lab Sample ID: 127231MB Lab File ID: 9186MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 2 Date Extracted: 04/25/12

Level:(low/med) LOW Date Analyzed: 04/25/12 Time: 1542

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	500	U	250	500	500

FL-PRO ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127231MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Lab File ID: 9186MB.D Lab Sample ID: 127231MB

Instrument ID: SFID01 Date Extracted: 04/25/12

Matrix: WATER Date Analyzed: 04/25/12

Level:(low/med) LOW Time Analyzed: 1542

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127230LCS	127230LCS	9186LCS.D	04/25/12	1604
2	TFS-MW-17	350580601	806-1.D	04/25/12	1818
3	TFS-MW-17-RS	350580602	806-2.D	04/25/12	1840
4	TFS-MW-17-MS	350580603	806-3.D	04/25/12	1903
5	TFS-MW-17-MSD	350580604	806-4.D	04/25/12	1958

COMMENTS:

2A

WATER FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505806

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127230LCS	97.0	93.3					0
127231MB	93.0	93.3					0
TFS-MW-17	87.3	78.4					0
TFS-MW-17-MS	82.4	85.0					0
TFS-MW-17-MSD	84.3	85.0					0
TFS-MW-17-RS	98.0	91.5					0

Control Limits

S1 = o-Terphenyl Surrogate 82 - 142
S2 = Nonatriacontane (C-39) 42 - 193

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

110512.1857

FL-PRO ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date: 03/28/12
 Instrument ID: SFID01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 4.16			S2 : 10.58			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	STD1064818	45519	PROCAL7.D	03/28/12	1416	4.17 10.63
2	STD1064817	45520	PROCAL6.D	03/28/12	1438	4.17 10.59
3	STD1064816	45521	PROCAL5.D	03/28/12	1501	4.16 10.54
4	STD1064815	45522	PROCAL4.D	03/28/12	1523	4.16 10.58
5	STD1064814	45523	PROCAL3.D	03/28/12	1545	4.14 10.5
6	STD1064813	45524	PROCAL2.D	03/28/12	1608	4.16 10.54
7	STD1064812	45525	PROCAL1.D	03/28/12	1630	4.13 10.5
8	SSC1064821	45526	PROSEC.D	03/28/12	1652	4.13 10.44
9	CCV1073386	45522	PROCCV1.D	04/25/12	1341	4.12 10.34
10	127231MB	127231MB	9186MB.D	04/25/12	1542	4.28 10.85
11	127230LCS	127230LCS	9186LCS.D	04/25/12	1604	4.16 10.53
12	TFS-MW-17	350580601	806-1.D	04/25/12	1818	4.09 10.29
13	TFS-MW-17-RS	350580602	806-2.D	04/25/12	1840	4.11 10.35
14	TFS-MW-17-MS	350580603	806-3.D	04/25/12	1903	4.08 10.29
15	CCV1073387	45522	PROCCV2.D	04/25/12	1935	4.08 10.23
16	TFS-MW-17-MSD	350580604	806-4.D	04/25/12	1958	4.1 10.33
17	CCV1073388	45522	PROCCV3.D	04/25/12	2159	4.08 10.22
18	ZZZZZ	ZZZZZ	ZZZZZ	04/26/12	0801	

QC LIMITS

S1 = o-Terphenyl Surrogate (+/- 0.2 MINUTES)
 S2 = Nonatriacontane (C-39) (+/- 0.46 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 127230LCS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	3400	2900	85.3			55 - 118

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca C EPA Sample No. TFS-MW-17-MS
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
TPH	3500	1700	4100	69.2	41 - 101

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

Form III

FL-PRO ORGANIC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo

TFS-MW-17-MSD

Lab Code : PEL Case No.: SAS No: SDG No.: 3505806

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
TPH	3500	4300	74.9	4.8	20	41 - 101

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO Standards Data

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:	RRF0.17 =PROCAL1.D	RRF0.34 =PROCAL2.D			
RRF0.85 =PROCAL3.D	RRF1.7 =PROCAL4.D	RRF2.55 =PROCAL5.D			
COMPOUND	RRF0.17	RRF0.34	RRF0.85	RRF1.7	RRF2.55
TPH	11892200	8905905.882	7673328.235	7746596.471	6757141.176
=====					
Nonatriacontane (C-39)(SURR)	5045493.333	5107080	5812986.667	5564053.333	5221266.667
o-Terphenyl Surrogate(SURR)	6862940	6760680	7635860	8031980	6886480

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:		RRF3.4 =PROCAL6.D	RRF5.1 =PROCAL7.D			
COMPOUND	RRF3.4	RRF5.1				
TPH	6619844.118	6701392.157				
=====						
Nonatriacontane (C-39)(SURR)	5110173.333	4655386.667				
o-Terphenyl Surrogate(SURR)	7013080	6544620				

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
TPH	LINR	-0.16196821	1.54514E-07	0.99787
=====				
Nonatriacontane (C-39)(SURR)	AVRG		5216634.286	7.2
o-Terphenyl Surrogate(SURR)	AVRG		7105091.429	7.5

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PROCAL1.D		RT2: PROCAL2.D			
RT3: PROCAL3.D		RT4: PROCAL4.D		RT5: PROCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
TPH	6.202	6.357	6.357	6.357	6.357		
=====							
Nonatriacontane (C-39)(SURR)	10.497	10.543	10.503	10.583	10.543		
o-Terphenyl Surrogate(SURR)	4.130	4.157	4.140	4.160	4.157		

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: PROCAL6.D		RT7: PROCAL7.D				
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW FROM TO	
TPH	6.357	6.357				6.357	0.908	11.805
=====								
Nonatriacontane (C-39)(SURR)	10.587	10.630				10.583	10.123	11.043
o-Terphenyl Surrogate(SURR)	4.167	4.173				4.160	3.960	4.360

7SSC

FL-PRO ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SFID01 CalibrationDate: 03/28/12 Time: 1652
 CCV ID: SSC1064821 Lab File ID: PROSEC.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.65	2.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5339786.667	2.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7346880	3.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 1341
 CCV ID: CCV1073386 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.88	10.6	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5634560	8.0	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7626040	7.3	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 1935
 CCV ID: CCV1073387 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.74	2.4	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5255320	0.7	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6963900	2.0	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Instrument ID: SFID01 CalibrationDate: 04/25/12 Time: 2159
 CCV ID: CCV1073388 Lab File ID: PROCCV3.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.76	3.5	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5345653.333	2.5	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7087780	0.2	AVRG

Inorganics

Inorganic Data Qualifiers

C (Concentration) Qualifier - Entries and their meanings are:

- J** The reported value obtained was less than the RL but greater than or equal to the MDL.
- E** The reported value obtained was over calibration or linear range.
- U** The reported value obtained was less than the MDL or was not detected.

Q Qualifier - Entries and their meanings are:

- U** The reported value is estimated because of interference. An explanatory comment must be included under "Comments" on the Cover Page if the problem applies to all samples in this data package or on the individual FORM 1 if it is an isolated problem.
- M** Duplicate injection precision was not met (two analyses of the same sample did not agree).
- N** Spiked sample recovery not within control limits.
- E** Serial Dilution percent difference not within control limits.
- S** The reported value was determined by the Method of Standard Additions (MSA).
- W** Post-digestion spike for Furnace AA analysis is out of control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
- *** Duplicate analysis not within control limits.
- +** Correlation coefficient for the MSA is less than 0.995.
- X** The data is flagged as rejected by analyst utilizing analytical judgement.

Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field.

M (Method) Qualifier - Enter one of the following:

- P** ICP
- A** Flame AA
- F** Furnace AA
- CV** Manual Cold Vapor AA
- TC** Total Organic Carbon
- AS** Semi-Automated Spectrophotometric
- CA** Midi-Distillation Spectrophotometric
- T** Titrimetric
- C** Manual Spectrophotometric
- GR** Gravimetric
- NR** Analyte was not required by your lab

Inorganic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for inorganic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).
- A** Post Digestion Spike.
- L** Serial Dilution.

Wet Chemistry Data Package

CASE NARRATIVE
Anions by Ion Chromatography

PEL Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: There is no preparation step for this method.

B. Sample Analysis: The following samples were re-analyzed out of hold for Nitrate and Nitrite: TFS-MW-17RE1. The sample were initially analyzed within hold however due to the CCV's exceeding limits, the sample was re-analyzed approximately 2 days out of hold. Both sets of data are reported for Nitrate and Nitrite. Only the diluted run is reported for Sulfate.

III. METHOD

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 300.1.

IV. PREPARATION

There is no preparation step for this method.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

CASE NARRATIVE
Anions by Ion Chromatography

PEL Lab Reference No./SDG: 3505806

Client: CH2M Hill

All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

E. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

F. Samples:

Sample analysis proceeded normally.
Sample TFS-MW-17 required a 5X dilution due to high concentration of the following analyte(s): Sulfate.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/08/2012

**CASE NARRATIVE
ALKALINITY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 310.1 / SM2320B.

IV. ANALYSIS

A. Blanks:

1. Method Blanks:

All acceptance criteria were met.

B. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

Sample analysis proceeded normally.
Sample TFS-MW-17 required a 10X dilution due to high concentration of the following analyte(s): Alkalinity (Total).

**CASE NARRATIVE
ALKALINITY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/26/2012

**CASE NARRATIVE
SULFIDE**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 376.1 / SM4500-S F.

IV. ANALYSIS

A. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

B. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

Sample analysis proceeded normally.

Sample TFS-MW-17 required a 10X dilution due to high concentration of the following analyte(s): Sulfide.

**CASE NARRATIVE
SULFIDE**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/24/2012

**CASE NARRATIVE
TOTAL ORGANIC CARBON**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA SW846 Method 9060 / SM5310B.

IV. PREPARATION

There is no preparation step for this method.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

D. Duplicate:

**CASE NARRATIVE
TOTAL ORGANIC CARBON**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505806

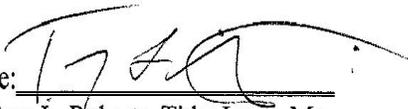
Client: CH2M Hill

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 04/26/2012

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic
Lab Code : PEL Case No.: _____ SDG No.: 3505806
SOW No.: _____

EPA Sample No	Lab Sample ID
<u>TFS-MW-17</u>	<u>350580601</u>
<u>TFS-MW-17DL1</u>	<u>350580601DL1</u>
<u>TFS-MW-17R1</u>	<u>350580601R1</u>

Comments:

Wet Chemistry Sample Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
47752-0-60-0	Alkalinity (Total)	550			IS	5	10	10
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	1.4			IC	0.031	0.062	0.1
18496-25-8	Sulfide	22			T	0.8	1.6	20
1012_5	TOC	8.98			TC	0.31	0.62	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	94.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17DL1
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601DL1
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
3-03-5	Sulfate	170			IC	1.6	3.2	5

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M TFS-MW-17R1
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 350580601R1
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.16			IC	0.031	0.062	0.1
3-03-5	Sulfate	192	E		IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	98.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Wet Chemistry QC Summary Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 042112MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 042112MB
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	0.64	U		IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	104.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 042312MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 042312MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
25-90-0	Nitrate-N	0.072	U		IC	0.036	0.072	0.1
15-90-0	Nitrite-N	0.062	U		IC	0.031	0.062	0.1
3-03-5	Sulfate	0.64	U		IC	0.32	0.64	1

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	100.0	90 - 115	

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 126865MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 126865MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

126871MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
Matrix: WATER Lab Sample ID: 126871MB
Level:(low/med) LOW Date Received: 4/23/2012
PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 126872MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 126872MB
 Level:(low/med) LOW Date Received: 4/23/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
18496-25-8	Sulfide	0.16	U		T	0.08	0.16	2

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 127167MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 127167MB
 Level:(low/med) LOW Date Received: 4/24/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
47752-0-60-0	Alkalinity (Total)	1	U		IS	0.5	1	1

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 127316MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: WATER Lab Sample ID: 127316MB
 Level:(low/med) LOW Date Received: 4/24/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
1012_5	TOC	0.62	U		TC	0.31	0.62	1

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

2-CC

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Concentration Units: (MG/L)

Analyte	Initial Calibration				Continuing Calibration						M	
	Source Used	True	Found	%R (1)	Source Used	True	Found	%R (1)	Found	%R (1)		
Alkalinity (Total)												IS
Nitrate-N	45021	1	1.000	100.0	45021	1	1.100	110.0				IC
Nitrite-N	45021	1	1.000	100.0	45021	1	1.200	120.0				IC
Sulfate	45021	8	7.700	96.2	45021	8	10.100	126.2				IC
Sulfide												T
TOC	44460	2.5	2.370	94.8	34386	2.5	2.520	100.8	2.600	104.0		TC

ICV IDs: IC= ICV1078178, TC= 127314ICV

CCV1 IDs: IC= CCV1078176, TC= 127319CCV

CCV2 IDs: TC= 127321CCV

(1) Control Limits: TOC: 75-125

Comments:

U.S. EPA - CLP

2-CC

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Concentration Units: (MG/L)

Analyte	Initial Calibration				Continuing Calibration						M
	Source Used	True	Found	%R (1)	Source Used	True	Found	%R (1)	Found	%R (1)	
Alkalinity (Total)											IS
Nitrate-N	45021	1	1.000	100.0	45021	1	1.000	100.0	1.000	100.0	IC
Nitrite-N	45021	1	1.100	110.0	45021	1	1.100	110.0	1.100	110.0	IC
Sulfate	45021	8	8.000	100.0	45021	8	8.100	101.2	8.200	102.5	IC
Sulfide											T
TOC											TC

ICV IDs: IC= ICV1072873

CCV1 IDs: IC= CCV1072869

CCV2 IDs: IC= CCV1072870

(1) Control Limits: TOC: 75-125

Comments:

U.S. EPA - CLP

2-CC

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Concentration Units: (MG/L)

Analyte	Initial Calibration				Continuing Calibration						M	
	Source Used	True	Found	%R (1)	Source Used	True	Found	%R (1)	Found	%R (1)		
Alkalinity (Total)												IS
Nitrate-N					45021	1	1.000	100.0				IC
Nitrite-N					45021	1	1.100	110.0				IC
Sulfate					45021	8	8.200	102.5				IC
Sulfide												T
TOC												TC

ICV IDs:

CCV1 IDs: IC= CCV1072871

CCV2 IDs:

(1) Control Limits: TOC: 75-125

Comments:

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Preparation Blank Matrix (water/soil): WATER
WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L
Percent R

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)				Preparation Blank		M
	(MG/L)	C	C	C	C	C	C		
Alkalinity (Total)							1	U	IS
Nitrate-N	0.036	U	0.036	U			0.072	U	IC
Nitrite-N	0.031	U	0.031	U			0.062	U	IC
Sulfate	0.32	U	0.32	U			0.64	U	IC
Sulfide							0.16	U	T
TOC	0.31	U	0.31	U	0.31	U	0.62	U	TC

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	104.0	90 - 115	

ICB IDs: IC= ICB1078177, TC= 127315ICB
 CCB1 IDs: IC= CCB1078175, TC= 127320CCB
 CCB2 IDs: TC= 127322CCB
 CCB3 IDs:

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No. SAS No: SDG No.: 3505806

Preparation Blank Matrix (water/soil): WATER
WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L
Percent R

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)						Preparation Blank		M
		C	C	C	C	C	C	C	C		
Alkalinity (Total)											IS
Nitrate-N	0.036	U	0.036	U	0.036	U	0.036	U	0.072	U	IC
Nitrite-N	0.031	U	0.031	U	0.031	U	0.031	U	0.062	U	IC
Sulfate	0.32	U	0.32	U	0.32	U	0.32	U	0.64	U	IC
Sulfide									0.16	U	T
TOC											TC

Surrogate	Recovery	Control Limits	Qualifier
Dichloroacetate - DCA	100.0	90 - 115	

ICB IDs: IC= ICB1072872
 CCB1 IDs: IC= CCB1072866
 CCB2 IDs: IC= CCB1072867
 CCB3 IDs: IC= CCB1072868

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Preparation Blank Matrix (water/soil): WATER
 Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L

Analyte	Initial Calib. Blank (MG/L)		Continuing Calibration Blank (MG/L)				Preparation Blank		M
	(MG/L)	C	C	C	C	C	C		
Alkalinity (Total)									IS
Nitrate-N									IC
Nitrite-N									IC
Sulfate									IC
Sulfide							0.16	U	T
TOC									TC

- ICB IDs:
- CCB1 IDs:
- CCB2 IDs:
- CCB3 IDs:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

042112LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Nitrate-N	20	0.99		0.98		1.0		IC
Nitrite-N	20	1		1.1		9.5		IC
Sulfate	20	8		7.9		1.3		IC

Comments:

110512 1857

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

042312LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Nitrate-N	20	1		1		0.0		IC
Nitrite-N	20	1.1		1.1		0.0		IC
Sulfate	20	8.1		8.1		0.0		IC

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

126868LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Sulfide	20	5.01		5.21		3.9		T

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127170LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Alkalinity (Total)	20	50.5		49		3.0		IS

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127318LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): MG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TOC	20	2.42		2.43		0.4		TC

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

042112LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	0.99	99	
Nitrite-N	45021	IC	75	125	1	1	100	
Sulfate	45021	IC	75	125	8	8	100	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

042112LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	0.98	98	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	7.9	98.8	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

042312LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	1	100	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	8.1	101.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

042312LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (mg/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Nitrate-N	45021	IC	75	125	1	1	100	
Nitrite-N	45021	IC	75	125	1	1.1	110	
Sulfate	45021	IC	75	125	8	8.1	101.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

126867LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Sulfide	45931	T	80	120	5	5.01	100.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

126868LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Sulfide	45931	T	80	120	5	5.21	104.2	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127169LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Alkalinity (Total)	44425	IS	80	120	50	50.5	101	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127170LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
Alkalinity (Total)	44425	IS	80	120	50	49	98	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127317LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
TOC	44460	TC	80	120	2.5	2.42	96.8	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127318LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505806

Matrix: (soil/water) WATER

Concentration Units: (MG/L)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
TOC	44460	TC	80	120	2.5	2.43	97.2	

Comments:

U.S. EPA - CLP

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METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505806
 Matrix: Water
 Concentration Units: mg/L

PARAMETER	M	INSTRUMENT ID	DATE	CRDL	MDL	Raw MDL (UG/L)
Alkalinity (Total)	IS	HACH	1/10/2007	1	0.5	0.5
Nitrate-N	IC	IC	1/17/2012	0.1	0.036	0.036
Nitrite-N	IC	IC	1/17/2012	0.1	0.031	0.031
Sulfate	IC	IC	1/17/2012	1	0.32	0.32
Sulfide	T	HACH	5/1/2006	2	0.08	0.08
TOC	TC	TOC	1/23/2012	1	0.31	0.31

Comments:

110512 1858

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Instrument ID Number: IC Method: IC
 Start Date: 2/15/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
OICAL1	1	17:14		X
OICAL2	1	17:36		X
OICAL3	1	17:58		X
OICAL4	1	18:20		X
OICAL5	1	18:42		X
OICAL6	1	19:04		X
OICAL7	1	19:26		X
ICV1078178	1	14:23		X
ICB1078177	1	14:45		X
042112MB	1	15:07		X
042112LCS	1	15:29		X
042112LCSD	1	15:51		X
ZZZZZZ	1	16:13		
ZZZZZZ	1	16:35		
ZZZZZZ	1	16:57		
ZZZZZZ	1	17:19		
TFS-MW-17	1	17:41		X
CCV1078176	1	18:03		X
CCB1078175	1	18:25		X
ICV1072873	1	17:52		X
ICB1072872	1	18:14		X
042312MB	1	18:36		X
042312LCS	1	18:58		X
042312LCSD	1	19:20		X
ZZZZZZ	1	19:42		
ZZZZZZ	1	20:04		
ZZZZZZ	1	20:26		
ZZZZZZ	1	20:48		
ZZZZZZ	1	21:10		
CCV1072869	1	21:32		X
CCB1072866	1	21:54		X
ZZZZZZ	1	22:16		
ZZZZZZ	1	22:38		
ZZZZZZ	1	23:00		
ZZZZZZ	1	23:22		
ZZZZZZ	1	23:44		
ZZZZZZ	1	0:06		

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Instrument ID Number: IC Method: IC
 Start Date: 2/15/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
ZZZZZZ	1	0:28		
ZZZZZZ	1	0:49		
ZZZZZZ	1	1:11		
ZZZZZZ	1	1:33		
CCV1072870	1	1:55		X
CCB1072867	1	2:17		X
ZZZZZZ	1	2:39		
ZZZZZZ	1	3:01		
ZZZZZZ	1	3:23		
ZZZZZZ	1	3:45		
ZZZZZZ	1	4:07		
TFS-MW-17R1	1	4:29		X
TFS-MW-17DL1	5	4:51		X
ZZZZZZ	5	5:13		
CCV1072871	1	5:35		X
CCB1072868	1	5:57		X

- * Nitrite-N
- * Dichloroacetate - DCA
- * Nitrate-N
- * Sulfate

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Instrument ID Number: HACH Method: IS
 Start Date: 4/24/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
ZZZZZZ	1	13:25		
ZZZZZZ	1	13:28		
127167MB	1	13:31		X
127169LCS	1	13:34		X
127170LCSD	1	13:37		X
ZZZZZZ	10	13:40		
ZZZZZZ	10	13:43		
ZZZZZZ	10	13:46		
ZZZZZZ	10	13:49		
ZZZZZZ	10	13:52		
ZZZZZZ	10	13:55		
ZZZZZZ	10	13:58		
ZZZZZZ	10	14:01		
ZZZZZZ	10	14:04		
ZZZZZZ	1	14:07		
127174CCB	1	14:10		X
ZZZZZZ	1	14:13		
ZZZZZZ	1	14:16		
ZZZZZZ	1	14:19		
ZZZZZZ	1	14:22		
ZZZZZZ	1	14:25		
ZZZZZZ	1	14:28		
ZZZZZZ	1	14:31		
ZZZZZZ	5	14:34		
ZZZZZZ	5	14:37		
ZZZZZZ	1	14:40		
127176CCB	1	14:43		X
TFS-MW-17	10	14:46		X
127178CCB	1	14:49		X

* Alkalinity (Total)

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Instrument ID Number: HACH Method: T
 Start Date: 4/23/2012 End Date: 4/23/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
<u>ZZZZZZ</u>	1	11:48		
126865MB	1	11:51		X
126867LCS	1	11:54		X
126868LCSD	1	11:57		X
<u>ZZZZZZ</u>	1	12:00		
<u>ZZZZZZ</u>	1	12:03		
<u>ZZZZZZ</u>	1	12:06		
<u>ZZZZZZ</u>	1	12:09		
<u>ZZZZZZ</u>	1	12:12		
<u>ZZZZZZ</u>	1	12:15		
<u>ZZZZZZ</u>	1	12:18		
<u>ZZZZZZ</u>	1	12:21		
<u>ZZZZZZ</u>	1	12:24		
<u>ZZZZZZ</u>	1	12:27		
126871MB	1	12:30		X
<u>ZZZZZZ</u>	1	12:33		
<u>ZZZZZZ</u>	1	12:36		
<u>ZZZZZZ</u>	1	12:39		
TFS-MW-17	10	12:42		X
126872MB	1	12:45		X

* Sulfide

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505806

Instrument ID Number: TOC Method: TC
 Start Date: 4/24/2012 End Date: 4/25/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
CAL01	1	8:50		X
CAL02	2	9:07		X
CAL03	4	9:26		X
CAL04	5	9:44		X
CAL05	10	10:02		X
CAL06	1	10:16		X
127314ICV	1	20:33		X
127315ICB	1	20:48		X
127316MB	1	21:04		X
127317LCS	1	21:20		X
127318LCSD	1	21:37		X
ZZZZZZ	1	21:54		
ZZZZZZ	1	22:15		
ZZZZZZ	1	22:32		
ZZZZZZ	1	22:51		
ZZZZZZ	1	23:09		
ZZZZZZ	1	23:26		
ZZZZZZ	1	23:45		
ZZZZZZ	1	0:03		
127319CCV	1	1:01		X
127320CCB	1	1:18		X
ZZZZZZ	1	3:11		
ZZZZZZ	1	3:30		
ZZZZZZ	1	3:48		
ZZZZZZ	1	4:06		
TFS-MW-17	1	4:26		X
127321CCV	1	4:46		X
127322CCB	1	5:03		X

* TOC

Chain of Custody Documentation

3505806
MK



1000 Abernathy Rd, Ste 1600
Atlanta, GA 30328
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER:

426847-042012-02

NAS Key West TFS	PROJECT NUMBER: -26447	LAB NAME AND CONTACT: PEL/M. Gudrason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company) 813 888 9507 x 242 Bethany Garvey	RECIPIENT 1 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling	CTO OK DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company) Greg Rowell	RECIPIENT 2 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT Greg Rowell	PROJECT TEL NO AND FAX NO.	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No., and Fax No.):
greg.rowell@ch2m.com				

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PRG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)											SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								8200B VOC	8270D SPC	8270 SIM	FL-PRO/TEP	Sulfate	Sulfide	Nitrate/Nitrite	ALK	TOC	8081	8151			
1	TFS-MW17-RS	ringsite	W	4-20-12	1025	28	28	3	2	2	X	1							QC		02
2	TFS-MW-17	MW-17	GW	4-20-12	1105	28	28	3	2	2	2	X	1	X	X	3			N		01
3	TFS-MW-17-MS	MS	GW	4-26-12	1110	28	28	3	2	2	2								QC		03
4	TFS-MW-17-MSD	MSD	GW	4-26-12	1110	28	28	3	2	2	2	X	1						QC		04
5	TFS-MW-TB3	TB3	W	4-26-12	—	28	28	2											QC		05
6	IDW SOIL 1	IDW soils	S	4-26-12	1420	28	28	1	1	X								SW	TECPs		06
7	IDW LIG-1	IDW water	GW	4-26-12	1425	28	28	3	1	1								AW			07
8																					
9																					
10																					

18
4-23-12

SAMPLER(S) AND COMPANY: (please print) Nikki Monroe/CH2M HILL		COURIER AND SHIPPING NUMBER: FEDEX		SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use) Temp. 2.8, 3.0, 4.2 PA 7.9 SM 45005-20 PK 2 8260, FL-PRO, TOC			
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
Printed Name and Signature: Nikki Monroe / <i>[Signature]</i>	4-20-12	1700	Printed Name and Signature: FEDEX	4-20-12	1700		
Printed Name and Signature:			Printed Name and Signature:				
Printed Name and Signature:			Printed Name and Signature: Marianne Keohane <i>M. K.</i>	4-21-12	09:15		

Distribution: Original - Laboratory (To be returned with Analytical Report); Copy 1 - Project File; Copy 2 - PMO

Form C1001, Rev 06-00

Sample 02 and 04 = 1 FL-PRO amber broken in transit

3505806

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3505806
MLC

	1000 Abernathy Rd, Ste 1600 Atlanta, GA 30328 Tel No: (770) 604-9192 Fax No: (770) 604-9282	CHAIN-OF-CUSTODY RECORD	* COC NUMBER: 426847-042012-02
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NAS Key West TFS	PROJECT NUMBER: 426847	LAB NAME AND CONTACT: PEL / M. Gudnason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company) Bethany Garvey	RECIPIENT 1 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling	CTO OK DO NUMBER:	LAB PO NUMBER: 813 888 9507 x 242	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company) Greg Rowell	RECIPIENT 2 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT: Greg Rowell	PROJECT TEL NO AND FAX NO.	LAB TEL NO AND FAX NO.	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No., and Fax No.):
greg.rowell@ch2m.com				

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)												SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								8082	9040C	1010L	9045											
1	IDW-S07C-1	IDW s=15	S	4-20-12	1420	23	X	X	X											SW	FCLPs	-06
2	IDW-L10-1	IDW waters	GW	4-20-12	1425	23	X	X	X											LW		-07
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

SAMPLER(S) AND COMPANY: (please print) Nick Monroe / CH2M HILL		COURIER AND SHIPPING NUMBER: FEDEX		SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):			
RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
Printed Name and Signature: Nick Monroe / [Signature]		4-20-12	1700	Printed Name and Signature: FEDEX		4-20-12	1700
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature: Marianna Krehawc M.K		4-21-12	0915

3505806

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FedEx Express **NEW Package US Airbill**

FedEx Tracking Number

8993 7167 6205

0200 Form ID No.

FedEx Retrieval Copy

1 From
 Date 4-20-12
 Sender's Name Nikki Monroe Phone 504 472 1399
 Company CHIZM HILL
 Address 30419 Seagrave Trail
 City Big Pine Key State FL ZIP 33043

2 Your Internal Billing Reference
 Recipient's Name Sample Receiving Phone 813 888-9507
 Company PEL

3 To
 Recipient's Name Sample Receiving Phone 813 888-9507
 Company PEL
 Address 8405 Benjamin Rd **01** **HOLD Weekday**
FedEx location address REQUIRED. NOT available for FedEx First Overnight.
 Address Tampa Fla **31** **HOLD Saturday**
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
 City Tampa Fla State FL ZIP 33624



4 Express Package Service * To most locations.
 NOTE: Service order has changed. Please select carefully. **Packages up to 150 lbs.**
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day **2 or 3 Business Days**

06 **FedEx First Overnight**
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

01 **FedEx Priority Overnight**
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 **FedEx Standard Overnight**
Next business afternoon.* Saturday Delivery NOT available.

49 **NEW FedEx 2Day A.M.**
Second business morning.* Saturday Delivery NOT available.

03 **FedEx 2Day**
Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 **FedEx Express Saver**
Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit \$500.

06 FedEx Envelope* **02** FedEx Pak* **03** FedEx Box **04** FedEx Tube **01** Other

6 Special Handling and Delivery Signature Options
03 **SATURDAY DELIVERY**

No Signature Required
Package may be left without obtaining a signature for delivery.

10 Direct Signature
Someone at recipient's address may sign for delivery. Fee applies.

34 Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
 One box must be checked.
 No **04** Yes
As per attached Shipper's Declaration. Yes
Shipper's Declaration not required.

06 Dry Ice
Dry ice, 9, UN 1845

Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No.

1 Sender Acct. No. in Section 1 will be billed. **2** Recipient **3** Third Party **4** Credit Card **5** Cash/Check

Total Packages 3 Total Weight 115 lbs. Credit Card Avail.

*Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

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3505806

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pH LOG SHEET

WO#: 3505806
 Client/Project NAS Key West

SampNumber	Method	Matrix	pH	Containers	Temp	Acid	
350580601	SM5310B	W	< 2	(3)		HCL	nlabus 23-Apr-12
350580601	SM4500S-2F	W	> 9	(1)		ZnAc/NaOH	nlabus 23-Apr-12
350580601	FL-PRO	W	< 2	(2)		H2SO4	nlabus 23-Apr-12
350580601	8260	W	< 2	(3)		HCL	nlabus 23-Apr-12
350580602	FL-PRO	W	< 2	(1)		H2SO4	nlabus 23-Apr-12
350580602	8260	W	< 2	(3)		HCL	nlabus 23-Apr-12
350580603	FL-PRO	W	< 2	(2)		H2SO4	nlabus 23-Apr-12
350580603	8260	W	< 2	(3)		HCL	nlabus 23-Apr-12
350580604	FL-PRO	W	< 2	(1)		H2SO4	nlabus 23-Apr-12
350580604	8260	W	< 2	(3)		HCL	nlabus 23-Apr-12

3505806

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SampNumber	Method	Matrix	pH	Containers	Temp	Acid	
350580605	8260	W	< 2	(2)		HCL	nlabus 23-Apr-12

3505806

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SAMPLE RECEIPT CONFIRMATION SHEET

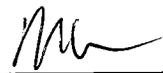
Client Information			
SDG:	3505806	Req:	91013
Client:	CH2M Hill	Project:	Boca Chica Truck Fill Stand - JP-5
Level:	4	Date Rec'd:	4/21/2012 9:15:00 AM
Rec'd via:	Fed-Ex	Due Date:	5/4/2012

Sample Verification			
Samples/Cooler Secure?	<input type="text" value="Yes"/>	All Samples on COC accounted For?	<input type="text" value="Yes"/>
Temperature of Samples(Celsius)	<input type="text" value="2.8C-4.2C"/>	All Samples Rec'd Intact?	<input type="text" value="No"/>
pH Verified?	<input type="text" value="Yes"/>	Sample Vol. Sufficient For Analysis	<input type="text" value="Yes"/>
pH WNL?	<input type="text" value="Yes"/>	Samples Rec'd W/ Hold Time?	<input type="text" value="Yes"/>
Soil Origin (Domestic/Foreign):	<input type="text"/>	Are All Samples to be Analyzed?	<input type="text" value="Yes"/>
Site Location/Project on COC?	<input type="text" value="Yes"/>	Correct Sample Containers?	<input type="text" value="Yes"/>
Client Project # on COC?	<input type="text" value="Yes"/>	COC Comments written on COC?	<input type="text" value="Yes"/>
Project Mgr. Indicated on COC?	<input type="text" value="Yes"/>	Samplers Initials on COC?	<input type="text" value="Yes"/>
COC relinquished/Dated by Client?	<input type="text" value="Yes"/>	Sample Date/Time Indicated?	<input type="text" value="Yes"/>
COC Received/Dated by SA?	<input type="text" value="Yes"/>	TAT Requested:	<input type="text" value="STD"/>
Specific Subcontract Indicated?	<input type="text" value="No"/>	Client Requests Verbal Results?	<input type="text" value="No"/>
Samples Received By	<input type="text" value="Fed-Ex"/>	Client Requests Faxed Results?	<input type="text" value="No"/>
SA to Conduct ALL Analyses?	<input type="text" value="Yes"/>		
Radioactivity Check?	<input type="text" value="No"/>		
COC Present?	<input type="text" value="Yes"/>		

LABEL REVIEW _____



PEER REVIEW _____



Client: CH2M Hill

WONo: 3505806

Profile Name: NAS Key West

Profile #: 91013

MATRIX W

Sample #	Bottle	Parameter	Check	Received	Date
01	017	300.1 Determination of Inorganic Anions by Ion Chromatography	In	Marianna Keohane	4/21/2012 11:09:14 AM
01	017	300.1 Determination of Inorganic Anions by Ion Chromatography	Out	Devon Thompson	4/21/2012 1:24:55 PM
01	017	300.1 Determination of Inorganic Anions by Ion Chromatography	In	Devon Thompson	4/21/2012 1:59:39 PM
01	003	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 11:07:41 AM
01	002	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 11:07:43 AM
01	001	8260 Volatile Organic Compounds	In	Marianna Keohane	4/21/2012 11:07:44 AM
01	001	8260 Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:51:00 AM
01	011	8270 GCMS semivolatiles	In	Marianna Keohane	4/21/2012 11:08:31 AM
01	010	8270 GCMS semivolatiles	In	Marianna Keohane	4/21/2012 11:08:33 AM
01	010	8270 GCMS semivolatiles	Consumed	Duffie Young	4/26/2012 7:52:50 PM
01	013	8270_SIM GCMS semivolatiles SIM	In	Marianna Keohane	4/21/2012 11:08:42 AM
01	012	8270_SIM GCMS semivolatiles SIM	In	Marianna Keohane	4/21/2012 11:08:43 AM
01	012	8270_SIM GCMS semivolatiles SIM	Consumed	Ryan Bennett	4/25/2012 11:07:46 AM
01	015	FL-PRO Petroleum Hydrocarbons	In	Marianna Keohane	4/21/2012 11:08:53 AM
01	014	FL-PRO Petroleum Hydrocarbons	In	Marianna Keohane	4/21/2012 11:08:54 AM
01	014	FL-PRO Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:10:03 AM
01	017	SM2320B Alkalinity (Total)	In	Marianna Keohane	4/21/2012 11:09:16 AM
01	017	SM2320B Alkalinity (Total)	Out	Devon Thompson	4/24/2012 3:54:43 PM
01	017	SM2320B Alkalinity (Total)	In	Devon Thompson	4/24/2012 3:54:57 PM
01	016	SM4500S-2F Sulfide	In	Marianna Keohane	4/21/2012 11:09:29 AM
01	016	SM4500S-2F Sulfide	Out	Devon Thompson	4/23/2012 8:26:39 AM
01	016	SM4500S-2F Sulfide	In	Devon Thompson	4/23/2012 7:36:31 PM

WONo: 3505806

Profile Name: NAS Key West

Profile #: 91013

01	006	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 11:08:11 AM
01	004	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 11:08:13 AM
01	005	SM5310B	Total Organic Carbon	In	Marianna Keohane	4/21/2012 11:08:13 AM
01	004	SM5310B	Total Organic Carbon	Out	Devon Thompson	4/24/2012 3:10:10 PM
01	004	SM5310B	Total Organic Carbon	In	Devon Thompson	4/25/2012 8:30:20 AM
02	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:37 PM
02	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:39 PM
02	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:39 PM
02	003	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:51:04 AM
02	007	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:04 PM
02	006	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:05 PM
02	005	8270	GCMS semivolatile	Consumed	Duffie Young	4/26/2012 7:52:52 PM
02	005	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:54 PM
02	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:56 PM
02	006	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:49 AM
02	008	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 1:34:14 PM
02	008	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:10:07 AM
03	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:40 PM
03	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:41 PM
03	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:42 PM
03	002	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:51:08 AM
03	007	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:06 PM
03	006	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:07 PM
03	005	8270	GCMS semivolatile	Consumed	Duffie Young	4/26/2012 7:52:53 PM
03	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:56 PM
03	005	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:56 PM
03	006	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:52 AM
03	009	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 1:34:16 PM

WONo: 3505806

Profile Name: NAS Key West

Profile #: 91013

03	008	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 1:34:17 PM
03	009	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:10:11 AM
04	003	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:43 PM
04	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:45 PM
04	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:45 PM
04	003	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:51:12 AM
04	007	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:07 PM
04	006	8270	GCMS semivolatile	In	Nicole Labus	4/23/2012 1:34:07 PM
04	006	8270	GCMS semivolatile	Consumed	Duffie Young	4/26/2012 7:52:56 PM
04	005	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:57 PM
04	004	8270_SIM	GCMS semivolatile SIM	In	Nicole Labus	4/23/2012 1:33:59 PM
04	005	8270_SIM	GCMS semivolatile SIM	Consumed	Ryan Bennett	4/25/2012 11:07:56 AM
04	008	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 1:34:17 PM
04	008	FL-PRO	Petroleum Hydrocarbons	Consumed	Ryan Bennett	4/25/2012 11:10:17 AM
05	002	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:46 PM
05	001	8260	Volatile Organic Compounds	In	Nicole Labus	4/23/2012 1:33:47 PM
05	001	8260	Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:40:34 AM

Addendum

Letter of Acceptance

Customer Name: CH2M Hill
Date and Time Received: 4/21/2012 9:15:00 AM
Date to be Reported: 5/4/2012
Laboratory Submission Number/SDG: 3505806

Project: NAS Key West /Boca Chica/ MW Sampling 426847

Samples: The submission consisted of 5 samples, including QC, with sample identification shown in the attached data tables.

Tests: The Samples will be analyzed for EPA methods: SM4500S-2F.

Sample Custody/COC discrepancies:

None.

Notes:

Temp 2.8C, 3.0C, 4.2C
pH<2 8260, TOC, FLPRO
pH>9 SM4500S-2f
Sample 02 and 04; 1 FLPRO amber broken in transit on each sample

Distribution of Report to:

CH2M Hill
Attn: Greg Rowell

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. Spectrum Analytical letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar materials.

Log-in Report

Level: 4

Total of: 21 analyses on 8 samples (including QC)

25-Apr-12

Report/SDG #: 3505806

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-17	350580601	MW-17	W	4/20/2012 11:05:00 AM	4/21/2012 9:15:00 AM

Method

300.1	Determination of Inorganic Anions by Ion	300.1
8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO
SM2320B	Alkalinity (Total)	SM2320B
SM4500S-2F	Sulfide	376.1
SM5310B	Total Organic Carbon	SM5310B

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-17-RS	350580602	rinsate	W	4/20/2012 10:25:00 AM	4/21/2012 9:15:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-17-MS	350580603	MS	W	4/20/2012 11:10:00 AM	4/21/2012 9:15:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Report/SDG #: 3505806

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-17-MSD	350580604	MSD	W	4/20/2012 11:10:00 AM	4/21/2012 9:15:00 AM

Method

8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
8270_SIM	GCMS semivolatile SIM	8270 SIM
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
TFS-MW-TB3	350580605	TB3	W	4/20/2012	4/21/2012 9:15:00 AM

Method

8260	Volatile Organic Compounds	8260
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Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Monday, May 07, 2012 9:13 AM
To: 'Greg.Rowell@CH2M.com'
Cc: Bethany.Garvey@CH2M.com; Camden.Robinson@CH2M.com
Subject: FW: 3505806-8270-NAS Key West

Good morning.

This will be in the case narrative for the referenced method and SDG.

A. Calibration:

All acceptance criteria were met with the exception of:

The MIN RRF was below the AVG RRF Limit of 0.01 for 4-Nitroquinoline-1-oxide for initial calibration curve (0.00936). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

SSC1072993 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: 1-Naphthylamine (+32.5%), 2-Naphthylamine (+22.6%), Methapyriline (+1425%), 1,3,5-Trinitrobenzene (-43.6%). No further action was taken, since these compounds were not detected in any samples and were a result of a discrepancy between the primary and secondary standards. The secondary standard also used to spike the LCS and MS/MSD. Because of this difference, Methapyriline exceeded the calibration range in some LCS and MS/MSD samples. No further action was taken, since this compound was on the high side and was not detected in any samples.

CCV1074505 was the continuing calibration verification standard analyzed on 04/27/12. The %D was over the 20% limit for the following compound: Kepone (-29.5%). CCV1076913 was the continuing calibration verification standard analyzed on 05/03/12. The %D was over the 20% limit for the following compound: 1-Kepone (-27.4%). This compound has been historically a poor performer. No further action was taken, since this compound was not detected in any samples.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:**1. Laboratory Control Spikes (LCS)**

All acceptance criteria were met with the exception of:

LCS 127787LCS was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1-Naphthylamine at 35.8 % with criteria of (38-91), a,a-Dimethylphenethylamine at 62 % with criteria of (70-130). The following analytes had marginal exceedance limit failures: 1,4-Naphthoquinone at 0 % with criteria of (8.83-162.2), 2-Naphthylamine at 36 % with criteria of (60-140), Hexachloropropene at 0 % with criteria of (7-119),

Methapyriline at 1230 % with criteria of (0-105). None of the analytes that failed LCS recoveries were detected in the samples

No further action was taken. Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed. All percent recovery and relative percent difference (RPD) criteria were met with the exception of:

MS - TFS-MW-17-MS was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), 1-Naphthylamine at 31.4 % with criteria of (38-91), 2-Naphthylamine at 29.7 % with criteria of (70-130), 4-Aminobiphenyl at 45.8 % with criteria of (49-103), 4-Nitroquinoline-1-oxide at 0 % with criteria of (10-125), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Hexachloropropene at 0 % with criteria of (21-105), Isodrin at 44.9 % with criteria of (54-110) and the following analyte(s) were recovered above criteria: 7,12-Dimethylbenz(a)anthracene at 96.3 % with criteria of (57-95), Diallate (Avadex) at 99 % with criteria of (56-98), Methapyriline at 948 % with criteria of (0-90), Pentachloronitrobenzene(PCNB) at 109 % with criteria of (60-104), Pronamide at 104 % with criteria of (59-99).

SD - TFS-MW-17-MSD was analyzed with the water samples extracted on 04/27/12. The following analytes were recovered below criteria: 1,4-Naphthoquinone at 0 % with criteria of (28-143), 1-Naphthylamine at 26.2 % with criteria of (38-91), 2-Naphthylamine at 22.5 % with criteria of (70-130), 4-Aminobiphenyl at 42.6 % with criteria of (49-103), 4-Nitroquinoline-1-oxide at 0 % with criteria of (10-125), a,a-Dimethylphenethylamine at 0 % with criteria of (70-130), Hexachloropropene at 0 % with criteria of (21-105), Isodrin at 47.8 % with criteria of (54-110), p-Dimethylaminoazobenzene at 61.3 % with criteria of (70-130) and the following analyte(s) were recovered above criteria: Methapyriline at 833 % with criteria of (0-90). The following analytes exceeded RPD criteria: 0,0,0-Triethylphosphorothioate at 22 % with criteria of (20), 1,2,4,5-Tetrachlorobenzene at 26.8 % with criteria of (20), 1,2,4-Trichlorobenzene at 25.7 % with criteria of (20), 1,2-Dichlorobenzene at 24.4 % with criteria of (20), 1,3-Dinitrobenzene at 20.1 % with criteria of (20), 1,4-Dichlorobenzene at 24.6 % with criteria of (20), 2,2'-Oxybis(1-chloropropane) at 28.2 % with criteria of (20), 2,3,4,6-Tetrachlorophenol at 26 % with criteria of (20), 2,4,5-Trichlorophenol at 23.6 % with criteria of (20), 2,4,6-Trichlorophenol at 22.3 % with criteria of (20), 2,4-Dichlorophenol at 20.2 % with criteria of (20), 2,4-Dinitrophenol at 25.7 % with criteria of (20), 2,4-Dinitrotoluene at 33.6 % with criteria of (20), 2,6-Dichlorophenol at 21.8 % with criteria of (20), 2,6-Dinitrotoluene at 23.5 % with criteria of (20), 2-Chloronaphthalene at 25.6 % with criteria of (20), 2-Chlorophenol at 25.3 % with criteria of (20), 2-Methylphenol at 26.2 % with criteria of (20), 2-Naphthylamine at 27.2 % with criteria of (20), 2-Nitroaniline at 24.5 % with criteria of (20), 2-Nitrophenol at 21.3 % with criteria of (20), 2-Picoline at 24 % with criteria of (20), 3-Methylcholanthrene at 23.2 % with criteria of (20), 3-Nitroaniline at 29.3 % with criteria of (20), 4-Bromophenylphenylether at 21.5 % with criteria of (20), 4-Chloro-3-methylphenol at 22.3 % with criteria of (20), 4-Chloroaniline at 24.5 % with criteria of (20), 4-Methylphenol at 25.8 % with criteria of (20), 4-Nitroaniline at 32.1 % with criteria of (20), 4-Nitrophenol at 33.2 % with criteria of (20), 5-Nitro-o-toluidine at 27.5 % with criteria of (20), 7,12-Dimethylbenz(a)anthracene at 23 % with criteria of (20), Acetophenone at 24.9 % with criteria of (20), Aniline at 26.9 % with criteria of (20), Aramite at 21.5 % with criteria of (20), Benzyl alcohol at 26.3 % with criteria of (20), Bis(2-chloroethyl)ether at 24.4 % with criteria of (20), Butylbenzylphthalate at 25 % with criteria of (20), Diallate (Avadex) at 22.9 % with criteria of (20), Dibenzofuran at 23.1 % with criteria of (20), Diethylphthalate at 22.7 % with criteria of (20), Dimethylphthalate at 24.5 % with criteria of (20), Di-n-octylphthalate at 24.8 % with criteria of (20), Ethyl methanesulfonate at 27.3 % with criteria of (20), Hexachlorobenzene at 23.1 % with criteria of (20), Hexachlorobutadiene at 23.5 % with criteria of (20), Hexachlorocyclopentadiene at 81.5 % with criteria of (20), Hexachloroethane at 30 % with criteria of (20), Isophorone at 20.5 % with criteria of (20), Isosafrole at 21.4 % with criteria of (20), Methylmethanesulfonate at 20.3 % with criteria of (20), Nitrobenzene at 22.4 % with criteria of (20), N-Nitrosodibutylamine at 23.5 % with

criteria of (20), N-Nitrosodiethylamine at 20.6 % with criteria of (20), N-Nitrosodimethylamine at 23.1 % with criteria of (20), N-Nitroso-di-n-propylamine at 24.7 % with criteria of (20), N-Nitrosodiphenylamine at 22.4 % with criteria of (20), N-Nitrosomethylethylamine at 21.3 % with criteria of (20), N-Nitrosomorpholine at 21.3 % with criteria of (20), N-Nitrosopiperidine at 20.1 % with criteria of (20), N-Nitrosopyrrolidine at 23.3 % with criteria of (20), o-Toluidine at 23.9 % with criteria of (20), Pentachlorobenzene at 22.1 % with criteria of (20), Pentachloroethane at 26.5 % with criteria of (20), Pentachloronitrobenzene(PCNB) at 21.6 % with criteria of (20), Phenacetin at 21 % with criteria of (20), Phenol at 22.2 % with criteria of (20), Pyridine at 21.8 % with criteria of (20), Safrole at 20.7 % with criteria of (20).

Samples coded accordingly.

Mark Gudnason [Tampa]

From: Mark Gudnason [Tampa]
Sent: Tuesday, May 08, 2012 7:48 PM
To: 'Greg.Rowell@CH2M.com'
Cc: Bethany.Garvey@CH2M.com; 'Camden.Robinson@CH2M.com'
Subject: FW: 3505806 / NAS Key West / 300.1

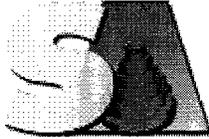
Good afternoon.

This will be in the case narrative for the referenced method and SDG.

- A. **Sample Analysis:** The following samples were re-analyzed out of hold for Nitrate and Nitrite: TFS-MW-17RE1. The sample were initially analyzed within hold however due to the CCV's exceeding limits, the sample was re-analyzed approximately 2 days out of hold. Both sets of data are reported for Nitrate and Nitrite. Only the diluted run is reported for Sulfate.

End Of Report

Date Reported:
16-May-12



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

- Final Report
- Re-Issued Report
- Revised Report

Laboratory Report

CH2M Hill
Northpark 400
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328

Project # 3505816
Project: NAS Key West /Boca Chica/ MW Sampling 426847

Attn: Greg Rowell

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
350581601	IDW-SOIL-1	S	20-Apr-12 14:20	21-Apr-12 9:15
350581602	IDW-LIQ-1	W	20-Apr-12 14:20	21-Apr-12 9:15

The samples were analyzed for the methods listed on the attached table of contents. See the attached data tables for results.

Soil samples are reported on dry weight basis, unless otherwise noted.

Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis.

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met unless noted in the case narrative.

Spectrum Analytical is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Florida	E84207
Texas	T104704408-11
South Carolina	96011001
North Dakota	R-178
California	07253CA
Louisiana	02025
Kansas	E-10385
Arkansas	11-036-1



Certificate # L2259 Testing

Respectfully Submitted,

Brian Spann
Laboratory Director
Spectrum Analytical, Inc. Florida Division

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EXECUTIVE SUMMARY - Detection Highlights

3505816

SAMPLE ID: IDW-LIQ-1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Aluminum	0.0978 J	0.100	MG/L	SW6010B
Arsenic	0.0130	0.0100	MG/L	SW6010B
Barium	0.00911 J	0.0100	MG/L	SW6010B
Calcium	100	0.100	MG/L	SW6010B
Chromium	0.00299 J	0.0100	MG/L	SW6010B
Copper	0.00426 J	0.0100	MG/L	SW6010B
Iron	11.9	0.0500	MG/L	SW6010B
Lead	0.00581 J	0.0150	MG/L	SW6010B
Magnesium	87.1	0.100	MG/L	SW6010B
Manganese	0.118	0.0100	MG/L	SW6010B
Potassium	33.6	0.500	MG/L	SW6010B
Sodium	463	0.360	MG/L	SW6010B
Vanadium	0.000647 J	0.0100	MG/L	SW6010B
Zinc	0.0254	0.0200	MG/L	SW6010B
Acetone	0.00420 J	0.010	MG/L	SW8260B
Toluene	0.000600 J	0.0010	MG/L	SW8260B
pH	7.39	0	PH	E150.1
TPH	3300	510	UG/L	FL-PRO

SAMPLE ID: IDW-SOIL-1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Arsenic	0.0871 J	5.00	MG/L	SW6010B TCLP TCLP
Barium	0.309 J	100	MG/L	SW6010B TCLP TCLP
Cadmium	0.0131 J	1.00	MG/L	SW6010B TCLP TCLP
Chromium	0.0310 J	5.00	MG/L	SW6010B TCLP TCLP
Lead	0.0420 J	5.00	MG/L	SW6010B TCLP TCLP
pH	9.10	0	PH	SW9045

Organics

Organic Data Qualifiers

- U** Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.

- J** Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.

- B** Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.

- E** Indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.

- D** Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.

- C** The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.

- P** This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns.

- N** This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.

- A** This qualifier indicates that a TIC is a suspected aldol-condensation product.

- X** Data flagged as rejected by analyst utilizing analytical judgement.

Organic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

8260 Volatile Organics

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met with the exception of:
Blank 050412BLK12 was analyzed with the water samples on 05/04/12. The following analyte(s) were detected below RL: Acetone at 0.0023 mg/L, Chloromethane at 0.00044 mg/L.
Samples coded accordingly.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample IDW-LIQ-1 was recovered above criteria for the following surrogate(s):
Dibromofluoromethane at 120 % with criteria of (85-115).

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:
LCS 050412LCS11D was analyzed with the water samples on 05/04/12.
All criteria were met. The following analyte(s) exceeded RPD criteria:
Acetone at 20.5 % with criteria of (20).

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Samples coded accordingly.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

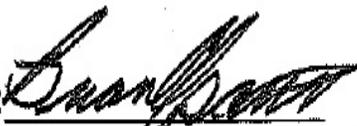
E. Internal Standards:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.
Client specified reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/07/2012

VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8260

EPA Sample No

Lab Sample ID

IDW-LIQ-1

350581602

8260 Sample Data

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 581602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1021

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Water Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.0012	U	0.0006	0.0012	0.0012
74-87-3	Chloromethane	0.00064	U	0.00032	0.00064	0.001
75-01-4	Vinyl chloride	0.00036	U	0.00018	0.00036	0.001
74-83-9	Bromomethane	0.00086	U	0.00043	0.00086	0.001
75-00-3	Chloroethane	0.00144	U	0.00072	0.00144	0.00144
75-69-4	Trichlorofluoromethane	0.0008	U	0.0004	0.0008	0.001
75-35-4	1,1-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
75-15-0	Carbon disulfide	0.00038	U	0.00019	0.00038	0.001
75-09-2	Methylene chloride	0.00132	U	0.00066	0.00132	0.005
156-60-5	trans-1,2-Dichloroethene	0.00066	U	0.00033	0.00066	0.00066
75-34-3	1,1-Dichloroethane	0.001	U	0.0005	0.001	0.001
67-64-1	Acetone	0.0042	J	0.0013	0.0026	0.01
156-59-2	cis-1,2-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
74-97-5	Bromochloromethane	0.00034	U	0.00017	0.00034	0.001
78-93-3	2-Butanone	0.004	U	0.002	0.004	0.004
67-66-3	Chloroform	0.00032	U	0.00016	0.00032	0.0005
71-55-6	1,1,1-Trichloroethane	0.00028	U	0.00014	0.00028	0.001
56-23-5	Carbon tetrachloride	0.00028	U	0.00014	0.00028	0.0005
71-43-2	Benzene	0.00034	U	0.00017	0.00034	0.0005
107-06-2	1,2-Dichloroethane	0.0003	U	0.00015	0.0003	0.0005
79-01-6	Trichloroethene	0.00038	U	0.00019	0.00038	0.0005
78-87-5	1,2-Dichloropropane	0.0003	U	0.00015	0.0003	0.001
75-27-4	Bromodichloromethane	0.0003	U	0.00015	0.0003	0.0005
10061-01-5	cis-1,3-Dichloropropene	0.0008	U	0.0004	0.0008	0.001
108-10-1	4-Methyl-2-pentanone	0.002	U	0.001	0.002	0.004
108-88-3	Toluene	0.0006	J	0.00014	0.00028	0.001

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 581602.D

Sample wt/vol: 5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1021

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Water Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
10061-02-6	trans-1,3-Dichloropropene	0.0006	U	0.0003	0.0006	0.001
79-00-5	1,1,2-Trichloroethane	0.0004	U	0.0002	0.0004	0.001
127-18-4	Tetrachloroethene	0.00042	U	0.00021	0.00042	0.0005
591-78-6	2-Hexanone	0.00096	U	0.00048	0.00096	0.004
124-48-1	Dibromochloromethane	0.00026	U	0.00013	0.00026	0.0005
106-93-4	1,2-Dibromoethane	0.00022	U	0.00011	0.00022	0.001
108-90-7	Chlorobenzene	0.00032	U	0.00016	0.00032	0.0005
100-41-4	Ethylbenzene	0.00044	U	0.00022	0.00044	0.0005
100-42-5	Styrene	0.00024	U	0.00012	0.00024	0.001
75-25-2	Bromoform	0.00038	U	0.00019	0.00038	0.001
98-82-8	Isopropylbenzene	0.00028	U	0.00014	0.00028	0.001
79-34-5	1,1,1,2-Tetrachloroethane	0.00026	U	0.00013	0.00026	0.001
541-73-1	1,3-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.002
106-46-7	1,4-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.003
95-50-1	1,2-Dichlorobenzene	0.0005	U	0.00025	0.0005	0.001
96-12-8	1,2-Dibromo-3-chloropropane	0.002	U	0.001	0.002	0.002
120-82-1	1,2,4-Trichlorobenzene	0.0008	U	0.0004	0.0008	0.001
87-61-6	1,2,3-Trichlorobenzene	0.001	U	0.0005	0.001	0.002
1330-20-7	Xylene (total)	0.001	U	0.0005	0.001	0.002
1634-04-4	Methyl tert-butyl ether	0.001	U	0.0005	0.001	0.001
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.001	U	0.0005	0.001	0.001
108-87-2	Methylcyclohexane	0.00054	U	0.00027	0.00054	0.001
79-20-9	Methyl Acetate	0.00076	U	0.00038	0.00076	0.001
110-82-7	Cyclohexane	0.0004	U	0.0002	0.0004	0.001

8260 QC Summary

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 050412BLK12

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 050412BLK12 Lab File ID: BLK12.D

Sample wt/vol: 5 Units: ML Date Received: 05/04/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0931

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-71-8	Dichlorodifluoromethane	0.0012	U	0.0006	0.0012	0.0012
74-87-3	Chloromethane	0.00044	J	0.00032	0.00064	0.001
75-01-4	Vinyl chloride	0.00036	U	0.00018	0.00036	0.001
74-83-9	Bromomethane	0.00086	U	0.00043	0.00086	0.001
75-00-3	Chloroethane	0.00144	U	0.00072	0.00144	0.00144
75-69-4	Trichlorofluoromethane	0.0008	U	0.0004	0.0008	0.001
75-35-4	1,1-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
75-15-0	Carbon disulfide	0.00038	U	0.00019	0.00038	0.001
75-09-2	Methylene chloride	0.00132	U	0.00066	0.00132	0.005
156-60-5	trans-1,2-Dichloroethene	0.00066	U	0.00033	0.00066	0.00066
75-34-3	1,1-Dichloroethane	0.001	U	0.0005	0.001	0.001
67-64-1	Acetone	0.0023	J	0.0013	0.0026	0.01
156-59-2	cis-1,2-Dichloroethene	0.00038	U	0.00019	0.00038	0.0005
74-97-5	Bromochloromethane	0.00034	U	0.00017	0.00034	0.001
78-93-3	2-Butanone	0.004	U	0.002	0.004	0.004
67-66-3	Chloroform	0.00032	U	0.00016	0.00032	0.0005
71-55-6	1,1,1-Trichloroethane	0.00028	U	0.00014	0.00028	0.001
56-23-5	Carbon tetrachloride	0.00028	U	0.00014	0.00028	0.0005
71-43-2	Benzene	0.00034	U	0.00017	0.00034	0.0005
107-06-2	1,2-Dichloroethane	0.0003	U	0.00015	0.0003	0.0005
79-01-6	Trichloroethene	0.00038	U	0.00019	0.00038	0.0005
78-87-5	1,2-Dichloropropane	0.0003	U	0.00015	0.0003	0.001
75-27-4	Bromodichloromethane	0.0003	U	0.00015	0.0003	0.0005
10061-01-5	cis-1,3-Dichloropropene	0.0008	U	0.0004	0.0008	0.001
108-10-1	4-Methyl-2-pentanone	0.002	U	0.001	0.002	0.004
108-88-3	Toluene	0.00028	U	0.00014	0.00028	0.001
10061-02-6	trans-1,3-Dichloropropene	0.0006	U	0.0003	0.0006	0.001

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 050412BLK12

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 050412BLK12 Lab File ID: BLK12.D

Sample wt/vol: 5 Units: ML Date Received: 05/04/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 0931

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
79-00-5	1,1,2-Trichloroethane	0.0004	U	0.0002	0.0004	0.001
127-18-4	Tetrachloroethene	0.00042	U	0.00021	0.00042	0.0005
591-78-6	2-Hexanone	0.00096	U	0.00048	0.00096	0.004
124-48-1	Dibromochloromethane	0.00026	U	0.00013	0.00026	0.0005
106-93-4	1,2-Dibromoethane	0.00022	U	0.00011	0.00022	0.001
108-90-7	Chlorobenzene	0.00032	U	0.00016	0.00032	0.0005
100-41-4	Ethylbenzene	0.00044	U	0.00022	0.00044	0.0005
100-42-5	Styrene	0.00024	U	0.00012	0.00024	0.001
75-25-2	Bromoform	0.00038	U	0.00019	0.00038	0.001
98-82-8	Isopropylbenzene	0.00028	U	0.00014	0.00028	0.001
79-34-5	1,1,2,2-Tetrachloroethane	0.00026	U	0.00013	0.00026	0.001
541-73-1	1,3-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.002
106-46-7	1,4-Dichlorobenzene	0.0003	U	0.00015	0.0003	0.003
95-50-1	1,2-Dichlorobenzene	0.0005	U	0.00025	0.0005	0.001
96-12-8	1,2-Dibromo-3-chloropropane	0.002	U	0.001	0.002	0.002
120-82-1	1,2,4-Trichlorobenzene	0.0008	U	0.0004	0.0008	0.001
87-61-6	1,2,3-Trichlorobenzene	0.001	U	0.0005	0.001	0.002
1330-20-7	Xylene (total)	0.001	U	0.0005	0.001	0.002
1634-04-4	Methyl tert-butyl ether	0.001	U	0.0005	0.001	0.001
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.001	U	0.0005	0.001	0.001
108-87-2	Methylcyclohexane	0.00054	U	0.00027	0.00054	0.001
79-20-9	Methyl Acetate	0.00076	U	0.00038	0.00076	0.001
110-82-7	Cyclohexane	0.0004	U	0.0002	0.0004	0.001

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 050412BLK12
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID: BLK12.D Lab Sample ID: 050412BLK12
 Instrument ID: VMS01 Date Extracted: _____
 Matrix: WATER Date Analyzed: 05/04/12
 Level:(low/med) LOW Time Analyzed: 0931

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810
2	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832
3	IDW-LIQ-1	350581602	581602.D	05/04/12	1021

COMMENTS:

2A

WATER VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
050412BLK12	114.0	110.0	98.0	118.0			0
050412LCS11	106.0	102.0	96.0	106.0			0
050412LCS11D	112.0	110.0	102.0	110.0			0
IDW-LIQ-1	120.0 *	116.0	108.0	118.0			1

Control Limits

S1 = Dibromofluoromethane 85 - 115
S2 = Toluene-d8 85 - 120
S3 = 4-Bromofluorobenzene 75 - 120
S4 = 1,2-Dichloroethane-d4 70 - 120

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

160512.1607

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: bfb02.D BFB Injection Date: 04/27/12
 Instrument ID: VMS01 BFB Injection Time: 1652
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.4
75	30.0 - 60.0% of mass 95	48
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.9 (1.08)1
174	50.0 - 100.0% of mass 95	86.2
175	5.0 - 9.0% of mass 174	6.3 (7.36)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.4 (96.69)1
177	5.0 - 9.0% of mass 176	5.4 (6.49)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1075199	200PPT	200PPT.D	04/27/12	1743
2	STD1075232	500PPT	500PPT.D	04/27/12	1806
3	STD1075198	1PPB	1PPB.D	04/27/12	1828
4	STD1075201	2PPB	2PPB.D	04/27/12	1850
5	STD1075234	5PPB	5PPB.D	04/27/12	1913
6	STD1075197	10PPB	10PPB.D	04/27/12	1935
7	STD1075200	20PPB	20PPB.D	04/27/12	1957
8	STD1075233	50PPB	50PPB.D	04/27/12	2020
9	STD1075235	60PPB	60PPB.D	04/27/12	2042
10	STD1075236	80PPB	80PPB.D	04/27/12	2104
11	SSC1075238	SEC12	SEC12.D	04/27/12	2149

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: BFB11.D BFB Injection Date: 05/04/12
 Instrument ID: VMS01 BFB Injection Time: 0610
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23
75	30.0 - 60.0% of mass 95	49
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.8 (0.95)1
174	50.0 - 100.0% of mass 95	86.1
175	5.0 - 9.0% of mass 174	6.4 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.9 (98.62)1
177	5.0 - 9.0% of mass 176	5.2 (6.11)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1077341	050412CCV12	50CCV12.D	05/04/12	0730
2	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810
3	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832
4	050412BLK12	050412BLK12	BLK12.D	05/04/12	0931
5	IDW-LIQ-1	350581602	581602.D	05/04/12	1021

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Lab File ID (Standard): 50PPB.D Date Analyzed: 4/27/2012
Instrument ID: VMS01 Time Analyzed: 20:20
GC Column: DB-624 ID: 0.18 (mm)
Matrix: (soil/water) W Heated Purge: (Y/N) No

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	1480488	6.62	1194948	9.14	721940	10.54
UPPER LIMIT	2960976	7.12	2389896	9.64	1443880	11.04
LOWER LIMIT	740244	6.12	597474	8.64	360970	10.04
EPA SAMPLE NO.						
1 050412LCS11	1472220	6.62	1198396	9.14	720683	10.54
2 050412LCS11D	1395016	6.62	1156331	9.14	697849	10.54
3 050412BLK12	1259496	6.62	1051438	9.14	608525	10.54
4 IDW-LIQ-1	1251391	6.62	1073251	9.14	599470	10.54

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 5.89			S2 : 8.12			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	042712BFB02	042712BFB02	bfb02.D	04/27/12	1652	
2	STD1075199	200PPT	200PPT.D	04/27/12	1743	
3	STD1075232	500PPT	500PPT.D	04/27/12	1806	
4	STD1075198	1PPB	1PPB.D	04/27/12	1828	
5	STD1075201	2PPB	2PPB.D	04/27/12	1850	
6	STD1075234	5PPB	5PPB.D	04/27/12	1913	5.89 8.12
7	STD1075197	10PPB	10PPB.D	04/27/12	1935	5.89 8.12
8	STD1075200	20PPB	20PPB.D	04/27/12	1957	5.89 8.12
9	STD1075233	50PPB	50PPB.D	04/27/12	2020	5.89 8.12
10	STD1075235	60PPB	60PPB.D	04/27/12	2042	5.89 8.12
11	STD1075236	80PPB	80PPB.D	04/27/12	2104	5.89 8.12
12	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2127	
13	SSC1075238	SEC12	SEC12.D	04/27/12	2149	5.89 8.12
14	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2211	
15	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2233	
16	050412BFB11	050412BFB11	BFB11.D	05/04/12	0610	
17	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	0649	
18	CCV1077341	050412CCV12	50CCV12.D	05/04/12	0730	5.88 8.12
19	050412LCS11	050412LCS11	LCS11.D	05/04/12	0810	5.88 8.12
20	050412LCS11D	050412LCS11D	LCS11D.D	05/04/12	0832	5.89 8.12
21	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	0908	
22	050412BLK12	050412BLK12	BLK12.D	05/04/12	0931	5.88 8.12
23	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	0959	
24	IDW-LIQ-1	350581602	581602.D	05/04/12	1021	5.89 8.12
25	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	1043	
26	ZZZZZ	ZZZZZ	ZZZZZ	05/04/12	1106	

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/27/12
 Instrument ID: VMS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 5.89			S2 : 8.12			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	05/04/12	1128		
28	ZZZZZZ	ZZZZZZ	05/04/12	1150		
29	ZZZZZZ	ZZZZZZ	05/04/12	1235		
30	ZZZZZZ	ZZZZZZ	05/04/12	1309		
31	ZZZZZZ	ZZZZZZ	05/04/12	1331		
32	ZZZZZZ	ZZZZZZ	05/04/12	1353		
33	ZZZZZZ	ZZZZZZ	05/04/12	1416		
34	ZZZZZZ	ZZZZZZ	05/04/12	1438		
35	ZZZZZZ	ZZZZZZ	05/04/12	1500		
36	ZZZZZZ	ZZZZZZ	05/04/12	1715		
37	ZZZZZZ	ZZZZZZ	05/04/12	1737		

QC LIMITS

S1 = Dibromofluoromethane (+/- 0.4 MINUTES)
 S2 = Toluene-d8 (+/- 0.4 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.63 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.4 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0185	92.5			30 - 155
Chloromethane	0.02	0.0175	87.5			40 - 125
Vinyl chloride	0.02	0.0192	96.0			50 - 145
Bromomethane	0.02	0.015	75.0			30 - 145
Chloroethane	0.02	0.02	100.0			60 - 135
Trichlorofluoromethane	0.02	0.0217	108.0			60 - 145
1,1-Dichloroethene	0.02	0.0204	102.0			70 - 130
Carbon disulfide	0.02	0.0212	106.0			35 - 160
Methylene chloride	0.02	0.0202	101.0			55 - 140
trans-1,2-Dichloroethene	0.02	0.0202	101.0			60 - 140
1,1-Dichloroethane	0.02	0.0199	99.5			70 - 135
Acetone	0.04	0.028	70.0			40 - 140
cis-1,2-Dichloroethene	0.02	0.0202	101.0			70 - 125
Bromochloromethane	0.02	0.0208	104.0			65 - 130
2-Butanone	0.04	0.0326	81.5			30 - 150
Chloroform	0.02	0.0205	102.0			65 - 135
1,1,1-Trichloroethane	0.02	0.0209	104.0			65 - 130
Carbon tetrachloride	0.02	0.0219	110.0			65 - 140
Benzene	0.02	0.0193	96.5			80 - 120
1,2-Dichloroethane	0.02	0.0205	102.0			70 - 130
Trichloroethene	0.02	0.0206	103.0			70 - 125
1,2-Dichloropropane	0.02	0.02	100.0			75 - 125
Bromodichloromethane	0.02	0.0201	100.0			75 - 120
cis-1,3-Dichloropropene	0.02	0.0206	103.0			70 - 130
4-Methyl-2-pentanone	0.04	0.0334	83.5			60 - 135
Toluene	0.02	0.0204	102.0			75 - 120
trans-1,3-Dichloropropene	0.02	0.02	100.0			55 - 140
1,1,2-Trichloroethane	0.02	0.0189	94.5			75 - 125
Tetrachloroethene	0.02	0.0202	101.0			45 - 150
2-Hexanone	0.04	0.0357	89.2			55 - 130
Dibromochloromethane	0.02	0.0212	106.0			60 - 135
1,2-Dibromoethane	0.02	0.0196	98.0			80 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Chlorobenzene	0.02	0.0199	99.5			80 - 120
Ethylbenzene	0.02	0.0201	100.0			75 - 125
Styrene	0.02	0.0201	100.0			65 - 135
Bromoform	0.02	0.0199	99.5			70 - 130
Isopropylbenzene	0.02	0.021	105.0			75 - 125
1,1,2,2-Tetrachloroethane	0.02	0.0183	91.5			65 - 130
1,3-Dichlorobenzene	0.02	0.0198	99.0			75 - 125
1,4-Dichlorobenzene	0.02	0.0192	96.0			75 - 125
1,2-Dichlorobenzene	0.02	0.0201	100.0			70 - 120
1,2-Dibromo-3-chloropropane	0.02	0.0188	94.0			50 - 130
1,2,4-Trichlorobenzene	0.02	0.0193	96.5			65 - 135
1,2,3-Trichlorobenzene	0.02	0.02	100.0			55 - 140
Xylene (total)	0.06	0.0607	101.0			82 - 124
Methyl tert-butyl ether	0.02	0.0186	93.0			65 - 125
1,1,2-Trichloro-1,2,2-trifluoroetha	0.02	0.0217	108.0			70 - 130
Methylcyclohexane	0.02	0.0208	104.0			70 - 130
Methyl Acetate	0.02	0.0172	86.0			70 - 130
Cyclohexane	0.02	0.021	105.0			70 - 130

Spike Recovery: 0 out of 50 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dichlorodifluoromethane	0.02	0.0186	93.0	0.5	20	30 - 155
Chloromethane	0.02	0.0175	87.5	0.0	20	40 - 125
Vinyl chloride	0.02	0.0186	93.0	3.2	20	50 - 145
Bromomethane	0.02	0.0143	71.5	4.8	20	30 - 145
Chloroethane	0.02	0.0197	98.5	1.5	20	60 - 135
Trichlorofluoromethane	0.02	0.0214	107.0	1.4	20	60 - 145
1,1-Dichloroethene	0.02	0.0208	104.0	1.9	20	70 - 130
Carbon disulfide	0.02	0.0208	104.0	1.9	20	35 - 160
Methylene chloride	0.02	0.0208	104.0	2.9	20	55 - 140
trans-1,2-Dichloroethene	0.02	0.0202	101.0	0.0	20	60 - 140
1,1-Dichloroethane	0.02	0.0202	101.0	1.5	20	70 - 135
Acetone	0.04	0.0344	86.0	20.5*	20	40 - 140
cis-1,2-Dichloroethene	0.02	0.0207	104.0	2.4	20	70 - 125
Bromochloromethane	0.02	0.0213	106.0	2.4	20	65 - 130
2-Butanone	0.04	0.039	97.5	17.9	20	30 - 150
Chloroform	0.02	0.0208	104.0	1.5	20	65 - 135
1,1,1-Trichloroethane	0.02	0.0212	106.0	1.4	20	65 - 130
Carbon tetrachloride	0.02	0.0218	109.0	0.5	20	65 - 140
Benzene	0.02	0.0194	97.0	0.5	20	80 - 120
1,2-Dichloroethane	0.02	0.0213	106.0	3.8	20	70 - 130
Trichloroethene	0.02	0.0204	102.0	1.0	20	70 - 125
1,2-Dichloropropane	0.02	0.0204	102.0	2.0	20	75 - 125
Bromodichloromethane	0.02	0.0207	104.0	2.9	20	75 - 120
cis-1,3-Dichloropropene	0.02	0.0205	102.0	0.5	20	70 - 130
4-Methyl-2-pentanone	0.04	0.0392	98.0	16.0	20	60 - 135
Toluene	0.02	0.0207	104.0	1.5	20	75 - 120
trans-1,3-Dichloropropene	0.02	0.0204	102.0	2.0	20	55 - 140
1,1,2-Trichloroethane	0.02	0.02	100.0	5.7	20	75 - 125
Tetrachloroethene	0.02	0.0201	100.0	0.5	20	45 - 150
2-Hexanone	0.04	0.04	100.0	11.4	20	55 - 130
Dibromochloromethane	0.02	0.0215	108.0	1.4	20	60 - 135
1,2-Dibromoethane	0.02	0.0199	99.5	1.5	20	80 - 120

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050412LCS11D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Chlorobenzene	0.02	0.0196	98.0	1.5	20	80 - 120
Ethylbenzene	0.02	0.0199	99.5	1.0	20	75 - 125
Styrene	0.02	0.0198	99.0	1.5	20	65 - 135
Bromoform	0.02	0.0204	102.0	2.5	20	70 - 130
Isopropylbenzene	0.02	0.0204	102.0	2.9	20	75 - 125
1,1,2,2-Tetrachloroethane	0.02	0.0196	98.0	6.9	20	65 - 130
1,3-Dichlorobenzene	0.02	0.0197	98.5	0.5	20	75 - 125
1,4-Dichlorobenzene	0.02	0.0191	95.5	0.5	20	75 - 125
1,2-Dichlorobenzene	0.02	0.0199	99.5	1.0	20	70 - 120
1,2-Dibromo-3-chloropropane	0.02	0.0195	97.5	3.7	20	50 - 130
1,2,4-Trichlorobenzene	0.02	0.0192	96.0	0.5	20	65 - 135
1,2,3-Trichlorobenzene	0.02	0.02	100.0	0.0	20	55 - 140
Xylene (total)	0.06	0.0607	101.0	0.0	20	82 - 124
Methyl tert-butyl ether	0.02	0.0194	97.0	4.2	20	65 - 125
1,1,2-Trichloro-1,2,2-trifluoroetha	0.02	0.0214	107.0	1.4	20	70 - 130
Methylcyclohexane	0.02	0.0203	102.0	2.4	20	70 - 130
Methyl Acetate	0.02	0.0195	97.5	12.5	20	70 - 130
Cyclohexane	0.02	0.0214	107.0	1.9	20	70 - 130

Spike Recovery: 0 out of 50 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8260 Standards Data

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D		RRF0.5 =500PPT.D			
RRF1 =1PPB.D		RRF2 =2PPB.D		RRF5 =5PPB.D			
COMPOUND		RRF0.2	RRF0.5	RRF1	RRF2	RRF5	%RSD OR R^2
Dichlorodifluoromethane				0.201	0.193	0.195	
Chloromethane	#		0.559	0.448	0.391	0.380	#
Vinyl chloride	*		0.329	0.274	0.249	0.258	*
Bromomethane				0.243	0.203	0.190	
Chloroethane				0.161	0.156	0.169	
Trichlorofluoromethane				0.182	0.163	0.180	
1,1-Dichloroethene	*		0.429	0.408	0.350	0.370	*
Carbon disulfide				0.623	0.504	0.510	
Methylene chloride				1.005	0.618	0.560	
trans-1,2-Dichloroethene			0.434	0.445	0.364	0.395	
1,1-Dichloroethane	#			0.645	0.548	0.539	#
Acetone						0.245	
cis-1,2-Dichloroethene			0.299	0.328	0.282	0.284	
Bromochloromethane				0.398	0.371	0.385	
2-Butanone				0.293	0.257	0.235	
Chloroform	*	0.445	0.506	0.520	0.449	0.498	*
1,1,1-Trichloroethane			0.414	0.403	0.352	0.393	
Carbon tetrachloride			0.346	0.370	0.311	0.332	
Benzene		1.324	1.229	1.152	0.966	1.034	
1,2-Dichloroethane			0.455	0.491	0.456	0.456	
Trichloroethene			0.343	0.331	0.280	0.296	
1,2-Dichloropropane	*	0.344	0.339	0.365	0.333	0.345	*
Bromodichloromethane		0.403	0.389	0.426	0.373	0.367	
cis-1,3-Dichloropropene		0.343	0.417	0.450	0.396	0.392	
4-Methyl-2-pentanone				0.170	0.141	0.161	
Toluene	*		0.702	0.774	0.622	0.651	*
trans-1,3-Dichloropropene			0.411	0.448	0.390	0.406	
1,1,2-Trichloroethane			0.283	0.315	0.271	0.292	
Tetrachloroethene			0.332	0.344	0.298	0.288	
2-Hexanone				0.496	0.406	0.312	
Dibromochloromethane		0.277	0.353	0.414	0.354	0.379	
1,2-Dibromoethane				0.401	0.343	0.372	
Chlorobenzene	#		1.144	1.214	0.993	1.019	#
Ethylbenzene	*		0.509	0.544	0.435	0.494	*

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D	RRF0.5 =500PPT.D					
RRF1 =1PPB.D		RRF2 =2PPB.D	RRF5 =5PPB.D					
COMPOUND		RRF0.2	RRF0.5	RRF1	RRF2	RRF5	RRF	%RSD OR R^2
Styrene				0.979	0.854	0.926		
Bromoform	#			0.301	0.272	0.276		#
Isopropylbenzene		2.024	1.962	2.065	1.898	2.100		
1,1,2,2-Tetrachloroethane	#	0.695	0.847	1.065	0.889	0.960		#
1,3-Dichlorobenzene			1.623	1.724	1.502	1.433		
1,4-Dichlorobenzene			1.846	1.848	1.503	1.508		
1,2-Dichlorobenzene			1.448	1.626	1.346	1.454		
1,2-Dibromo-3-chloropropane					0.183	0.157		
1,2,4-Trichlorobenzene				1.153	0.945	0.937		
1,2,3-Trichlorobenzene				1.154	0.957	0.960		
Methyl tert-butyl ether				0.818	0.719	0.744		
1,1,2-Trichloro-1,2,2-trifluoroethane				0.182	0.163	0.180		
Methylcyclohexane				0.424	0.374	0.397		
Methyl Acetate				0.603	0.499	0.493		
Cyclohexane				0.524	0.453	0.503		
o-Xylene			1.217	1.378	1.211	1.265		
p,m-Xylene		0.648	0.588	0.645	0.538	0.604		
=====								
Dibromofluoromethane(SURR)						0.241		
Toluene-d8(SURR)						0.842		
4-Bromofluorobenzene(SURR)						0.755		
1,2-Dichloroethane-d4(SURR)						0.056		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

COMPOUND	RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2
Dichlorodifluoromethane	0.212	0.210	0.235	0.241	0.226	0.21409	8.5
Chloromethane	# 0.393	0.363	0.398	0.428	0.397	0.41739	14.1 #
Vinyl chloride	* 0.284	0.274	0.310	0.347	0.316	0.29359	11.4 *
Bromomethane	0.186	0.128	0.120	0.134	0.123	0.16585	0.99441
Chloroethane	0.167	0.157	0.170	0.191	0.177	0.16851	6.8
Trichlorofluoromethane	0.199	0.177	0.201	0.199	0.205	0.18832	8
1,1-Dichloroethene	* 0.416	0.363	0.383	0.393	0.390	0.38923	6.6 *
Carbon disulfide	0.555	0.505	0.535	0.559	0.561	0.54402	7.4
Methylene chloride	0.569	0.488	0.491	0.491	0.483	0.58791	0.99973
trans-1,2-Dichloroethene	0.429	0.390	0.397	0.406	0.412	0.40803	6.2
1,1-Dichloroethane	# 0.604	0.547	0.554	0.570	0.570	0.5721	6.2 #
Acetone	0.178	0.136	0.139	0.212	0.212	0.18711	23.5 <-
cis-1,2-Dichloroethene	0.323	0.300	0.303	0.311	0.307	0.30425	5.1
Bromochloromethane	0.436	0.381	0.395	0.398	0.398	0.39526	4.9
2-Butanone	0.221	0.201	0.213	0.257	0.251	0.24092	12.3
Chloroform	* 0.523	0.469	0.470	0.481	0.480	0.4841	5.6 *
1,1,1-Trichloroethane	0.431	0.391	0.404	0.415	0.421	0.40255	5.7
Carbon tetrachloride	0.386	0.338	0.367	0.374	0.379	0.35594	7.1
Benzene	1.137	1.031	1.049	1.081	1.088	1.10914	9.5
1,2-Dichloroethane	0.493	0.445	0.448	0.454	0.449	0.46077	3.9
Trichloroethene	0.325	0.284	0.297	0.305	0.305	0.30745	7
1,2-Dichloropropane	* 0.377	0.341	0.347	0.349	0.354	0.34947	3.7 *
Bromodichloromethane	0.407	0.373	0.380	0.388	0.389	0.38943	4.7
cis-1,3-Dichloropropene	0.449	0.413	0.428	0.436	0.434	0.41572	7.8
4-Methyl-2-pentanone	0.171	0.162	0.172	0.195	0.193	0.17072	10.2
Toluene	* 0.739	0.687	0.702	0.711	0.715	0.70035	6.4 *
trans-1,3-Dichloropropene	0.455	0.423	0.441	0.452	0.456	0.43112	5.7
1,1,2-Trichloroethane	0.312	0.279	0.283	0.285	0.285	0.28945	5.1
Tetrachloroethene	0.332	0.284	0.307	0.309	0.308	0.31126	6.6
2-Hexanone	0.406	0.392	0.419	0.462	0.459	0.41895	13.4
Dibromochloromethane	0.406	0.387	0.405	0.403	0.413	0.37903	11.2
1,2-Dibromoethane	0.395	0.359	0.373	0.371	0.370	0.37301	4.9
Chlorobenzene	# 1.106	0.989	1.012	1.022	1.026	1.05835	7.4 #
Ethylbenzene	* 0.540	0.483	0.519	0.520	0.525	0.50762	6.7 *

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS01 Calibration Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 1743 End: 2104
 Min RRF for SPCC(#) = 0.1 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D		RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D	
COMPOUND		RRF10	RRF20	RRF50	RRF60	RRF80	RRF	%RSD OR R^2			
Styrene		1.052	0.957	1.019	1.025	1.034	0.98073	6.8			
Bromoform	#	0.292	0.283	0.306	0.305	0.309	0.29276	4.9	#		
Isopropylbenzene		2.382	2.176	2.285	2.368	2.383	2.16441	8.4			
1,1,2,2-Tetrachloroethane	#	0.972	0.870	0.883	0.873	0.879	0.89324	10.7	#		
1,3-Dichlorobenzene		1.630	1.422	1.453	1.515	1.488	1.53208	6.8			
1,4-Dichlorobenzene		1.650	1.482	1.469	1.512	1.524	1.59349	9.6			
1,2-Dichlorobenzene		1.560	1.416	1.425	1.446	1.443	1.46247	5.6			
1,2-Dibromo-3-chloropropane		0.183	0.162	0.173	0.174	0.175	0.17228	5.7			
1,2,4-Trichlorobenzene		1.030	0.930	0.985	1.024	1.015	1.00241	7.3			
1,2,3-Trichlorobenzene		1.033	0.929	0.968	0.999	1.000	1.00001	7			
Methyl tert-butyl ether		0.780	0.716	0.731	0.736	0.734	0.74723	4.7			
1,1,2-Trichloro-1,2,2-trifluoroethane		0.199	0.177	0.201	0.199	0.205	0.18832	8			
Methylcyclohexane		0.462	0.401	0.443	0.448	0.453	0.42512	7.4			
Methyl Acetate		0.473	0.444	0.463	0.466	0.457	0.48737	10.2			
Cyclohexane		0.594	0.510	0.555	0.573	0.579	0.5363	8.9			
o-Xylene		1.405	1.278	1.348	1.378	1.383	1.31817	5.7			
p,m-Xylene		0.667	0.614	0.639	0.660	0.662	0.62646	6.5			
=====											
Dibromofluoromethane(SURR)		0.251	0.253	0.265	0.233	0.258	0.25015	4.6			
Toluene-d8(SURR)		0.913	0.895	0.938	0.849	0.949	0.89762	5			
4-Bromofluorobenzene(SURR)		0.755	0.742	0.766	0.675	0.752	0.74076	4.5			
1,2-Dichloroethane-d4(SURR)		0.063	0.060	0.064	0.057	0.063	0.06033	5.9			

Average Used: 7.3

7SSC
VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS01 CalibrationDate: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.21409	0.21333	0.4	AVRG
Chloromethane	# 0.41739	0.38337	8.2	AVRG#
Vinyl chloride	* 0.29359	0.30212	2.9	AVRG*
Bromomethane	50	47.7	4.6	LINR
Chloroethane	0.16851	0.16843	0.0	AVRG
Trichlorofluoromethane	0.18832	0.19726	4.7	AVRG
1,1-Dichloroethene	* 0.38923	0.36686	5.7	AVRG*
Carbon disulfide	0.54402	0.52191	4.1	AVRG
Methylene chloride	50	46.5	7.0	LINR
trans-1,2-Dichloroethene	0.40803	0.38198	6.4	AVRG
1,1-Dichloroethane	# 0.5721	0.52598	8.1	AVRG#
Acetone	0.18711	0.18187	2.8	AVRG
cis-1,2-Dichloroethene	0.30425	0.28762	5.5	AVRG
Bromochloromethane	0.39526	0.37025	6.3	AVRG
2-Butanone	0.24092	0.22377	7.1	AVRG
Chloroform	* 0.4841	0.45393	6.2	AVRG*
1,1,1-Trichloroethane	0.40255	0.38696	3.9	AVRG
Carbon tetrachloride	0.35594	0.34864	2.1	AVRG
Benzene	1.10914	1.008	9.1	AVRG
1,2-Dichloroethane	0.46077	0.41892	9.1	AVRG
Trichloroethene	0.30745	0.28515	7.3	AVRG
1,2-Dichloropropane	* 0.34947	0.32933	5.8	AVRG*
Bromodichloromethane	0.38943	0.35793	8.1	AVRG
cis-1,3-Dichloropropene	0.41572	0.40441	2.7	AVRG
4-Methyl-2-pentanone	0.17072	0.16963	0.6	AVRG
Toluene	* 0.70035	0.66666	4.8	AVRG*
trans-1,3-Dichloropropene	0.43112	0.4155	3.6	AVRG
1,1,2-Trichloroethane	0.28945	0.26999	6.7	AVRG
Tetrachloroethene	0.31126	0.29415	5.5	AVRG
2-Hexanone	0.41895	0.41517	0.9	AVRG
Dibromochloromethane	0.37903	0.38076	0.5	AVRG
1,2-Dibromoethane	0.37301	0.35035	6.1	AVRG
Chlorobenzene	# 1.05835	0.96341	9.0	AVRG#
Ethylbenzene	* 0.50762	0.49389	2.7	AVRG*
Styrene	0.98073	0.95526	2.6	AVRG
Bromoform	# 0.29276	0.27986	4.4	AVRG#

7SSC
VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS01 CalibrationDate: 04/27/12 Time: 2149
 CCV ID: SSC1075238 Lab File ID: SEC12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Isopropylbenzene	2.16441	2.224	2.8	AVRG
1,1,2,2-Tetrachloroethane	# 0.89324	0.83143	6.9	AVRG#
1,3-Dichlorobenzene	1.53208	1.405	8.3	AVRG
1,4-Dichlorobenzene	1.59349	1.43	10.3	AVRG
1,2-Dichlorobenzene	1.46247	1.366	6.6	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.16323	5.3	AVRG
1,2,4-Trichlorobenzene	1.00241	0.96434	3.8	AVRG
1,2,3-Trichlorobenzene	1.00001	0.95666	4.3	AVRG
Methyl tert-butyl ether	0.74723	0.68805	7.9	AVRG
1,1,2-Trichloro-1,2,2-trifluoroethane	0.18832	0.19726	4.7	AVRG
Methylcyclohexane	0.42512	0.41887	1.5	AVRG
Methyl Acetate	0.48737	0.43285	11.2	AVRG
Cyclohexane	0.5363	0.53202	0.8	AVRG
o-Xylene	1.31817	1.278	3.0	AVRG
p,m-Xylene	0.62646	0.61501	1.8	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.24471	2.2	AVRG
Toluene-d8(SURR)	0.89762	0.87451	2.6	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.72689	1.9	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06094	1.0	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS01 CalibrationDate: 05/04/12 Time: 0730
 CCV ID: CCV1077341 Lab File ID: 50CCV12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dichlorodifluoromethane	0.21409	0.2431	13.6	AVRG
Chloromethane	# 0.41739	0.4021	3.7	AVRG#
Vinyl chloride	* 0.29359	0.32213	9.7	AVRG*
Bromomethane	50	38.7	22.6	LINR
Chloroethane	0.16851	0.18814	11.6	AVRG
Trichlorofluoromethane	0.18832	0.23285	23.6	AVRG
1,1-Dichloroethene	* 0.38923	0.40281	3.5	AVRG*
Carbon disulfide	0.54402	0.56514	3.9	AVRG
Methylene chloride	50	48.5	3.0	LINR
trans-1,2-Dichloroethene	0.40803	0.39379	3.5	AVRG
1,1-Dichloroethane	# 0.5721	0.54852	4.1	AVRG#
Acetone	0.18711	0.15334	18.0	AVRG
cis-1,2-Dichloroethene	0.30425	0.29416	3.3	AVRG
Bromochloromethane	0.39526	0.39077	1.1	AVRG
2-Butanone	0.24092	0.19823	17.7	AVRG
Chloroform	* 0.4841	0.469	3.1	AVRG*
1,1,1-Trichloroethane	0.40255	0.41519	3.1	AVRG
Carbon tetrachloride	0.35594	0.38263	7.5	AVRG
Benzene	1.10914	1.026	7.5	AVRG
1,2-Dichloroethane	0.46077	0.44878	2.6	AVRG
Trichloroethene	0.30745	0.29323	4.6	AVRG
1,2-Dichloropropane	* 0.34947	0.33835	3.2	AVRG*
Bromodichloromethane	0.38943	0.378	2.9	AVRG
cis-1,3-Dichloropropene	0.41572	0.41635	0.2	AVRG
4-Methyl-2-pentanone	0.17072	0.14401	15.6	AVRG
Toluene	* 0.70035	0.6788	3.1	AVRG*
trans-1,3-Dichloropropene	0.43112	0.42432	1.6	AVRG
1,1,2-Trichloroethane	0.28945	0.26623	8.0	AVRG
Tetrachloroethene	0.31126	0.3037	2.4	AVRG
2-Hexanone	0.41895	0.34676	17.2	AVRG
Dibromochloromethane	0.37903	0.3889	2.6	AVRG
1,2-Dibromoethane	0.37301	0.34496	7.5	AVRG
Chlorobenzene	# 1.05835	0.96907	8.4	AVRG#
Ethylbenzene	* 0.50762	0.49155	3.2	AVRG*
Styrene	0.98073	0.95061	3.1	AVRG
Bromoform	# 0.29276	0.28121	3.9	AVRG#

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS01 CalibrationDate: 05/04/12 Time: 0730
 CCV ID: CCV1077341 Lab File ID: 50CCV12.D Init. Calib. Date Begin: 04/27/12 End: 04/27/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.1 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Isopropylbenzene	2.16441	2.203	1.8	AVRG
1,1,2,2-Tetrachloroethane	# 0.89324	0.77568	13.2	AVRG#
1,3-Dichlorobenzene	1.53208	1.417	7.5	AVRG
1,4-Dichlorobenzene	1.59349	1.445	9.3	AVRG
1,2-Dichlorobenzene	1.46247	1.38	5.6	AVRG
1,2-Dibromo-3-chloropropane	0.17228	0.14612	15.2	AVRG
1,2,4-Trichlorobenzene	1.00241	0.95973	4.3	AVRG
1,2,3-Trichlorobenzene	1.00001	0.95835	4.2	AVRG
Methyl tert-butyl ether	0.74723	0.66758	10.7	AVRG
1,1,2-Trichloro-1,2,2-trifluoroethane	0.18832	0.23285	23.6	AVRG
Methylcyclohexane	0.42512	0.45944	8.1	AVRG
Methyl Acetate	0.48737	0.39678	18.6	AVRG
Cyclohexane	0.5363	0.57429	7.1	AVRG
o-Xylene	1.31817	1.261	4.3	AVRG
p,m-Xylene	0.62646	0.61644	1.6	AVRG
=====				
Dibromofluoromethane(SURR)	0.25015	0.26566	6.2	AVRG
Toluene-d8(SURR)	0.89762	0.9376	4.5	AVRG
4-Bromofluorobenzene(SURR)	0.74076	0.71365	3.7	AVRG
1,2-Dichloroethane-d4(SURR)	0.06033	0.06282	4.1	AVRG

Average Used: 7.4

8260 TCLP Volatile Organics

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA 8260B/SW846

IV. PREPARATION

The TCLP samples were prepared by EPA 1311/SW846 for volatiles analysis. All aspects of sample preparation proceeded without exception.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

All acceptance criteria were met.

**CASE NARRATIVE
GC/MS VOLATILE ORGANICS**

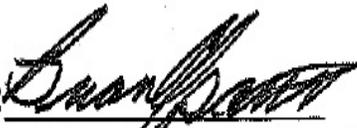
Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

F. Samples:

Sample analysis proceeded normally.
Client specified reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik **Title:** Lab Director

SIGNED:

DATE: 05/10/2012

VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8260 TCLP

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>

8260 TCLP Sample Data

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-SOIL-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 581601.D

Sample wt/vol: 0.5 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1513

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: IDW Soils Method: 8260 TCLP

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-35-4	1,1-Dichloroethene	0.0038	U	0.0019	0.0038	0.7
107-06-2	1,2-Dichloroethane	0.003	U	0.0015	0.003	0.5
78-93-3	2-Butanone	0.04	U	0.02	0.04	200
71-43-2	Benzene	0.0034	U	0.0017	0.0034	0.5
56-23-5	Carbon tetrachloride	0.0028	U	0.0014	0.0028	0.5
108-90-7	Chlorobenzene	0.0032	U	0.0016	0.0032	100
67-66-3	Chloroform	0.0032	U	0.0016	0.0032	6
127-18-4	Tetrachloroethene	0.0042	U	0.0021	0.0042	0.7
79-01-6	Trichloroethene	0.0038	U	0.0019	0.0038	0.5
75-01-4	Vinyl chloride	0.0036	U	0.0018	0.0036	0.2
106-46-7	1,4-Dichlorobenzene	0.003	U	0.0015	0.003	7.5

8260 TCLP QC Summary

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 050912TBLK61

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 050912TBLK61 Lab File ID: TBLK61R.D

Sample wt/vol: 0.5 Units: ML Date Received: 05/09/12

Concentrated Extract Volume: 5 Date Extracted: _____

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1447

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: PURGETRAP Station ID: _____ Method: 8260 TCLP

GPC Cleanup : (Y/N) _____ pH: _____

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
75-35-4	1,1-Dichloroethene	0.0038	U	0.0019	0.0038	0.7
107-06-2	1,2-Dichloroethane	0.003	U	0.0015	0.003	0.5
78-93-3	2-Butanone	0.04	U	0.02	0.04	200
71-43-2	Benzene	0.0034	U	0.0017	0.0034	0.5
56-23-5	Carbon tetrachloride	0.0028	U	0.0014	0.0028	0.5
108-90-7	Chlorobenzene	0.0032	U	0.0016	0.0032	100
67-66-3	Chloroform	0.0032	U	0.0016	0.0032	6
127-18-4	Tetrachloroethene	0.0042	U	0.0021	0.0042	0.7
79-01-6	Trichloroethene	0.0038	U	0.0019	0.0038	0.5
75-01-4	Vinyl chloride	0.0036	U	0.0018	0.0036	0.2
106-46-7	1,4-Dichlorobenzene	0.003	U	0.0015	0.003	7.5

VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 050912TBLK61
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID: TBLK61R.D Lab Sample ID: 050912TBLK61
 Instrument ID: VMS06 Date Extracted: _____
 Matrix: WATER Date Analyzed: 05/09/12
 Level:(low/med) LOW Time Analyzed: 1447

TCLP Analysis

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	050912LCS61	050912LCS61	LCS61.D	05/09/12	0918
2	050912LCS61D	050912LCS61D	LCS61D.D	05/09/12	0943
3	IDW-SOIL-1	350581601	581601.D	05/09/12	1513

COMMENTS:

2A

WATER VOLATILE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): DB-624 ID: 0.18 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
050912LCS61	94.0	102.0	100.0	104.0			0
050912LCS61D	98.0	104.0	110.0	108.0			0
050912TBLK61	98.0	104.0	108.0	104.0			0
IDW-SOIL-1	98.0	108.0	112.0	112.0			0

Control Limits

S1 = Dibromofluoromethane 83 - 128
S2 = Toluene-d8 89 - 121
S3 = 4-Bromofluorobenzene 85 - 115
S4 = 1,2-Dichloroethane-d4 89 - 123

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

160512.1608

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: BFB61.D BFB Injection Date: 04/16/12
 Instrument ID: VMS06 BFB Injection Time: 0604
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.5
75	30.0 - 60.0% of mass 95	51
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.7 (1.04)1
174	50.0 - 100.0% of mass 95	68.7
175	5.0 - 9.0% of mass 174	4.5 (6.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	66.5 (96.81)1
177	5.0 - 9.0% of mass 176	4.7 (7.1)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1070754	80PPB	80PPB.D	04/16/12	0729
2	STD1070753	60PPB	60PPB.D	04/16/12	0754
3	STD1070751	50PPB	50PPB.D	04/16/12	0819
4	STD1070746	20PPB	20PPB.D	04/16/12	0845
5	STD1070743	10PPB	10PPB.D	04/16/12	0910
6	STD1070752	5PPB	5PPB.D	04/16/12	0935
7	STD1070747	2PPB	2PPB.D	04/16/12	1001
8	STD1070744	1PPB	1PPB.D	04/16/12	1026
9	STD1070750	500PPT	500PPT.D	04/16/12	1051
10	STD1070745	200PPT	200PPT.D	04/16/12	1117
11	SSC1070755	SEC62	SEC62.D	04/16/12	1405

**VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
BROMOFLUOROBENZENE (BFB)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Lab File ID: BFB61.D BFB Injection Date: 05/09/12
 Instrument ID: VMS06 BFB Injection Time: 0738
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	46.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.4 (0.49)1
174	50.0 - 100.0% of mass 95	76.4
175	5.0 - 9.0% of mass 174	6.4 (8.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	73.4 (96.09)1
177	5.0 - 9.0% of mass 176	5.1 (6.93)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1078641	050912CCV62	50CCV62.D	05/09/12	0853
2	050912LCS61	050912LCS61	LCS61.D	05/09/12	0918
3	050912LCS61D	050912LCS61D	LCS61D.D	05/09/12	0943
4	050912TBLK61	050912TBLK61	TBLK61R.D	05/09/12	1447
5	IDW-SOIL-1	350581601	581601.D	05/09/12	1513

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Lab File ID (Standard): 50PPB.D Date Analyzed: 4/16/2012
Instrument ID: VMS06 Time Analyzed: 8:19
GC Column: DB-624 ID: 0.18 (mm)
Matrix: (soil/water) W Heated Purge: (Y/N) No

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	1907258	6.75	1310460	9.98	817371	12.32
UPPER LIMIT	3814516	7.25	2620920	10.48	1634742	12.82
LOWER LIMIT	953629	6.25	655230	9.48	408685.5	11.82
EPA SAMPLE NO.						
1 050912LCS61	2330135	6.75	1798584	9.98	1005129	12.32
2 050912LCS61D	2314797	6.75	1827158	9.98	980240	12.32
3 050912TBLK61	1908533	6.75	1474893	9.98	730066	12.32
4 IDW-SOIL-1	1883903	6.75	1494667	9.98	743593	12.32

IS1 = Fluorobenzene

IS2 = Chlorobenzene-d5

IS3 = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/16/12
 Instrument ID: VMS06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 8.51			S2 : 5.92				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	041612BFB61	041612BFB61	BFB61.D	04/16/12	0604		
2	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	0630		
3	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	0655		
4	STD1070754	80PPB	80PPB.D	04/16/12	0729	8.51	5.92
5	STD1070753	60PPB	60PPB.D	04/16/12	0754	8.51	5.92
6	STD1070751	50PPB	50PPB.D	04/16/12	0819	8.51	5.92
7	STD1070746	20PPB	20PPB.D	04/16/12	0845	8.51	5.92
8	STD1070743	10PPB	10PPB.D	04/16/12	0910	8.51	5.92
9	STD1070752	5PPB	5PPB.D	04/16/12	0935	8.51	5.93
10	STD1070747	2PPB	2PPB.D	04/16/12	1001		
11	STD1070744	1PPB	1PPB.D	04/16/12	1026		
12	STD1070750	500PPT	500PPT.D	04/16/12	1051		
13	STD1070745	200PPT	200PPT.D	04/16/12	1117		
14	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1158		
15	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1223		
16	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1249		
17	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1314		
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1339		
19	SSC1070755	SEC62	SEC62.D	04/16/12	1405	8.51	5.92
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1430		
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/16/12	1455		
22	050912BFB61	050912BFB61	BFB61.D	05/09/12	0738		
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	0819		
24	CCV1078641	050912CCV62	50CCV62.D	05/09/12	0853	8.51	5.92
25	050912LCS61	050912LCS61	LCS61.D	05/09/12	0918	8.51	5.92
26	050912LCS61D	050912LCS61D	LCS61D.D	05/09/12	0943	8.51	5.92

QC LIMITS

S1 = Toluene-d8 (+/- 0.41 MINUTES)
 S2 = Dibromofluoromethane (+/- 0.41 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.74 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.41 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: DB-624 ID: 0.18 (mm) Init. Calib. Date: 04/16/12
 Instrument ID: VMS06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1: 8.51		S2: 5.92				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	05/09/12	1009		
28	ZZZZZZ	ZZZZZZ	05/09/12	1034		
29	ZZZZZZ	ZZZZZZ	05/09/12	1059		
30	ZZZZZZ	ZZZZZZ	05/09/12	1125		
31	ZZZZZZ	ZZZZZZ	05/09/12	1150		
32	ZZZZZZ	ZZZZZZ	05/09/12	1215		
33	ZZZZZZ	ZZZZZZ	05/09/12	1241		
34	ZZZZZZ	ZZZZZZ	05/09/12	1306		
35	ZZZZZZ	ZZZZZZ	05/09/12	1331		
36	ZZZZZZ	ZZZZZZ	05/09/12	1357		
37	ZZZZZZ	ZZZZZZ	05/09/12	1422		
38	050912TBLK61	050912TBLK61	TBLK61R.D	05/09/12	1447	8.51 5.92
39	IDW-SOIL-1	350581601	581601.D	05/09/12	1513	8.51 5.92
40	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1538	
41	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1604	
42	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1629	
43	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1655	
44	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1720	
45	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1746	
46	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1811	
47	ZZZZZZ	ZZZZZZ	ZZZZZZ	05/09/12	1837	

QC LIMITS

S1 = Toluene-d8 (+/- 0.41 MINUTES)
 S2 = Dibromofluoromethane (+/- 0.41 MINUTES)
 S3 = 4-Bromofluorobenzene (+/- 0.74 MINUTES)
 S4 = 1,2-Dichloroethane-d4 (+/- 0.41 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050912LCS61

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816**TCLP Analysis**

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Vinyl chloride	0.02	0.0208	104.0			63 - 129
1,1-Dichloroethene	0.02	0.0171	85.5			70 - 130
2-Butanone	0.04	0.0366	91.5			30 - 150
Chloroform	0.02	0.0181	90.5			65 - 135
Carbon tetrachloride	0.02	0.0189	94.5			65 - 140
Benzene	0.02	0.0221	110.0			77 - 118
1,2-Dichloroethane	0.02	0.0166	83.0			78 - 124
Trichloroethene	0.02	0.0216	108.0			70 - 125
Tetrachloroethene	0.02	0.0219	110.0			80 - 111
Chlorobenzene	0.02	0.0214	107.0			76 - 114
1,4-Dichlorobenzene	0.02	0.0205	102.0			70 - 117

Spike Recovery: 0 out of 11 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

050912LCS61D

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816**TCLP Analysis**

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Vinyl chloride	0.02	0.0203	102.0	2.4	20	63 - 129
1,1-Dichloroethene	0.02	0.0177	88.5	3.4	20	70 - 130
2-Butanone	0.04	0.0354	88.5	3.3	20	30 - 150
Chloroform	0.02	0.0183	91.5	1.1	20	65 - 135
Carbon tetrachloride	0.02	0.0179	89.5	5.4	20	65 - 140
Benzene	0.02	0.0221	110.0	0.0	20	77 - 118
1,2-Dichloroethane	0.02	0.0166	83.0	0.0	20	78 - 124
Trichloroethene	0.02	0.0214	107.0	0.9	20	70 - 125
Tetrachloroethene	0.02	0.0211	106.0	3.7	20	80 - 111
Chlorobenzene	0.02	0.0209	104.0	2.4	20	76 - 114
1,4-Dichlorobenzene	0.02	0.0211	106.0	2.9	20	70 - 117

Spike Recovery: 0 out of 11 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8260 TCLP Standards Data

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(#) = 0.5 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF0.2 =200PPT.D	RRF0.5 =500PPT.D					
RRF1 =1PPB.D		RRF2 =2PPB.D	RRF5 =5PPB.D					
COMPOUND		RRF0.2	RRF0.5	RRF1	RRF2	RRF5	$\overline{\text{RRF}}$	%RSD OR R^2
1,1-Dichloroethene	*		1.373	1.039	1.105	0.988		*
1,2-Dichloroethane			1.022	0.884	0.958	0.842		
2-Butanone					0.233	0.223		
Benzene		2.498	2.337	2.444	2.823	2.710		
Carbon tetrachloride			0.828	0.753	0.943	0.789		
Chlorobenzene	#		2.461	2.478	2.597	2.483		#
Chloroform	*	1.581	1.204	1.074	1.292	1.123		*
Tetrachloroethene			0.695	0.741	0.765	0.734		
Trichloroethene			0.768	0.638	0.761	0.644		
Vinyl chloride	*		1.033	0.828	0.878	0.795		*
1,4-Dichlorobenzene			3.779	3.460	4.163	3.465		
=====								
1,2-Dichloroethane-d4(SURR)								
4-Bromofluorobenzene(SURR)						1.780		
Dibromofluoromethane(SURR)						0.495		
Toluene-d8(SURR)						2.090		

VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: VMS06 Calibration Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Calibration Time Begin: 729 End: 1117
 Min RRF for SPCC(#) = 0.5 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF10 =10PPB.D		RRF20 =20PPB.D				
RRF50 =50PPB.D		RRF60 =60PPB.D		RRF80 =80PPB.D				
COMPOUND		RRF10	RRF20	RRF50	RRF60	RRF80	<u>RRF</u>	%RSD OR R^2
1,1-Dichloroethene	*	1.197	1.013	0.962	1.182	1.165	1.11396	11.7 *
1,2-Dichloroethane		0.896	0.815	0.796	0.870	0.872	0.8838	8
2-Butanone		0.245	0.209	0.214	0.235	0.218	0.22528	5.7
Benzene		2.545	2.727	2.505	2.566	2.508	2.56646	5.7
Carbon tetrachloride		0.898	0.837	0.844	0.964	0.988	0.87167	9.3
Chlorobenzene	#	2.418	2.393	2.270	2.341	2.235	2.40837	4.7 #
Chloroform	*	1.189	1.119	1.104	1.163	1.140	1.19914	12.3 *
Tetrachloroethene		0.752	0.705	0.684	0.700	0.685	0.71787	4.2
Trichloroethene		0.678	0.693	0.650	0.701	0.685	0.69097	6.8
Vinyl chloride	*	0.917	0.790	0.813	0.985	1.022	0.89579	10.9 *
1,4-Dichlorobenzene		3.331	3.268	2.974	3.110	2.969	3.39088	11.5
=====								
1,2-Dichloroethane-d4(SURR)		0.131	0.122	0.115	0.113	0.108	0.11784	7.6
4-Bromofluorobenzene(SURR)		1.456	1.813	1.486	1.591	1.511	1.60608	9.6
Dibromofluoromethane(SURR)		0.526	0.566	0.506	0.512	0.503	0.51792	5
Toluene-d8(SURR)		2.149	2.346	1.804	2.500	2.023	2.15182	11.4

7SSC

VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS06 CalibrationDate: 04/16/12 Time: 1405
 CCV ID: SSC1070755 Lab File ID: SEC62.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.5 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1,1-Dichloroethene	* 1.11396	1.088	2.3	AVRG *
1,2-Dichloroethane	0.8838	0.88117	0.3	AVRG
2-Butanone	0.22528	0.23073	2.4	AVRG
Benzene	2.56646	2.739	6.7	AVRG
Carbon tetrachloride	0.87167	0.93892	7.7	AVRG
Chlorobenzene	# 2.40837	2.267	5.9	AVRG#
Chloroform	* 1.19914	1.201	0.2	AVRG *
Tetrachloroethene	0.71787	0.65869	8.2	AVRG
Trichloroethene	0.69097	0.64264	7.0	AVRG
Vinyl chloride	* 0.89579	0.89696	0.1	AVRG *
1,4-Dichlorobenzene	3.39088	3.012	11.2	AVRG
=====				
1,2-Dichloroethane-d4(SURR)	0.11784	0.14027	19.0	AVRG
4-Bromofluorobenzene(SURR)	1.60608	1.778	10.7	AVRG
Dibromofluoromethane(SURR)	0.51792	0.61045	17.9	AVRG
Toluene-d8(SURR)	2.15182	2.136	0.7	AVRG

VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: VMS06 CalibrationDate: 05/09/12 Time: 0853
 CCV ID: CCV1078641 Lab File ID: 50CCV62.D Init. Calib. Date Begin: 04/16/12 End: 04/16/12
 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) NO
 Min RRF for SPCC(#) = 0.5 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1,1-Dichloroethene	* 1.11396	0.93462	16.1	AVRG *
1,2-Dichloroethane	0.8838	0.71409	19.2	AVRG
2-Butanone	0.22528	0.21341	5.3	AVRG
Benzene	2.56646	2.687	4.7	AVRG
Carbon tetrachloride	0.87167	0.78654	9.8	AVRG
Chlorobenzene	# 2.40837	2.428	0.8	AVRG#
Chloroform	* 1.19914	1.061	11.5	AVRG *
Tetrachloroethene	0.71787	0.74335	3.5	AVRG
Trichloroethene	0.69097	0.71172	3.0	AVRG
Vinyl chloride	* 0.89579	0.89853	0.3	AVRG *
1,4-Dichlorobenzene	3.39088	3.207	5.4	AVRG
=====				
1,2-Dichloroethane-d4(SURR)	0.11784	0.11898	1.0	AVRG
4-Bromofluorobenzene(SURR)	1.60608	1.542	4.0	AVRG
Dibromofluoromethane(SURR)	0.51792	0.48439	6.5	AVRG
Toluene-d8(SURR)	2.15182	2.16	0.4	AVRG

8270 Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8270 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met with the exception of:

SSC1072998 was the second source verification standard analyzed with the initial calibration on 04/23/12. The %D was over the 20% limit for the following compound: Isophorone (+24.9%). No further action was taken, since this compound was not detected in any samples.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanf **Title:** Lab Director

SIGNED:
05/02/2012

DATE:

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8270

EPA Sample No

Lab Sample ID

IDW-LIQ-1

350581602

8270 Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 81602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 2217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Water Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
111-44-4	Bis(2-chloroethyl)ether	0.0061	U	0.0031	0.0061	0.0061
108-95-2	Phenol	0.0035	U	0.0017	0.0035	0.0041
95-57-8	2-Chlorophenol	0.0059	U	0.003	0.0059	0.0059
541-73-1	1,3-Dichlorobenzene	0.0055	U	0.0028	0.0055	0.0055
106-46-7	1,4-Dichlorobenzene	0.0055	U	0.0028	0.0055	0.0055
95-50-1	1,2-Dichlorobenzene	0.0053	U	0.0026	0.0053	0.0053
108-60-1	2,2'-Oxybis(1-chloropropane)	0.0067	U	0.0034	0.0067	0.0067
95-48-7	2-Methylphenol	0.0053	U	0.0026	0.0053	0.0053
67-72-1	Hexachloroethane	0.0053	U	0.0026	0.0053	0.0053
621-64-7	N-Nitroso-di-n-propylamine	0.0061	U	0.0031	0.0061	0.0061
106-44-5	4-Methylphenol	0.012	U	0.0062	0.012	0.012
98-95-3	Nitrobenzene	0.002	U	0.001	0.002	0.0041
78-59-1	Isophorone	0.0078	U	0.0039	0.0078	0.0078
88-75-5	2-Nitrophenol	0.0016	U	0.00078	0.0016	0.0041
105-67-9	2,4-Dimethylphenol	0.0047	U	0.0023	0.0047	0.0047
111-91-1	Bis(2-chloroethoxy)methane	0.0071	U	0.0036	0.0071	0.0071
120-83-2	2,4-Dichlorophenol	0.0063	U	0.0032	0.0063	0.0063
120-82-1	1,2,4-Trichlorobenzene	0.0053	U	0.0026	0.0053	0.0053
91-20-3	Naphthalene	0.0057	U	0.0028	0.0057	0.0057
106-47-8	4-Chloroaniline	0.0061	U	0.0031	0.0061	0.0061
91-57-6	2-Methylnaphthalene	0.0057	U	0.0028	0.0057	0.0057
87-68-3	Hexachlorobutadiene	0.0051	U	0.0026	0.0051	0.0051
59-50-7	4-Chloro-3-methylphenol	0.0055	U	0.0028	0.0055	0.0055
77-47-4	Hexachlorocyclopentadiene	0.0017	U	0.00084	0.0017	0.0041
88-06-2	2,4,6-Trichlorophenol	0.0017	U	0.00086	0.0017	0.0041
95-95-4	2,4,5-Trichlorophenol	0.0069	U	0.0035	0.0069	0.0069

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 81602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 2217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Water Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-58-7	2-Chloronaphthalene	0.0057	U	0.0028	0.0057	0.0057
88-74-4	2-Nitroaniline	0.0061	U	0.0031	0.0061	0.0061
208-96-8	Acenaphthylene	0.0061	U	0.0031	0.0061	0.0061
131-11-3	Dimethylphthalate	0.0061	U	0.0031	0.0061	0.0061
606-20-2	2,6-Dinitrotoluene	0.0057	U	0.0028	0.0057	0.0057
83-32-9	Acenaphthene	0.0057	U	0.0028	0.0057	0.0057
99-09-2	3-Nitroaniline	0.0057	U	0.0028	0.0057	0.0057
51-28-5	2,4-Dinitrophenol	0.011	U	0.0057	0.011	0.02
132-64-9	Dibenzofuran	0.0055	U	0.0028	0.0055	0.0055
121-14-2	2,4-Dinitrotoluene	0.0057	U	0.0028	0.0057	0.0057
100-02-7	4-Nitrophenol	0.0082	U	0.0041	0.0082	0.0082
86-73-7	Fluorene	0.0059	U	0.003	0.0059	0.0059
7005-72-3	4-Chlorophenyl-phenylether	0.0051	U	0.0026	0.0051	0.0051
84-66-2	Diethylphthalate	0.0057	U	0.0028	0.0057	0.0057
100-01-6	4-Nitroaniline	0.0031	U	0.0015	0.0031	0.0041
534-52-1	4,6-Dinitro-2-methylphenol	0.0082	U	0.0041	0.0082	0.0082
86-30-6	N-Nitrosodiphenylamine	0.0069	U	0.0035	0.0069	0.0069
101-55-3	4-Bromophenyl-phenylether	0.0047	U	0.0023	0.0047	0.0047
118-74-1	Hexachlorobenzene	0.00084	U	0.00042	0.00084	0.0041
87-86-5	Pentachlorophenol	0.0028	U	0.0014	0.0028	0.01
85-01-8	Phenanthrene	0.0057	U	0.0028	0.0057	0.0057
120-12-7	Anthracene	0.0057	U	0.0028	0.0057	0.0057
84-74-2	Di-n-butylphthalate	0.0018	U	0.00088	0.0018	0.0041
206-44-0	Fluoranthene	0.0057	U	0.0028	0.0057	0.0057
129-00-0	Pyrene	0.0024	U	0.0012	0.0024	0.0041
85-68-7	Butylbenzylphthalate	0.0061	U	0.0031	0.0061	0.0061

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 81602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 2217

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Water Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
91-94-1	3,3'-Dichlorobenzidine	0.0055	U	0.0028	0.0055	0.0055
56-55-3	Benzo(a)anthracene	0.0053	U	0.0026	0.0053	0.0053
218-01-9	Chrysene	0.0059	U	0.003	0.0059	0.0059
117-81-7	Bis(2-ethylhexyl)phthalate	0.009	U	0.0045	0.009	0.009
117-84-0	Di-n-octylphthalate	0.0041	U	0.002	0.0041	0.0041
205-99-2	Benzo(b)fluoranthene	0.0053	U	0.0026	0.0053	0.0053
207-08-9	Benzo(k)fluoranthene	0.0059	U	0.003	0.0059	0.0059
50-32-8	Benzo(a)pyrene	0.0057	U	0.0028	0.0057	0.0057
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	U	0.0016	0.0033	0.0041
53-70-3	Dibenzo(a,h)anthracene	0.0024	U	0.0012	0.0024	0.0041
191-24-2	Benzo(g,h,i)perylene	0.0053	U	0.0026	0.0053	0.0053
86-74-8	Carbazole	0.0063	U	0.0032	0.0063	0.0063

8270 QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127786MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
111-44-4	Bis(2-chloroethyl)ether	0.006	U	0.003	0.006	0.006
108-95-2	Phenol	0.0034	U	0.0017	0.0034	0.004
95-57-8	2-Chlorophenol	0.0058	U	0.0029	0.0058	0.0058
541-73-1	1,3-Dichlorobenzene	0.0054	U	0.0027	0.0054	0.0054
106-46-7	1,4-Dichlorobenzene	0.0054	U	0.0027	0.0054	0.0054
95-50-1	1,2-Dichlorobenzene	0.0052	U	0.0026	0.0052	0.0052
108-60-1	2,2'-Oxybis(1-chloropropane)	0.0066	U	0.0033	0.0066	0.0066
95-48-7	2-Methylphenol	0.0052	U	0.0026	0.0052	0.0052
67-72-1	Hexachloroethane	0.0052	U	0.0026	0.0052	0.0052
621-64-7	N-Nitroso-di-n-propylamine	0.006	U	0.003	0.006	0.006
106-44-5	4-Methylphenol	0.012	U	0.0061	0.012	0.012
98-95-3	Nitrobenzene	0.002	U	0.001	0.002	0.004
78-59-1	Isophorone	0.0076	U	0.0038	0.0076	0.0076
88-75-5	2-Nitrophenol	0.0015	U	0.00077	0.0015	0.004
105-67-9	2,4-Dimethylphenol	0.0046	U	0.0023	0.0046	0.0046
111-91-1	Bis(2-chloroethoxy)methane	0.007	U	0.0035	0.007	0.007
120-83-2	2,4-Dichlorophenol	0.0062	U	0.0031	0.0062	0.0062
120-82-1	1,2,4-Trichlorobenzene	0.0052	U	0.0026	0.0052	0.0052
91-20-3	Naphthalene	0.0056	U	0.0028	0.0056	0.0056
106-47-8	4-Chloroaniline	0.006	U	0.003	0.006	0.006
91-57-6	2-Methylnaphthalene	0.0056	U	0.0028	0.0056	0.0056
87-68-3	Hexachlorobutadiene	0.005	U	0.0025	0.005	0.005
59-50-7	4-Chloro-3-methylphenol	0.0054	U	0.0027	0.0054	0.0054
77-47-4	Hexachlorocyclopentadiene	0.0016	U	0.00082	0.0016	0.004
88-06-2	2,4,6-Trichlorophenol	0.0017	U	0.00084	0.0017	0.004
95-95-4	2,4,5-Trichlorophenol	0.0068	U	0.0034	0.0068	0.0068
91-58-7	2-Chloronaphthalene	0.0056	U	0.0028	0.0056	0.0056

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127786MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
88-74-4	2-Nitroaniline	0.006	U	0.003	0.006	0.006
208-96-8	Acenaphthylene	0.006	U	0.003	0.006	0.006
131-11-3	Dimethylphthalate	0.006	U	0.003	0.006	0.006
606-20-2	2,6-Dinitrotoluene	0.0056	U	0.0028	0.0056	0.0056
83-32-9	Acenaphthene	0.0056	U	0.0028	0.0056	0.0056
99-09-2	3-Nitroaniline	0.0056	U	0.0028	0.0056	0.0056
51-28-5	2,4-Dinitrophenol	0.011	U	0.0056	0.011	0.02
132-64-9	Dibenzofuran	0.0054	U	0.0027	0.0054	0.0054
121-14-2	2,4-Dinitrotoluene	0.0056	U	0.0028	0.0056	0.0056
100-02-7	4-Nitrophenol	0.008	U	0.004	0.008	0.008
86-73-7	Fluorene	0.0058	U	0.0029	0.0058	0.0058
7005-72-3	4-Chlorophenyl-phenylether	0.005	U	0.0025	0.005	0.005
84-66-2	Diethylphthalate	0.0056	U	0.0028	0.0056	0.0056
100-01-6	4-Nitroaniline	0.003	U	0.0015	0.003	0.004
534-52-1	4,6-Dinitro-2-methylphenol	0.008	U	0.004	0.008	0.008
86-30-6	N-Nitrosodiphenylamine	0.0068	U	0.0034	0.0068	0.0068
101-55-3	4-Bromophenyl-phenylether	0.0046	U	0.0023	0.0046	0.0046
118-74-1	Hexachlorobenzene	0.00082	U	0.00041	0.00082	0.004
87-86-5	Pentachlorophenol	0.0028	U	0.0014	0.0028	0.01
85-01-8	Phenanthrene	0.0056	U	0.0028	0.0056	0.0056
120-12-7	Anthracene	0.0056	U	0.0028	0.0056	0.0056
84-74-2	Di-n-butylphthalate	0.0017	U	0.00086	0.0017	0.004
206-44-0	Fluoranthene	0.0056	U	0.0028	0.0056	0.0056
129-00-0	Pyrene	0.0024	U	0.0012	0.0024	0.004
85-68-7	Butylbenzylphthalate	0.006	U	0.003	0.006	0.006
91-94-1	3,3'-Dichlorobenzidine	0.0054	U	0.0027	0.0054	0.0054
56-55-3	Benzo(a)anthracene	0.0052	U	0.0026	0.0052	0.0052

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127786MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127786MB Lab File ID: 9225MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 1 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1643

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
218-01-9	Chrysene	0.0058	U	0.0029	0.0058	0.0058
117-81-7	Bis(2-ethylhexyl)phthalate	0.0088	U	0.0044	0.0088	0.0088
117-84-0	Di-n-octylphthalate	0.004	U	0.002	0.004	0.004
205-99-2	Benzo(b)fluoranthene	0.0052	U	0.0026	0.0052	0.0052
207-08-9	Benzo(k)fluoranthene	0.0058	U	0.0029	0.0058	0.0058
50-32-8	Benzo(a)pyrene	0.0056	U	0.0028	0.0056	0.0056
193-39-5	Indeno(1,2,3-cd)pyrene	0.0032	U	0.0016	0.0032	0.004
53-70-3	Dibenzo(a,h)anthracene	0.0024	U	0.0012	0.0024	0.004
191-24-2	Benzo(g,h,i)perylene	0.0052	U	0.0026	0.0052	0.0052
86-74-8	Carbazole	0.0062	U	0.0031	0.0062	0.0062

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127786MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID: 9225MB.D Lab Sample ID: 127786MB
 Instrument ID: SMSD03 Date Extracted: 04/27/12
 Matrix: WATER Date Analyzed: 04/27/12
 Level:(low/med) LOW Time Analyzed: 1643

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127787LCS	127787LCS	9225LCS.D	04/27/12	1707
2	IDW-LIQ-1	350581602	81602.D	04/27/12	2217

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.2
68	Less than 2.0% of mass 69	0.6 (1.3)1
69	Mass 69 relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.83)1
127	10.0 - 80.0% of mass 198	45.1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	33
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.5 (14.69)2
442	Greater than 50.0% of mass 198	92
443	15.0 - 24.0% of mass 442	17.3 (18.77)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1072999	45921	8270CAL7.D	04/23/12	1023
2	STD1073000	45922	8270CAL6.D	04/23/12	1047
3	STD1073001	45923	8270CAL5.D	04/23/12	1110
4	STD1073002	45924	8270CAL4.D	04/23/12	1134
5	STD1073004	45925	8270CAL3.D	04/23/12	1158
6	STD1073005	45926	8270CAL2.D	04/23/12	1221
7	STD1073006	45927	8270CAL1.D	04/23/12	1245
8	SSC1072998	45872	8270SEC2.D	04/23/12	1333
9	STD1073007	45933	BSCAL7.D	04/23/12	1356
10	STD1073008	45934	BSCAL6.D	04/23/12	1420
11	STD1073009	45935	BSCAL5.D	04/23/12	1444
12	STD1073010	45936	BSCAL4.D	04/23/12	1507
13	STD1073012	45937	BSCAL3.D	04/23/12	1531
14	STD1073013	45938	BSCAL2.D	04/23/12	1555
15	STD1073014	45939	BSCAL1.D	04/23/12	1619
16	SSC1072994	44859	BSSEC.D	04/23/12	1642

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: DFTPP1.D DFTPP Injection Date: 04/27/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1455
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.1
68	Less than 2.0% of mass 69	0.4 (0.85)1
69	Mass 69 relative abundance	45.5
70	Less than 2.0% of mass 69	0.1 (0.29)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	33.9
365	Greater than 1.0% of mass 198	6
441	0.0 - 24.0% of mass 442	14 (14.13)2
442	Greater than 50.0% of mass 198	99
443	15.0 - 24.0% of mass 442	19.5 (19.68)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1074504	45924	8270CCV1.D	04/27/12	1519
2	CCV1074506	45936	BSCCV1.D	04/27/12	1542
3	127786MB	127786MB	9225MB.D	04/27/12	1643
4	127787LCS	127787LCS	9225LCS.D	04/27/12	1707
5	IDW-LIQ-1	350581602	81602.D	04/27/12	2217

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
Instrument ID: SMSD03 Time Analyzed: 11:34
GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
1 127786MB	313979	4.41	1012472	5.57	687469	7.27
2 127787LCS	322392	4.41	1074655	5.57	731454	7.27
3 IDW-LIQ-1	279132	4.41	930870	5.57	669281	7.27

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18
EPA SAMPLE NO.						
1 127786MB	1317444	8.72	1698973	11.32	1793483	12.66
2 127787LCS	1427761	8.72	2061660	11.32	1814437	12.65
3 IDW-LIQ-1	1285284	8.72	1660988	11.32	1700280	12.64

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP2	45777	DFTPP2.D	04/23/12	1003	
2	STD1072999	45921	8270CAL7.D	04/23/12	1023	3.39 4.15
3	STD1073000	45922	8270CAL6.D	04/23/12	1047	3.38 4.14
4	STD1073001	45923	8270CAL5.D	04/23/12	1110	3.38 4.14
5	STD1073002	45924	8270CAL4.D	04/23/12	1134	3.38 4.14
6	STD1073004	45925	8270CAL3.D	04/23/12	1158	3.38 4.14
7	STD1073005	45926	8270CAL2.D	04/23/12	1221	3.39 4.14
8	STD1073006	45927	8270CAL1.D	04/23/12	1245	3.39 4.14
9	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1309	
10	SSC1072998	45872	8270SEC2.D	04/23/12	1333	3.38 4.14
11	STD1073007	45933	BSCAL7.D	04/23/12	1356	
12	STD1073008	45934	BSCAL6.D	04/23/12	1420	
13	STD1073009	45935	BSCAL5.D	04/23/12	1444	
14	STD1073010	45936	BSCAL4.D	04/23/12	1507	
15	STD1073012	45937	BSCAL3.D	04/23/12	1531	
16	STD1073013	45938	BSCAL2.D	04/23/12	1555	
17	STD1073014	45939	BSCAL1.D	04/23/12	1619	
18	SSC1072994	44859	BSSEC.D	04/23/12	1642	
19	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1706	
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1730	
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1753	
22	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1817	
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1841	
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1904	
25	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1928	
26	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1952	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	04/23/12	2015		
28	DFTPP1	DFTPP1.D	04/27/12	1455		
29	CCV1074504	8270CCV1.D	04/27/12	1519	3.34	4.1
30	CCV1074506	BSCCV1.D	04/27/12	1542		
31	ZZZZZZ	ZZZZZZ	04/27/12	1606		
32	127786MB	9225MB.D	04/27/12	1643	3.34	4.09
33	127787LCS	9225LCS.D	04/27/12	1707	3.34	4.1
34	ZZZZZZ	ZZZZZZ	04/27/12	1732		
35	ZZZZZZ	ZZZZZZ	04/27/12	1756		
36	ZZZZZZ	ZZZZZZ	04/27/12	1820		
37	ZZZZZZ	ZZZZZZ	04/27/12	1845		
38	ZZZZZZ	ZZZZZZ	04/27/12	1909		
39	ZZZZZZ	ZZZZZZ	04/27/12	1932		
40	ZZZZZZ	ZZZZZZ	04/27/12	1956		
41	ZZZZZZ	ZZZZZZ	04/27/12	2020		
42	ZZZZZZ	ZZZZZZ	04/27/12	2043		
43	ZZZZZZ	ZZZZZZ	04/27/12	2107		
44	ZZZZZZ	ZZZZZZ	04/27/12	2130		
45	ZZZZZZ	ZZZZZZ	04/27/12	2154		
46	IDW-LIQ-1	81602.D	04/27/12	2217	3.34	4.09
47	ZZZZZZ	ZZZZZZ	04/27/12	2241		
48	ZZZZZZ	ZZZZZZ	04/27/12	2305		
49	ZZZZZZ	ZZZZZZ	04/27/12	2328		

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127787LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Bis(2-chloroethyl)ether	0.04	0.037	92.5			35 - 110
Phenol	0.04	0.013	32.5			0 - 115
2-Chlorophenol	0.04	0.028	70.0			35 - 105
1,3-Dichlorobenzene	0.04	0.028	70.0			30 - 100
1,4-Dichlorobenzene	0.04	0.028	70.0			30 - 100
1,2-Dichlorobenzene	0.04	0.029	72.5			35 - 100
2,2'-Oxybis(1-chloropropane)	0.04	0.031	77.5			25 - 130
2-Methylphenol	0.04	0.024	60.0			40 - 110
Hexachloroethane	0.04	0.027	67.5			30 - 95
N-Nitroso-di-n-propylamine	0.04	0.039	97.5			35 - 130
4-Methylphenol	0.04	0.026	65.0			30 - 110
Nitrobenzene	0.04	0.034	85.0			45 - 110
Isophorone	0.04	0.039	97.5			50 - 110
2-Nitrophenol	0.04	0.031	77.5			40 - 115
2,4-Dimethylphenol	0.04	0.031	77.5			30 - 110
Bis(2-chloroethoxy)methane	0.04	0.034	85.0			45 - 105
2,4-Dichlorophenol	0.04	0.03	75.0			50 - 105
1,2,4-Trichlorobenzene	0.04	0.03	75.0			35 - 105
Naphthalene	0.04	0.032	80.0			40 - 100
4-Chloroaniline	0.04	0.034	85.0			15 - 110
2-Methylnaphthalene	0.04	0.03	75.0			45 - 105
Hexachlorobutadiene	0.04	0.031	77.5			25 - 105
4-Chloro-3-methylphenol	0.04	0.03	75.0			45 - 110
Hexachlorocyclopentadiene	0.04	0.025	62.5			13 - 80
2,4,6-Trichlorophenol	0.04	0.03	75.0			50 - 115
2,4,5-Trichlorophenol	0.04	0.035	87.5			50 - 110
2-Chloronaphthalene	0.04	0.032	80.0			50 - 105
2-Nitroaniline	0.04	0.037	92.5			50 - 115
Acenaphthylene	0.04	0.034	85.0			50 - 105
Dimethylphthalate	0.04	0.035	87.5			25 - 125
2,6-Dinitrotoluene	0.04	0.033	82.5			50 - 115
Acenaphthene	0.04	0.032	80.0			45 - 110

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127787LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
3-Nitroaniline	0.04	0.033	82.5			20 - 125
2,4-Dinitrophenol	0.08	0.076	95.0			15 - 140
Dibenzofuran	0.04	0.033	82.5			55 - 105
2,4-Dinitrotoluene	0.04	0.034	85.0			50 - 120
4-Nitrophenol	0.04	0.016	40.0			0 - 125
Fluorene	0.04	0.033	82.5			50 - 110
4-Chlorophenyl-phenylether	0.04	0.033	82.5			50 - 110
Diethylphthalate	0.04	0.037	92.5			40 - 120
4-Nitroaniline	0.04	0.04	100.0			35 - 120
4,6-Dinitro-2-methylphenol	0.04	0.031	77.5			40 - 130
N-Nitrosodiphenylamine	0.04	0.033	82.5			50 - 110
4-Bromophenyl-phenylether	0.04	0.032	80.0			50 - 115
Hexachlorobenzene	0.04	0.03	75.0			50 - 110
Pentachlorophenol	0.04	0.041	102.0			40 - 115
Phenanthrene	0.04	0.033	82.5			50 - 115
Anthracene	0.04	0.033	82.5			55 - 110
Di-n-butylphthalate	0.04	0.034	85.0			55 - 115
Fluoranthene	0.04	0.033	82.5			55 - 115
Pyrene	0.04	0.035	87.5			50 - 130
Butylbenzylphthalate	0.04	0.04	100.0			45 - 115
3,3'-Dichlorobenzidine	0.08	0.061	76.2			20 - 110
Benzo(a)anthracene	0.04	0.037	92.5			55 - 110
Chrysene	0.04	0.035	87.5			55 - 110
Bis(2-ethylhexyl)phthalate	0.04	0.04	100.0			40 - 125
Di-n-octylphthalate	0.04	0.038	95.0			35 - 135
Benzo(b)fluoranthene	0.04	0.04	100.0			45 - 120
Benzo(k)fluoranthene	0.04	0.035	87.5			45 - 125
Benzo(a)pyrene	0.04	0.035	87.5			55 - 110
Indeno(1,2,3-cd)pyrene	0.04	0.035	87.5			45 - 125
Dibenzo(a,h)anthracene	0.04	0.035	87.5			40 - 125
Benzo(g,h,i)perylene	0.04	0.035	87.5			40 - 125
Carbazole	0.04	0.036	90.0			50 - 115

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 127787LCS
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.

Spike Recovery: 0 out of 64 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8270 Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D	RRF10 =8270CAL2.D					
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D	RRF60 =8270CAL5.D					
COMPOUND		RRF4	RRF10	RRF20	RRF45	RRF60	$\overline{\text{RRF}}$	%RSD OR R^2
Bis(2-chloroethyl)ether		1.059	1.079	1.103	1.131	1.124		
Phenol	*	1.631	1.590	1.687	1.797	1.829		*
2-Chlorophenol		1.119	1.054	1.148	1.201	1.191		
1,3-Dichlorobenzene		1.399	1.287	1.420	1.458	1.471		
1,4-Dichlorobenzene	*	1.484	1.425	1.469	1.519	1.522		*
1,2-Dichlorobenzene		1.304	1.323	1.355	1.379	1.380		
2,2'-Oxybis(1-chloropropane)		0.780	0.709	0.750	0.790	0.777		
2-Methylphenol		0.952	0.955	0.991	1.091	1.089		
Hexachloroethane		0.583	0.553	0.574	0.609	0.598		
N-Nitroso-di-n-propylamine	#	1.113	1.088	1.136	1.235	1.214		#
4-Methylphenol		1.362	1.406	1.475	1.554	1.571		
Nitrobenzene		0.526	0.524	0.528	0.543	0.527		
Isophorone		0.611	0.617	0.633	0.653	0.643		
2-Nitrophenol	*	0.179	0.188	0.197	0.197	0.203		*
2,4-Dimethylphenol		0.303	0.290	0.299	0.305	0.303		
Bis(2-chloroethoxy)methane		0.428	0.419	0.433	0.445	0.439		
2,4-Dichlorophenol	*	0.319	0.347	0.350	0.364	0.374		*
1,2,4-Trichlorobenzene		0.452	0.431	0.429	0.446	0.453		
Naphthalene		1.063	0.989	1.028	1.047	1.030		
4-Chloroaniline		0.430	0.409	0.428	0.438	0.436		
2-Methylnaphthalene		0.744	0.700	0.729	0.751	0.758		
Hexachlorobutadiene	*	0.330	0.315	0.340	0.344	0.349		*
4-Chloro-3-methylphenol	*	0.330	0.321	0.342	0.354	0.350		*
Hexachlorocyclopentadiene	#	0.544	0.573	0.624	0.650	0.667		#
2,4,6-Trichlorophenol	*	0.442	0.463	0.486	0.517	0.525		*
2,4,5-Trichlorophenol		0.399	0.438	0.453	0.468	0.483		
2-Chloronaphthalene		1.087	1.104	1.169	1.216	1.205		
2-Nitroaniline		0.354	0.388	0.407	0.422	0.422		
Acenaphthylene		1.668	1.658	1.757	1.802	1.784		
Dimethylphthalate		1.307	1.314	1.378	1.403	1.374		
2,6-Dinitrotoluene		0.266	0.286	0.300	0.319	0.323		
Acenaphthene	*	0.941	0.987	1.035	1.085	1.095		*
3-Nitroaniline		0.254	0.255	0.276	0.278	0.274		
2,4-Dinitrophenol	#		0.095	0.142	0.195	0.210		#

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D		RRF10 =8270CAL2.D			
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D		RRF60 =8270CAL5.D			
COMPOUND		RRF4	RRF10	RRF20	RRF45	RRF60	%RSD OR R^2
Dibenzofuran		1.688	1.639	1.683	1.774	1.743	
2,4-Dinitrotoluene		0.377	0.399	0.411	0.433	0.446	
4-Nitrophenol	#	0.232	0.281	0.304	0.314	0.309	#
Fluorene		1.314	1.344	1.410	1.557	1.573	
4-Chlorophenyl-phenylether		0.764	0.787	0.822	0.925	0.954	
Diethylphthalate		1.243	1.225	1.226	1.281	1.266	
4-Nitroaniline		0.265	0.217	0.216	0.222	0.238	
4,6-Dinitro-2-methylphenol		0.093	0.122	0.142	0.171	0.174	
N-Nitrosodiphenylamine	*	0.482	0.488	0.500	0.509	0.504	*
4-Bromophenyl-phenylether		0.269	0.272	0.283	0.301	0.298	
Hexachlorobenzene		0.316	0.301	0.315	0.344	0.348	
Pentachlorophenol	*		0.155	0.183	0.205	0.210	*
Phenanthrene		1.037	1.007	1.019	1.080	1.038	
Anthracene		1.010	0.996	1.024	1.076	1.057	
Di-n-butylphthalate		0.999	1.047	1.099	1.143	1.113	
Fluoranthene	*	1.217	1.154	1.204	1.211	1.174	*
Pyrene		0.923	0.881	0.878	0.790	0.738	
Butylbenzylphthalate		0.335	0.346	0.355	0.354	0.343	
3,3'-Dichlorobenzidine		0.391	0.416	0.444	0.493	0.488	
Benzo(a)anthracene		1.097	1.035	1.062	1.048	1.002	
Chrysene		1.019	0.957	0.978	0.893	0.827	
Bis(2-ethylhexyl)phthalate		0.565	0.570	0.609	0.633	0.621	
Di-n-octylphthalate	*	0.763	0.818	0.876	0.936	0.916	*
Benzo(b)fluoranthene		1.017	1.083	1.076	1.097	1.071	
Benzo(k)fluoranthene		1.111	1.063	1.084	1.152	1.088	
Benzo(a)pyrene	*	0.977	1.049	1.061	1.089	1.063	*
Indeno(1,2,3-cd)pyrene		1.270	1.261	1.323	1.347	1.307	
Dibenzo(a,h)anthracene		1.084	1.086	1.148	1.191	1.167	
Benzo(g,h,i)perylene		1.025	1.038	1.067	1.022	0.964	
Carbazole		0.869	0.854	0.860	0.846	0.848	
=====							
2-Fluorophenol(SURR)		1.109	1.085	1.161	1.193	1.186	
Phenol-d5(SURR)		1.464	1.441	1.516	1.613	1.619	
Nitrobenzene-d5(SURR)		0.527	0.515	0.536	0.553	0.547	

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF4 =8270CAL1.D	RRF10 =8270CAL2.D				
RRF20 =8270CAL3.D		RRF45 =8270CAL4.D	RRF60 =8270CAL5.D				
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	$\overline{\text{RRF}}$	%RSD OR R^2
2-Fluorobiphenyl(SURR)	1.504	1.477	1.534	1.626	1.585		
2,4,6-Tribromophenol(SURR)	0.232	0.261	0.273	0.289	0.292		
p-Terphenyl-d14(SURR)	0.904	0.818	0.821	0.757	0.689		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D					
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2		
Bis(2-chloroethyl)ether	1.107	1.136				1.10557	2.6		
Phenol	* 1.855	1.926				1.75904	7.1	*	
2-Chlorophenol	1.175	1.208				1.15668	4.7		
1,3-Dichlorobenzene	1.437	1.460				1.41871	4.5		
1,4-Dichlorobenzene	* 1.518	1.530				1.49525	2.5	*	
1,2-Dichlorobenzene	1.381	1.408				1.36142	2.7		
2,2'-Oxybis(1-chloropropane)	0.775	0.829				0.77294	4.7		
2-Methylphenol	1.096	1.160				1.04767	7.8		
Hexachloroethane	0.602	0.615				0.59057	3.7		
N-Nitroso-di-n-propylamine	# 1.205	1.250				1.17738	5.4	#	
4-Methylphenol	1.604	1.633				1.51461	6.8		
Nitrobenzene	0.538	0.540				0.53215	1.4		
Isophorone	0.653					0.63498	0.99986		
2-Nitrophenol	* 0.203	0.211				0.19693	5.3	*	
2,4-Dimethylphenol	0.310	0.313				0.30321	2.5		
Bis(2-chloroethoxy)methane	0.456	0.456				0.43959	3.2		
2,4-Dichlorophenol	* 0.368	0.382				0.35774	5.9	*	
1,2,4-Trichlorobenzene	0.457	0.463				0.44729	2.9		
Naphthalene	1.025	1.005				1.02648	2.4		
4-Chloroaniline	0.443	0.438				0.43162	2.6		
2-Methylnaphthalene	0.774	0.772				0.74689	3.5		
Hexachlorobutadiene	* 0.355	0.360				0.34168	4.5	*	
4-Chloro-3-methylphenol	* 0.349	0.363				0.34436	4.2	*	
Hexachlorocyclopentadiene	# 0.670	0.689				0.63111	8.6	#	
2,4,6-Trichlorophenol	* 0.517	0.534				0.49778	7	*	
2,4,5-Trichlorophenol	0.486	0.494				0.46015	7.2		
2-Chloronaphthalene	1.219	1.207				1.17243	4.7		
2-Nitroaniline	0.414	0.421				0.40396	6.2		
Acenaphthylene	1.769	1.702				1.73451	3.3		
Dimethylphthalate	1.345	1.307				1.347	2.9		
2,6-Dinitrotoluene	0.322	0.315				0.30449	7		
Acenaphthene	* 1.107	1.113				1.0518	6.3	*	
3-Nitroaniline	0.278	0.279				0.27047	4.1		
2,4-Dinitrophenol	# 0.215	0.219				0.17918	0.9995	#	

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D	RRF100 =8270CAL7.D				
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
Dibenzofuran	1.740	1.714				1.71164	2.6
2,4-Dinitrotoluene	0.456	0.467				0.42698	7.7
4-Nitrophenol	# 0.308	0.310				0.29402	10 #
Fluorene	1.602	1.578				1.48267	8.3
4-Chlorophenyl-phenylether	0.977	0.994				0.8889	10.8
Diethylphthalate	1.242	1.221				1.24358	1.8
4-Nitroaniline	0.237	0.244				0.23414	7.5
4,6-Dinitro-2-methylphenol	0.179	0.187				0.15268	0.99853
N-Nitrosodiphenylamine	* 0.520	0.524				0.50383	3.1 *
4-Bromophenyl-phenylether	0.307	0.316				0.29225	6.2
Hexachlorobenzene	0.357	0.371				0.33604	7.6
Pentachlorophenol	* 0.211	0.222				0.1975	12.5 *
Phenanthrene	1.035	0.998				1.03044	2.6
Anthracene	1.031	0.992				1.02634	3
Di-n-butylphthalate	1.105	1.052				1.07969	4.6
Fluoranthene	* 1.179	1.132				1.18164	2.7 *
Pyrene	0.702	0.653				0.79473	12.9
Butylbenzylphthalate	0.338	0.340				0.34424	2.3
3,3'-Dichlorobenzidine	0.502	0.507				0.46301	10
Benzo(a)anthracene	0.936	0.848				1.00427	8.5
Chrysene	0.782	0.705				0.88032	13
Bis(2-ethylhexyl)phthalate	0.608	0.559				0.59501	5
Di-n-octylphthalate	* 0.898	0.826				0.86193	7.2 *
Benzo(b)fluoranthene	1.070	1.027				1.06307	2.8
Benzo(k)fluoranthene	1.038	0.940				1.06816	6.3
Benzo(a)pyrene	* 1.038	0.993				1.03857	3.9 *
Indeno(1,2,3-cd)pyrene	1.295	1.257				1.29416	2.6
Dibenzo(a,h)anthracene	1.149	1.087				1.13022	3.9
Benzo(g,h,i)perylene	0.927	0.878				0.98879	6.9
Carbazole	0.857	0.851				0.85498	0.9
=====							
2-Fluorophenol(SURR)	1.171	1.186				1.15589	3.6
Phenol-d5(SURR)	1.608	1.585				1.54937	4.9
Nitrobenzene-d5(SURR)	0.549	0.552				0.53982	2.7

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1619
 Min RRF for SPCC(#) = 0.05 Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D			
COMPOUND	RRF75	RRF100				$\overline{\text{RRF}}$	%RSD OR R^2
2-Fluorobiphenyl(SURR)	1.580	1.529				1.54784	3.3
2,4,6-Tribromophenol(SURR)	0.299	0.311				0.27947	9.5
p-Terphenyl-d14(SURR)	0.671	0.622				0.75461	13.2

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Bis(2-chloroethyl)ether	1.10557	1.19	7.6	AVRG
Phenol	* 1.75904	1.767	0.5	AVRG *
2-Chlorophenol	1.15668	1.15	0.6	AVRG
1,3-Dichlorobenzene	1.41871	1.424	0.4	AVRG
1,4-Dichlorobenzene	* 1.49525	1.509	0.9	AVRG *
1,2-Dichlorobenzene	1.36142	1.362	0.0	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.80115	3.6	AVRG
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58903	0.3	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.244	5.7	AVRG #
4-Methylphenol	1.51461	1.54	1.7	AVRG
Nitrobenzene	0.53215	0.52704	1.0	AVRG
Isophorone	45	56.2	24.9	LINR
2-Nitrophenol	* 0.19693	0.19603	0.5	AVRG *
2,4-Dimethylphenol	0.30321	0.32693	7.8	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46869	6.6	AVRG
2,4-Dichlorophenol	* 0.35774	0.35146	1.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.44124	1.4	AVRG
Naphthalene	1.02648	1.087	5.9	AVRG
4-Chloroaniline	0.43162	0.45571	5.6	AVRG
2-Methylnaphthalene	0.74689	0.75534	1.1	AVRG
Hexachlorobutadiene	* 0.34168	0.37423	9.5	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.34325	0.3	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.66526	5.4	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.51405	3.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47926	4.2	AVRG
2-Chloronaphthalene	1.17243	1.21	3.2	AVRG
2-Nitroaniline	0.40396	0.43684	8.1	AVRG
Acenaphthylene	1.73451	1.854	6.9	AVRG
Dimethylphthalate	1.347	1.437	6.7	AVRG
2,6-Dinitrotoluene	0.30449	0.31835	4.6	AVRG
Acenaphthene	* 1.0518	1.086	3.3	AVRG *
3-Nitroaniline	0.27047	0.29706	9.8	AVRG
2,4-Dinitrophenol	# 45	49.6	10.2	LINR #
Dibenzofuran	1.71164	1.795	4.9	AVRG
2,4-Dinitrotoluene	0.42698	0.44249	3.6	AVRG

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.31262	6.3	AVRG#
Fluorene	1.48267	1.595	7.6	AVRG
4-Chlorophenyl-phenylether	0.8889	0.93795	5.5	AVRG
Diethylphthalate	1.24358	1.303	4.8	AVRG
4-Nitroaniline	0.23414	0.25728	9.9	AVRG
4,6-Dinitro-2-methylphenol	45	43.7	2.9	LINR
N-Nitrosodiphenylamine	* 0.50383	0.55994	11.1	AVRG*
4-Bromophenyl-phenylether	0.29225	0.31014	6.1	AVRG
Hexachlorobenzene	0.33604	0.34736	3.4	AVRG
Pentachlorophenol	* 0.1975	0.20129	1.9	AVRG*
Phenanthrene	1.03044	1.101	6.8	AVRG
Anthracene	1.02634	1.104	7.6	AVRG
Di-n-butylphthalate	1.07969	1.167	8.1	AVRG
Fluoranthene	* 1.18164	1.292	9.3	AVRG*
Pyrene	0.79473	0.8457	6.4	AVRG
Butylbenzylphthalate	0.34424	0.38811	12.7	AVRG
Benzo(a)anthracene	1.00427	1.112	10.7	AVRG
Chrysene	0.88032	0.92345	4.9	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.69176	16.3	AVRG
Di-n-octylphthalate	* 0.86193	0.98898	14.7	AVRG*
Benzo(b)fluoranthene	1.06307	1.159	9.0	AVRG
Benzo(k)fluoranthene	1.06816	1.158	8.4	AVRG
Benzo(a)pyrene	* 1.03857	1.117	7.6	AVRG*
Indeno(1,2,3-cd)pyrene	1.29416	1.395	7.8	AVRG
Dibenzo(a,h)anthracene	1.13022	1.242	9.9	AVRG
Benzo(g,h,i)perylene	0.98879	1.057	6.9	AVRG
Carbazole	0.85498	0.97304	13.8	AVRG
=====				
2-Fluorophenol(SURR)	1.15589	1.205	4.2	AVRG
Phenol-d5(SURR)	1.54937	1.48	4.5	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.51104	5.3	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.521	1.7	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28828	3.2	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.72682	3.7	AVRG

Average Used: 5.9

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1642
 CCV ID: SSC1072994 Lab File ID: BSSEC.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.47412	2.4	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1519
 CCV ID: CCV1074504 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Bis(2-chloroethyl)ether	1.10557	1.123	1.6	AVRG
Phenol	* 1.75904	1.802	2.4	AVRG *
2-Chlorophenol	1.15668	1.194	3.2	AVRG
1,3-Dichlorobenzene	1.41871	1.451	2.3	AVRG
1,4-Dichlorobenzene	* 1.49525	1.549	3.6	AVRG *
1,2-Dichlorobenzene	1.36142	1.398	2.7	AVRG
2,2'-Oxybis(1-chloropropane)	0.77294	0.77573	0.4	AVRG
2-Methylphenol	1.04767	1.07	2.1	AVRG
Hexachloroethane	0.59057	0.61378	3.9	AVRG
N-Nitroso-di-n-propylamine	# 1.17738	1.241	5.4	AVRG #
4-Methylphenol	1.51461	1.596	5.4	AVRG
Nitrobenzene	0.53215	0.55335	4.0	AVRG
Isophorone	45	47	4.4	LINR
2-Nitrophenol	* 0.19693	0.21172	7.5	AVRG *
2,4-Dimethylphenol	0.30321	0.31507	3.9	AVRG
Bis(2-chloroethoxy)methane	0.43959	0.46196	5.1	AVRG
2,4-Dichlorophenol	* 0.35774	0.37834	5.8	AVRG *
1,2,4-Trichlorobenzene	0.44729	0.45571	1.9	AVRG
Naphthalene	1.02648	1.071	4.3	AVRG
4-Chloroaniline	0.43162	0.44756	3.7	AVRG
2-Methylnaphthalene	0.74689	0.76503	2.4	AVRG
Hexachlorobutadiene	* 0.34168	0.35676	4.4	AVRG *
4-Chloro-3-methylphenol	* 0.34436	0.36778	6.8	AVRG *
Hexachlorocyclopentadiene	# 0.63111	0.64176	1.7	AVRG #
2,4,6-Trichlorophenol	* 0.49778	0.48395	2.8	AVRG *
2,4,5-Trichlorophenol	0.46015	0.52432	13.9	AVRG
2-Chloronaphthalene	1.17243	1.224	4.4	AVRG
2-Nitroaniline	0.40396	0.41953	3.9	AVRG
Acenaphthylene	1.73451	1.829	5.4	AVRG
Dimethylphthalate	1.347	1.431	6.2	AVRG
2,6-Dinitrotoluene	0.30449	0.32271	6.0	AVRG
Acenaphthene	* 1.0518	1.077	2.4	AVRG *
3-Nitroaniline	0.27047	0.27363	1.2	AVRG
2,4-Dinitrophenol	# 45	44.5	1.1	LINR #
Dibenzofuran	1.71164	1.788	4.5	AVRG
2,4-Dinitrotoluene	0.42698	0.43987	3.0	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1519
 CCV ID: CCV1074504 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
4-Nitrophenol	# 0.29402	0.32787	11.5	AVRG#
Fluorene	1.48267	1.548	4.4	AVRG
4-Chlorophenyl-phenylether	0.8889	0.91595	3.0	AVRG
Diethylphthalate	1.24358	1.321	6.2	AVRG
4-Nitroaniline	0.23414	0.23716	1.3	AVRG
4,6-Dinitro-2-methylphenol	45	43.1	4.2	LINR
N-Nitrosodiphenylamine	* 0.50383	0.48995	2.8	AVRG*
4-Bromophenyl-phenylether	0.29225	0.28335	3.0	AVRG
Hexachlorobenzene	0.33604	0.33307	0.9	AVRG
Pentachlorophenol	* 0.1975	0.21869	10.7	AVRG*
Phenanthrene	1.03044	1.044	1.3	AVRG
Anthracene	1.02634	1.062	3.5	AVRG
Di-n-butylphthalate	1.07969	1.15	6.5	AVRG
Fluoranthene	* 1.18164	1.192	0.9	AVRG*
Pyrene	0.79473	0.80685	1.5	AVRG
Butylbenzylphthalate	0.34424	0.3554	3.2	AVRG
Benzo(a)anthracene	1.00427	1.034	3.0	AVRG
Chrysene	0.88032	0.86921	1.3	AVRG
Bis(2-ethylhexyl)phthalate	0.59501	0.64944	9.1	AVRG
Di-n-octylphthalate	* 0.86193	0.94683	9.8	AVRG*
Benzo(b)fluoranthene	1.06307	1.096	3.1	AVRG
Benzo(k)fluoranthene	1.06816	1.096	2.6	AVRG
Benzo(a)pyrene	* 1.03857	1.052	1.3	AVRG*
Indeno(1,2,3-cd)pyrene	1.29416	1.289	0.4	AVRG
Dibenzo(a,h)anthracene	1.13022	1.137	0.6	AVRG
Benzo(g,h,i)perylene	0.98879	0.96646	2.3	AVRG
Carbazole	0.85498	0.86833	1.6	AVRG
=====				
2-Fluorophenol(SURR)	1.15589	1.199	3.7	AVRG
Phenol-d5(SURR)	1.54937	1.571	1.4	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.56091	3.9	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.613	4.2	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.29254	4.7	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.74791	0.9	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/27/12 Time: 1542
 CCV ID: CCV1074506 Lab File ID: BSCCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = 0.05 Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
3,3'-Dichlorobenzidine	0.46301	0.50218	8.5	AVRG

8270 TCLP Semi-Volatile Organics

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8270D

IV. PREPARATION

TCLP samples were prepared by EPA SW846 1311 prior to 8270 semi-volatiles preparation. Water/TCLP samples were prepared by EPA SW846 3510 for 8270

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

All acceptance criteria were met.

F. Samples:

**CASE NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Sample analysis proceeded normally.

Project specific Reporting Limits were used per client request.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 05/10/2012

SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8270 TCLP

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>

8270 TCLP Sample Data

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-SOIL-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 81601.D

Sample wt/vol: 500 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1258

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Soils Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.0084	U	0.0042	0.0084	5
106-46-7	1,4-Dichlorobenzene	0.0108	U	0.0054	0.0108	7.5
95-48-7	2-Methylphenol	0.0104	U	0.0052	0.0104	200
67-72-1	Hexachloroethane	0.0104	U	0.0052	0.0104	3
106-44-5	4-Methylphenol	0.0244	U	0.0122	0.0244	200
98-95-3	Nitrobenzene	0.004	U	0.002	0.004	2
87-68-3	Hexachlorobutadiene	0.01	U	0.005	0.01	0.5
88-06-2	2,4,6-Trichlorophenol	0.00336	U	0.00168	0.00336	2
95-95-4	2,4,5-Trichlorophenol	0.0136	U	0.0068	0.0136	400
121-14-2	2,4-Dinitrotoluene	0.0112	U	0.0056	0.0112	0.1
118-74-1	Hexachlorobenzene	0.00164	U	0.00082	0.00164	0.1
87-86-5	Pentachlorophenol	0.0056	U	0.0028	0.0056	100

8270 TCLP QC Summary

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 128817MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 128817MB Lab File ID: 9298MB.D

Sample wt/vol: 500 Units: ML Date Received: 04/26/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1210

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH: _____

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
110-86-1	Pyridine	0.0084	U	0.0042	0.0084	5
106-46-7	1,4-Dichlorobenzene	0.0108	U	0.0054	0.0108	7.5
95-48-7	2-Methylphenol	0.0104	U	0.0052	0.0104	200
67-72-1	Hexachloroethane	0.0104	U	0.0052	0.0104	3
106-44-5	4-Methylphenol	0.0244	U	0.0122	0.0244	200
98-95-3	Nitrobenzene	0.004	U	0.002	0.004	2
87-68-3	Hexachlorobutadiene	0.01	U	0.005	0.01	0.5
88-06-2	2,4,6-Trichlorophenol	0.00336	U	0.00168	0.00336	2
95-95-4	2,4,5-Trichlorophenol	0.0136	U	0.0068	0.0136	400
121-14-2	2,4-Dinitrotoluene	0.0112	U	0.0056	0.0112	0.1
118-74-1	Hexachlorobenzene	0.00164	U	0.00082	0.00164	0.1
87-86-5	Pentachlorophenol	0.0056	U	0.0028	0.0056	100

SEMI-VOLATILE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 128817MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9298MB.D Lab Sample ID: 128817MB

Instrument ID: SMSD03 Date Extracted: 05/03/12

Matrix: WATER Date Analyzed: 05/04/12

Level:(low/med) LOW Time Analyzed: 1210

TCLP Analysis

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128818LCS	128818LCS	9298LCS.D	05/04/12	1234
2	IDW-SOIL-1	350581601	81601.D	05/04/12	1258

COMMENTS:

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: DFTPP2.D DFTPP Injection Date: 04/23/12
 Instrument ID: SMSD03 DFTPP Injection Time: 1003
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	30.2
68	Less than 2.0% of mass 69	0.6 (1.3)1
69	Mass 69 relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.83)1
127	10.0 - 80.0% of mass 198	45.1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	33
365	Greater than 1.0% of mass 198	6.5
441	0.0 - 24.0% of mass 442	13.5 (14.69)2
442	Greater than 50.0% of mass 198	92
443	15.0 - 24.0% of mass 442	17.3 (18.77)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD1072999	45921	8270CAL7.D	04/23/12	1023
2	STD1073000	45922	8270CAL6.D	04/23/12	1047
3	STD1073001	45923	8270CAL5.D	04/23/12	1110
4	STD1073002	45924	8270CAL4.D	04/23/12	1134
5	STD1073004	45925	8270CAL3.D	04/23/12	1158
6	STD1073005	45926	8270CAL2.D	04/23/12	1221
7	STD1073006	45927	8270CAL1.D	04/23/12	1245
8	SSC1072998	45872	8270SEC2.D	04/23/12	1333

**SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION -
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Lab File ID: DFTPP1.D DFTPP Injection Date: 05/04/12
 Instrument ID: SMSD03 DFTPP Injection Time: 0753
 GC Column: HPMS-5 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27.8
68	Less than 2.0% of mass 69	0.5 (1.13)1
69	Mass 69 relative abundance	45.5
70	Less than 2.0% of mass 69	0.3 (0.73)1
127	10.0 - 80.0% of mass 198	43.8
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of mass 198	34.6
365	Greater than 1.0% of mass 198	6.8
441	0.0 - 24.0% of mass 442	16.8 (16.36)2
442	Greater than 50.0% of mass 198	102.4
443	15.0 - 24.0% of mass 442	20.2 (19.69)2

1-Value is % of mass 69

2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	CCV1077399	45924	8270CCV1.D	05/04/12	0813
2	128817MB	128817MB	9298MB.D	05/04/12	1210
3	128818LCS	128818LCS	9298LCS.D	05/04/12	1234
4	IDW-SOIL-1	350581601	81601.D	05/04/12	1258

8A

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
Instrument ID: SMSD03 Time Analyzed: 11:34
GC Column: HPMS-5 ID: 0.25 (mm)

	IS1 AREA #	RT	IS2 AREA #	RT	IS3 AREA #	RT
MID CAL STD	324938	4.45	1085348	5.61	730887	7.31
UPPER LIMIT	649876	4.95	2170696	6.11	1461774	7.81
LOWER LIMIT	162469	3.95	542674	5.11	365443.5	6.81
EPA SAMPLE NO.						
1 128817MB	289355	4.35	956384	5.51	689585	7.21
2 128818LCS	271090	4.35	930343	5.52	646910	7.21
3 IDW-SOIL-1	275373	4.35	913759	5.51	632553	7.21

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW S
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID (Standard): 8270CAL4.D Date Analyzed: 4/23/2012
 Instrument ID: SMSD03 Time Analyzed: 11:34
 GC Column: HPMS-5 ID: 0.25 (mm)

	IS4 AREA #	RT	IS5 AREA #	RT	IS6 AREA #	RT
MID CAL STD	1306281	8.76	2165349	11.36	1911346	12.68
UPPER LIMIT	2612562	9.26	4330698	11.86	3822692	13.18
LOWER LIMIT	653140.5	8.26	1082674.5	10.86	955673	12.18
EPA SAMPLE NO.						
1 128817MB	1358002	8.66	1872647	11.26	1839618	12.59
2 128818LCS	1273655	8.67	2748543	11.26	1857426	12.59
3 IDW-SOIL-1	1304056	8.66	1789597	11.26	1768156	12.58

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

UPPER LIMIT = +100%
of internal standard area.
LOWER LIMIT = -50%
of internal standard area

Column used to flag internal standard area values with an asterisk

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	DFTPP2	45777	DFTPP2.D	04/23/12	1003	
2	STD1072999	45921	8270CAL7.D	04/23/12	1023	3.39 4.15
3	STD1073000	45922	8270CAL6.D	04/23/12	1047	3.38 4.14
4	STD1073001	45923	8270CAL5.D	04/23/12	1110	3.38 4.14
5	STD1073002	45924	8270CAL4.D	04/23/12	1134	3.38 4.14
6	STD1073004	45925	8270CAL3.D	04/23/12	1158	3.38 4.14
7	STD1073005	45926	8270CAL2.D	04/23/12	1221	3.39 4.14
8	STD1073006	45927	8270CAL1.D	04/23/12	1245	3.39 4.14
9	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1309	
10	SSC1072998	45872	8270SEC2.D	04/23/12	1333	3.38 4.14
11	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1356	
12	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1420	
13	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1444	
14	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1507	
15	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1531	
16	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1555	
17	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1619	
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1642	
19	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1706	
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1730	
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1753	
22	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1817	
23	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1841	
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1904	
25	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1928	
26	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/23/12	1952	

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: HPMS-5 ID: 0.25 (mm) Init. Calib. Date: 04/23/12
 Instrument ID: SMSD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 3.38			S2 : 4.14			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	ZZZZZZ	ZZZZZZ	04/23/12	2015		
28	DFTPP1	DFTPP1.D	05/04/12	0753		
29	CCV1077399	8270CCV1.D	05/04/12	0813	3.28	4.04
30	ZZZZZZ	ZZZZZZ	05/04/12	0836		
31	ZZZZZZ	ZZZZZZ	05/04/12	0900		
32	ZZZZZZ	ZZZZZZ	05/04/12	1122		
33	ZZZZZZ	ZZZZZZ	05/04/12	1145		
34	128817MB	9298MB.D	05/04/12	1210	3.28	4.04
35	128818LCS	9298LCS.D	05/04/12	1234	3.28	4.04
36	IDW-SOIL-1	81601.D	05/04/12	1258	3.28	4.04
37	ZZZZZZ	ZZZZZZ	05/04/12	1322		
38	ZZZZZZ	ZZZZZZ	05/04/12	1346		
39	ZZZZZZ	ZZZZZZ	05/04/12	1409		
40	ZZZZZZ	ZZZZZZ	05/04/12	1433		
41	ZZZZZZ	ZZZZZZ	05/04/12	1457		
42	ZZZZZZ	ZZZZZZ	05/04/12	1521		
43	ZZZZZZ	ZZZZZZ	05/04/12	1545		
44	ZZZZZZ	ZZZZZZ	05/04/12	1609		
45	ZZZZZZ	ZZZZZZ	05/04/12	1632		
46	ZZZZZZ	ZZZZZZ	05/04/12	1656		
47	ZZZZZZ	ZZZZZZ	05/04/12	1720		
48	ZZZZZZ	ZZZZZZ	05/04/12	1744		

QC LIMITS

S1 = 2-Fluorophenol (+/- 0.27 MINUTES)
 S2 = Phenol-d5 (+/- 0.27 MINUTES)
 S3 = Nitrobenzene-d5 (+/- 0.34 MINUTES)
 S4 = 2-Fluorobiphenyl (+/- 0.44 MINUTES)
 S5 = 2,4,6-Tribromophenol (+/- 0.44 MINUTES)
 S6 = p-Terphenyl-d14 (+/- 0.68 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

SEMI-VOLATILE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

128818LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816**TCLP Analysis**

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Pyridine	0.08	0.0557	69.6			18 - 110
1,4-Dichlorobenzene	0.08	0.042	52.5			42 - 120
2-Methylphenol	0.08	0.0565	70.6			39 - 120
Hexachloroethane	0.08	0.0403	50.4			34 - 120
4-Methylphenol	0.08	0.0578	72.2			49 - 110
Nitrobenzene	0.08	0.0631	78.9			62 - 110
Hexachlorobutadiene	0.08	0.0461	57.6			46 - 125
2,4,6-Trichlorophenol	0.08	0.0647	80.9			35 - 111
2,4,5-Trichlorophenol	0.08	0.079	98.8			45 - 124
2,4-Dinitrotoluene	0.08	0.0724	90.5			64 - 114
Hexachlorobenzene	0.08	0.0658	82.2			63 - 120
Pentachlorophenol	0.08	0.0748	93.5			40 - 120

Spike Recovery: 0 out of 12 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8270 TCLP Standards Data

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1245
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 30 %

LAB FILE ID: RRF4 =8270CAL1.D RRF10 =8270CAL2.D							
RRF20 =8270CAL3.D RRF45 =8270CAL4.D RRF60 =8270CAL5.D							
COMPOUND	RRF4	RRF10	RRF20	RRF45	RRF60	<u>RRF</u>	%RSD OR R^2
Pyridine	1.430	1.447	1.524	1.547	1.528		
1,4-Dichlorobenzene	* 1.484	1.425	1.469	1.519	1.522		*
2-Methylphenol	0.952	0.955	0.991	1.091	1.089		
Hexachloroethane	0.583	0.553	0.574	0.609	0.598		
4-Methylphenol	1.362	1.406	1.475	1.554	1.571		
Nitrobenzene	0.526	0.524	0.528	0.543	0.527		
Hexachlorobutadiene	* 0.330	0.315	0.340	0.344	0.349		*
2,4,6-Trichlorophenol	* 0.442	0.463	0.486	0.517	0.525		*
2,4,5-Trichlorophenol	0.399	0.438	0.453	0.468	0.483		
2,4-Dinitrotoluene	0.377	0.399	0.411	0.433	0.446		
Hexachlorobenzene	0.316	0.301	0.315	0.344	0.348		
Pentachlorophenol	*	0.155	0.183	0.205	0.210		*
=====*							
2-Fluorophenol(SURR)	1.109	1.085	1.161	1.193	1.186		
Phenol-d5(SURR)	1.464	1.441	1.516	1.613	1.619		
Nitrobenzene-d5(SURR)	0.527	0.515	0.536	0.553	0.547		
2-Fluorobiphenyl(SURR)	1.504	1.477	1.534	1.626	1.585		
2,4,6-Tribromophenol(SURR)	0.232	0.261	0.273	0.289	0.292		
p-Terphenyl-d14(SURR)	0.904	0.818	0.821	0.757	0.689		

SEMI-VOLATILE ORGANIC INITIAL CALIBRATION DATA

Lab Name: PEL, Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SMSD03 Calibration Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm) Calibration Time Begin: 1023 End: 1245
 Min RRF for SPCC(#) = N/A Max %RSD for CCC(*) = 30 %

LAB FILE ID:		RRF75 =8270CAL6.D		RRF100 =8270CAL7.D			
COMPOUND	RRF75	RRF100				RRF	%RSD OR R^2
Pyridine	1.527	1.517				1.50266	3
1,4-Dichlorobenzene	* 1.518	1.530				1.49525	2.5 *
2-Methylphenol	1.096	1.160				1.04767	7.8
Hexachloroethane	0.602	0.615				0.59057	3.7
4-Methylphenol	1.604	1.633				1.51461	6.8
Nitrobenzene	0.538	0.540				0.53215	1.4
Hexachlorobutadiene	* 0.355	0.360				0.34168	4.5 *
2,4,6-Trichlorophenol	* 0.517	0.534				0.49778	7 *
2,4,5-Trichlorophenol	0.486	0.494				0.46015	7.2
2,4-Dinitrotoluene	0.456	0.467				0.42698	7.7
Hexachlorobenzene	0.357	0.371				0.33604	7.6
Pentachlorophenol	* 0.211	0.222				0.1975	12.5 *
=====*							
2-Fluorophenol(SURR)	1.171	1.186				1.15589	3.6
Phenol-d5(SURR)	1.608	1.585				1.54937	4.9
Nitrobenzene-d5(SURR)	0.549	0.552				0.53982	2.7
2-Fluorobiphenyl(SURR)	1.580	1.529				1.54784	3.3
2,4,6-Tribromophenol(SURR)	0.299	0.311				0.27947	9.5
p-Terphenyl-d14(SURR)	0.671	0.622				0.75461	13.2

7SSC

SEMI-VOLATILE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 04/23/12 Time: 1333
 CCV ID: SSC1072998 Lab File ID: 8270SEC2.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.459	2.9	AVRG
1,4-Dichlorobenzene	* 1.49525	1.509	0.9	AVRG *
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58903	0.3	AVRG
4-Methylphenol	1.51461	1.54	1.7	AVRG
Nitrobenzene	0.53215	0.52704	1.0	AVRG
Hexachlorobutadiene	* 0.34168	0.37423	9.5	AVRG *
2,4,6-Trichlorophenol	* 0.49778	0.51405	3.3	AVRG *
2,4,5-Trichlorophenol	0.46015	0.47926	4.2	AVRG
2,4-Dinitrotoluene	0.42698	0.44249	3.6	AVRG
Hexachlorobenzene	0.33604	0.34736	3.4	AVRG
Pentachlorophenol	* 0.1975	0.20129	1.9	AVRG *
=====				
2-Fluorophenol(SURR)	1.15589	1.205	4.2	AVRG
Phenol-d5(SURR)	1.54937	1.48	4.5	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.51104	5.3	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.521	1.7	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.28828	3.2	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.72682	3.7	AVRG

SEMI-VOLATILE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SMSD03 CalibrationDate: 05/04/12 Time: 0813
 CCV ID: CCV1077399 Lab File ID: 8270CCV1.D Init. Calib. Date Begin: 04/23/12 End: 04/23/12
 GC Column: HPMS-5 ID: 0.25 (mm)
 Min RRF for SPCC(#) = N/A Max %D for CCC(*) = 20 %

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Pyridine	1.50266	1.62	7.8	AVRG
1,4-Dichlorobenzene	* 1.49525	1.502	0.5	AVRG *
2-Methylphenol	1.04767	1.048	0.0	AVRG
Hexachloroethane	0.59057	0.58888	0.3	AVRG
4-Methylphenol	1.51461	1.616	6.7	AVRG
Nitrobenzene	0.53215	0.56009	5.3	AVRG
Hexachlorobutadiene	* 0.34168	0.38092	11.5	AVRG *
2,4,6-Trichlorophenol	* 0.49778	0.47819	3.9	AVRG *
2,4,5-Trichlorophenol	0.46015	0.54221	17.8	AVRG
2,4-Dinitrotoluene	0.42698	0.45494	6.5	AVRG
Hexachlorobenzene	0.33604	0.3349	0.3	AVRG
Pentachlorophenol	* 0.1975	0.21331	8.0	AVRG *
=====				
2-Fluorophenol(SURR)	1.15589	1.165	0.8	AVRG
Phenol-d5(SURR)	1.54937	1.564	0.9	AVRG
Nitrobenzene-d5(SURR)	0.53982	0.58372	8.1	AVRG
2-Fluorobiphenyl(SURR)	1.54784	1.609	4.0	AVRG
2,4,6-Tribromophenol(SURR)	0.27947	0.30454	9.0	AVRG
p-Terphenyl-d14(SURR)	0.75461	0.74339	1.5	AVRG

8081 Pesticide Organics

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8081

IV. PREPARATION

Water samples were prepared by SW846 EPA 3510 for 8081 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met with the exception of:
Sample 127479LCS was recovered above criteria for the following surrogate(s):
Decachlorobiphenyl at 140 % with criteria of (30-135). Since all other recoveries were within criteria and the sample was non-detect for target analytes, no further action was taken.

Sample 127480LCSD was recovered above criteria for the following surrogate(s):
Decachlorobiphenyl at 140 % with criteria of (30-135). Since all other recoveries were within criteria and the sample was non-detect for target analytes, no further action was taken.

Samples coded accordingly.

D. Spikes:

1. Laboratory Control Spikes (LCS)

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

Sample analysis proceeded normally.

Data was collected using dual column analysis. Results reported from the primary column if the %D between the two columns is >40%, data is coded.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature:



Name: Brian C. Spann Title: Lab Director

SIGNED:
05/11/2012

DATE:

PESTICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8081

EPA Sample No	Lab Sample ID
<u>IDW-LIQ-1</u>	<u>350581602</u>

8081 Sample Data

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 81602.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 10 Date Extracted: 04/26/12
 Level:(low/med) LOW Date Analyzed: 04/29/12 Time: 0519
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: IDW Water Method: 8081
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)
 CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
319-84-6	alpha-BHC	0.000061	U	0.000031	0.000061	0.00001
319-85-7	beta-BHC	0.000002	U	0.000001	0.000002	0.000051
319-86-8	delta-BHC	0.000061	U	0.000031	0.000061	0.000051
58-89-9	gamma-BHC (Lindane)	0.000041	U	0.000002	0.000041	0.000051
76-44-8	Heptachlor	0.000082	U	0.000041	0.000082	0.000051
309-00-2	Aldrin	0.000041	U	0.000002	0.000041	0.000051
1024-57-3	Heptachlor epoxide	0.000002	U	0.000001	0.000002	0.000051
959-98-8	Endosulfan I	0.000082	U	0.000041	0.000082	0.000051
60-57-1	Dieldrin	0.000061	U	0.000031	0.000061	0.000051
72-55-9	4,4'-DDE	0.000082	U	0.000041	0.000082	0.000051
72-20-8	Endrin	0.000041	U	0.000002	0.000041	0.000051
33213-65-9	Endosulfan II	0.000041	U	0.000002	0.000041	0.000051
72-54-8	4,4'-DDD	0.000061	U	0.000031	0.000061	0.000051
1031-07-8	Endosulfan sulfate	0.000002	U	0.000001	0.000002	0.000051
50-29-3	4,4'-DDT	0.000002	U	0.000001	0.000002	0.000051
72-43-5	Methoxychlor	0.000041	U	0.000002	0.000041	0.000051
7421-93-4	Endrin aldehyde	0.000041	U	0.000002	0.000041	0.000051
5103-74-2	gamma-Chlordane	0.000041	U	0.000002	0.000041	0.000051
5103-71-9	alpha-Chlordane	0.000061	U	0.000031	0.000061	0.000051
53494-70-5	Endrin ketone	0.000012	U	0.0000061	0.000012	0.000051
57-74-9	Chlordane	0.0001	U	0.000051	0.0001	0.00051
8001-35-2	Toxaphene	0.00037	U	0.00018	0.00037	0.00051

Results reported on Primary Column, if RPD >40% results flagged accordingly.

8081 QC Summary

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 127478MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127478MB Lab File ID: 9205MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/26/12

Concentrated Extract Volume: 10 Date Extracted: 04/26/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 0011

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8081

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
319-84-6	alpha-BHC	0.000006	U	0.000003	0.000006	0.00001
319-85-7	beta-BHC	0.000002	U	0.000001	0.000002	0.00005
319-86-8	delta-BHC	0.000006	U	0.000003	0.000006	0.00005
58-89-9	gamma-BHC (Lindane)	0.000004	U	0.000002	0.000004	0.00005
76-44-8	Heptachlor	0.000008	U	0.000004	0.000008	0.00005
309-00-2	Aldrin	0.000004	U	0.000002	0.000004	0.00005
1024-57-3	Heptachlor epoxide	0.000002	U	0.000001	0.000002	0.00005
959-98-8	Endosulfan I	0.000008	U	0.000004	0.000008	0.00005
60-57-1	Dieldrin	0.000006	U	0.000003	0.000006	0.00005
72-55-9	4,4'-DDE	0.000008	U	0.000004	0.000008	0.00005
72-20-8	Endrin	0.000004	U	0.000002	0.000004	0.00005
33213-65-9	Endosulfan II	0.000004	U	0.000002	0.000004	0.00005
72-54-8	4,4'-DDD	0.000006	U	0.000003	0.000006	0.00005
1031-07-8	Endosulfan sulfate	0.000002	U	0.000001	0.000002	0.00005
50-29-3	4,4'-DDT	0.000002	U	0.000001	0.000002	0.00005
72-43-5	Methoxychlor	0.000004	U	0.000002	0.000004	0.00005
7421-93-4	Endrin aldehyde	0.000004	U	0.000002	0.000004	0.00005
5103-74-2	gamma-Chlordane	0.000004	U	0.000002	0.000004	0.00005
5103-71-9	alpha-Chlordane	0.000006	U	0.000003	0.000006	0.00005
53494-70-5	Endrin ketone	0.000012	U	0.000006	0.000012	0.00005
57-74-9	Chlordane	0.0001	U	0.00005	0.0001	0.0005
8001-35-2	Toxaphene	0.00036	U	0.00018	0.00036	0.0005

Results reported on Primary Column, if RPD >40% results flagged accordingly.

PESTICIDE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127478MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Lab File ID: 9205MB.D Lab Sample ID: 127478MB
 Instrument ID: SECD03 Date Extracted: 04/26/12
 Matrix: WATER Date Analyzed: 04/30/12
 Level:(low/med) LOW Time Analyzed: 0011

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	IDW-LIQ-1	350581602	81602.D	04/29/12	0519
2	127479LCS	127479LCS	9205LCS.D	04/30/12	0029
3	127480LCSD	127480LCSD	9205LCSD.D	04/30/12	0047
4	127481LCS	127481LCS	9205LCST.D	04/30/12	0105

COMMENTS:

2A

WATER PESTICIDE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127478MB	100.0	110.0					0
127479LCS	140.0	140.0 *					1
127480LCSD	140.0	140.0 *					1
127481LCS	100.0	110.0					0
IDW-LIQ-1	56.0	82.0					0

Control Limits

S1 = Tetrachloro-m-xylene 25 - 140

S2 = Decachlorobiphenyl 30 - 135

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Form II

160512.1609

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 2.81			S2 : 10.72				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	EVA1074361	45410	PEM1.D	04/28/12	2020		
2	STD1074355	45905	PCAL8.D	04/28/12	2038	2.81	10.72
3	STD1074353	45906	PCAL7.D	04/28/12	2056	2.81	10.72
4	STD1074351	45907	PCAL6.D	04/28/12	2114	2.8	10.72
5	STD1074349	45908	PCAL5.D	04/28/12	2131	2.8	10.72
6	STD1074347	45909	PCAL4.D	04/28/12	2149	2.81	10.72
7	STD1074345	45910	PCAL3.D	04/28/12	2207	2.79	10.72
8	STD1074343	45911	PCAL2.D	04/28/12	2225	2.79	10.72
9	STD1074341	45912	PCAL1.D	04/28/12	2243	2.8	10.72
10	STD1074369	45269	TCAL4.D	04/28/12	2301		
11	STD1074337	44709	CCAL4.D	04/28/12	2319		
12	SSC1074363	44300	PSEC.D	04/28/12	2337	2.8	10.72
13	EVA1074654	45410	PEM2.D	04/29/12	0407		
14	CCV1074359	45909	PCCV2.D	04/29/12	0425	2.8	10.72
15	CCV1074680	45269	TCCV2.D	04/29/12	0443		
16	CCV1074630	44709	CCC2.D	04/29/12	0501		
17	IDW-LIQ-1	350581602	81602.D	04/29/12	0519	2.8	10.72
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0537		
19	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0631		
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0649		
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0707		
22	CCV1074648	45909	PCCV3.D	04/29/12	0743	2.8	10.72
23	CCV1074682	45269	TCCV3.D	04/29/12	0801		
24	CCV1074632	44709	CCC3.D	04/29/12	0819		
25	EVA1074652	45410	PEM1.D	04/29/12	1912		
26	CCV1074656	45999	PSEC1R.D	04/29/12	2259	2.79	10.72

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 2.81			S2 : 10.72			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	CCV1074686	44120	TSEC1.D	04/29/12	2317	
28	CCV1074636	44121	CSEC1.D	04/29/12	2335	
29	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	2353	
30	127478MB	127478MB	9205MB.D	04/30/12	0011	2.79 10.72
31	127479LCS	127479LCS	9205LCS.D	04/30/12	0029	2.79 10.72
32	127480LCSD	127480LCSD	9205LCSD.D	04/30/12	0047	2.79 10.72
33	127481LCS	127481LCS	9205LCST.D	04/30/12	0105	2.8 10.72
34	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0123	
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0141	
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0159	
37	CCV1074658	45999	PSEC2.D	04/30/12	0235	2.8 10.72
38	CCV1074688	44120	TSEC2.D	04/30/12	0253	
39	CCV1074638	44121	CSEC2.D	04/30/12	0311	

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 2.61			S2 : 11.13				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	EVA1074362	45410	PEM1.D	04/28/12	2020		
2	STD1074356	45905	PCAL8.D	04/28/12	2038	2.61	11.13
3	STD1074354	45906	PCAL7.D	04/28/12	2056	2.62	11.13
4	STD1074352	45907	PCAL6.D	04/28/12	2114	2.61	11.13
5	STD1074350	45908	PCAL5.D	04/28/12	2131	2.6	11.13
6	STD1074348	45909	PCAL4.D	04/28/12	2149	2.61	11.13
7	STD1074346	45910	PCAL3.D	04/28/12	2207	2.61	11.13
8	STD1074344	45911	PCAL2.D	04/28/12	2225	2.61	11.13
9	STD1074342	45912	PCAL1.D	04/28/12	2243	2.61	11.13
10	STD1074370	45269	TCAL4.D	04/28/12	2301		
11	STD1074338	44709	CCAL4.D	04/28/12	2319		
12	SSC1074364	44300	PSEC.D	04/28/12	2337	2.61	11.13
13	EVA1074655	45410	PEM2.D	04/29/12	0407		
14	CCV1074360	45909	PCCV2.D	04/29/12	0425	2.61	11.13
15	CCV1074681	45269	TCCV2.D	04/29/12	0443		
16	CCV1074631	44709	CCC2.D	04/29/12	0501		
17	IDW-LIQ-1	350581602	81602.D	04/29/12	0519	2.6	11.13
18	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0537		
19	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0631		
20	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0649		
21	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	0707		
22	CCV1074649	45909	PCCV3.D	04/29/12	0743	2.6	11.13
23	CCV1074683	45269	TCCV3.D	04/29/12	0801		
24	CCV1074633	44709	CCC3.D	04/29/12	0819		
25	EVA1074653	45410	PEM1.D	04/29/12	1912		
26	CCV1074657	45999	PSEC1R.D	04/29/12	2259	2.6	11.13

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 2.61			S2 : 11.13			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
27	CCV1074687	44120	TSEC1.D	04/29/12	2317	
28	CCV1074637	44121	CSEC1.D	04/29/12	2335	
29	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/29/12	2353	
30	127478MB	127478MB	9205MB.D	04/30/12	0011	2.6 11.13
31	127479LCS	127479LCS	9205LCS.D	04/30/12	0029	2.6 11.13
32	127480LCSD	127480LCSD	9205LCSD.D	04/30/12	0047	2.6 11.13
33	127481LCS	127481LCS	9205LCST.D	04/30/12	0105	2.61 11.13
34	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0123	
35	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0141	
36	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/30/12	0159	
37	CCV1074659	45999	PSEC2.D	04/30/12	0235	2.6 11.13
38	CCV1074689	44120	TSEC2.D	04/30/12	0253	
39	CCV1074639	44121	CSEC2.D	04/30/12	0311	

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127478MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127478MB Date(s) Analyzed: 04/30/12 04/30/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Tetrachloro-m-xylene	* 1	2.794	2.798	0.004	4717.65	0.10	0.001	
	2	2.601	2.607	0.006	7869871	0.099	0.00099	1.01
Decachlorobiphenyl	* 1	10.717	10.718	0.001	3596.327	0.11	0.0011	
	2	11.129	11.129	0.000	6307583	0.096	0.00096	13.59

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

127479LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 127479LCS Date(s) Analyzed: 04/30/12 04/30/12Instrumet ID (1): SECD03 Instrumet ID (2): SECD03Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
alpha-BHC	* 1	3.554	3.556	0.002	5288.073	0.046	0.000458	6.07
	2	3.436	3.440	0.004	8155098	0.043	0.000431	
beta-BHC	* 1	4.014	4.016	0.002	2006.237	0.045	0.000452	3.60
	2	3.930	3.934	0.004	2974134	0.044	0.000436	
delta-BHC	* 1	4.213	4.216	0.003	4511.959	0.044	0.000443	1.36
	2	4.238	4.240	0.002	7240319	0.044	0.000437	
gamma-BHC (Lindane)	* 1	3.923	3.926	0.003	4649.147	0.045	0.000452	3.37
	2	3.845	3.847	0.002	7335599	0.044	0.000437	
Heptachlor	* 1	4.455	4.458	0.003	4521.39	0.045	0.000454	0.88
	2	4.312	4.314	0.002	7051344	0.045	0.00045	
Aldrin	* 1	4.794	4.797	0.003	4033.345	0.044	0.000445	5.07
	2	4.659	4.661	0.002	6409113	0.042	0.000423	
Heptachlor epoxide	* 1	5.479	5.481	0.002	3524.297	0.044	0.000443	4.38
	2	5.281	5.282	0.001	5841897	0.042	0.000424	
Endosulfan I	* 1	5.971	5.973	0.002	3374.179	0.045	0.00045	5.25
	2	5.751	5.753	0.002	5327239	0.043	0.000427	
Dieldrin	* 1	6.279	6.281	0.002	3255.404	0.042	0.000417	2.84
	2	6.095	6.095	0.000	6049707	0.043	0.000429	
4,4'-DDE	* 1	5.850	5.852	0.002	3496.622	0.044	0.000442	3.45
	2	5.850	5.852	0.002	5940901	0.043	0.000427	
Endrin	* 1	6.600	6.602	0.002	3109.45	0.046	0.000462	0.87
	2	6.505	6.507	0.002	5448963	0.046	0.000458	
Endosulfan II	* 1	6.914	6.915	0.001	2927.237	0.044	0.000442	0.45
	2	6.799	6.800	0.001	5267320	0.044	0.000444	
4,4'-DDD	* 1	6.635	6.637	0.002	2778.347	0.044	0.000441	0.68
	2	6.616	6.619	0.003	4804106	0.044	0.000444	
Endosulfan sulfate	* 1	8.250	8.251	0.001	2706.317	0.049	0.000492	5.43
	2	7.737	7.738	0.001	4600089	0.047	0.000466	
4,4'-DDT	* 1	7.042	7.044	0.002	2990.36	0.046	0.000458	0.00
	2	7.079	7.080	0.001	5065006	0.046	0.000458	
Methoxychlor	* 1	7.770	7.771	0.001	1493.212	0.049	0.00049	4.38
	2	8.195	8.194	0.001	2382569	0.047	0.000469	
Endrin aldehyde	* 1	7.535	7.537	0.002	2087.835	0.042	0.000425	7.06
	2	7.296	7.298	0.002	3760370	0.040	0.000396	

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

127479LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 127479LCS Date(s) Analyzed: 04/30/12 04/30/12Instrumet ID (1): SECD03 Instrumet ID (2): SECD03Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

gamma-Chlordane	*	1	5.630	5.632	0.002	3635.342	0.046	0.00046	8.14
		2	5.500	5.501	0.001	6112725	0.042	0.000424	
alpha-Chlordane	*	1	5.790	5.793	0.003	3463.645	0.044	0.000442	7.76
		2	5.671	5.674	0.003	5517959	0.041	0.000409	
Endrin ketone	*	1	8.752	8.755	0.003	3236.421	0.044	0.000444	3.67
		2	8.679	8.680	0.001	5114595	0.043	0.000428	
Tetrachloro-m-xylene	*	1	2.795	2.798	0.003	6167.094	0.14	0.0014	7.41
		2	2.599	2.607	0.008	10530539	0.13	0.0013	
Decachlorobiphenyl	*	1	10.717	10.718	0.001	4613.375	0.14	0.0014	7.41
		2	11.129	11.129	0.000	8344501	0.13	0.0013	

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

127480LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 127480LCSD Date(s) Analyzed: 04/30/12 04/30/12Instrumet ID (1): SECD03 Instrumet ID (2): SECD03Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
alpha-BHC	* 1	3.552	3.556	0.004	5206.683	0.045	0.00045	4.55
	2	3.435	3.440	0.005	8207198	0.043	0.00043	
beta-BHC	* 1	4.012	4.016	0.004	1989.302	0.045	0.00045	2.25
	2	3.930	3.934	0.004	2976878	0.044	0.00044	
delta-BHC	* 1	4.212	4.216	0.004	4515.444	0.044	0.00044	0.00
	2	4.236	4.240	0.004	7212122	0.044	0.00044	
gamma-BHC (Lindane)	* 1	3.922	3.926	0.004	4626.626	0.045	0.00045	2.25
	2	3.844	3.847	0.003	7334427	0.044	0.00044	
Heptachlor	* 1	4.455	4.458	0.003	4506.169	0.045	0.00045	2.20
	2	4.311	4.314	0.003	7122599	0.045	0.00046	
Aldrin	* 1	4.793	4.797	0.004	3999.347	0.044	0.00044	4.65
	2	4.658	4.661	0.003	6380115	0.042	0.00042	
Heptachlor epoxide	* 1	5.478	5.481	0.003	3477.949	0.044	0.00044	4.65
	2	5.280	5.282	0.002	5780143	0.042	0.00042	
Endosulfan I	* 1	5.970	5.973	0.003	3286.549	0.044	0.00044	2.30
	2	5.750	5.753	0.003	5308115	0.042	0.00043	
Dieldrin	* 1	6.278	6.281	0.003	3260.933	0.042	0.00042	0.00
	2	6.094	6.095	0.001	5961490	0.042	0.00042	
4,4'-DDE	* 1	5.849	5.852	0.003	3465.066	0.044	0.00044	4.65
	2	5.850	5.852	0.002	5824643	0.042	0.00042	
Endrin	* 1	6.599	6.602	0.003	3054.411	0.045	0.00045	0.00
	2	6.505	6.507	0.002	5390334	0.045	0.00045	
Endosulfan II	* 1	6.912	6.915	0.003	2904.511	0.044	0.00044	0.00
	2	6.798	6.800	0.002	5197801	0.044	0.00044	
4,4'-DDD	* 1	6.635	6.637	0.002	2819.077	0.045	0.00045	2.25
	2	6.615	6.619	0.004	4724648	0.044	0.00044	
Endosulfan sulfate	* 1	8.248	8.251	0.003	2643.962	0.048	0.00048	2.06
	2	7.735	7.738	0.003	4821634	0.049	0.00049	
4,4'-DDT	* 1	7.042	7.044	0.002	2969.401	0.046	0.00046	0.00
	2	7.079	7.080	0.001	5130507	0.046	0.00046	
Methoxychlor	* 1	7.770	7.771	0.001	1460.966	0.048	0.00048	2.06
	2	8.193	8.194	0.001	2498355	0.049	0.00049	
Endrin aldehyde	* 1	7.535	7.537	0.002	2125.947	0.043	0.00043	7.23
	2	7.295	7.298	0.003	3842856	0.040	0.0004	

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

127480LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 127480LCSD Date(s) Analyzed: 04/30/12 04/30/12Instrumet ID (1): SECD03 Instrumet ID (2): SECD03Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

gamma-Chlordane	*	1	5.629	5.632	0.003	3601.645	0.046	0.00046	9.09
		2	5.500	5.501	0.001	6037237	0.042	0.00042	
alpha-Chlordane	*	1	5.790	5.793	0.003	3422.887	0.044	0.00044	7.06
		2	5.671	5.674	0.003	5485399	0.041	0.00041	
Endrin ketone	*	1	8.752	8.755	0.003	3146.911	0.043	0.00043	0.00
		2	8.679	8.680	0.001	5080839	0.042	0.00043	
Tetrachloro-m-xylene	*	1	2.793	2.798	0.005	6375.275	0.14	0.0014	0.00
		2	2.600	2.607	0.007	10803400	0.14	0.0014	
Decachlorobiphenyl	*	1	10.717	10.718	0.001	4549.652	0.14	0.0014	7.41
		2	11.128	11.129	0.001	8272172	0.13	0.0013	

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127481LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127481LCS Date(s) Analyzed: 04/30/12 04/30/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Toxaphene	* 1	8.900	8.900	0.000	9024.586	1.1	0.0106	
	2	10.900	10.900	0.000	14159748	1.1	0.0114	7.27
Tetrachloro-m-xylene	* 1	2.796	2.798	0.002	4510.835	0.10	0.001	
	2	2.606	2.607	0.001	7860835	0.099	0.00099	1.01
Decachlorobiphenyl	* 1	10.717	10.718	0.001	3704.696	0.11	0.0011	
	2	11.128	11.129	0.001	6394690	0.098	0.00098	11.54

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa IDW-LIQ-1

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 350581602 Date(s) Analyzed: 04/29/12 04/29/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Tetrachloro-m-xylene	* 1	2.800	2.798	0.002	2464.62	0.055	0.00056	
	2	2.603	2.607	0.004	3953794	0.049	0.0005	11.32
Decachlorobiphenyl	* 1	10.718	10.718	0.000	2649.662	0.080	0.00082	
	2	11.130	11.129	0.001	5125354	0.078	0.0008	2.47

* Column used for quantitation

PESTICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127479LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
alpha-BHC	0.0005	0.00046	91.6			60 - 130
beta-BHC	0.0005	0.00045	90.4			65 - 125
delta-BHC	0.0005	0.00044	88.6			45 - 135
gamma-BHC (Lindane)	0.0005	0.00045	90.4			25 - 135
Heptachlor	0.0005	0.00045	90.8			40 - 130
Aldrin	0.0005	0.00045	89.0			25 - 140
Heptachlor epoxide	0.0005	0.00044	88.6			60 - 130
Endosulfan I	0.0005	0.00045	90.0			50 - 110
Dieldrin	0.0005	0.00042	83.4			60 - 130
4,4'-DDE	0.0005	0.00044	88.4			35 - 140
Endrin	0.0005	0.00046	92.4			55 - 135
Endosulfan II	0.0005	0.00044	88.4			30 - 130
4,4'-DDD	0.0005	0.00044	88.2			25 - 150
Endosulfan sulfate	0.0005	0.00049	98.4			55 - 135
4,4'-DDT	0.0005	0.00046	91.6			45 - 140
Methoxychlor	0.0005	0.00049	98.0			55 - 150
Endrin aldehyde	0.0005	0.00043	85.0			55 - 135
gamma-Chlordane	0.0005	0.00046	92.0			60 - 125
alpha-Chlordane	0.0005	0.00044	88.4			65 - 125
Endrin ketone	0.0005	0.00044	88.8			75 - 125

Spike Recovery: 0 out of 20 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

PESTICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127480LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
alpha-BHC	0.0005	0.00045	90.0	1.8	20	60 - 130
beta-BHC	0.0005	0.00045	90.0	0.4	20	65 - 125
delta-BHC	0.0005	0.00044	88.0	0.7	20	45 - 135
gamma-BHC (Lindane)	0.0005	0.00045	90.0	0.4	20	25 - 135
Heptachlor	0.0005	0.00045	90.0	0.9	20	40 - 130
Aldrin	0.0005	0.00044	88.0	1.1	20	25 - 140
Heptachlor epoxide	0.0005	0.00044	88.0	0.7	20	60 - 130
Endosulfan I	0.0005	0.00044	88.0	2.2	20	50 - 110
Dieldrin	0.0005	0.00042	84.0	0.7	20	60 - 130
4,4'-DDE	0.0005	0.00044	88.0	0.5	20	35 - 140
Endrin	0.0005	0.00045	90.0	2.6	20	55 - 135
Endosulfan II	0.0005	0.00044	88.0	0.5	20	30 - 130
4,4'-DDD	0.0005	0.00045	90.0	2.0	20	25 - 150
Endosulfan sulfate	0.0005	0.00048	96.0	2.5	20	55 - 135
4,4'-DDT	0.0005	0.00046	92.0	0.4	20	45 - 140
Methoxychlor	0.0005	0.00048	96.0	2.1	20	55 - 150
Endrin aldehyde	0.0005	0.00043	86.0	1.2	20	55 - 135
gamma-Chlordane	0.0005	0.00046	92.0	0.0	20	60 - 125
alpha-Chlordane	0.0005	0.00044	88.0	0.5	20	65 - 125
Endrin ketone	0.0005	0.00043	86.0	3.2	20	75 - 125

Spike Recovery: 0 out of 20 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

PESTICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 127481LCS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Toxaphene	0.01	0.0106	106.0			70 - 130

Spike Recovery: 0 out of 1 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8081 Standards Data

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

LAB FILE ID:	RRF1 =PCAL1.D	RRF5 =PCAL2.D			
RRF10 =PCAL3.D	RRF40 =PCAL4.D	RRF60 =PCAL5.D			
COMPOUND	RRF1	RRF5	RRF10	RRF40	RRF60
alpha-BHC	124425	142876	108327.4	104023.25	111552.35
beta-BHC	51726	58363.4	44914.3	39272.65	41047.817
delta-BHC	106797	128789.8	98512.4	91789.8	97557.083
gamma-BHC (Lindane)	110769	129277.2	99229.1	92497.25	97919.2
Heptachlor	112954	131649.6	98513.9	89417.725	93539.483
Aldrin	99603	115591	90076	81444.85	86137.75
Heptachlor epoxide	92647	104547.6	80377.2	70963	73521.4
Endosulfan I	86216	102334.6	76520.1	65460.625	68943.583
Dieldrin	86345	104785	77125.5	65465.3	73490.217
4,4'-DDE	87056	103640.8	78243.5	69779.925	74115.567
Endrin	77674	90325.4	68439.9	61074.975	62242.183
Endosulfan II	78926	87895.4	63438.5	58318.95	61485.967
4,4'-DDD	68565	81831.6	60986.7	55170.075	58655.65
Endosulfan sulfate	63700	73798.6	60094	47717.425	49198.367
4,4'-DDT	69835	83884	60688.8	57589.4	62094.667
Methoxychlor	36307	40902.6	29373.9	28808.475	28607.717
Endrin aldehyde	76644	70381.8	53236.5	44609.425	49457.767
gamma-Chlordane	91031	95840.8	76125.3	72499.5	74687.917
alpha-Chlordane	89256	101418.4	77032.7	68624.2	72868.833
Endrin ketone	83991	98143	75276	63492.925	66789.933
Chlordane-1				14872.52	
Chlordane-2				21466.1	
Chlordane-3				14616.58	
Chlordane-4				48265.14	
Chlordane-5				74081.52	
Toxaphene-1				7975.47	
Toxaphene-2				8417.23	
Toxaphene-3				11506.99	
Toxaphene-4				6743.84	
Toxaphene-5				8101.9	
=====					
Tetrachloro-m-xylene(SURR)	55989	45679.8	32968.6	44475.575	47999.983
Decachlorobiphenyl(SURR)	50823	55631.6	40050	32160.575	33364.383

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

LAB FILE ID:		RRF80 =PCAL6.D	RRF100 =PCAL7.D		
RRF150 =PCAL8.D					
COMPOUND	RRF80	RRF100	RRF150		
alpha-BHC	111625.512	111225.89	110070.713		
beta-BHC	40401.525	40169.95	39552.907		
delta-BHC	97408.412	97813.03	96403.207		
gamma-BHC (Lindane)	97852.038	97988.08	96373.68		
Heptachlor	91759.275	91384.36	87732.42		
Aldrin	85225.288	84954.01	82258.487		
Heptachlor epoxide	72860.425	71973.23	69078.287		
Endosulfan I	68282.788	67640.16	65039.107		
Dieldrin	73489.362	73100.37	70188.84		
4,4'-DDE	74070.138	74162.82	72227.853		
Endrin	61460.738	60108.93	57187.387		
Endosulfan II	61441.275	60743.37	57911.973		
4,4'-DDD	60233.112	60491.3	58042.06		
Endosulfan sulfate	49513.35	48811.39	46858.407		
4,4'-DDT	63282.188	63216.43	61329.413		
Methoxychlor	26937.038	26308.1	26475.947		
Endrin aldehyde	49633.262	48698.8			
gamma-Chlordane	74336.338	74198.26	72909.02		
alpha-Chlordane	72751.762	72745.27	71417.92		
Endrin ketone	66583.838	65682.44	62606.273		
Chlordane-1					
Chlordane-2					
Chlordane-3					
Chlordane-4					
Chlordane-5					
Toxaphene-1					
Toxaphene-2					
Toxaphene-3					
Toxaphene-4					
Toxaphene-5					
=====					
Tetrachloro-m-xylene(SURR)	42004.875	45861.11	44697.367		
Decachlorobiphenyl(SURR)	33521.55	32945.67			

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
alpha-BHC	AVRG		115515.764	10.8
beta-BHC	AVRG		44431.0685	15.8
delta-BHC	AVRG		101883.842	11.4
gamma-BHC (Lindane)	AVRG		102738.193	11.6
Heptachlor	AVRG		99618.8454	15.3
Aldrin	AVRG		90661.298	12.8
Heptachlor epoxide	AVRG		79496.0177	15.9
Endosulfan I	AVRG		75054.6203	17.5
Dieldrin	AVRG		77998.6986	15.9
4,4'-DDE	AVRG		79162.0753	14.1
Endrin	AVRG		67314.1891	16.8
Endosulfan II	AVRG		66270.1794	16.6
4,4'-DDD	AVRG		62996.9372	13.5
Endosulfan sulfate	AVRG		54961.4423	17.9
4,4'-DDT	AVRG		65239.9872	12.7
Methoxychlor	AVRG		30465.097	17.4
Endrin aldehyde	LINR	-0.5706286	2.06135E-05	0.9979
gamma-Chlordane	AVRG		78953.5168	11.5
alpha-Chlordane	AVRG		78264.3857	14.4
Endrin ketone	AVRG		72820.6761	17.1
Chlordane-1	AVRG		14872.52	0
Chlordane-2	AVRG		21466.1	0
Chlordane-3	AVRG		14616.58	0
Chlordane-4	AVRG		48265.14	0
Chlordane-5	AVRG		74081.52	0
Toxaphene-1	AVRG		7975.47	0
Toxaphene-2	AVRG		8417.23	0
Toxaphene-3	AVRG		11506.99	0
Toxaphene-4	AVRG		6743.84	0
Toxaphene-5	AVRG		8101.9	0
=====				
Tetrachloro-m-xylene(SURR)	AVRG		44959.5387	14.2

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
Decachlorobiphenyl(SURR)	LINR	-1.727552	3.08276E-05	0.99888

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PCAL1.D		RT2: PCAL2.D			
RT3: PCAL3.D		RT4: PCAL4.D		RT5: PCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
alpha-BHC	3.555	3.558	3.555	3.561	3.554		
beta-BHC	4.014	4.016	4.015	4.019	4.014		
delta-BHC	4.214	4.216	4.215	4.220	4.214		
gamma-BHC (Lindane)	3.924	3.927	3.925	3.930	3.924		
Heptachlor	4.457	4.459	4.457	4.460	4.456		
Aldrin	4.795	4.796	4.795	4.798	4.795		
Heptachlor epoxide	5.480	5.481	5.480	5.483	5.480		
Endosulfan I	5.973	5.973	5.973	5.975	5.973		
Dieldrin	6.279	6.281	6.280	6.281	6.279		
4,4'-DDE	5.851	5.851	5.850	5.852	5.851		
Endrin	6.601	6.601	6.601	6.603	6.602		
Endosulfan II	6.914	6.916	6.915	6.916	6.915		
4,4'-DDD	6.636	6.637	6.637	6.638	6.637		
Endosulfan sulfate	8.249	8.251	8.251	8.252	8.251		
4,4'-DDT	7.044	7.044	7.044	7.045	7.044		
Methoxychlor	7.771	7.771	7.770	7.772	7.771		
Endrin aldehyde	7.536	7.536	7.536	7.538	7.536		
gamma-Chlordane	5.631	5.631	5.631	5.634	5.631		
alpha-Chlordane	5.792	5.792	5.792	5.794	5.793		
Endrin ketone	8.754	8.755	8.755	8.755	8.755		
Chlordane-1				4.366			
Chlordane-2				4.459			
Chlordane-3				4.931			
Chlordane-4				5.633			
Chlordane-5				5.788			
Toxaphene-1				6.485			
Toxaphene-2				6.629			
Toxaphene-3				6.895			
Toxaphene-4				7.397			
Toxaphene-5				8.099			
=====							
Tetrachloro-m-xylene(SURR)	2.801	2.795	2.793	2.806	2.796		
Decachlorobiphenyl(SURR)	10.719	10.720	10.720	10.720	10.719		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: PCAL6.D		RT7: PCAL7.D				
RT8: PCAL8.D								
COMPOUND	RT6	RT7	RT8			MIDCAL RT	RT WINDOW	
							FROM	TO
alpha-BHC	3.558	3.563	3.563			3.561	3.461	3.661
beta-BHC	4.018	4.020	4.019			4.019	3.919	4.119
delta-BHC	4.217	4.219	4.218			4.220	4.120	4.320
gamma-BHC (Lindane)	3.928	3.930	3.930			3.930	3.830	4.030
Heptachlor	4.459	4.461	4.461			4.460	4.360	4.560
Aldrin	4.797	4.800	4.798			4.798	4.698	4.898
Heptachlor epoxide	5.482	5.483	5.483			5.483	5.383	5.583
Endosulfan I	5.974	5.975	5.975			5.975	5.875	6.075
Dieldrin	6.281	6.282	6.283			6.281	6.181	6.381
4,4'-DDE	5.852	5.854	5.853			5.852	5.752	5.952
Endrin	6.602	6.604	6.603			6.603	6.503	6.703
Endosulfan II	6.915	6.917	6.918			6.916	6.816	7.016
4,4'-DDD	6.638	6.639	6.638			6.638	6.538	6.738
Endosulfan sulfate	8.251	8.252	8.253			8.252	8.152	8.352
4,4'-DDT	7.045	7.046	7.046			7.045	6.945	7.145
Methoxychlor	7.771	7.772	7.773			7.772	7.672	7.872
Endrin aldehyde	7.538	7.538				7.538	7.438	7.638
gamma-Chlordane	5.633	5.634	5.633			5.634	5.534	5.734
alpha-Chlordane	5.794	5.795	5.794			5.794	5.694	5.894
Endrin ketone	8.755	8.756	8.757			8.755	8.655	8.855
Chlordane-1						4.366	4.266	4.466
Chlordane-2						4.459	4.359	4.559
Chlordane-3						4.931	4.831	5.031
Chlordane-4						5.633	5.533	5.733
Chlordane-5						5.788	5.688	5.888
Toxaphene-1						6.485	6.385	6.585
Toxaphene-2						6.629	6.529	6.729
Toxaphene-3						6.895	6.795	6.995
Toxaphene-4						7.397	7.297	7.497
Toxaphene-5						8.099	7.999	8.199
=====								
Tetrachloro-m-xylene(SURR)	2.800	2.810	2.809			2.806	2.706	2.906
Decachlorobiphenyl(SURR)	10.720	10.720				10.720	10.520	10.920

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

LAB FILE ID:	RRF1 =PCAL1.D	RRF5 =PCAL2.D			
RRF10 =PCAL3.D	RRF40 =PCAL4.D	RRF60 =PCAL5.D			
COMPOUND	RRF1	RRF5	RRF10	RRF40	RRF60
alpha-BHC	204384	233169	174807.4	169179.45	180562.933
beta-BHC	76205	86520.6	64452.5	62277.25	63754.517
delta-BHC	173045	202737	154430.9	147212.35	159725.8
gamma-BHC (Lindane)	178039	208152	157568.1	148998.85	160703.05
Heptachlor	184588	186372.8	137153	143771	154604.55
Aldrin	171453	186420.2	143833.8	132134.15	144142.017
Heptachlor epoxide	155330	185172.2	132766	119271.15	130159.6
Endosulfan I	135905	165598.6	120428.8	107173.975	119623.85
Dieldrin	155626	182415.4	134493.2	122126.175	135163.967
4,4'-DDE	152335	179329.2	132109.9	118386.55	133544.233
Endrin	131319	154930.4	115705.6	106435.95	113715.117
Endosulfan II	136914	156433.2	114434.1	106166.225	111073.433
4,4'-DDD	110401	138517.2	102573.7	96503.5	104620.817
Endosulfan sulfate	114294	126967.4	96126.5	86417.15	91206.1
4,4'-DDT	117757	133844.6	102394.6	98560.8	107540.317
Methoxychlor	57165	72291.6	53927.8	43205.425	45387.65
Endrin aldehyde	125660	118480.2	88130.1	82009.275	86959.083
gamma-Chlordane	157893	187257	132947.3	124101.95	137525.267
alpha-Chlordane	149289	171273.2	125918.9	113347	130124.567
Endrin ketone	133526	158168.2	118397.2	104772.275	110786.35
Chlordane-1				35331.94	
Chlordane-2				21688.44	
Chlordane-3				76659.27	
Chlordane-4				65326.45	
Chlordane-5				62210.71	
Toxaphene-1				8859.31	
Toxaphene-2				11011.8	
Toxaphene-3				18626.81	
Toxaphene-4				12423.74	
Toxaphene-5				10213.81	
=====					
Tetrachloro-m-xylene(SURR)	160175	147963	108659.7	76846.1	79999.7
Decachlorobiphenyl(SURR)	84877	85208.6	60641.6	55174.65	59375.5

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

LAB FILE ID:		RRF80 =PCAL6.D	RRF100 =PCAL7.D		
RRF150 =PCAL8.D					
COMPOUND	RRF80	RRF100	RRF150		
alpha-BHC	182849.8	183246.74	183824.8		
beta-BHC	64880.838	63601.64	63513.707		
delta-BHC	161108.825	163008.07	162893.8		
gamma-BHC (Lindane)	162123.462	162655.89	163222.353		
Heptachlor	147730.875	151769.41	147267.287		
Aldrin	145812.088	145083.63	142172.373		
Heptachlor epoxide	128183.888	127521.32	122631.913		
Endosulfan I	117281.512	118021.71	113962.04		
Dieldrin	133660.75	134375.01	129081.66		
4,4'-DDE	131687.375	134010.77	131479.72		
Endrin	111256.875	110519.79	107033.633		
Endosulfan II	109390.375	109217.23	105742.353		
4,4'-DDD	104204.725	104766.7	103286.453		
Endosulfan sulfate	91611.4	92268.2	90390.133		
4,4'-DDT	107782.862	108619.19	107919.287		
Methoxychlor	45680.025	44965.74	43531.447		
Endrin aldehyde	86681.3	86832.31	84151.387		
gamma-Chlordane	136828.65	138703.63	137041.227		
alpha-Chlordane	128753.012	131110.95	129222.013		
Endrin ketone	111287.862	110800.42	107130.42		
Chlordane-1					
Chlordane-2					
Chlordane-3					
Chlordane-4					
Chlordane-5					
Toxaphene-1					
Toxaphene-2					
Toxaphene-3					
Toxaphene-4					
Toxaphene-5					
=====					
Tetrachloro-m-xylene(SURR)	79721.45	79737.12	78973.66		
Decachlorobiphenyl(SURR)	58578.688	59909.31	60048.373		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
alpha-BHC	AVRG		189003.015	10.9
beta-BHC	AVRG		68150.7564	12.7
delta-BHC	AVRG		165520.218	10.1
gamma-BHC (Lindane)	AVRG		167682.838	10.9
Heptachlor	AVRG		156657.115	11.8
Aldrin	AVRG		151381.407	11.9
Heptachlor epoxide	AVRG		137629.509	16
Endosulfan I	AVRG		124749.436	14.7
Dieldrin	AVRG		140867.77	13.7
4,4'-DDE	AVRG		139110.344	13.4
Endrin	AVRG		118864.546	13.9
Endosulfan II	AVRG		118671.365	15.4
4,4'-DDD	AVRG		108109.262	11.9
Endosulfan sulfate	AVRG		98660.1104	14.4
4,4'-DDT	AVRG		110552.332	9.9
Methoxychlor	AVRG		50769.3358	19.9
Endrin aldehyde	AVRG		94862.9569	17.9
gamma-Chlordane	AVRG		144037.253	13.8
alpha-Chlordane	AVRG		134879.83	13.1
Endrin ketone	AVRG		119358.591	15.1
Chlordane-1	AVRG		35331.94	0
Chlordane-2	AVRG		21688.44	0
Chlordane-3	AVRG		76659.27	0
Chlordane-4	AVRG		65326.45	0
Chlordane-5	AVRG		62210.71	0
Toxaphene-1	AVRG		8859.31	0
Toxaphene-2	AVRG		11011.8	0
Toxaphene-3	AVRG		18626.81	0
Toxaphene-4	AVRG		12423.74	0
Toxaphene-5	AVRG		10213.81	0
=====				
Tetrachloro-m-xylene(SURR)	LINR	-2.3783999	1.28967E-05	0.99911
Decachlorobiphenyl(SURR)	AVRG		65476.7151	18.6

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT1: PCAL1.D		RT2: PCAL2.D			
RT3: PCAL3.D		RT4: PCAL4.D		RT5: PCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
alpha-BHC	3.439	3.442	3.439	3.446	3.437		
beta-BHC	3.932	3.934	3.932	3.936	3.931		
delta-BHC	4.239	4.241	4.240	4.243	4.239		
gamma-BHC (Lindane)	3.847	3.849	3.845	3.851	3.846		
Heptachlor	4.314	4.316	4.315	4.318	4.314		
Aldrin	4.660	4.662	4.660	4.664	4.660		
Heptachlor epoxide	5.283	5.283	5.282	5.285	5.282		
Endosulfan I	5.752	5.754	5.752	5.754	5.753		
Dieldrin	6.096	6.096	6.096	6.097	6.096		
4,4'-DDE	5.852	5.853	5.852	5.854	5.852		
Endrin	6.506	6.508	6.507	6.509	6.507		
Endosulfan II	6.800	6.801	6.800	6.802	6.800		
4,4'-DDD	6.618	6.619	6.618	6.620	6.619		
Endosulfan sulfate	7.739	7.740	7.739	7.740	7.739		
4,4'-DDT	7.080	7.081	7.080	7.081	7.081		
Methoxychlor	8.194	8.196	8.196	8.196	8.195		
Endrin aldehyde	7.298	7.299	7.299	7.300	7.298		
gamma-Chlordane	5.501	5.501	5.501	5.503	5.500		
alpha-Chlordane	5.674	5.674	5.674	5.675	5.674		
Endrin ketone	8.681	8.681	8.681	8.681	8.681		
Chlordane-1				4.316			
Chlordane-2				4.811			
Chlordane-3				5.502			
Chlordane-4				5.609			
Chlordane-5				5.674			
Toxaphene-1				6.062			
Toxaphene-2				6.781			
Toxaphene-3				6.921			
Toxaphene-4				7.306			
Toxaphene-5				8.157			
=====							
Tetrachloro-m-xylene(SURR)	2.608	2.608	2.605	2.615	2.604		
Decachlorobiphenyl(SURR)	11.129	11.131	11.130	11.130	11.131		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 2038 End: 2319
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT6: PCAL6.D		RT7: PCAL7.D				
RT8: PCAL8.D								
COMPOUND	RT6	RT7	RT8			MIDCAL RT	RT WINDOW FROM	TO
alpha-BHC	3.443	3.445	3.443			3.446	3.346	3.546
beta-BHC	3.934	3.935	3.936			3.936	3.836	4.036
delta-BHC	4.241	4.243	4.243			4.243	4.143	4.343
gamma-BHC (Lindane)	3.849	3.851	3.851			3.851	3.751	3.951
Heptachlor	4.316	4.318	4.318			4.318	4.218	4.418
Aldrin	4.663	4.665	4.663			4.664	4.564	4.764
Heptachlor epoxide	5.283	5.285	5.285			5.285	5.185	5.385
Endosulfan I	5.754	5.755	5.755			5.754	5.654	5.854
Dieldrin	6.098	6.097	6.098			6.097	5.997	6.197
4,4'-DDE	5.853	5.854	5.854			5.854	5.754	5.954
Endrin	6.507	6.510	6.508			6.509	6.409	6.609
Endosulfan II	6.800	6.801	6.802			6.802	6.702	6.902
4,4'-DDD	6.619	6.619	6.619			6.620	6.520	6.720
Endosulfan sulfate	7.740	7.740	7.740			7.740	7.640	7.840
4,4'-DDT	7.082	7.082	7.082			7.081	6.981	7.181
Methoxychlor	8.196	8.196	8.197			8.196	8.096	8.296
Endrin aldehyde	7.299	7.299	7.299			7.300	7.200	7.400
gamma-Chlordane	5.502	5.504	5.503			5.503	5.403	5.603
alpha-Chlordane	5.675	5.675	5.676			5.675	5.575	5.775
Endrin ketone	8.681	8.682	8.682			8.681	8.581	8.781
Chlordane-1						4.316	4.216	4.416
Chlordane-2						4.811	4.711	4.911
Chlordane-3						5.502	5.402	5.602
Chlordane-4						5.609	5.509	5.709
Chlordane-5						5.674	5.574	5.774
Toxaphene-1						6.062	5.962	6.162
Toxaphene-2						6.781	6.681	6.881
Toxaphene-3						6.921	6.821	7.021
Toxaphene-4						7.306	7.206	7.406
Toxaphene-5						8.157	8.057	8.257
=====								
Tetrachloro-m-xylene(SURR)	2.611	2.617	2.613			2.615	2.515	2.715
Decachlorobiphenyl(SURR)	11.130	11.130	11.130			11.130	10.930	11.330

7SSC

PESTICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/28/12 Time: 2337
 CCV ID: SSC1074363 Lab File ID: PSEC.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	115515.76	110637.975	4.2	AVRG
beta-BHC	44431.069	40897	8.0	AVRG
delta-BHC	101883.84	95659.4	6.1	AVRG
gamma-BHC (Lindane)	102738.19	96975.975	5.6	AVRG
Heptachlor	99618.845	93407.4	6.2	AVRG
Aldrin	90661.298	85422.775	5.8	AVRG
Heptachlor epoxide	79496.018	74799.775	5.9	AVRG
Endosulfan I	75054.62	69688.925	7.1	AVRG
Dieldrin	77998.699	71941.8	7.8	AVRG
4,4'-DDE	79162.075	73813	6.8	AVRG
Endrin	67314.189	63803.275	5.2	AVRG
Endosulfan II	66270.179	61411.05	7.3	AVRG
4,4'-DDD	62996.937	58099.65	7.8	AVRG
Endosulfan sulfate	54961.442	49289.55	10.3	AVRG
4,4'-DDT	65239.987	61626.8	5.5	AVRG
Methoxychlor	30465.097	27777.225	8.8	AVRG
Endrin aldehyde	40	38.3	4.3	LINR
gamma-Chlordane	78953.517	76708.875	2.8	AVRG
alpha-Chlordane	78264.386	73062.5	6.6	AVRG
Endrin ketone	72820.676	67095.5	7.9	AVRG
=====				
Tetrachloro-m-xylene(SURR)	44959.539	47443.5	5.5	AVRG
Decachlorobiphenyl(SURR)	40	40.7	1.8	LINR

7SSC

PESTICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/28/12 Time: 2337
 CCV ID: SSC1074364 Lab File ID: PSEC.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	189003.02	178354.9	5.6	AVRG
beta-BHC	68150.757	65546.8	3.8	AVRG
delta-BHC	165520.22	156621.7	5.4	AVRG
gamma-BHC (Lindane)	167682.84	159218.35	5.0	AVRG
Heptachlor	156657.12	153191.4	2.2	AVRG
Aldrin	151381.41	143168.05	5.4	AVRG
Heptachlor epoxide	137629.51	127394.975	7.4	AVRG
Endosulfan I	124749.44	116604.075	6.5	AVRG
Dieldrin	140867.77	130997.525	7.0	AVRG
4,4'-DDE	139110.34	128009.15	8.0	AVRG
Endrin	118864.55	112370.325	5.5	AVRG
Endosulfan II	118671.37	110626.3	6.8	AVRG
4,4'-DDD	108109.26	101437.65	6.2	AVRG
Endosulfan sulfate	98660.11	91547.625	7.2	AVRG
4,4'-DDT	110552.33	104613.7	5.4	AVRG
Methoxychlor	50769.336	46833.625	7.8	AVRG
Endrin aldehyde	94862.957	86101.375	9.2	AVRG
gamma-Chlordane	144037.25	132792.525	7.8	AVRG
alpha-Chlordane	134879.83	124634.35	7.6	AVRG
Endrin ketone	119358.59	112295.675	5.9	AVRG
=====				
Tetrachloro-m-xylene(SURR)	40	39	2.5	LINR
Decachlorobiphenyl(SURR)	65476.715	58470.35	10.7	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0425
 CCV ID: CCV1074359 Lab File ID: PCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	115515.76	110047.925	4.7	AVRG
beta-BHC	44431.069	41406.375	6.8	AVRG
delta-BHC	101883.84	97342.125	4.5	AVRG
gamma-BHC (Lindane)	102738.19	97385.175	5.2	AVRG
Heptachlor	99618.845	94197.75	5.4	AVRG
Aldrin	90661.298	86504.9	4.6	AVRG
Heptachlor epoxide	79496.018	75146.3	5.5	AVRG
Endosulfan I	75054.62	70368.3	6.2	AVRG
Dieldrin	77998.699	69365.3	11.1	AVRG
4,4'-DDE	79162.075	74112.9	6.4	AVRG
Endrin	67314.189	64757.1	3.8	AVRG
Endosulfan II	66270.179	63119.125	4.8	AVRG
4,4'-DDD	62996.937	60514.975	3.9	AVRG
Endosulfan sulfate	54961.442	51602.6	6.1	AVRG
4,4'-DDT	65239.987	62888.975	3.6	AVRG
Methoxychlor	30465.097	28986.2	4.9	AVRG
Endrin aldehyde	40	37.2	7.0	LINR
gamma-Chlordane	78953.517	74448.5	5.7	AVRG
alpha-Chlordane	78264.386	73139.9	6.5	AVRG
Endrin ketone	72820.676	69546.375	4.5	AVRG
=====				
Tetrachloro-m-xylene(SURR)	44959.539	45178.075	0.5	AVRG
Decachlorobiphenyl(SURR)	40	42.1	5.3	LINR

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0425
 CCV ID: CCV1074360 Lab File ID: PCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	189003.02	180568.9	4.5	AVRG
beta-BHC	68150.757	69892.8	2.6	AVRG
delta-BHC	165520.22	159427.825	3.7	AVRG
gamma-BHC (Lindane)	167682.84	162431	3.1	AVRG
Heptachlor	156657.12	149618.025	4.5	AVRG
Aldrin	151381.41	149926.95	1.0	AVRG
Heptachlor epoxide	137629.51	132885.05	3.4	AVRG
Endosulfan I	124749.44	119800	4.0	AVRG
Dieldrin	140867.77	138461.425	1.7	AVRG
4,4'-DDE	139110.34	133234	4.2	AVRG
Endrin	118864.55	121071.725	1.9	AVRG
Endosulfan II	118671.37	118816.45	0.1	AVRG
4,4'-DDD	108109.26	109263.6	1.1	AVRG
Endosulfan sulfate	98660.11	105488.75	6.9	AVRG
4,4'-DDT	110552.33	112282.25	1.6	AVRG
Methoxychlor	50769.336	53551.55	5.5	AVRG
Endrin aldehyde	94862.957	93711.825	1.2	AVRG
gamma-Chlordane	144037.25	137640.425	4.4	AVRG
alpha-Chlordane	134879.83	124578.275	7.6	AVRG
Endrin ketone	119358.59	120620.875	1.1	AVRG
=====				
Tetrachloro-m-xylene(SURR)	40	39	2.5	LINR
Decachlorobiphenyl(SURR)	65476.715	60102.525	8.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0443
 CCV ID: CCV1074680 Lab File ID: TCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	7975.47	8484.83	6.4	AVRG
Toxaphene-2	8417.23	8440.67	0.3	AVRG
Toxaphene-3	11506.99	12175.98	5.8	AVRG
Toxaphene-4	6743.84	6688.8	0.8	AVRG
Toxaphene-5	8101.9	7362.81	9.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0443
 CCV ID: CCV1074681 Lab File ID: TCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	8859.31	8881.86	0.3	AVRG
Toxaphene-2	11011.8	11748.68	6.7	AVRG
Toxaphene-3	18626.81	14983.93	19.6	AVRG
Toxaphene-4	12423.74	13030.84	4.9	AVRG
Toxaphene-5	10213.81	10415.31	2.0	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0501
 CCV ID: CCV1074630 Lab File ID: CCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	14872.52	16012.43	7.7	AVRG
Chlordane-2	21466.1	22927.7	6.8	AVRG
Chlordane-3	14616.58	15588.5	6.6	AVRG
Chlordane-4	48265.14	47308.04	2.0	AVRG
Chlordane-5	74081.52	77103.18	4.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0501
 CCV ID: CCV1074631 Lab File ID: CCCV2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	35331.94	38050.27	7.7	AVRG
Chlordane-2	21688.44	23430.23	8.0	AVRG
Chlordane-3	76659.27	79916.85	4.2	AVRG
Chlordane-4	65326.45	69057.3	5.7	AVRG
Chlordane-5	62210.71	63137.89	1.5	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0743
 CCV ID: CCV1074648 Lab File ID: PCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	115515.76	109815.95	4.9	AVRG
beta-BHC	44431.069	41493.275	6.6	AVRG
delta-BHC	101883.84	98026.4	3.8	AVRG
gamma-BHC (Lindane)	102738.19	97269.6	5.3	AVRG
Heptachlor	99618.845	95182.475	4.5	AVRG
Aldrin	90661.298	86287.475	4.8	AVRG
Heptachlor epoxide	79496.018	74143.725	6.7	AVRG
Endosulfan I	75054.62	68700.75	8.5	AVRG
Dieldrin	77998.699	71106.875	8.8	AVRG
4,4'-DDE	79162.075	72862.525	8.0	AVRG
Endrin	67314.189	63115.325	6.2	AVRG
Endosulfan II	66270.179	61088.675	7.8	AVRG
4,4'-DDD	62996.937	60698.1	3.6	AVRG
Endosulfan sulfate	54961.442	52366.375	4.7	AVRG
4,4'-DDT	65239.987	59499.575	8.8	AVRG
Methoxychlor	30465.097	28843.55	5.3	AVRG
Endrin aldehyde	40	40	0.0	LINR
gamma-Chlordane	78953.517	75917.725	3.8	AVRG
alpha-Chlordane	78264.386	71682.575	8.4	AVRG
Endrin ketone	72820.676	67035.15	7.9	AVRG
=====				
Tetrachloro-m-xylene(SURR)	44959.539	47794.975	6.3	AVRG
Decachlorobiphenyl(SURR)	40	41.4	3.5	LINR

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0743
 CCV ID: CCV1074649 Lab File ID: PCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	189003.02	185624.2	1.8	AVRG
beta-BHC	68150.757	66510.2	2.4	AVRG
delta-BHC	165520.22	159008.25	3.9	AVRG
gamma-BHC (Lindane)	167682.84	162485.975	3.1	AVRG
Heptachlor	156657.12	155007.7	1.1	AVRG
Aldrin	151381.41	141855	6.3	AVRG
Heptachlor epoxide	137629.51	128766.425	6.4	AVRG
Endosulfan I	124749.44	118040.225	5.4	AVRG
Dieldrin	140867.77	132586.5	5.9	AVRG
4,4'-DDE	139110.34	129178.975	7.1	AVRG
Endrin	118864.55	115794.55	2.6	AVRG
Endosulfan II	118671.37	113743.35	4.2	AVRG
4,4'-DDD	108109.26	105306.4	2.6	AVRG
Endosulfan sulfate	98660.11	97103.625	1.6	AVRG
4,4'-DDT	110552.33	104174.125	5.8	AVRG
Methoxychlor	50769.336	46995.775	7.4	AVRG
Endrin aldehyde	94862.957	88672.35	6.5	AVRG
gamma-Chlordane	144037.25	134056.15	6.9	AVRG
alpha-Chlordane	134879.83	124855.1	7.4	AVRG
Endrin ketone	119358.59	114268.9	4.3	AVRG
=====				
Tetrachloro-m-xylene(SURR)	40	40.6	1.5	LINR
Decachlorobiphenyl(SURR)	65476.715	60829.4	7.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0801
 CCV ID: CCV1074682 Lab File ID: TCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	7975.47	8103.98	1.6	AVRG
Toxaphene-2	8417.23	8320.62	1.1	AVRG
Toxaphene-3	11506.99	11015.92	4.3	AVRG
Toxaphene-4	6743.84	6348.96	5.9	AVRG
Toxaphene-5	8101.9	7971.96	1.6	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0801
 CCV ID: CCV1074683 Lab File ID: TCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	8859.31	8848.96	0.1	AVRG
Toxaphene-2	11011.8	11146.2	1.2	AVRG
Toxaphene-3	18626.81	15351.37	17.6	AVRG
Toxaphene-4	12423.74	12610.4	1.5	AVRG
Toxaphene-5	10213.81	9536.12	6.6	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0819
 CCV ID: CCV1074632 Lab File ID: CCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	14872.52	15198.64	2.2	AVRG
Chlordane-2	21466.1	21779.38	1.5	AVRG
Chlordane-3	14616.58	14930.08	2.1	AVRG
Chlordane-4	48265.14	41870.97	13.2	AVRG
Chlordane-5	74081.52	73723.21	0.5	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 0819
 CCV ID: CCV1074633 Lab File ID: CCCV3.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	35331.94	36295.88	2.7	AVRG
Chlordane-2	21688.44	23248.05	7.2	AVRG
Chlordane-3	76659.27	78500.53	2.4	AVRG
Chlordane-4	65326.45	64514.57	1.2	AVRG
Chlordane-5	62210.71	60836.53	2.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2259
 CCV ID: CCV1074656 Lab File ID: PSEC1R.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	115515.76	112133.475	2.9	AVRG
beta-BHC	44431.069	42146.975	5.1	AVRG
delta-BHC	101883.84	98687.7	3.1	AVRG
gamma-BHC (Lindane)	102738.19	98914.325	3.7	AVRG
Heptachlor	99618.845	96095.2	3.5	AVRG
Aldrin	90661.298	87341.5	3.7	AVRG
Heptachlor epoxide	79496.018	74783.125	5.9	AVRG
Endosulfan I	75054.62	69602.075	7.3	AVRG
Dieldrin	77998.699	70382.05	9.8	AVRG
4,4'-DDE	79162.075	74171.5	6.3	AVRG
Endrin	67314.189	65346.8	2.9	AVRG
Endosulfan II	66270.179	62481.65	5.7	AVRG
4,4'-DDD	62996.937	59277.75	5.9	AVRG
Endosulfan sulfate	54961.442	54728.25	0.4	AVRG
4,4'-DDT	65239.987	64321.875	1.4	AVRG
Methoxychlor	30465.097	30709.15	0.8	AVRG
Endrin aldehyde	40	40.1	0.3	LINR
gamma-Chlordane	78953.517	76962.075	2.5	AVRG
alpha-Chlordane	78264.386	73295.275	6.3	AVRG
Endrin ketone	72820.676	68640.825	5.7	AVRG
=====				
Tetrachloro-m-xylene(SURR)	44959.539	49515.1	10.1	AVRG
Decachlorobiphenyl(SURR)	40	42.8	7.0	LINR

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2259
 CCV ID: CCV1074657 Lab File ID: PSEC1R.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	189003.02	175096.775	7.4	AVRG
beta-BHC	68150.757	59954.575	12.0	AVRG
delta-BHC	165520.22	152224.15	8.0	AVRG
gamma-BHC (Lindane)	167682.84	152519.55	9.0	AVRG
Heptachlor	156657.12	150186.675	4.1	AVRG
Aldrin	151381.41	136464.475	9.9	AVRG
Heptachlor epoxide	137629.51	122781.575	10.8	AVRG
Endosulfan I	124749.44	110692.15	11.3	AVRG
Dieldrin	140867.77	125582.45	10.9	AVRG
4,4'-DDE	139110.34	121465	12.7	AVRG
Endrin	118864.55	113268.025	4.7	AVRG
Endosulfan II	118671.37	110557.625	6.8	AVRG
4,4'-DDD	108109.26	100407.875	7.1	AVRG
Endosulfan sulfate	98660.11	99912.35	1.3	AVRG
4,4'-DDT	110552.33	108163.425	2.2	AVRG
Methoxychlor	50769.336	50919.075	0.3	AVRG
Endrin aldehyde	94862.957	86871.625	8.4	AVRG
gamma-Chlordane	144037.25	126576.075	12.1	AVRG
alpha-Chlordane	134879.83	117781.4	12.7	AVRG
Endrin ketone	119358.59	112411.05	5.8	AVRG
=====				
Tetrachloro-m-xylene(SURR)	40	38	5.0	LINR
Decachlorobiphenyl(SURR)	65476.715	58397.6	10.8	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2317
 CCV ID: CCV1074686 Lab File ID: TSEC1.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	7975.47	7949.79	0.3	AVRG
Toxaphene-2	8417.23	8003.33	4.9	AVRG
Toxaphene-3	11506.99	11373.99	1.2	AVRG
Toxaphene-4	6743.84	6653.14	1.3	AVRG
Toxaphene-5	8101.9	7043.95	13.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2317
 CCV ID: CCV1074687 Lab File ID: TSEC1.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	8859.31	8281.16	6.5	AVRG
Toxaphene-2	11011.8	10692.86	2.9	AVRG
Toxaphene-3	18626.81	18860.38	1.3	AVRG
Toxaphene-4	12423.74	12173.83	2.0	AVRG
Toxaphene-5	10213.81	10541.93	3.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2335
 CCV ID: CCV1074636 Lab File ID: CSEC1.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	14872.52	14809.73	0.4	AVRG
Chlordane-2	21466.1	21463.12	0.0	AVRG
Chlordane-3	14616.58	14411.15	1.4	AVRG
Chlordane-4	48265.14	47804.13	1.0	AVRG
Chlordane-5	74081.52	74130.98	0.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/29/12 Time: 2335
 CCV ID: CCV1074637 Lab File ID: CSEC1.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	35331.94	34338.17	2.8	AVRG
Chlordane-2	21688.44	20700.34	4.6	AVRG
Chlordane-3	76659.27	72928.29	4.9	AVRG
Chlordane-4	65326.45	62675.92	4.1	AVRG
Chlordane-5	62210.71	59898.07	3.7	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0235
 CCV ID: CCV1074658 Lab File ID: PSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	115515.76	107205.325	7.2	AVRG
beta-BHC	44431.069	40810.025	8.1	AVRG
delta-BHC	101883.84	96147.55	5.6	AVRG
gamma-BHC (Lindane)	102738.19	95577.2	7.0	AVRG
Heptachlor	99618.845	93922.5	5.7	AVRG
Aldrin	90661.298	85356.85	5.9	AVRG
Heptachlor epoxide	79496.018	73479.125	7.6	AVRG
Endosulfan I	75054.62	68837.25	8.3	AVRG
Dieldrin	77998.699	71846.875	7.9	AVRG
4,4'-DDE	79162.075	72546.2	8.4	AVRG
Endrin	67314.189	63628.275	5.5	AVRG
Endosulfan II	66270.179	61088.95	7.8	AVRG
4,4'-DDD	62996.937	57766	8.3	AVRG
Endosulfan sulfate	54961.442	51684.05	6.0	AVRG
4,4'-DDT	65239.987	62247.975	4.6	AVRG
Methoxychlor	30465.097	28006.825	8.1	AVRG
Endrin aldehyde	40	39.7	0.7	LINR
gamma-Chlordane	78953.517	75802.175	4.0	AVRG
alpha-Chlordane	78264.386	71885.5	8.2	AVRG
Endrin ketone	72820.676	67303.725	7.6	AVRG
=====				
Tetrachloro-m-xylene(SURR)	44959.539	47993.575	6.7	AVRG
Decachlorobiphenyl(SURR)	40	42.1	5.3	LINR

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0235
 CCV ID: CCV1074659 Lab File ID: PSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
alpha-BHC	189003.02	171512.925	9.3	AVRG
beta-BHC	68150.757	63534.875	6.8	AVRG
delta-BHC	165520.22	151321.6	8.6	AVRG
gamma-BHC (Lindane)	167682.84	151844.95	9.4	AVRG
Heptachlor	156657.12	150471.15	3.9	AVRG
Aldrin	151381.41	137237.275	9.3	AVRG
Heptachlor epoxide	137629.51	122891.625	10.7	AVRG
Endosulfan I	124749.44	112664.6	9.7	AVRG
Dieldrin	140867.77	125414.425	11.0	AVRG
4,4'-DDE	139110.34	122943.3	11.6	AVRG
Endrin	118864.55	110057.05	7.4	AVRG
Endosulfan II	118671.37	106000.475	10.7	AVRG
4,4'-DDD	108109.26	97660.875	9.7	AVRG
Endosulfan sulfate	98660.11	93687.1	5.0	AVRG
4,4'-DDT	110552.33	102463.825	7.3	AVRG
Methoxychlor	50769.336	47711.125	6.0	AVRG
Endrin aldehyde	94862.957	84117.15	11.3	AVRG
gamma-Chlordane	144037.25	126835.3	11.9	AVRG
alpha-Chlordane	134879.83	119996.725	11.0	AVRG
Endrin ketone	119358.59	110287.3	7.6	AVRG
=====				
Tetrachloro-m-xylene(SURR)	40	37.6	6.0	LINR
Decachlorobiphenyl(SURR)	65476.715	58700.35	10.3	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0253
 CCV ID: CCV1074688 Lab File ID: TSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	7975.47	8536.91	7.0	AVRG
Toxaphene-2	8417.23	8613.4	2.3	AVRG
Toxaphene-3	11506.99	12055.58	4.8	AVRG
Toxaphene-4	6743.84	6712.49	0.5	AVRG
Toxaphene-5	8101.9	7630.21	5.8	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0253
 CCV ID: CCV1074689 Lab File ID: TSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	8859.31	8721.44	1.6	AVRG
Toxaphene-2	11011.8	11159.93	1.3	AVRG
Toxaphene-3	18626.81	15115	18.9	AVRG
Toxaphene-4	12423.74	12815.73	3.2	AVRG
Toxaphene-5	10213.81	11055.01	8.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0311
 CCV ID: CCV1074638 Lab File ID: CSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	14872.52	15746.39	5.9	AVRG
Chlordane-2	21466.1	22660.32	5.6	AVRG
Chlordane-3	14616.58	15406.96	5.4	AVRG
Chlordane-4	48265.14	48998.04	1.5	AVRG
Chlordane-5	74081.52	77937.7	5.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 04/30/12 Time: 0311
 CCV ID: CCV1074639 Lab File ID: CSEC2.D Init. Calib. Date Begin: 04/28/12 End: 04/28/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	35331.94	36750.42	4.0	AVRG
Chlordane-2	21688.44	22547.2	4.0	AVRG
Chlordane-3	76659.27	77902.69	1.6	AVRG
Chlordane-4	65326.45	67168.02	2.8	AVRG
Chlordane-5	62210.71	62579.85	0.6	AVRG

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074361 Date Analyzed: 04/28/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 2020

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.76	8.66	8.86	
Endrin	6.60	6.50	6.70	7.67
4,4'-DDT	7.05	6.94	7.14	1.34
4,4'-DDE	5.85	5.75	5.95	
4,4'-DDD	6.71	6.54	6.74	

Combined % breakdown: 9.01

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074362 Date Analyzed: 04/28/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 2020

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.68	8.58	8.78	
Endrin	6.51	6.41	6.61	6.74
4,4'-DDT	7.08	6.98	7.18	2.29
4,4'-DDE	5.86	5.75	5.95	
4,4'-DDD	6.62	6.52	6.72	

Combined % breakdown: 9.03

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074654 Date Analyzed: 04/29/12
 Lab File ID (EVA): PEM2.D Time Analyzed: 0407

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.76	8.66	8.86	
Endrin	6.60	6.50	6.70	5.59
4,4'-DDT	7.05	6.94	7.14	0.59
4,4'-DDE	5.85	5.75	5.95	
4,4'-DDD	0.00	6.54	6.74	

Combined % breakdown: 6.18

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074655 Date Analyzed: 04/29/12
 Lab File ID (EVA): PEM2.D Time Analyzed: 0407

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.68	8.58	8.78	
Endrin	6.51	6.41	6.61	6.00
4,4'-DDT	7.08	6.98	7.18	2.00
4,4'-DDE	5.85	5.75	5.95	
4,4'-DDD	6.62	6.52	6.72	

Combined % breakdown: 8.00

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074652 Date Analyzed: 04/29/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 1912

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.75	8.66	8.86	
Endrin	6.60	6.50	6.70	4.02
4,4'-DDT	7.04	6.94	7.14	0.85
4,4'-DDE	5.85	5.75	5.95	
4,4'-DDD	0.00	6.54	6.74	

Combined % breakdown: 4.87

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/28/12
 EPA Sample No. (EVA): EVA1074653 Date Analyzed: 04/29/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 1912

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.68	8.58	8.78	
Endrin	6.51	6.41	6.61	4.65
4,4'-DDT	7.08	6.98	7.18	2.40
4,4'-DDE	5.85	5.75	5.95	
4,4'-DDD	6.62	6.52	6.72	

Combined % breakdown: 7.05

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

8081 TCLP Pesticide Organics

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8081

IV. PREPARATION

TCLP Samples were prepared by EPA SW846 1311 for 8081 semi-volatile analysis.

Water / TCLP samples were prepared by EPA SW846 3510 for 8081 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Sample analysis proceeded normally.

Data was collected using dual column analysis. Results reported from the primary column if the %D between the two columns is >40%, data is coded.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/11/2012

PESTICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8081 TCLP

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>

8081 TCLP Sample Data

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-SOIL-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 81601.D

Sample wt/vol: 500 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 10 Date Extracted: 05/02/12

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1037

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Soils Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
58-89-9	gamma-BHC (Lindane)	0.00001	U	0.000005	0.00001	0.4
76-44-8	Heptachlor	0.000016	U	0.000008	0.000016	0.008
1024-57-3	Heptachlor epoxide	0.000006	U	0.000003	0.000006	0.008
72-20-8	Endrin	0.000008	U	0.000004	0.000008	0.02
72-43-5	Methoxychlor	0.000008	U	0.000004	0.000008	10
57-74-9	Chlordane	0.0002	U	0.0001	0.0002	0.03
8001-35-2	Toxaphene	0.00072	U	0.00036	0.00072	0.5

Results reported on Primary Column, if RPD >40% results flagged accordingly.

8081 TCLP QC Summary

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 128632MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 128632MB Lab File ID: 9279MB.D

Sample wt/vol: 500 Units: ML Date Received: 04/25/12

Concentrated Extract Volume: 10 Date Extracted: 05/02/12

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 0943

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
58-89-9	gamma-BHC (Lindane)	0.00001	U	0.000005	0.00001	0.4
76-44-8	Heptachlor	0.000016	U	0.000008	0.000016	0.008
1024-57-3	Heptachlor epoxide	0.000006	U	0.000003	0.000006	0.008
72-20-8	Endrin	0.000008	U	0.000004	0.000008	0.02
72-43-5	Methoxychlor	0.000008	U	0.000004	0.000008	10
57-74-9	Chlordane	0.0002	U	0.0001	0.0002	0.03
8001-35-2	Toxaphene	0.00072	U	0.00036	0.00072	0.5

Results reported on Primary Column, if RPD >40% results flagged accordingly.

PESTICIDE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 128632MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9279MB.D Lab Sample ID: 128632MB

Instrument ID: SECD03 Date Extracted: 05/02/12

Matrix: WATER Date Analyzed: 05/09/12

Level:(low/med) LOW Time Analyzed: 0943

TCLP Analysis

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128635LCS	128635LCS	9279LCST.D	05/09/12	1019
2	IDW-SOIL-1	350581601	81601.D	05/09/12	1037
3	128633LCS	128633LCS	9279LCS.D	05/09/12	1218

COMMENTS:

2A

WATER PESTICIDE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
128632MB	85.0	85.0					0
128633LCS	45.0	100.0					0
128635LCS	70.0	75.0					0
IDW-SOIL-1	75.0	70.0					0

Control Limits

S1 = Tetrachloro-m-xylene 45 - 125
S2 = Decachlorobiphenyl 34 - 133

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Form II

160512.1609

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 2.76			S2 : 10.67			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	EVA1077979	45410	PEM1.D	05/07/12	0835	
2	STD1077967	45905	PCAL8.D	05/07/12	0946	2.77 10.68
3	STD1077965	45906	PCAL7.D	05/07/12	1004	2.75 10.67
4	STD1077963	45907	PCAL6.D	05/07/12	1022	2.76 10.67
5	STD1077961	45908	PCAL5.D	05/07/12	1040	2.76 10.67
6	STD1077959	45909	PCAL4.D	05/07/12	1058	2.76 10.67
7	STD1077957	45910	PCAL3.D	05/07/12	1116	2.76 10.67
8	STD1077955	45911	PCAL2.D	05/07/12	1134	2.75 10.67
9	STD1077953	45912	PCAL1.D	05/07/12	1152	2.76 10.67
10	STD1077997	45269	TCAL4.D	05/07/12	1210	
11	STD1077943	44709	CCAL4.D	05/07/12	1229	
12	CCV1077983	45999	PSEC.D	05/07/12	1247	2.76 10.66
13	EVA1078852	45410	PEM1.D	05/09/12	0813	
14	CCV1078848	45999	PCCV1.D	05/09/12	0831	2.75 10.64
15	CCV1078854	45269	TCCV1.D	05/09/12	0859	
16	CCV1078840	44709	CCC1.D	05/09/12	0918	
17	128632MB	128632MB	9279MB.D	05/09/12	0943	2.76 10.65
18	128635LCS	128635LCS	9279LCST.D	05/09/12	1019	2.75 10.64
19	IDW-SOIL-1	350581601	81601.D	05/09/12	1037	2.74 10.64
20	ZZZZZ	ZZZZZ	ZZZZZ	05/09/12	1055	
21	128633LCS	128633LCS	9279LCS.D	05/09/12	1218	2.75 10.65
22	CCV1078856	45269	TCCV2.D	05/09/12	1313	
23	CCV1078842	44709	CCC2.D	05/09/12	1331	
24	CCV1079483	45999	PCCV2R.D	05/09/12	1349	2.73 10.64

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 Instrument ID: SECD03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 2.56			S2 : 11.08			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	EVA1077980	45410	PEM1.D	05/07/12	0835	
2	STD1077968	45905	PCAL8.D	05/07/12	0946	2.57 11.08
3	STD1077966	45906	PCAL7.D	05/07/12	1004	2.56 11.08
4	STD1077964	45907	PCAL6.D	05/07/12	1022	2.56 11.08
5	STD1077962	45908	PCAL5.D	05/07/12	1040	2.56 11.08
6	STD1077960	45909	PCAL4.D	05/07/12	1058	2.56 11.08
7	STD1077958	45910	PCAL3.D	05/07/12	1116	2.56 11.08
8	STD1077956	45911	PCAL2.D	05/07/12	1134	2.56 11.08
9	STD1077954	45912	PCAL1.D	05/07/12	1152	2.56 11.08
10	STD1077998	45269	TCAL4.D	05/07/12	1210	
11	STD1077944	44709	CCAL4.D	05/07/12	1229	
12	CCV1077984	45999	PSEC.D	05/07/12	1247	2.57 11.08
13	EVA1078853	45410	PEM1.D	05/09/12	0813	
14	CCV1078849	45999	PCCV1.D	05/09/12	0831	2.55 11.05
15	CCV1078855	45269	TCCV1.D	05/09/12	0859	
16	CCV1078841	44709	CCC1.D	05/09/12	0918	
17	128632MB	128632MB	9279MB.D	05/09/12	0943	2.55 11.06
18	128635LCS	128635LCS	9279LCST.D	05/09/12	1019	2.55 11.05
19	IDW-SOIL-1	350581601	81601.D	05/09/12	1037	2.55 11.05
20	IDW-SOIL-1MS	128730MS	9279MS.D	05/09/12	1055	
21	128633LCS	128633LCS	9279LCS.D	05/09/12	1218	2.55 11.06
22	CCV1078857	45269	TCCV2.D	05/09/12	1313	
23	CCV1078843	44709	CCC2.D	05/09/12	1331	
24	CCV1079484	45999	PCCV2R.D	05/09/12	1349	2.53 11.05

QC LIMITS

S1 = Tetrachloro-m-xylene (+/- 0.1 MINUTES)
 S2 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 128632MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 128632MB Date(s) Analyzed: 05/09/12 05/09/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Tetrachloro-m-xylene	* 1	2.756	2.759	0.003	5086.924	0.084	0.0017	
	2	2.549	2.562	0.013	8890846	0.072	0.0014	19.35
Decachlorobiphenyl	* 1	10.646	10.664	0.018	4110.586	0.086	0.0017	
	2	11.056	11.083	0.027	10189358	0.098	0.002	16.22

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 128633LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 128633LCS Date(s) Analyzed: 05/09/12 05/09/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
gamma-BHC (Lindane)	* 1	3.885	3.895	0.010	4745.441	0.034	0.000689	8.48
	2	3.799	3.815	0.016	9235359	0.037	0.00075	
Heptachlor	* 1	4.415	4.425	0.010	5019.829	0.039	0.000778	55.50
	2	4.266	4.282	0.016	4799503	0.022	0.00044	
Heptachlor epoxide	* 1	5.434	5.445	0.011	4462.919	0.042	0.000842	19.41
	2	5.226	5.245	0.019	6954599	0.035	0.000693	
Endrin	* 1	6.547	6.561	0.014	4114.172	0.049	0.000973	4.72
	2	6.440	6.463	0.023	8661833	0.051	0.00102	
Methoxychlor	* 1	7.716	7.728	0.012	2148.981	0.056	0.00112	22.66
	2	8.122	8.147	0.025	3508260	0.045	0.000892	
Tetrachloro-m-xylene	* 1	2.747	2.759	0.012	2743.682	0.045	0.0009	28.57
	2	2.546	2.562	0.016	7412302	0.060	0.0012	
Decachlorobiphenyl	* 1	10.647	10.664	0.017	4663.502	0.098	0.002	58.06
	2	11.057	11.083	0.026	5471702	0.053	0.0011	

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 128635LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 128635LCS Date(s) Analyzed: 05/09/12 05/09/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Toxaphene	* 1	8.900	8.900	0.000	10360.005	1.0	0.02	
	2	10.900	10.900	0.000	17040454	1.0	0.0206	2.96
Tetrachloro-m-xylene	* 1	2.751	2.759	0.008	4127.766	0.068	0.0014	
	2	2.548	2.562	0.014	7299205	0.059	0.0012	15.38
Decachlorobiphenyl	* 1	10.637	10.664	0.027	3661.232	0.077	0.0015	
	2	11.053	11.083	0.030	9479559	0.092	0.0018	18.18

* Column used for quantitation

PESTICIDE ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa IDW-SOIL-1

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 350581601 Date(s) Analyzed: 05/09/12 05/09/12

Instrumet ID (1): SECD03 Instrumet ID (2): SECD03

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Tetrachloro-m-xylene	* 1	2.742	2.759	0.017	4432.079	0.073	0.0015	
	2	2.547	2.562	0.015	8482483	0.069	0.0014	6.90
Decachlorobiphenyl	* 1	10.637	10.664	0.027	3456.418	0.072	0.0014	
	2	11.054	11.083	0.029	8228690	0.079	0.0016	13.33

* Column used for quantitation

PESTICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 128633LCS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

TCLP Analysis

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	0.001	0.00069	68.9			65 - 127
Heptachlor	0.001	0.00078	77.8			64 - 129
Heptachlor epoxide	0.001	0.00084	84.2			60 - 128
Endrin	0.001	0.00097	97.3			63 - 132
Methoxychlor	0.001	0.00112	112.0			59 - 130

Spike Recovery: 0 out of 5 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

PESTICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 128635LCS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

TCLP Analysis

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Toxaphene	0.02	0.02	100.0			46 - 170

Spike Recovery: 0 out of 1 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8081 TCLP Standards Data

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

LAB FILE ID:	RRF1 =PCAL1.D	RRF5 =PCAL2.D			
RRF10 =PCAL3.D	RRF40 =PCAL4.D	RRF60 =PCAL5.D			
COMPOUND	RRF1	RRF5	RRF10	RRF40	RRF60
gamma-BHC (Lindane)	143588	139914.4	131713.1	112951.65	148643.517
Heptachlor	138792	137095.4	127109.9	107085.45	137836.183
Heptachlor epoxide	117794	116110.8	107108.4	87517	110956.6
Endrin	94157	89205.4	81711.8	71883.3	89741.283
Methoxychlor	42686	42184.2	39767.7	31849.5	39154.017
Chlordane-1				19146.96	
Chlordane-2				27200.59	
Chlordane-3				18589.81	
Chlordane-4				61847.26	
Chlordane-5				95224.11	
Toxaphene-1				10194.37	
Toxaphene-2				9999.37	
Toxaphene-3				14408.65	
Toxaphene-4				8958.46	
Toxaphene-5				8749.43	
=====					
Tetrachloro-m-xylene(SURR)	70641	63018.8	60662.5	56086.5	66024.1
Decachlorobiphenyl(SURR)	53409	55498.2	49659.1	38179.175	48712.317

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

LAB FILE ID:		RRF80 =PCAL6.D	RRF100 =PCAL7.D		
RRF150 =PCAL8.D					
COMPOUND	RRF80	RRF100	RRF150		
gamma-BHC (Lindane)	140470.8	148371.33	136881.847		
Heptachlor	128818.588	135102.54	120750.973		
Heptachlor epoxide	104160.888	107646.21	97071.467		
Endrin	82555.975	88195.76	79280.987		
Methoxychlor	37817.788	38132.67	34223.073		
Chlordane-1					
Chlordane-2					
Chlordane-3					
Chlordane-4					
Chlordane-5					
Toxaphene-1					
Toxaphene-2					
Toxaphene-3					
Toxaphene-4					
Toxaphene-5					
=====					
Tetrachloro-m-xylene(SURR)	53937.1	61070.34	55567.387		
Decachlorobiphenyl(SURR)	46185.925	46787.7	42672.7		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
gamma-BHC (Lindane)	AVRG		137816.83	8.4
Heptachlor	AVRG		129073.879	8.4
Heptachlor epoxide	AVRG		106045.671	9.4
Endrin	AVRG		84591.4381	8.4
Methoxychlor	AVRG		38226.8684	9.7
Chlordane-1	AVRG		19146.96	0
Chlordane-2	AVRG		27200.59	0
Chlordane-3	AVRG		18589.81	0
Chlordane-4	AVRG		61847.26	0
Chlordane-5	AVRG		95224.11	0
Toxaphene-1	AVRG		10194.37	0
Toxaphene-2	AVRG		9999.37	0
Toxaphene-3	AVRG		14408.65	0
Toxaphene-4	AVRG		8958.46	0
Toxaphene-5	AVRG		8749.43	0
=====				
Tetrachloro-m-xylene(SURR)	AVRG		60875.9658	9.3
Decachlorobiphenyl(SURR)	AVRG		47638.0146	11.7

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PCAL1.D		RT2: PCAL2.D			
RT3: PCAL3.D		RT4: PCAL4.D		RT5: PCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
gamma-BHC (Lindane)	3.894	3.893	3.894	3.894	3.893		
Heptachlor	4.424	4.424	4.425	4.424	4.425		
Heptachlor epoxide	5.444	5.445	5.445	5.445	5.445		
Endrin	6.559	6.560	6.560	6.561	6.560		
Methoxychlor	7.727	7.728	7.727	7.728	7.729		
Chlordane-1				4.332			
Chlordane-2				4.424			
Chlordane-3				4.897			
Chlordane-4				5.595			
Chlordane-5				5.750			
Toxaphene-1				6.444			
Toxaphene-2				6.588			
Toxaphene-3				6.853			
Toxaphene-4				7.354			
Toxaphene-5				8.051			
=====							
Tetrachloro-m-xylene(SURR)	2.759	2.754	2.760	2.759	2.756		
Decachlorobiphenyl(SURR)	10.665	10.666	10.666	10.667	10.666		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: PCAL6.D		RT7: PCAL7.D				
RT8: PCAL8.D								
COMPOUND	RT6	RT7	RT8			MIDCAL	RT WINDOW	
						RT	FROM	TO
gamma-BHC (Lindane)	3.895	3.894	3.904			3.894	3.794	3.994
Heptachlor	4.425	4.423	4.434			4.424	4.324	4.524
Heptachlor epoxide	5.445	5.446	5.455			5.445	5.345	5.545
Endrin	6.560	6.561	6.572			6.561	6.461	6.661
Methoxychlor	7.729	7.729	7.741			7.728	7.628	7.828
Chlordane-1						4.332	4.232	4.432
Chlordane-2						4.424	4.324	4.524
Chlordane-3						4.897	4.797	4.997
Chlordane-4						5.595	5.495	5.695
Chlordane-5						5.750	5.650	5.850
Toxaphene-1						6.444	6.344	6.544
Toxaphene-2						6.588	6.488	6.688
Toxaphene-3						6.853	6.753	6.953
Toxaphene-4						7.354	7.254	7.454
Toxaphene-5						8.051	7.951	8.151
=====								
Tetrachloro-m-xylene(SURR)	2.757	2.754	2.768			2.759	2.659	2.859
Decachlorobiphenyl(SURR)	10.666	10.668	10.679			10.667	10.467	10.867

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

LAB FILE ID:	RRF1 =PCAL1.D	RRF5 =PCAL2.D			
RRF10 =PCAL3.D	RRF40 =PCAL4.D	RRF60 =PCAL5.D			
COMPOUND	RRF1	RRF5	RRF10	RRF40	RRF60
gamma-BHC (Lindane)	249514	244055.8	227133	199137.2	266454.533
Heptachlor	248448	220431	212748.5	192630.05	240874.45
Heptachlor epoxide	212338	210575.2	192774.4	163170.35	220096.767
Endrin	186460	168886.8	156592.5	141047.4	185506.267
Methoxychlor	88420	85264.8	77421.4	64221.25	82981.6
Chlordane-1				48126.87	
Chlordane-2				29679.38	
Chlordane-3				106268.86	
Chlordane-4				92420.73	
Chlordane-5				89408.59	
Toxaphene-1				11938.16	
Toxaphene-2				15176.48	
Toxaphene-3				26182	
Toxaphene-4				17589.36	
Toxaphene-5				15137.04	
=====					
Tetrachloro-m-xylene(SURR)		147763.8	124141.2	100001.725	128295.4
Decachlorobiphenyl(SURR)	116102	110635.6	100569.8	82893.675	108948.45

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

LAB FILE ID:		RRF80 =PCAL6.D	RRF100 =PCAL7.D		
RRF150 =PCAL8.D					
COMPOUND	RRF80	RRF100	RRF150		
gamma-BHC (Lindane)	257150.038	269681.7	257534.513		
Heptachlor	207878.862	219852.18	202608.94		
Heptachlor epoxide	205627.238	211458.27	189991.36		
Endrin	170166.788	181273.02	166784.727		
Methoxychlor	78615.575	80463.18	71847.447		
Chlordane-1					
Chlordane-2					
Chlordane-3					
Chlordane-4					
Chlordane-5					
Toxaphene-1					
Toxaphene-2					
Toxaphene-3					
Toxaphene-4					
Toxaphene-5					
=====					
Tetrachloro-m-xylene(SURR)	122268.7	126933.08	112292.413		
Decachlorobiphenyl(SURR)	102272.812	106823.77	100470.34		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
gamma-BHC (Lindane)	AVRG		246332.598	9.5
Heptachlor	AVRG		218183.998	8.6
Heptachlor epoxide	AVRG		200753.948	9.1
Endrin	AVRG		169589.688	9.1
Methoxychlor	AVRG		78654.4065	9.8
Chlordane-1	AVRG		48126.87	0
Chlordane-2	AVRG		29679.38	0
Chlordane-3	AVRG		106268.86	0
Chlordane-4	AVRG		92420.73	0
Chlordane-5	AVRG		89408.59	0
Toxaphene-1	AVRG		11938.16	0
Toxaphene-2	AVRG		15176.48	0
Toxaphene-3	AVRG		26182	0
Toxaphene-4	AVRG		17589.36	0
Toxaphene-5	AVRG		15137.04	0
=====				
Tetrachloro-m-xylene(SURR)	AVRG		123099.474	12
Decachlorobiphenyl(SURR)	AVRG		103589.556	9.6

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT1: PCAL1.D		RT2: PCAL2.D			
RT3: PCAL3.D		RT4: PCAL4.D		RT5: PCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
gamma-BHC (Lindane)	3.814	3.814	3.814	3.814	3.814		
Heptachlor	4.281	4.281	4.282	4.281	4.282		
Heptachlor epoxide	5.245	5.245	5.245	5.245	5.245		
Endrin	6.464	6.464	6.463	6.463	6.462		
Methoxychlor	8.147	8.148	8.147	8.146	8.147		
Chlordane-1				4.282			
Chlordane-2				4.774			
Chlordane-3				5.463			
Chlordane-4				5.569			
Chlordane-5				5.635			
Toxaphene-1				6.020			
Toxaphene-2				6.736			
Toxaphene-3				6.874			
Toxaphene-4				7.261			
Toxaphene-5				8.105			
=====							
Tetrachloro-m-xylene(SURR)		2.560	2.564	2.564	2.562		
Decachlorobiphenyl(SURR)	11.084	11.084	11.083	11.083	11.082		

PESTICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 Calibration Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 946 End: 1229
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID: RT6: PCAL6.D RT7: PCAL7.D								
RT8: PCAL8.D								
COMPOUND	RT6	RT7	RT8			MIDCAL RT	RT WINDOW FROM TO	
gamma-BHC (Lindane)	3.815	3.813	3.816			3.814	3.714	3.914
Heptachlor	4.283	4.281	4.284			4.281	4.181	4.381
Heptachlor epoxide	5.245	5.245	5.248			5.245	5.145	5.345
Endrin	6.463	6.462	6.466			6.463	6.363	6.563
Methoxychlor	8.147	8.147	8.149			8.146	8.046	8.246
Chlordane-1						4.282	4.182	4.382
Chlordane-2						4.774	4.674	4.874
Chlordane-3						5.463	5.363	5.563
Chlordane-4						5.569	5.469	5.669
Chlordane-5						5.635	5.535	5.735
Toxaphene-1						6.020	5.920	6.120
Toxaphene-2						6.736	6.636	6.836
Toxaphene-3						6.874	6.774	6.974
Toxaphene-4						7.261	7.161	7.361
Toxaphene-5						8.105	8.005	8.205
=====								
Tetrachloro-m-xylene(SURR)	2.563	2.557	2.566			2.564	2.464	2.664
Decachlorobiphenyl(SURR)	11.082	11.082	11.084			11.083	10.883	11.283

7SSC

PESTICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/07/12 Time: 1247
 CCV ID: SSC1077983 Lab File ID: PSEC.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	137816.83	120261.025	12.7	AVRG
Heptachlor	129073.88	113692.95	11.9	AVRG
Heptachlor epoxide	106045.67	93412.425	11.9	AVRG
Endrin	84591.438	74852.825	11.5	AVRG
Methoxychlor	38226.868	34463.25	9.8	AVRG
=====				
Tetrachloro-m-xylene(SURR)	60875.966	57484.95	5.6	AVRG
Decachlorobiphenyl(SURR)	47638.015	41205.4	13.5	AVRG

7SSC

PESTICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/07/12 Time: 1247
 CCV ID: SSC1077984 Lab File ID: PSEC.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	246332.6	212174.6	13.9	AVRG
Heptachlor	218184	201012.625	7.9	AVRG
Heptachlor epoxide	200753.95	174185.775	13.2	AVRG
Endrin	169589.69	147453.325	13.1	AVRG
Methoxychlor	78654.406	67867.35	13.7	AVRG
=====				
Tetrachloro-m-xylene(SURR)	123099.47	106342.525	13.6	AVRG
Decachlorobiphenyl(SURR)	103589.56	88877.25	14.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0831
 CCV ID: CCV1078848 Lab File ID: PCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	137816.83	136651.375	0.8	AVRG
Heptachlor	129073.88	134292.675	4.0	AVRG
Heptachlor epoxide	106045.67	106449.425	0.4	AVRG
Endrin	84591.438	92805.125	9.7	AVRG
Methoxychlor	38226.868	38199.7	0.1	AVRG
=====				
Tetrachloro-m-xylene(SURR)	60875.966	68631.7	12.7	AVRG
Decachlorobiphenyl(SURR)	47638.015	45310.925	4.9	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0831
 CCV ID: CCV1078849 Lab File ID: PCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	246332.6	233672.45	5.1	AVRG
Heptachlor	218184	232079.4	6.4	AVRG
Heptachlor epoxide	200753.95	193031.65	3.8	AVRG
Endrin	169589.69	178562.35	5.3	AVRG
Methoxychlor	78654.406	83210.225	5.8	AVRG
=====				
Tetrachloro-m-xylene(SURR)	123099.47	116629.475	5.3	AVRG
Decachlorobiphenyl(SURR)	103589.56	99385.95	4.1	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0859
 CCV ID: CCV1078854 Lab File ID: TCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	10194.37	11248.93	10.3	AVRG
Toxaphene-2	9999.37	11318.44	13.2	AVRG
Toxaphene-3	14408.65	16120.39	11.9	AVRG
Toxaphene-4	8958.46	9427.05	5.2	AVRG
Toxaphene-5	8749.43	9737.8	11.3	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0859
 CCV ID: CCV1078855 Lab File ID: TCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	11938.16	11973.59	0.3	AVRG
Toxaphene-2	15176.48	15846.57	4.4	AVRG
Toxaphene-3	26182	22354.27	14.6	AVRG
Toxaphene-4	17589.36	18090.77	2.9	AVRG
Toxaphene-5	15137.04	15967.6	5.5	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0918
 CCV ID: CCV1078840 Lab File ID: CCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	19146.96	20240.26	5.7	AVRG
Chlordane-2	27200.59	29268.78	7.6	AVRG
Chlordane-3	18589.81	19814.56	6.6	AVRG
Chlordane-4	61847.26	65920.03	6.6	AVRG
Chlordane-5	95224.11	101916.12	7.0	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 0918
 CCV ID: CCV1078841 Lab File ID: CCCV1.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	48126.87	51028.2	6.0	AVRG
Chlordane-2	29679.38	31400.7	5.8	AVRG
Chlordane-3	106268.86	110634.64	4.1	AVRG
Chlordane-4	92420.73	96134.06	4.0	AVRG
Chlordane-5	89408.59	92670.4	3.6	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1313
 CCV ID: CCV1078856 Lab File ID: TCCV2.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	10194.37	11609.41	13.9	AVRG
Toxaphene-2	9999.37	11571.99	15.7	AVRG
Toxaphene-3	14408.65	16151.67	12.1	AVRG
Toxaphene-4	8958.46	8990.25	0.4	AVRG
Toxaphene-5	8749.43	9588.11	9.6	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1313
 CCV ID: CCV1078857 Lab File ID: TCCV2.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Toxaphene-1	11938.16	12714.54	6.5	AVRG
Toxaphene-2	15176.48	16141.23	6.4	AVRG
Toxaphene-3	26182	21792.86	16.8	AVRG
Toxaphene-4	17589.36	15076.44	14.3	AVRG
Toxaphene-5	15137.04	15791.6	4.3	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: SAS No: SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1331
 CCV ID: CCV1078842 Lab File ID: CCCV2.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	19146.96	19754.5	3.2	AVRG
Chlordane-2	27200.59	28738.52	5.7	AVRG
Chlordane-3	18589.81	19391.02	4.3	AVRG
Chlordane-4	61847.26	66673.58	7.8	AVRG
Chlordane-5	95224.11	103499.57	8.7	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1331
 CCV ID: CCV1078843 Lab File ID: CCCV2.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Chlordane-1	48126.87	51001.74	6.0	AVRG
Chlordane-2	29679.38	32166.4	8.4	AVRG
Chlordane-3	106268.86	113186.74	6.5	AVRG
Chlordane-4	92420.73	97193.14	5.2	AVRG
Chlordane-5	89408.59	94963.31	6.2	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1349
 CCV ID: CCV1079483 Lab File ID: PCCV2R.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	137816.83	121432.425	11.9	AVRG
Heptachlor	129073.88	112840.825	12.6	AVRG
Heptachlor epoxide	106045.67	93301.2	12.0	AVRG
Endrin	84591.438	81239.775	4.0	AVRG
Methoxychlor	38226.868	40873.4	6.9	AVRG
=====				
Tetrachloro-m-xylene(SURR)	60875.966	52822.225	13.2	AVRG
Decachlorobiphenyl(SURR)	47638.015	43381.6	8.9	AVRG

PESTICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD03 CalibrationDate: 05/09/12 Time: 1349
 CCV ID: CCV1079484 Lab File ID: PCCV2R.D Init. Calib. Date Begin: 05/07/12 End: 05/07/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
gamma-BHC (Lindane)	246332.6	221632.4	10.0	AVRG
Heptachlor	218184	200575.375	8.1	AVRG
Heptachlor epoxide	200753.95	183087.65	8.8	AVRG
Endrin	169589.69	168756.625	0.5	AVRG
Methoxychlor	78654.406	75552.65	3.9	AVRG
=====				
Tetrachloro-m-xylene(SURR)	123099.47	108054.5	12.2	AVRG
Decachlorobiphenyl(SURR)	103589.56	90680.125	12.5	AVRG

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 EPA Sample No. (EVA): EVA1077979 Date Analyzed: 05/07/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 0835

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.71	8.61	8.81	
Endrin	6.56	6.46	6.66	8.15
4,4'-DDT	7.00	6.90	7.10	0.57
4,4'-DDE	5.82	5.72	5.92	
4,4'-DDD	0.00	6.50	6.70	

Combined % breakdown: 8.72

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 EPA Sample No. (EVA): EVA1077980 Date Analyzed: 05/07/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 0835

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.63	8.53	8.73	
Endrin	6.46	6.36	6.56	10.60
4,4'-DDT	7.04	6.94	7.14	1.43
4,4'-DDE	5.81	5.71	5.91	
4,4'-DDD	6.58	6.48	6.68	

Combined % breakdown: 12.03

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 EPA Sample No. (EVA): EVA1078852 Date Analyzed: 05/09/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 0813

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.68	8.61	8.81	
Endrin	6.54	6.46	6.66	5.58
4,4'-DDT	6.98	6.90	7.10	0.55
4,4'-DDE	5.80	5.72	5.92	
4,4'-DDD	0.00	6.50	6.70	

Combined % breakdown: 6.13

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

PESTICIDE ORGANIC CALIBRATION VERIFICATION SUMMARY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 05/07/12
 EPA Sample No. (EVA): EVA1078853 Date Analyzed: 05/09/12
 Lab File ID (EVA): PEM1.D Time Analyzed: 0813

PEM COMPOUND	RT	RT WINDOW		% BREAK- DOWN
		FROM	TO	
Endrin ketone	8.60	8.53	8.73	
Endrin	6.44	6.36	6.56	5.05
4,4'-DDT	7.01	6.94	7.14	2.54
4,4'-DDE	5.79	5.71	5.91	
4,4'-DDD	6.55	6.48	6.68	

Combined % breakdown: 7.59

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%
 Endrin breakdown must be less than or equal to 15.0%
 Combined breakdown must be less than or equal to 30.0%

8082 PCB Organics

**CASE NARRATIVE
POLYCHLORINATED BIPHENYLS (PCB) SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8082 for Aroclor analysis

IV. PREPARATION

Soil samples were prepared by SW846 EPA 3550 for 8082 semi-volatile analysis.
Water samples were prepared by SW846 EPA 3510 for 8082 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

Please note CCV1074114 was below criteria at 26.8% for one peak used to quantify Aroclor-1016 on column STX-CLP1, however the total for this Aroclor passed criteria at 13.5%, meeting QC requirements

Please note CCV1074797 was below criteria at 22.8% and 21.1% for two peaks used to quantify Aroclor-1260 on column STX-CLP2, however the total for this Aroclor passed criteria at 11%, meeting QC requirements

Please note CCV1074115 was below criteria at 20.3% for one peak used to quantify Aroclor-1016 on column STX-CLP1, however the total for this Aroclor passed criteria at 9.8%, meeting QC requirements

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

PCB 1016 and PCB 1260 were used as the spiking solution for all QC spikes.

**CASE NARRATIVE
POLYCHLORINATED BIPHENYLS (PCB) SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

1. Laboratory Control Spikes (LCS)

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

Data was collected using dual column analysis. Results reported from the primary column if the %D between the two columns is >40%, data is coded.

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 05/02/2012

PCB ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8082

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>
<u>IDW-LIQ-1</u>	<u>350581602</u>

8082 Sample Data

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
IDW-SOIL-1

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 816-1.D

Sample wt/vol: 33.29 Units: G Date Received: 04/21/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1950

PercentSolids: 85.1 decanted : _____ Dilution Factor: 1

Extraction: SONC Station ID: IDW Soils Method: 8082

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
12674-11-2	Aroclor-1016	0.03	U	0.015	0.03	58
11096-82-5	Aroclor-1260	0.016	U	0.0082	0.016	58
11104-28-2	Aroclor-1221	0.028	U	0.014	0.028	58
11141-16-5	Aroclor-1232	0.046	U	0.023	0.046	58
53469-21-9	Aroclor-1242	0.026	U	0.013	0.026	58
12672-29-6	Aroclor-1248	0.026	U	0.013	0.026	58
11097-69-1	Aroclor-1254	0.022	U	0.011	0.022	58

Results reported on Primary Column, if RPD >40% results flagged accordingly.

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 816-02.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 10 Date Extracted: 04/26/12
 Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1048
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: IDW Water Method: 8082
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)
 CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
12674-11-2	Aroclor-1016	0.00073	U	0.00037	0.00073	0.00073
11096-82-5	Aroclor-1260	0.00051	U	0.00026	0.00051	0.00051
11104-28-2	Aroclor-1221	0.00088	U	0.00044	0.00088	0.00088
11141-16-5	Aroclor-1232	0.00041	U	0.0002	0.00041	0.00051
53469-21-9	Aroclor-1242	0.00063	U	0.00032	0.00063	0.00063
12672-29-6	Aroclor-1248	0.00041	U	0.0002	0.00041	0.00051
11097-69-1	Aroclor-1254	0.00041	U	0.0002	0.00041	0.00051

Results reported on Primary Column, if RPD >40% results flagged accordingly.

8082 QC Summary

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 127491MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127491MB Lab File ID: 9206MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/26/12

Concentrated Extract Volume: 10 Date Extracted: 04/26/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 0948

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8082

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
12674-11-2	Aroclor-1016	0.00072	U	0.00036	0.00072	0.00072
11096-82-5	Aroclor-1260	0.0005	U	0.00025	0.0005	0.0005
11104-28-2	Aroclor-1221	0.00086	U	0.00043	0.00086	0.00086
11141-16-5	Aroclor-1232	0.0004	U	0.0002	0.0004	0.0005
53469-21-9	Aroclor-1242	0.00062	U	0.00031	0.00062	0.00062
12672-29-6	Aroclor-1248	0.0004	U	0.0002	0.0004	0.0005
11097-69-1	Aroclor-1254	0.0004	U	0.0002	0.0004	0.0005

Results reported on Primary Column, if RPD >40% results flagged accordingly.

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127811MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Lab Sample ID: 127811MB Lab File ID: 9229MB.D

Sample wt/vol: 33.15 Units: G Date Received: 04/27/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1919

PercentSolids: 100 decanted : (_____) Dilution Factor: 1

Extraction: SONC Station ID: _____ Method: 8082

GPC Cleanup : (Y/N) N pH: _____

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
12674-11-2	Aroclor-1016	0.026	U	0.013	0.026	50
11096-82-5	Aroclor-1260	0.014	U	0.007	0.014	50
11104-28-2	Aroclor-1221	0.024	U	0.012	0.024	50
11141-16-5	Aroclor-1232	0.04	U	0.02	0.04	50
53469-21-9	Aroclor-1242	0.022	U	0.011	0.022	50
12672-29-6	Aroclor-1248	0.022	U	0.011	0.022	50
11097-69-1	Aroclor-1254	0.019	U	0.0094	0.019	50

Results reported on Primary Column, if RPD >40% results flagged accordingly.

PCB ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127491MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9206MB.D Lab Sample ID: 127491MB

Instrument ID: SECD04 Date Extracted: 04/26/12

Matrix: WATER Date Analyzed: 04/27/12

Level:(low/med) LOW Time Analyzed: 0948

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127492LCS	127492LCS	9206LCS.D	04/27/12	1003
2	127493LCSD	127493LCSD	9206LCSD.D	04/27/12	1018
3	IDW-LIQ-1	350581602	816-02.D	04/27/12	1048

COMMENTS:

PCB ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127811MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9229MB.D Lab Sample ID: 127811MB

Instrument ID: SECD04 Date Extracted: 04/27/12

Matrix: SOIL Date Analyzed: 04/27/12

Level:(low/med) LOW Time Analyzed: 1919

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127812LCS	127812LCS	9229LCS.D	04/27/12	1934
2	IDW-SOIL-1	350581601	816-1.D	04/27/12	1950

COMMENTS:

2A

WATER PCB ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127491MB	87.0						0
127492LCS	90.0						0
127493LCSD	92.0						0
IDW-LIQ-1	79.0						0

Control Limits

S1 = Decachlorobiphenyl

40 - 135

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Form II

160512.1610

2A

SOIL PCB ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127811MB	83.3						0
127812LCS	82.8						0
IDW-SOIL-1	77.1						0

Control Limits

S1 = Decachlorobiphenyl

60 - 125

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Form II

160512 1610

PCB ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 03/19/12
 Instrument ID: SECD04

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 :			S2 :			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	STD1061637	44134	1232CAL3.D	03/19/12	1019	
2	STD1061638	44821	1242CAL3.D	03/19/12	1034	
3	STD1061639	44340	1248CAL3.D	03/19/12	1049	
4	STD1061640	44135	2154CAL3.D	03/19/12	1104	
5	STD1061641	44128	ACAL1.D	03/19/12	1119	8.26
6	STD1061642	44127	ACAL2.D	03/19/12	1134	8.26
7	STD1061643	45333	ACAL3.D	03/19/12	1149	8.26
8	STD1061644	44125	ACAL4.D	03/19/12	1205	8.26
9	STD1061645	44124	ACAL5.D	03/19/12	1220	8.26
10	STD1061646	44123	ACAL6.D	03/19/12	1235	8.26
11	SSC1061633	43164	ASEC.D	03/19/12	1250	8.26
12	CCV1074114	45865	ACCV1R.D	04/27/12	0925	8.26
13	127491MB	127491MB	9206MB.D	04/27/12	0948	8.26
14	127492LCS	127492LCS	9206LCS.D	04/27/12	1003	8.24
15	127493LCSD	127493LCSD	9206LCSD.D	04/27/12	1018	8.25
16	IDW-LIQ-1	350581602	816-02.D	04/27/12	1048	8.24
17	CCV1074115	45333	ACCV2.D	04/27/12	1149	8.24
18	127811MB	127811MB	9229MB.D	04/27/12	1919	8.26
19	127812LCS	127812LCS	9229LCS.D	04/27/12	1934	8.25
20	IDW-SOIL-1	350581601	816-1.D	04/27/12	1950	8.24
21	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2005	
22	ZZZZZ	ZZZZZ	ZZZZZ	04/27/12	2020	
23	CCV1074799	45333	ACCV3.D	04/27/12	2150	8.24

QC LIMITS

S1 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PCB ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 03/19/12
 Instrument ID: SECD04

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 :			S2 :			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	STD1068282	44134	1232CAL3.D	03/19/12	1019	
2	STD1068283	44821	1242CAL3.D	03/19/12	1034	
3	STD1068284	44340	1248CAL3.D	03/19/12	1049	
4	STD1068285	44135	2154CAL3.D	03/19/12	1104	
5	STD1068286	44128	ACAL1.D	03/19/12	1119	8.58
6	STD1068287	44127	ACAL2.D	03/19/12	1134	8.58
7	STD1068288	45333	ACAL3.D	03/19/12	1149	8.58
8	STD1068289	44125	ACAL4.D	03/19/12	1205	8.58
9	STD1068290	44124	ACAL5.D	03/19/12	1220	8.58
10	STD1068291	44123	ACAL6.D	03/19/12	1235	8.58
11	SSC1068295	43164	ASEC.D	03/19/12	1250	8.57
12	CCV1074797	45865	ACCV1R.D	04/27/12	0925	8.58
13	127491MB	127491MB	9206MB.D	04/27/12	0948	8.57
14	127492LCS	127492LCS	9206LCS.D	04/27/12	1003	8.57
15	127493LCSD	127493LCSD	9206LCSD.D	04/27/12	1018	8.57
16	IDW-LIQ-1	350581602	816-02.D	04/27/12	1048	8.56
17	CCV1074798	45333	ACCV2.D	04/27/12	1149	8.56
18	127811MB	127811MB	9229MB.D	04/27/12	1919	8.58
19	127812LCS	127812LCS	9229LCS.D	04/27/12	1934	8.57
20	IDW-SOIL-1	350581601	816-1.D	04/27/12	1950	8.56
21	IDW-SOIL-1MS	127813MS	816-1MS.D	04/27/12	2005	
22	IDW-SOIL-1MSD	127814MSD	816-1MSD.D	04/27/12	2020	
23	CCV1074800	45333	ACCV3.D	04/27/12	2150	8.56
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2321	

QC LIMITS

S1 = Decachlorobiphenyl (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

127491MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 127491MB Date(s) Analyzed: 04/27/12 04/27/12Instrumet ID (1): SECD04 Instrumet ID (2): SECD04Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Decachlorobiphenyl	* 1	8.257	8.259	0.002	2339.992	0.000087	0.00087	
	2	8.573	8.575	0.002	2786767	0.000097	0.00097	10.87

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127492LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127492LCS Date(s) Analyzed: 04/27/12 04/27/12

Instrumet ID (1): SECD04 Instrumet ID (2): SECD04

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Aroclor-1016	* 1	9.000	9.000	0.000	1292.987	0.00077	0.0077	
	2	8.000	8.000	0.000	5824644	0.00088	0.0088	13.33
Aroclor-1260	* 1	17.000	17.000	0.000	9489.354	0.00078	0.0078	
	2	17.000	17.000	0.000	8874688	0.00076	0.0076	2.60
Decachlorobiphenyl	* 1	8.244	8.259	0.015	2408.87	0.000090	0.0009	
	2	8.566	8.575	0.009	2910390	0.00010	0.001	10.53

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127493LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127493LCSD Date(s) Analyzed: 04/27/12 04/27/12

Instrumet ID (1): SECD04 Instrumet ID (2): SECD04

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Aroclor-1016	* 1	9.000	9.000	0.000	1328.365	0.00078	0.0078	
	2	8.000	8.000	0.000	6071612	0.00092	0.0092	16.47
Aroclor-1260	* 1	17.000	17.000	0.000	9949.294	0.00082	0.0082	
	2	17.000	17.000	0.000	9389432	0.00081	0.0081	1.23
Decachlorobiphenyl	* 1	8.245	8.259	0.014	2482.025	0.000092	0.00092	
	2	8.566	8.575	0.009	3039242	0.00010	0.001	8.33

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127811MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127811MB Date(s) Analyzed: 04/27/12 04/27/12

Instrumet ID (1): SECD04 Instrumet ID (2): SECD04

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Decachlorobiphenyl	* 1	8.261	8.259	0.002	2250.953	0.000084	0.025	
	2	8.575	8.575	0.000	2832314	0.000098	0.03	18.18

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa 127812LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab Sample ID: 127812LCS Date(s) Analyzed: 04/27/12 04/27/12

Instrumet ID (1): SECD04 Instrumet ID (2): SECD04

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Aroclor-1016	* 1	9.000	9.000	0.000	1206.719	0.00070	0.21	
	2	8.000	8.000	0.000	5517295	0.00084	0.25	17.39
Aroclor-1260	* 1	17.000	17.000	0.000	8421.639	0.00069	0.2	
	2	17.000	17.000	0.000	8561839	0.00074	0.22	9.52
Decachlorobiphenyl	* 1	8.245	8.259	0.014	2195.568	0.000082	0.024	
	2	8.565	8.575	0.010	2868490	0.00010	0.029	18.87

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

IDW-SOIL-1

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 350581601 Date(s) Analyzed: 04/27/12 04/27/12Instrumet ID (1): SECD04 Instrumet ID (2): SECD04Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Decachlorobiphenyl	* 1	8.243	8.259	0.016	2043.494	0.000076	0.027	
	2	8.564	8.575	0.011	2491652	0.000086	0.031	13.79

* Column used for quantitation

PCB ORGANIC DUAL COLUMN CONFIRMATION CHECK

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa

IDW-LIQ-1

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816Lab Sample ID: 350581602 Date(s) Analyzed: 04/27/12 04/27/12Instrumet ID (1): SECD04 Instrumet ID (2): SECD04Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

COMPOUND	COL	RT	EXP RT	DIFF	AREA	AMOUNT	CONC	%D
Decachlorobiphenyl	* 1	8.238	8.259	0.021	2073.516	0.000077	0.00079	
	2	8.561	8.575	0.014	2431444	0.000084	0.00086	8.48

* Column used for quantitation

PCB ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127492LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Aroclor-1016	0.01	0.0077	77.0			25 - 145
Aroclor-1260	0.01	0.0078	78.0			30 - 145

Spike Recovery: 0 out of 2 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

PCB ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127493LCSD

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Aroclor-1016	0.01	0.0078	78.0	1.3	20	25 - 145
Aroclor-1260	0.01	0.0082	82.0	5.0	20	30 - 145

Spike Recovery: 0 out of 2 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

PCB ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127812LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Aroclor-1016	0.29	0.21	72.4			40 - 140
Aroclor-1260	0.29	0.2	69.0			60 - 130

Spike Recovery: 0 out of 2 outside limits

Results reported on Primary Column, if RPD >40% results flagged accordingly.

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8082 Standards Data

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID:		RRF0.006 =ACAL1.D	RRF0.02 =ACAL2.D		
RRF0.1 =1232CAL3.D		RRF0.2 =ACAL4.D	RRF0.4 =ACAL5.D		
COMPOUND	RRF0.006	RRF0.02	RRF0.1	RRF0.2	RRF0.4
1016-1	1224166.667	1166700	987160	910120	907685
1016-2	1254666.667	1348250	1205110	1109145	1131357.5
1016-3	3940833.333	3844450	3533550	3259960	3389112.5
1016-4	2018666.667	1776700	1627280	1478865	1537230
1016-5	1144666.667	1048900	939700	870990	916030
1260-1	15089500	13994650	14102970	13483805	15022787.5
1260-2	10532500	9447250	9201690	8814305	9759912.5
1260-3	8237666.667	7659850	7389720	7148080	7787600
1260-4	24515833.33	22428700	22210220	21458870	24006730
1260-5	5195666.667	4838200	4698090	4542020	4795945
1221-1			241094.118		
1221-2			159041.176		
1221-3			777670.588		
1232-1			267110		
1232-2			1052100		
1232-3			578580		
1232-4			1538490		
1232-5			692920		
1242-1			687200		
1242-2			857940		
1242-3			2476670		
1242-4			1113750		
1242-5			1115990		
1248-1			1660440		
1248-2			1325740		
1248-3			1261350		
1248-4			2591200		
1248-5			5060360		
1254-1			3140220		
1254-2			7480220		
1254-3			3353660		
1254-4			8511590		
1254-5			8185030		

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID:	RRF0.006 =ACAL1.D	RRF0.02 =ACAL2.D			
RRF0.1 =1232CAL3.D	RRF0.2 =ACAL4.D	RRF0.4 =ACAL5.D			
COMPOUND	RRF0.006	RRF0.02	RRF0.1	RRF0.2	RRF0.4
=====					
Decachlorobiphenyl(SURR)	30029666.67	27913400	25975880	24462030	25866940

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID: RRF0.5 =ACAL6.D					
COMPOUND	RRF0.5				
1016-1	957742				
1016-2	1180378				
1016-3	3559386				
1016-4	1597720				
1016-5	941104				
1260-1	16179796				
1260-2	10433498				
1260-3	8444048				
1260-4	25643460				
1260-5	4937962				
1221-1					
1221-2					
1221-3					
1232-1					
1232-2					
1232-3					
1232-4					
1232-5					
1242-1					
1242-2					
1242-3					
1242-4					
1242-5					
1248-1					
1248-2					
1248-3					
1248-4					
1248-5					
1254-1					
1254-2					
1254-3					
1254-4					
1254-5					

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID: RRF0.5 =ACAL6.D					
COMPOUND	RRF0.5				
=====					
Decachlorobiphenyl(SURR)	27035496				

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
1016-1	AVRG		1025595.611	13.3
1016-2	AVRG		1204817.861	7.3
1016-3	AVRG		3587881.972	7.3
1016-4	AVRG		1672743.611	11.8
1016-5	AVRG		976898.4444	10.3
1260-1	AVRG		14645584.75	6.7
1260-2	AVRG		9698192.583	7
1260-3	AVRG		7777827.444	6.3
1260-4	AVRG		23377302.22	6.8
1260-5	AVRG		4834647.278	4.6
1221-1	AVRG		241094.1176	0
1221-2	AVRG		159041.1765	0
1221-3	AVRG		777670.5882	0
1232-1	AVRG		267110	0
1232-2	AVRG		1052100	0
1232-3	AVRG		578580	0
1232-4	AVRG		1538490	0
1232-5	AVRG		692920	0
1242-1	AVRG		687200	0
1242-2	AVRG		857940	0
1242-3	AVRG		2476670	0
1242-4	AVRG		1113750	0
1242-5	AVRG		1115990	0
1248-1	AVRG		1660440	0
1248-2	AVRG		1325740	0
1248-3	AVRG		1261350	0
1248-4	AVRG		2591200	0
1248-5	AVRG		5060360	0
1254-1	AVRG		3140220	0
1254-2	AVRG		7480220	0
1254-3	AVRG		3353660	0
1254-4	AVRG		8511590	0

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
1254-5	AVRG		8185030	0
=====				
Decachlorobiphenyl(SURR)	AVRG		26880568.78	7.2

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: ACAL1.D		RT2: ACAL2.D			
RT3: 1232CAL3.D		RT4: ACAL4.D		RT5: ACAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
1016-1	3.760	3.759	3.759	3.763	3.754		
1016-2	4.173	4.178	4.178	4.180	4.174		
1016-3	4.660	4.662	4.661	4.662	4.657		
1016-4	4.786	4.785	4.787	4.788	4.783		
1016-5	5.226	5.224	5.224	5.226	5.222		
1260-1	6.286	6.286	6.287	6.288	6.286		
1260-2	6.561	6.561	6.562	6.563	6.561		
1260-3	6.745	6.745	6.746	6.746	6.744		
1260-4	6.972	6.972	6.972	6.973	6.972		
1260-5	7.751	7.753	7.752	7.753	7.751		
1221-1			3.507				
1221-2			3.699				
1221-3			3.754				
1232-1			3.505				
1232-2			3.754				
1232-3			4.175				
1232-4			4.659				
1232-5			4.784				
1242-1			3.758				
1242-2			4.177				
1242-3			4.660				
1242-4			4.785				
1242-5			4.845				
1248-1			4.658				
1248-2			4.946				
1248-3			5.223				
1248-4			5.429				
1248-5			5.494				
1254-1			5.495				
1254-2			5.659				
1254-3			5.876				
1254-4			5.966				
1254-5			6.166				
=====							
Decachlorobiphenyl(SURR)	8.257	8.257	8.258	8.259	8.257		

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: ACAL6.D						
COMPOUND	RT6					MIDCAL RT	RT WINDOW	
							FROM	TO
1016-1	3.754					3.759	3.559	3.959
1016-2	4.174					4.178	3.978	4.378
1016-3	4.657					4.661	4.461	4.861
1016-4	4.783					4.787	4.587	4.987
1016-5	5.222					5.224	5.024	5.424
1260-1	6.286					6.287	6.087	6.487
1260-2	6.561					6.562	6.362	6.762
1260-3	6.744					6.746	6.546	6.946
1260-4	6.972					6.972	6.772	7.172
1260-5	7.751					7.752	7.552	7.952
1221-1						3.507	3.307	3.707
1221-2						3.699	3.499	3.899
1221-3						3.754	3.554	3.954
1232-1						3.505	3.305	3.705
1232-2						3.754	3.554	3.954
1232-3						4.175	3.975	4.375
1232-4						4.659	4.459	4.859
1232-5						4.784	4.584	4.984
1242-1						3.758	3.558	3.958
1242-2						4.177	3.977	4.377
1242-3						4.660	4.460	4.860
1242-4						4.785	4.585	4.985
1242-5						4.845	4.645	5.045
1248-1						4.658	4.458	4.858
1248-2						4.946	4.746	5.146
1248-3						5.223	5.023	5.423
1248-4						5.429	5.229	5.629
1248-5						5.494	5.294	5.694
1254-1						5.495	5.295	5.695
1254-2						5.659	5.459	5.859
1254-3						5.876	5.676	6.076
1254-4						5.966	5.766	6.166
1254-5						6.166	5.966	6.366
=====								
Decachlorobiphenyl(SURR)	8.257					8.258	8.058	8.458

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID:	RRF0.006 =ACAL1.D	RRF0.02 =ACAL2.D			
RRF0.1 =1232CAL3.D	RRF0.2 =ACAL4.D	RRF0.4 =ACAL5.D			
COMPOUND	RRF0.006	RRF0.02	RRF0.1	RRF0.2	RRF0.4
1016-1	5444000	4255100	4208740	3634265	3970917.5
1016-2	7287000	5918150	5656890	5169400	5413327.5
1016-3	15425666.67	13593750	13153840	12221985	13048437.5
1016-4	6367833.333	5549550	5171050	4773855	5044020
1016-5	4784666.667	4076850	3835600	3543355	3821517.5
1260-1	11846333.33	10627700	10452050	9910370	10741982.5
1260-2	10657500	9391000	9090340	8522245	9143587.5
1260-3	11472666.67	9412200	8887540	8288095	9007900
1260-4	24649166.67	22920550	22804070	21690255	23378765
1260-5	5420333.333	5004900	4983250	4696295	5163575
1221-1			919711.765		
1221-2			555841.176		
1221-3			2224752.941		
1232-1			966530		
1232-2			2955030		
1232-3			2563050		
1232-4			1189620		
1232-5			5588370		
1242-1			1989650		
1242-2			3998150		
1242-3			9162350		
1242-4			3615650		
1242-5			2450270		
1248-1			2889790		
1248-2			3896570		
1248-3			4809420		
1248-4			5494540		
1248-5			6554280		
1254-1			3273840		
1254-2			4926720		
1254-3			5788480		
1254-4			4285090		
1254-5			9056390		

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID:		RRF0.006 =ACAL1.D	RRF0.02 =ACAL2.D		
RRF0.1 =1232CAL3.D		RRF0.2 =ACAL4.D	RRF0.4 =ACAL5.D		
COMPOUND	RRF0.006	RRF0.02	RRF0.1	RRF0.2	RRF0.4
=====					
Decachlorobiphenyl(SURR)	29697000	28820200	27981580	26672940	28917585

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID: RRF0.5 =ACAL6.D					
COMPOUND	RRF0.5				
1016-1	4234300				
1016-2	5710428				
1016-3	13840328				
1016-4	5360182				
1016-5	4050494				
1260-1	11413802				
1260-2	9715070				
1260-3	9594134				
1260-4	24551914				
1260-5	5549144				
1221-1					
1221-2					
1221-3					
1232-1					
1232-2					
1232-3					
1232-4					
1232-5					
1242-1					
1242-2					
1242-3					
1242-4					
1242-5					
1248-1					
1248-2					
1248-3					
1248-4					
1248-5					
1254-1					
1254-2					
1254-3					
1254-4					
1254-5					

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

LAB FILE ID: RRF0.5 =ACAL6.D					
COMPOUND	RRF0.5				
=====					
Decachlorobiphenyl(SURR)	30556240				

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
1016-1	AVRG		4291220.417	14.3
1016-2	AVRG		5859199.25	12.7
1016-3	AVRG		13547334.53	7.9
1016-4	AVRG		5377748.389	10.3
1016-5	AVRG		4018747.194	10.5
1260-1	AVRG		10832039.64	6.4
1260-2	AVRG		9419957.083	7.7
1260-3	AVRG		9443755.944	11.6
1260-4	AVRG		23332453.44	4.8
1260-5	AVRG		5136249.556	6.1
1221-1	AVRG		919711.7647	0
1221-2	AVRG		555841.1765	0
1221-3	AVRG		2224752.941	0
1232-1	AVRG		966530	0
1232-2	AVRG		2955030	0
1232-3	AVRG		2563050	0
1232-4	AVRG		1189620	0
1232-5	AVRG		5588370	0
1242-1	AVRG		1989650	0
1242-2	AVRG		3998150	0
1242-3	AVRG		9162350	0
1242-4	AVRG		3615650	0
1242-5	AVRG		2450270	0
1248-1	AVRG		2889790	0
1248-2	AVRG		3896570	0
1248-3	AVRG		4809420	0
1248-4	AVRG		5494540	0
1248-5	AVRG		6554280	0
1254-1	AVRG		3273840	0
1254-2	AVRG		4926720	0
1254-3	AVRG		5788480	0
1254-4	AVRG		4285090	0
1254-5	AVRG		9056390	0

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
Decachlorobiphenyl(SURR)	AVRG		28774257.5	4.7

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = Max %RSD for CCC(*) = %

LAB FILE ID:		RT1: ACAL1.D		RT2: ACAL2.D			
RT3: 1232CAL3.D		RT4: ACAL4.D		RT5: ACAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
1016-1	3.886	3.886	3.887	3.888	3.882		
1016-2	4.326	4.326	4.327	4.328	4.324		
1016-3	4.769	4.769	4.768	4.769	4.767		
1016-4	4.890	4.890	4.889	4.890	4.888		
1016-5	5.281	5.281	5.281	5.281	5.279		
1260-1	6.347	6.348	6.348	6.348	6.347		
1260-2	6.656	6.657	6.657	6.657	6.656		
1260-3	6.876	6.877	6.877	6.877	6.876		
1260-4	7.055	7.056	7.055	7.054	7.054		
1260-5	7.888	7.889	7.889	7.888	7.888		
1221-1			3.636				
1221-2			3.809				
1221-3			3.882				
1232-1			3.635				
1232-2			3.882				
1232-3			4.323				
1232-4			4.570				
1232-5			4.767				
1242-1			3.884				
1242-2			4.325				
1242-3			4.769				
1242-4			4.889				
1242-5			4.979				
1248-1			4.750				
1248-2			5.052				
1248-3			5.280				
1248-4			5.573				
1248-5			5.611				
1254-1			5.052				
1254-2			5.607				
1254-3			5.742				
1254-4			5.998				
1254-5			6.081				

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT1: ACAL1.D		RT2: ACAL2.D				
RT3: 1232CAL3.D		RT4: ACAL4.D		RT5: ACAL5.D				
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO	
=====								
Decachlorobiphenyl(SURR)	8.576	8.576	8.577	8.577	8.575			

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID: RT6: ACAL6.D								
COMPOUND	RT6					MIDCAL RT	RT WINDOW FROM TO	
1016-1	3.882					3.887	3.687	4.087
1016-2	4.323					4.327	4.127	4.527
1016-3	4.767					4.768	4.568	4.968
1016-4	4.887					4.889	4.689	5.089
1016-5	5.279					5.281	5.081	5.481
1260-1	6.347					6.348	6.148	6.548
1260-2	6.655					6.657	6.457	6.857
1260-3	6.876					6.877	6.677	7.077
1260-4	7.054					7.055	6.855	7.255
1260-5	7.888					7.889	7.689	8.089
1221-1						3.636	3.436	3.836
1221-2						3.809	3.609	4.009
1221-3						3.882	3.682	4.082
1232-1						3.635	3.435	3.835
1232-2						3.882	3.682	4.082
1232-3						4.323	4.123	4.523
1232-4						4.570	4.370	4.770
1232-5						4.767	4.567	4.967
1242-1						3.884	3.684	4.084
1242-2						4.325	4.125	4.525
1242-3						4.769	4.569	4.969
1242-4						4.889	4.689	5.089
1242-5						4.979	4.779	5.179
1248-1						4.750	4.550	4.950
1248-2						5.052	4.852	5.252
1248-3						5.280	5.080	5.480
1248-4						5.573	5.373	5.773
1248-5						5.611	5.411	5.811
1254-1						5.052	4.852	5.252
1254-2						5.607	5.407	5.807
1254-3						5.742	5.542	5.942
1254-4						5.998	5.798	6.198
1254-5						6.081	5.881	6.281

PCB ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD04 Calibration Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 1019 End: 1235
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT6: ACAL6.D						
COMPOUND	RT6					MIDCAL RT	RT WINDOW	
							FROM	TO
=====								
Decachlorobiphenyl(SURR)	8.575					8.577	8.377	8.777

7SSC

PCB ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 03/19/12 Time: 1250
 CCV ID: SSC1061633 Lab File ID: ASEC.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	1025595.6	868730	15.3	AVRG
1016-2	1204817.9	1221880	1.4	AVRG
1016-3	3587882	3697290	3.0	AVRG
1016-4	1672743.6	1569850	6.2	AVRG
1016-5	976898.45	927060	5.1	AVRG
1260-1	14645585	14219810	2.9	AVRG
1260-2	9698192.6	9245190	4.7	AVRG
1260-3	7777827.5	7365300	5.3	AVRG
1260-4	23377302	22272670	4.7	AVRG
1260-5	4834647.3	4776160	1.2	AVRG
=====				
Decachlorobiphenyl(SURR)	26880569	26630920	0.9	AVRG

7SSC

PCB ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 03/19/12 Time: 1250
 CCV ID: SSC1068295 Lab File ID: ASEC.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	4291220.4	4201620	2.1	AVRG
1016-2	5859199.3	5389440	8.0	AVRG
1016-3	13547335	12906450	4.7	AVRG
1016-4	5377748.4	5139320	4.4	AVRG
1016-5	4018747.2	3775470	6.1	AVRG
1260-1	10832040	10403460	4.0	AVRG
1260-2	9419957.1	8916190	5.3	AVRG
1260-3	9443756	9133530	3.3	AVRG
1260-4	23332454	22861510	2.0	AVRG
1260-5	5136249.5	5310680	3.4	AVRG
=====				
Decachlorobiphenyl(SURR)	28774258	28922960	0.5	AVRG

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 0925
 CCV ID: CCV1074114 Lab File ID: ACCV1R.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	1025595.6	915750	10.7	AVRG
1016-2	1204817.9	1142590	5.2	AVRG
1016-3	3587882	2992880	16.6	AVRG
1016-4	1672743.6	1456770	12.9	AVRG
1016-5	976898.45	714640	26.8	AVRG
1260-1	14645585	11717460	20.0	AVRG
1260-2	9698192.6	8320620	14.2	AVRG
1260-3	7777827.5	6400400	17.7	AVRG
1260-4	23377302	20776010	11.1	AVRG
1260-5	4834647.3	4561780	5.6	AVRG
=====				
Decachlorobiphenyl(SURR)	26880569	24731140	8.0	AVRG

Average Used: 13.5

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 0925
 CCV ID: CCV1074797 Lab File ID: ACCV1R.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	4291220.4	4516980	5.3	AVRG
1016-2	5859199.3	5774820	1.4	AVRG
1016-3	13547335	12383680	8.6	AVRG
1016-4	5377748.4	4885790	9.1	AVRG
1016-5	4018747.2	3554050	11.6	AVRG
1260-1	10832040	8360490	22.8	AVRG <-
1260-2	9419957.1	7637180	18.9	AVRG
1260-3	9443756	7447150	21.1	AVRG <-
1260-4	23332454	19662970	15.7	AVRG
1260-5	5136249.5	4830730	5.9	AVRG
=====				
Decachlorobiphenyl(SURR)	28774258	28896200	0.4	AVRG

Average Used: 11

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 1149
 CCV ID: CCV1074115 Lab File ID: ACCV2.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	1025595.6	924550	9.9	AVRG
1016-2	1204817.9	1205000	0.0	AVRG
1016-3	3587882	3066420	14.5	AVRG
1016-4	1672743.6	1538400	8.0	AVRG
1016-5	976898.45	778780	20.3	AVRG
1260-1	14645585	11923900	18.6	AVRG
1260-2	9698192.6	8600330	11.3	AVRG
1260-3	7777827.5	6644520	14.6	AVRG
1260-4	23377302	21557190	7.8	AVRG
1260-5	4834647.3	4836720	0.0	AVRG
=====				
Decachlorobiphenyl(SURR)	26880569	25996960	3.3	AVRG

Average Used: 9.8

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 1149
 CCV ID: CCV1074798 Lab File ID: ACCV2.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	4291220.4	4763230	11.0	AVRG
1016-2	5859199.3	5669940	3.2	AVRG
1016-3	13547335	13383510	1.2	AVRG
1016-4	5377748.4	5311110	1.2	AVRG
1016-5	4018747.2	3883680	3.4	AVRG
1260-1	10832040	8772360	19.0	AVRG
1260-2	9419957.1	8906060	5.5	AVRG
1260-3	9443756	8464750	10.4	AVRG
1260-4	23332454	22145740	5.1	AVRG
1260-5	5136249.5	5068130	1.3	AVRG
=====				
Decachlorobiphenyl(SURR)	28774258	31795780	10.5	AVRG

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 2150
 CCV ID: CCV1074799 Lab File ID: ACCV3.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	1025595.6	977310	4.7	AVRG
1016-2	1204817.9	1233070	2.3	AVRG
1016-3	3587882	3282300	8.5	AVRG
1016-4	1672743.6	1584710	5.3	AVRG
1016-5	976898.45	813860	16.7	AVRG
1260-1	14645585	12586160	14.1	AVRG
1260-2	9698192.6	9038010	6.8	AVRG
1260-3	7777827.5	6794940	12.6	AVRG
1260-4	23377302	21880270	6.4	AVRG
1260-5	4834647.3	4650270	3.8	AVRG
=====				
Decachlorobiphenyl(SURR)	26880569	24452500	9.0	AVRG

PCB ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD04 CalibrationDate: 04/27/12 Time: 2150
 CCV ID: CCV1074800 Lab File ID: ACCV3.D Init. Calib. Date Begin: 03/19/12 End: 03/19/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
1016-1	4291220.4	4662160	8.6	AVRG
1016-2	5859199.3	5846620	0.2	AVRG
1016-3	13547335	12728370	6.0	AVRG
1016-4	5377748.4	4810450	10.5	AVRG
1016-5	4018747.2	3698090	8.0	AVRG
1260-1	10832040	8682370	19.8	AVRG
1260-2	9419957.1	7827080	16.9	AVRG
1260-3	9443756	7702220	18.4	AVRG
1260-4	23332454	20032470	14.1	AVRG
1260-5	5136249.5	4826660	6.0	AVRG
=====				
Decachlorobiphenyl(SURR)	28774258	29885180	3.9	AVRG

8151 Herbicide Organics

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8151 chlorinated acid herbicides

IV. PREPARATION

Water samples were prepared by EPA SW846 3510 for 8151 semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met with the exception of:

Please note the second source CCV SSC1075668 was above criteria at 28% for Dichlorprop. Since the sample was non-detect for the target analytes, no further action was taken.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met with the exception of:
LCS 127783LCS was analyzed with the water samples extracted on 04/27/12. The following analyte was recovered above criteria: MCPA at 150 % with criteria of (60-145). The following analyte exceeded RPD criteria: MCPA at 22.2 % with criteria of (20). Since the recovery is above criteria and the sample was non-detect for MCPA, and since the LCS recovery for MCPA was within criteria, no further action was taken.

Samples coded accordingly.

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

Sample analysis proceeded normally.

Data was collected using dual column analysis. Please note that since the sample was non-detect for the target analytes, a confirmation column was not required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/14/2012

HERBICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8151

EPA Sample No	Lab Sample ID
<u>IDW-LIQ-1</u>	<u>350581602</u>

8151 Sample Data

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 81602.D

Sample wt/vol: 980 Units: ML Date Received: 04/21/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1614

PercentSolids: 0 decanted : _____ Dilution Factor: 1

Extraction: SEPF Station ID: IDW Water Method: 8151

GPC Cleanup : (Y/N) N pH: _____

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
1918-00-9	Dicamba	0.00014	U	0.000071	0.00014	0.00051
75-99-0	Dalapon	0.00076	U	0.00038	0.00076	0.00076
93-65-2	MCPPP	0.082	U	0.041	0.082	0.082
94-74-6	MCPA	0.037	U	0.018	0.037	0.051
120-36-5	Dichloroprop	0.00037	U	0.00018	0.00037	0.00051
94-75-7	2,4'-D	0.00031	U	0.00015	0.00031	0.00051
93-72-1	2,4,5-TP (Silvex)	0.00014	U	0.000071	0.00014	0.00051
93-76-5	2,4,5-T	0.00022	U	0.00011	0.00022	0.00051
94-82-6	2,4-DB	0.00061	U	0.00031	0.00061	0.00061
88-85-7	Dinoseb	0.00014	U	0.000071	0.00014	0.00051

8151 QC Summary

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.
127784MB

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127784MB Lab File ID: 9224MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 05/10/12 Time: 1937

PercentSolids: 0 decanted : (_____) Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: 8151

GPC Cleanup : (Y/N) N pH: _____

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
1918-00-9	Dicamba	0.00014	U	0.00007	0.00014	0.0005
75-99-0	Dalapon	0.00074	U	0.00037	0.00074	0.00074
93-65-2	MCPD	0.08	U	0.04	0.08	0.08
94-74-6	MCPA	0.036	U	0.018	0.036	0.05
120-36-5	Dichloroprop	0.00036	U	0.00018	0.00036	0.0005
94-75-7	2,4'-D	0.0003	U	0.00015	0.0003	0.0005
93-72-1	2,4,5-TP (Silvex)	0.00014	U	0.00007	0.00014	0.0005
93-76-5	2,4,5-T	0.00022	U	0.00011	0.00022	0.0005
94-82-6	2,4-DB	0.0006	U	0.0003	0.0006	0.0006
88-85-7	Dinoseb	0.00014	U	0.00007	0.00014	0.0005

HERBICIDE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127784MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9224MB.D Lab Sample ID: 127784MB

Instrument ID: SECD01 Date Extracted: 04/27/12

Matrix: WATER Date Analyzed: 05/10/12

Level:(low/med) LOW Time Analyzed: 1937

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	IDW-LIQ-1	350581602	81602.D	04/30/12	1614
2	127785LCS	127785LCS	9224LCS.D	05/10/12	2004
3	127783LCSD	127783LCSD	9224LCSD.D	05/11/12	1316

COMMENTS:

2A

WATER HERBICIDE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(2): STX-CLP2 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127783LCSD	64.0						0
127784MB	76.0						0
127785LCS	60.0						0
IDW-LIQ-1	57.7						0

Control Limits

S1 = DCAA

54 - 103

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

160512.1610

HERBICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP2 ID: 0.32 (mm) Init. Calib. Date: 04/30/12
 Instrument ID: SECD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 10.97			S2 :			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	STD1075667	127033CAL07	HCAL7.D	04/30/12	0832	10.97
2	STD1075666	127032CAL06	HCAL6.D	04/30/12	0859	10.97
3	STD1075665	127031CAL05	HCAL5.D	04/30/12	0927	10.96
4	STD1075662	127030CAL04	HCAL4.D	04/30/12	0954	10.97
5	STD1075661	127029CAL03	HCAL3.D	04/30/12	1021	10.97
6	STD1075660	127028CAL02	HCAL2.D	04/30/12	1048	10.97
7	STD1075659	127027CAL01	HCAL1.D	04/30/12	1115	10.97
8	SSC1075668	127034CAL08	HSEC.D	04/30/12	1142	10.96
9	CCV1075663	127030CAL04	HCCV1.D	04/30/12	1209	10.96
10	IDW-LIQ-1	350581602	81602.D	04/30/12	1614	10.96
11	CCV1075657	120670CAL04	HCCV2.D	04/30/12	1736	10.96
12	CCV1079800	120670CAL04	HCCV2.D	05/10/12	1423	10.97
13	127784MB	127784MB	9224MB.D	05/10/12	1937	10.97
14	127785LCS	127785LCS	9224LCS.D	05/10/12	2004	10.97
15	CCV1079801	127030CAL04	HCCV3.D	05/10/12	2152	10.97
16	CCV1079802	127030CAL04	HCCV1.D	05/11/12	1249	10.97
17	127783LCSD	127783LCSD	9224LCSD.D	05/11/12	1316	10.97
18	CCV1079803	127030CAL04	HCCV2.D	05/11/12	1343	10.97

S1 = DCAA QC LIMITS
 (+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.
 * Values outside of QC limits

HERBICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127783LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dicamba	0.001	0.00075	75.0	2.7	20	60 - 110
Dalapon	0.0025	0.0019	76.0	5.4	20	40 - 110
MCPP	0.1	0.095	95.0	9.9	20	52 - 125
MCPA	0.1	0.15	150.0*	22.2*	20	60 - 145
Dichloroprop	0.001	0.00084	84.0	10.0	20	70 - 120
2,4'-D	0.001	0.00071	71.0	7.3	20	35 - 115
2,4,5-TP (Silvex)	0.001	0.00078	78.0	2.6	20	50 - 115
2,4,5-T	0.001	0.00073	73.0	2.8	20	35 - 110
2,4-DB	0.001	0.00065	65.0	11.6	20	45 - 130
Dinoseb	0.001	0.00067	67.0	3.0	20	20 - 95

Spike Recovery: 1 out of 10 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

HERBICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127785LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
Dicamba	0.001	0.00073	73.0			60 - 110
Dalapon	0.0025	0.0018	72.0			40 - 110
MCPP	0.1	0.086	86.0			52 - 125
MCPA	0.1	0.12	120.0			60 - 145
Dichloroprop	0.001	0.00076	76.0			70 - 120
2,4'-D	0.001	0.00066	66.0			35 - 115
2,4,5-TP (Silvex)	0.001	0.00076	76.0			50 - 115
2,4,5-T	0.001	0.00071	71.0			35 - 110
2,4-DB	0.001	0.00073	73.0			45 - 130
Dinoseb	0.001	0.00065	65.0			20 - 95

Spike Recovery: 0 out of 10 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8151 Standards Data

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

LAB FILE ID:	RRF0.025 =HCAL1.D	RRF0.05 =HCAL2.D	RRF0.1 =HCAL3.D	RRF0.15 =HCAL4.D	RRF0.2 =HCAL5.D
COMPOUND	RRF0.025	RRF0.05	RRF0.1	RRF0.15	RRF0.2
Dicamba	18337920	16386640	15265360	15537886.67	13983045
Dalapon	11744160	9731232	9240552	10340840	8694082
MCPP	33030	26338.2	29589.3	31406.667	27835.8
MCPA	49382	40719	35648.2	29062	24837.2
Dichloroprop	9279240	7123120	6415660	6166906.667	5360145
2,4'-D	11568560	9039840	7469660	7203780	6277770
2,4,5-TP (Silvex)	36253480	32175360	29193610	28869686.67	25841930
2,4,5-T	30183520	28358900	27598160	27746666.67	24527270
2,4-DB	8793000	6352720	5772570	5549000	4849305
Dinoseb	26616840	22762600	20710960	20780293.33	18861680
=====					
DCAA(SURR)		6507780	5729980	5357760	4966375

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

LAB FILE ID:		RRF0.25 =HCAL6.D	RRF0.3 =HCAL7.D			
COMPOUND	RRF0.25	RRF0.3				
Dicamba	13597724	12767420				
Dalapon	8388172.8	7538660				
MCPP	26725	24745.733				
MCPA	22561.6	20767.067				
Dichloroprop	5041720	4591820				
2,4'-D	5969488	5443656.667				
2,4,5-TP (Silvex)	25164076	23453083.33				
2,4,5-T	24073148	22407756.67				
2,4-DB	4619636	4199870				
Dinoseb	18406852	17103613.33				
=====						
DCAA(SURR)	4641348	4227943.333				

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
Dicamba	AVRG		15125142.24	12.5
Dalapon	AVRG		9382528.4	14.8
MCPP	AVRG		28524.38571	10.4
MCPA	2ORDR	2.142449536	-5.086E-06	0.99832
Dichloroprop	2ORDR	0.009502135	0.000000064	0.99671
2,4'-D	2ORDR	0.0009813	0.000000075	0.997
2,4,5-TP (Silvex)	AVRG		28707318	15.4
2,4,5-T	AVRG		26413631.62	10.5
2,4-DB	2ORDR	0.005095062	0.000000091	0.99643
Dinoseb	AVRG		20748976.95	15.3
=====				
DCAA(SURR)	AVRG		5238531.056	15.6

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT1: HCAL1.D		RT2: HCAL2.D			
RT3: HCAL3.D		RT4: HCAL4.D		RT5: HCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
Dicamba	11.127	11.125	11.125	11.125	11.125		
Dalapon	3.223	3.237	3.243	3.247	3.245		
MCPP	11.235	11.233	11.233	11.235	11.235		
MCPA	11.452	11.450	11.450	11.450	11.452		
Dichloroprop	11.743	11.742	11.740	11.740	11.740		
2,4'-D	12.005	12.000	11.998	11.998	11.997		
2,4,5-TP (Silvex)	12.633	12.632	12.632	12.632	12.632		
2,4,5-T	12.928	12.925	12.923	12.922	12.922		
2,4-DB	13.297	13.293	13.292	13.292	13.292		
Dinoseb	13.518	13.518	13.518	13.517	13.517		
=====							
DCAA(SURR)		10.968	10.967	10.967	10.965		

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115
 Min RRF for SPCC(#) = Max %RSD for CCC(*) =

LAB FILE ID:		RT6: HCAL6.D		RT7: HCAL7.D				
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW FROM TO	
Dicamba	11.127	11.127				11.125	10.925	11.325
Dalapon	3.248	3.253				3.247	3.047	3.447
MCPD	11.237	11.238				11.235	11.035	11.435
MCPA	11.453	11.455				11.450	11.250	11.650
Dichloroprop	11.740	11.742				11.740	11.540	11.940
2,4'-D	11.997	11.998				11.998	11.798	12.198
2,4,5-TP (Silvex)	12.632	12.632				12.632	12.432	12.832
2,4,5-T	12.922	12.922				12.922	12.722	13.122
2,4-DB	13.292	13.292				13.292	13.092	13.492
Dinoseb	13.518	13.518				13.517	13.317	13.717
=====								
DCAA(SURR)	10.967	10.967				10.967	10.767	11.167

7SSC
HERBICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 04/30/12 Time: 1142
 CCV ID: SSC1075668 Lab File ID: HSEC.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	15201053.333	0.5	AVRG
Dalapon	9382528.4	10169306.667	8.4	AVRG
MCPD	28524.386	30229.067	6.0	AVRG
MCPA	15	15.3	2.0	2ORD
Dichloroprop	0.15	0.192	28.0	2ORD
2,4'-D	0.15	0.173	15.3	2ORD
2,4,5-TP (Silvex)	28707318	28986780	1.0	AVRG
2,4,5-T	26413632	26128540	1.1	AVRG
2,4-DB	0.15	0.136	9.3	2ORD
Dinoseb	20748977	19814180	4.5	AVRG
=====				
DCAA(SURR)	5238531	5762993.333	10.0	AVRG

Average Used: 7.8

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 04/30/12 Time: 1209
 CCV ID: CCV1075663 Lab File ID: HCCV1.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	15472373.333	2.3	AVRG
Dalapon	9382528.4	10080794.667	7.4	AVRG
MCPP	28524.386	31542.333	10.6	AVRG
MCPA	15	15.2	1.3	2ORD
Dichloroprop	0.15	0.158	5.3	2ORD
2,4'-D	0.15	0.157	4.7	2ORD
2,4,5-TP (Silvex)	28707318	28762313.333	0.2	AVRG
2,4,5-T	26413632	27578906.667	4.4	AVRG
2,4-DB	0.15	0.159	6.0	2ORD
Dinoseb	20748977	20848213.333	0.5	AVRG
=====				
DCAA(SURR)	5238531	5340220	1.9	AVRG

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 04/30/12 Time: 1736
 CCV ID: CCV1075657 Lab File ID: HCCV2.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	14739906.667	2.5	AVRG
Dalapon	9382528.4	9540880	1.7	AVRG
MCPD	28524.386	30344.667	6.4	AVRG
MCPA	15	17.5	16.7	2ORD
Dichloroprop	0.15	0.145	3.3	2ORD
2,4'-D	0.15	0.143	4.7	2ORD
2,4,5-TP (Silvex)	28707318	26833693.333	6.5	AVRG
2,4,5-T	26413632	25956786.667	1.7	AVRG
2,4-DB	0.15	0.142	5.3	2ORD
Dinoseb	20748977	19423546.667	6.4	AVRG
=====				
DCAA(SURR)	5238531	5079820	3.0	AVRG

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 05/10/12 Time: 1423
 CCV ID: CCV1079800 Lab File ID: HCCV2.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	14151766.667	6.4	AVRG
Dalapon	9382528.4	8752605.333	6.7	AVRG
MCPD	28524.386	30221	5.9	AVRG
MCPA	15	13	13.3	2ORD
Dichloroprop	0.15	0.132	12.0	2ORD
2,4'-D	0.15	0.134	10.7	2ORD
2,4,5-TP (Silvex)	28707318	25754173.333	10.3	AVRG
2,4,5-T	26413632	23790926.667	9.9	AVRG
2,4-DB	0.15	0.129	14.0	2ORD
Dinoseb	20748977	17685840	14.8	AVRG
=====				
DCAA(SURR)	5238531	4874640	6.9	AVRG

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 05/10/12 Time: 2152
 CCV ID: CCV1079801 Lab File ID: HCCV3.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	14080366.667	6.9	AVRG
Dalapon	9382528.4	8953373.333	4.6	AVRG
MCPPP	28524.386	28895.6	1.3	AVRG
MCPA	15	14.6	2.7	2ORD
Dichloroprop	0.15	0.127	15.3	2ORD
2,4'-D	0.15	0.13	13.3	2ORD
2,4,5-TP (Silvex)	28707318	25360933.333	11.7	AVRG
2,4,5-T	26413632	23669260	10.4	AVRG
2,4-DB	0.15	0.126	16.0	2ORD
Dinoseb	20748977	17466066.667	15.8	AVRG
=====				
DCAA(SURR)	5238531	4707040	10.1	AVRG

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 05/11/12 Time: 1249
 CCV ID: CCV1079802 Lab File ID: HCCV1.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	14437886.667	4.5	AVRG
Dalapon	9382528.4	9114168	2.9	AVRG
MCPP	28524.386	30020	5.2	AVRG
MCPA	15	13.8	8.0	2ORD
Dichloroprop	0.15	0.137	8.7	2ORD
2,4'-D	0.15	0.139	7.3	2ORD
2,4,5-TP (Silvex)	28707318	26123453.333	9.0	AVRG
2,4,5-T	26413632	24393800	7.6	AVRG
2,4-DB	0.15	0.143	4.7	2ORD
Dinoseb	20748977	17992833.333	13.3	AVRG
=====				
DCAA(SURR)	5238531	4888860	6.7	AVRG

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 05/11/12 Time: 1343
 CCV ID: CCV1079803 Lab File ID: HCCV2.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP2 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
Dicamba	15125142	14480906.667	4.3	AVRG
Dalapon	9382528.4	9394648	0.1	AVRG
MCPP	28524.386	30351.867	6.4	AVRG
MCPA	15	13.3	11.3	2ORD
Dichloroprop	0.15	0.135	10.0	2ORD
2,4'-D	0.15	0.137	8.7	2ORD
2,4,5-TP (Silvex)	28707318	26089966.667	9.1	AVRG
2,4,5-T	26413632	24358740	7.8	AVRG
2,4-DB	0.15	0.135	10.0	2ORD
Dinoseb	20748977	17891806.667	13.8	AVRG
=====				
DCAA(SURR)	5238531	4839040	7.6	AVRG

8151 TCLP Herbicide Organics

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

EPA SW846 8151 chlorinated acid herbicides

IV. PREPARATION

TCLP samples were prepared by EPA SW846 1311 prior to 8151 semi-volatiles preparation. Water/TCLP samples were prepared by EPA SW846 3510 for 8151

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

**CASE NARRATIVE
GC/ECD SEMIVOLATILE ORGANIC**

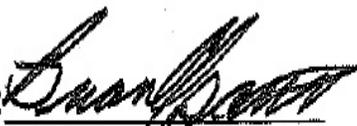
Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Sample analysis proceeded normally.

Data was collected using dual column analysis. Please note that since the sample was non-detect for the target analytes, the confirmation column was not required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Brian C. Spanik Title: Lab Director

SIGNED:

DATE: 05/11/2012

HERBICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: 8151 TCLP

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>

8151 TCLP Sample Data

HERBICIDE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. IDW-SOIL-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 81601.D
 Sample wt/vol: 500 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 10 Date Extracted: 05/03/12
 Level:(low/med) LOW Date Analyzed: 05/10/12 Time: 1328
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: IDW Soils Method: 8151 TCLP
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
94-75-7	2,4'-D	0.0006	U	0.0003	0.0006	1
93-72-1	2,4,5-TP (Silvex)	0.00028	U	0.00014	0.00028	10

8151 TCLP QC Summary

HERBICIDE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW EPA Sample No. 128814MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 128814MB Lab File ID: 9297MB.D
 Sample wt/vol: 500 Units: ML Date Received: 04/25/12
 Concentrated Extract Volume: 10 Date Extracted: 05/03/12
 Level:(low/med) LOW Date Analyzed: 05/10/12 Time: 1234
 PercentSolids: 0 decanted : (_____) Dilution Factor: 1
 Extraction: SEPF Station ID: _____ Method: 8151 TCLP
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
94-75-7	2,4'-D	0.0006	U	0.0003	0.0006	1
93-72-1	2,4,5-TP (Silvex)	0.00028	U	0.00014	0.00028	10

HERBICIDE ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 128814MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9297MB.D Lab Sample ID: 128814MB

Instrument ID: SECD01 Date Extracted: 05/03/12

Matrix: WATER Date Analyzed: 05/10/12

Level:(low/med) LOW Time Analyzed: 1234

TCLP Analysis

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	128815LCS	128815LCS	9297LCS.D	05/10/12	1301
2	IDW-SOIL-1	350581601	81601.D	05/10/12	1328

COMMENTS:

2A

WATER HERBICIDE ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): STX-CLP1 ID: 0.32 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
128814MB	100.0						0
128815LCS	78.0						0
IDW-SOIL-1	88.0						0

Control Limits

S1 = DCAA

54 - 103

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

160512.1611

HERBICIDE ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: STX-CLP1 ID: 0.32 (mm) Init. Calib. Date: 04/30/12
 Instrument ID: SECD01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION						
S1 : 11.14			S2 :			
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
1	STD1075759	127033CAL07	HCAL7.D	04/30/12	0832	11.14
2	STD1075758	127032CAL06	HCAL6.D	04/30/12	0859	11.14
3	STD1075757	127031CAL05	HCAL5.D	04/30/12	0927	11.14
4	STD1075754	127030CAL04	HCAL4.D	04/30/12	0954	11.14
5	STD1075753	127029CAL03	HCAL3.D	04/30/12	1021	11.14
6	STD1075752	127028CAL02	HCAL2.D	04/30/12	1048	11.15
7	STD1075751	127027CAL01	HCAL1.D	04/30/12	1115	11.15
8	SSC1075760	127034CAL08	HSEC.D	04/30/12	1142	11.14
9	127030CAL04	127030CAL04	HCCV1.D	05/10/12	1145	
10	128814MB	128814MB	9297MB.D	05/10/12	1234	11.15
11	128815LCS	128815LCS	9297LCS.D	05/10/12	1301	11.14
12	IDW-SOIL-1	350581601	81601.D	05/10/12	1328	11.14
13	ZZZZZ	ZZZZZ	ZZZZZ	05/10/12	1355	
14	CCV1079485	120670CAL04	HCCV2.D	05/10/12	1423	11.14

QC LIMITS

S1 = DCAA

(+/- 0.2 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

HERBICIDE ORGANIC LAB CONTROL SAMPLE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. 128815LCS
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

TCLP Analysis

COMPOUND	SPIKE ADDED mg/L	LCS CONCENTRATION mg/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
2,4'-D	0.002	0.00153	76.5			27 - 182
2,4,5-TP (Silvex)	0.002	0.00141	70.5			36 - 159

Spike Recovery: 0 out of 2 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

8151 TCLP Standards Data

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

LAB FILE ID:	RRF0.025 =HCAL1.D	RRF0.05 =HCAL2.D			
RRF0.1 =HCAL3.D	RRF0.15 =HCAL4.D	RRF0.2 =HCAL5.D			
COMPOUND	RRF0.025	RRF0.05	RRF0.1	RRF0.15	RRF0.2
2,4'-D	16338880	13038100	10337630	10041766.67	8868690
2,4,5-TP (Silvex)	47856840	42517520	37320370	37751973.33	33925355
=====					
DCAA(SURR)	16413400	11659200	7865720	7344680	6987505

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

LAB FILE ID:		RRF0.25 =HCAL6.D	RRF0.3 =HCAL7.D			
COMPOUND	RRF0.25	RRF0.3				
2,4'-D	8503684					
2,4,5-TP (Silvex)	34883432	32674190				
=====						
DCAA(SURR)	6583068					

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
2,4'-D	2ORDR	-0.0127859	0.000000086	0.99754
2,4,5-TP (Silvex)	AVRG		38132811.5	14.1
=====				
DCAA(SURR)	2ORDR	-0.0531399	0.000000188	0.99738

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: HCAL1.D		RT2: HCAL2.D			
RT3: HCAL3.D		RT4: HCAL4.D		RT5: HCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
2,4'-D	12.187	12.175	12.168	12.165	12.163		
2,4,5-TP (Silvex)	12.845	12.845	12.843	12.842	12.842		
=====							
DCAA(SURR)	11.152	11.147	11.145	11.143	11.142		

HERBICIDE ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SECD01 Calibration Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm) Calibration Time Begin: 832 End: 1115
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: HCAL6.D		RT7: HCAL7.D				
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW FROM TO	
2,4'-D	12.163					12.165	11.965	12.365
2,4,5-TP (Silvex)	12.842	12.842				12.842	12.642	13.042
=====								
DCAA(SURR)	11.143					11.143	10.943	11.343

7SSC
HERBICIDE ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 04/30/12 Time: 1142
 CCV ID: SSC1075760 Lab File ID: HSEC.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2,4'-D	0.15	0.15	0.0	2ORD
2,4,5-TP (Silvex)	38132811	37604826.667	1.4	AVRG
=====				
DCAA(SURR)	0.15	0.168	12.0	2ORD

HERBICIDE ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SECD01 CalibrationDate: 05/10/12 Time: 1423
 CCV ID: CCV1079485 Lab File ID: HCCV2.D Init. Calib. Date Begin: 04/30/12 End: 04/30/12
 GC Column: STX-CLP1 ID: 0.32 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
2,4'-D	0.15	0.13	13.3	2ORD
2,4,5-TP (Silvex)	38132811	31925260	16.3	AVRG
=====				
DCAA(SURR)	0.15	0.127	15.3	2ORD

FL-PRO Organics

CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Florida DEP/FL PRO

IV. PREPARATION

Soil samples were prepared by SW846 EPA 3550 for FL-PRO semi-volatile analysis.
Water samples were prepared by SW846 EPA 3510 for FL-PRO semi-volatile analysis.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

All acceptance criteria were met.

C. Surrogates:

All acceptance criteria were met.

D. Spikes:

1. Laboratory Control Spikes (LCS)

All acceptance criteria were met

2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

No spikes requested by client.

E. Internal Standards:

This method does not require the use of internal standards.

F. Samples:

**CASE NARRATIVE
FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.



SIGNED:

DATE: 05/02/2012

FL-PRO ORGANIC CROSS REFERENCE TABLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Method: FL-PRO

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>
<u>IDW-LIQ-1</u>	<u>350581602</u>

FL-PRO Sample Data

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M EPA Sample No. IDW-SOIL-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: SOIL Lab Sample ID: 350581601 Lab File ID: 816-1.D
 Sample wt/vol: 33.18 Units: G Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/24/12
 Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 2213
 PercentSolids: 85.1 decanted : _____ Dilution Factor: 1
 Extraction: SONC Station ID: IDW Soils Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	26.9	U	15.2	26.9	26.9

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602 Lab File ID: 816-2.D
 Sample wt/vol: 980 Units: ML Date Received: 04/21/12
 Concentrated Extract Volume: 2 Date Extracted: 04/27/12
 Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1542
 PercentSolids: 0 decanted : _____ Dilution Factor: 1
 Extraction: SEPF Station ID: IDW Water Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	3300		255	510	510

FL-PRO QC Summary

FL-PRO ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW EPA Sample No. 127066MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: SOIL Lab Sample ID: 127066MB Lab File ID: 9174MB.D
 Sample wt/vol: 33.02 Units: G Date Received: 04/24/12
 Concentrated Extract Volume: 2 Date Extracted: 04/24/12
 Level:(low/med) LOW Date Analyzed: 04/24/12 Time: 1543
 PercentSolids: 100 decanted : (_____ Dilution Factor: 1
 Extraction: SONC Station ID: _____ Method: FL-PRO
 GPC Cleanup : (Y/N) N pH: _____
 Column(1): RTX-5 ID: 0.53 (mm)
 CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	23	U	13	23	23

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW 127805MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Lab Sample ID: 127805MB Lab File ID: 9227MB.D

Sample wt/vol: 1000 Units: ML Date Received: 04/27/12

Concentrated Extract Volume: 2 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1457

PercentSolids: 0 decanted : (_____ Dilution Factor: 1

Extraction: SEPF Station ID: _____ Method: FL-PRO

GPC Cleanup : (Y/N) N pH: _____

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q	MDL	LOD	LOQ
5289290-40-0	TPH	500	U	250	500	500

FL-PRO ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127066MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9174MB.D Lab Sample ID: 127066MB

Instrument ID: SFID01 Date Extracted: 04/24/12

Matrix: SOIL Date Analyzed: 04/24/12

Level:(low/med) LOW Time Analyzed: 1543

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127065LCS	127065LCS	9174LCS.D	04/24/12	1605
2	IDW-SOIL-1	350581601	816-1.D	04/24/12	2213

COMMENTS:

FL-PRO ORGANIC METHOD BLANK SUMMARY

Lab Name: Spectrum Analytical, Inc Contract: NAS Key West /Boca Chica/ MW Sa EPA Sample No. 127805MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Lab File ID: 9227MB.D Lab Sample ID: 127805MB

Instrument ID: SFID01 Date Extracted: 04/27/12

Matrix: WATER Date Analyzed: 04/27/12

Level:(low/med) LOW Time Analyzed: 1457

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	127804LCS	127804LCS	9227LCS.D	04/27/12	1520
2	IDW-LIQ-1	350581602	816-2.D	04/27/12	1542

COMMENTS:

2A

WATER FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127804LCS	110.0	107.0					0
127805MB	110.0	107.0					0
IDW-LIQ-1	128.0	124.0					0

Control Limits

S1 = o-Terphenyl Surrogate 82 - 142
S2 = Nonatriacontane (C-39) 42 - 193

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out
Control limit source: (lab/method) METHOD

Form II

160512.1611

2A

SOIL FL-PRO ORGANIC SURROGATE RECOVERY

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

Lab Code : PEL Case No. SAS No: SDG NO.: 3505816

Column(1): RTX-5 ID: 0.53 (mm)

EPA Sample NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
127065LCS	83.3	71.1					0
127066MB	93.3	86.7					0
IDW-SOIL-1	97.1	94.3					0

Control Limits

S1 = o-Terphenyl Surrogate 62 - 109
S2 = Nonatriacontane (C-39) 60 - 118

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Control limit source: (lab/method) METHOD

Form II

160512.1611

FL-PRO ORGANIC ANALYTICAL SEQUENCE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 426
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date: 03/28/12
 Instrument ID: SFID01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MIDCAL SURROGATE RT FROM INITIAL CALIBRATION							
S1 : 4.16			S2 : 10.58				
CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #	
1	STD1064818	45519	PROCAL7.D	03/28/12	1416	4.17	10.63
2	STD1064817	45520	PROCAL6.D	03/28/12	1438	4.17	10.59
3	STD1064816	45521	PROCAL5.D	03/28/12	1501	4.16	10.54
4	STD1064815	45522	PROCAL4.D	03/28/12	1523	4.16	10.58
5	STD1064814	45523	PROCAL3.D	03/28/12	1545	4.14	10.5
6	STD1064813	45524	PROCAL2.D	03/28/12	1608	4.16	10.54
7	STD1064812	45525	PROCAL1.D	03/28/12	1630	4.13	10.5
8	SSC1064821	45526	PROSEC.D	03/28/12	1652	4.13	10.44
9	CCV1073182	45522	PROCCV1.D	04/24/12	1029	4.14	10.46
10	127066MB	127066MB	9174MB.D	04/24/12	1543	4.28	10.85
11	127065LCS	127065LCS	9174LCS.D	04/24/12	1605	4.14	10.44
12	CCV1073183	45522	PROCCV2.D	04/24/12	1936	4.08	10.25
13	IDW-SOIL-1	350581601	816-1.D	04/24/12	2213	4.09	10.27
14	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	2235		
15	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/24/12	2257		
16	CCV1073184	45522	PROCCV3a.D	04/24/12	2330	4.08	10.2
17	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/25/12	1004		
18	CCV1074603	45522	PROCCV1.D	04/27/12	1306	4.31	10.92
19	127805MB	127805MB	9227MB.D	04/27/12	1457	4.32	10.98
20	127804LCS	127804LCS	9227LCS.D	04/27/12	1520	4.16	10.54
21	IDW-LIQ-1	350581602	816-2.D	04/27/12	1542	4.17	10.54
22	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1844		
23	CCV1074604	45522	PROCCV2.D	04/27/12	1916	4.09	10.26
24	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	1939		
25	ZZZZZZ	ZZZZZZ	ZZZZZZ	04/27/12	2001		
26	CCV1074605	45522	PROCCV3.D	04/27/12	2226	4.1	10.31

QC LIMITS

S1 = o-Terphenyl Surrogate (+/- 0.2 MINUTES)
 S2 = Nonatriacontane (C-39) (+/- 0.46 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127065LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED mg/Kg	LCS CONCENTRATION mg/Kg	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	103	76.3	74.1			63 - 153

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO ORGANIC LAB CONTROL SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127804LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC #	LCS % RPD	QC LIMITS	
					RPD	REC.
TPH	3400	3200	94.1			55 - 118

Spike Recovery: 0 out of 1 outside limits

Column to be used to flag recovery values with an asterisk

* Values outside QC limits

Control limit source: (lab/method) METHOD

COMMENTS: _____

FL-PRO Standards Data

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID:	RRF0.17 =PROCAL1.D	RRF0.34 =PROCAL2.D			
RRF0.85 =PROCAL3.D	RRF1.7 =PROCAL4.D	RRF2.55 =PROCAL5.D			
COMPOUND	RRF0.17	RRF0.34	RRF0.85	RRF1.7	RRF2.55
TPH	11892200	8905905.882	7673328.235	7746596.471	6757141.176
=====					
Nonatriacontane (C-39)(SURR)	5045493.333	5107080	5812986.667	5564053.333	5221266.667
o-Terphenyl Surrogate(SURR)	6862940	6760680	7635860	8031980	6886480

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

LAB FILE ID: RRF3.4 =PROCAL6.D RRF5.1 =PROCAL7.D					
COMPOUND	RRF3.4	RRF5.1			
TPH	6619844.118	6701392.157			
=====					
Nonatriacontane (C-39)(SURR)	5110173.333	4655386.667			
o-Terphenyl Surrogate(SURR)	7013080	6544620			

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		AO	A1	
TPH	LINR	-0.16196821	1.54514E-07	0.99787
=====				
Nonatriacontane (C-39)(SURR)	AVRG		5216634.286	7.2
o-Terphenyl Surrogate(SURR)	AVRG		7105091.429	7.5

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. SAS No: SDG No.: 3505816
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT1: PROCAL1.D		RT2: PROCAL2.D			
RT3: PROCAL3.D		RT4: PROCAL4.D		RT5: PROCAL5.D			
COMPOUND	RT1	RT2	RT3	RT4	RT5	MIDCAL RT	RT WINDOW FROM TO
TPH	6.202	6.357	6.357	6.357	6.357		
=====							
Nonatriacontane (C-39)(SURR)	10.497	10.543	10.503	10.583	10.543		
o-Terphenyl Surrogate(SURR)	4.130	4.157	4.140	4.160	4.157		

FL-PRO ORGANIC INITIAL CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 Calibration Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm) Calibration Time Begin: 1416 End: 1630
 Min RRF for SPCC(#) = 0 Max %RSD for CCC(*) = 0 %

LAB FILE ID:		RT6: PROCAL6.D		RT7: PROCAL7.D				
COMPOUND	RT6	RT7				MIDCAL RT	RT WINDOW FROM TO	
TPH	6.357	6.357				6.357	0.908	11.805
=====								
Nonatriacontane (C-39)(SURR)	10.587	10.630				10.583	10.123	11.043
o-Terphenyl Surrogate(SURR)	4.167	4.173				4.160	3.960	4.360

7SSC

FL-PRO ORGANIC SECONDARY SOURCE CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 03/28/12 Time: 1652
 CCV ID: SSC1064821 Lab File ID: PROSEC.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.65	2.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5339786.667	2.4	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7346880	3.4	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/24/12 Time: 1029
 CCV ID: CCV1073182 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.98	16.5	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	6034853.333	15.7	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7943280	11.8	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/24/12 Time: 1936
 CCV ID: CCV1073183 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.84	8.2	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5338160	2.3	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7059120	0.6	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/24/12 Time: 2330
 CCV ID: CCV1073184 Lab File ID: PROCCV3a.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.83	7.6	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5349160	2.5	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	6849220	3.6	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/27/12 Time: 1306
 CCV ID: CCV1074603 Lab File ID: PROCCV1.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.71	0.6	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5535773.333	6.1	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7246380	2.0	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/27/12 Time: 1916
 CCV ID: CCV1074604 Lab File ID: PROCCV2.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.89	11.2	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5745533.333	10.1	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7463260	5.0	AVRG

FL-PRO ORGANIC CONTINUING CALIBRATION DATA

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling 4268
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Instrument ID: SFID01 CalibrationDate: 04/27/12 Time: 2226
 CCV ID: CCV1074605 Lab File ID: PROCCV3.D Init. Calib. Date Begin: 03/28/12 End: 03/28/12
 GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	Expected	Found	%D / %Drift	Curve Type
TPH	1.7	1.92	12.9	LINR
=====				
Nonatriacontane (C-39)(SURR)	5216634.3	5885826.667	12.8	AVRG
o-Terphenyl Surrogate(SURR)	7105091.4	7761900	9.2	AVRG

Inorganics

Inorganic Data Qualifiers

C (Concentration) Qualifier - Entries and their meanings are:

- J** The reported value obtained was less than the RL but greater than or equal to the MDL.
- E** The reported value obtained was over calibration or linear range.
- U** The reported value obtained was less than the MDL or was not detected.

Q Qualifier - Entries and their meanings are:

- U** The reported value is estimated because of interference. An explanatory comment must be included under "Comments" on the Cover Page if the problem applies to all samples in this data package or on the individual FORM 1 if it is an isolated problem.
- M** Duplicate injection precision was not met (two analyses of the same sample did not agree).
- N** Spiked sample recovery not within control limits.
- E** Serial Dilution percent difference not within control limits.
- S** The reported value was determined by the Method of Standard Additions (MSA).
- W** Post-digestion spike for Furnace AA analysis is out of control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
- *** Duplicate analysis not within control limits.
- +** Correlation coefficient for the MSA is less than 0.995.
- X** The data is flagged as rejected by analyst utilizing analytical judgement.

Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field.

M (Method) Qualifier - Enter one of the following:

- P** ICP
- A** Flame AA
- F** Furnace AA
- CV** Manual Cold Vapor AA
- TC** Total Organic Carbon
- AS** Semi-Automated Spectrophotometric
- CA** Midi-Distillation Spectrophotometric
- T** Titrimetric
- C** Manual Spectrophotometric
- GR** Gravimetric
- NR** Analyte was not required by your lab

Inorganic Sample ID Qualifiers

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for inorganic analysis are defined below:

- DL** Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R** Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE** Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS** Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD** Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).
- A** Post Digestion Spike.
- L** Serial Dilution.

Metals Data Package

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHOD

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 6010B for ICP metals.

IV. PREPARATION

Water samples were prepared according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 3010A.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met. No action required. The following ICB/CCB(s) had element concentrations below the RL:

ICB1073807 was analyzed on 04/26/12 09:44. The following analyte(s) were detected below RL: Aluminum at -0.0194 mg/L, Beryllium at 0.000204 mg/L, Calcium at -0.091 mg/L, Iron at 0.0139 mg/L, Manganese at -0.000453 mg/L, Silver at 0.000642 mg/L.

CCB1073812 was analyzed on 04/26/12 10:12. The following analyte(s) were detected below RL: Aluminum at -0.0111 mg/L, Beryllium at 0.000172 mg/L, Calcium at -0.0774 mg/L, Iron at 0.0241 mg/L, Magnesium at 0.0155 mg/L, Manganese at -0.000527 mg/L, Selenium at 0.0056 mg/L, Silver at 0.000753 mg/L.

CCB1073824 was analyzed on 04/26/12 15:54. The following analyte(s) were detected below RL: Aluminum at -0.0258 mg/L, Beryllium at 0.000152 mg/L, Calcium at -0.0812 mg/L, Iron at 0.00838 mg/L, Silver at 0.000617 mg/L. The hits in the blanks are below the RL, therefore, no corrective action was taken.

2. Method Blanks:

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

All acceptance criteria were met with the exception of:
Blank 127496MB was analyzed with the water samples on 04/26/12. The following analyte(s) were detected below RL: Iron at 0.0151 mg/L. The hits in the blank are below the RL, therefore, no corrective action was taken.
Samples coded accordingly.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Post Digestion Spike:

All acceptance criteria were met.

3. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

D. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Serial Dilution:

All acceptance criteria were met with the exception of:
Serial Dilution 350579701L was analyzed with the water samples on 04/26/12. The following analyte(s) exceeded criteria: Aluminum at 16 % with criteria of (10). The SD is associated with the QC for a different SDG. The LCS/LCSD pass all quality control criteria. No further action was taken.
Samples coded accordingly.

F. ICP Interference Check Samples:

All acceptance criteria were met.

G. Samples:

Sample analysis proceeded normally.

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/09/2012

**CASE NARRATIVE
MERCURY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 7470A.

IV. PREPARATION

Water samples were prepared according to the Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 7470A.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met. No action required. The following ICB/CCB(s) had element concentrations below the RL:
CCB1073879 was analyzed on 04/26/12 15:57. The following analyte(s) were detected below RL: Mercury at -0.0000383 mg/L. The hit in the blank is below the RL, therefore, no corrective action was taken.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Post Digestion Spike:

**CASE NARRATIVE
MERCURY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

All acceptance criteria were met.

3. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

D. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Serial Dilution:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/09/2012

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic
Lab Code : PEL Case No.: _____ SDG No.: 3505816
SOW No.: _____

EPA Sample No	Lab Sample ID
<u>IDW-LIQ-1</u>	<u>350581602</u>

Were ICP interelement corrections applied?	Yes/No	Yes
Were ICP background corrections applied?	Yes/No	Yes
If yes - were raw data generated before application of background corrections?	Yes/No	No

Comments:

Metals Inorganic Sample Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: IDW Water

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7429-90-5	Aluminum	0.0978	J		P	0.0093	0.0186	0.1
7440-36-0	Antimony	0.0066	U		P	0.0033	0.0066	0.01
7440-38-2	Arsenic	0.013			P	0.00331	0.00662	0.01
7440-39-3	Barium	0.00911	J		P	0.00022	0.00044	0.01
7440-41-7	Beryllium	0.00024	U		P	0.00012	0.00024	0.005
7440-43-9	Cadmium	0.00144	U		P	0.00072	0.00144	0.005
7440-70-2	Calcium	100			P	0.039	0.078	0.1
7440-47-3	Chromium	0.00299	J		P	0.00043	0.00086	0.01
7440-48-4	Cobalt	0.00074	U		P	0.00037	0.00074	0.01
7440-50-8	Copper	0.00426	J		P	0.0027	0.0054	0.01
7439-89-6	Iron	11.9			P	0.0055	0.011	0.05
7439-92-1	Lead	0.00581	J		P	0.0037	0.0074	0.015
7439-95-4	Magnesium	87.1			P	0.0098	0.0196	0.1
7439-96-5	Manganese	0.118			P	0.00035	0.0007	0.01
7439-97-6	Mercury	0.000074	U		CV	0.000037	0.000074	0.0002
7440-02-0	Nickel	0.00186	U		P	0.00093	0.00186	0.005
7440-09-7	Potassium	33.6			P	0.0717	0.143	0.5
7782-49-2	Selenium	0.0082	U		P	0.0041	0.0082	0.02
7440-22-4	Silver	0.00104	U		P	0.00052	0.00104	0.01
7440-23-5	Sodium	463			P	0.18	0.36	0.36
7440-28-0	Thallium	0.0088	U		P	0.0044	0.0088	0.01

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: IDW Water

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7440-62-2	Vanadium	0.000647	J		P	0.00044	0.00088	0.01
7440-66-6	Zinc	0.0254			P	0.004	0.008	0.02

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Metals Inorganic QC Summary Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 127496MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 127496MB
 Level:(low/med) LOW Date Received: 4/25/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7429-90-5	Aluminum	0.0186	U		P	0.0093	0.0186	0.1
7440-36-0	Antimony	0.0066	U		P	0.0033	0.0066	0.01
7440-38-2	Arsenic	0.00662	U		P	0.00331	0.00662	0.01
7440-39-3	Barium	0.00044	U		P	0.00022	0.00044	0.01
7440-41-7	Beryllium	0.00024	U		P	0.00012	0.00024	0.005
7440-43-9	Cadmium	0.00144	U		P	0.00072	0.00144	0.005
7440-70-2	Calcium	0.078	U		P	0.039	0.078	0.1
7440-47-3	Chromium	0.00086	U		P	0.00043	0.00086	0.01
7440-48-4	Cobalt	0.00074	U		P	0.00037	0.00074	0.01
7440-50-8	Copper	0.0054	U		P	0.0027	0.0054	0.01
7439-89-6	Iron	0.0151	J		P	0.0055	0.011	0.05
7439-92-1	Lead	0.0074	U		P	0.0037	0.0074	0.015
7439-95-4	Magnesium	0.0196	U		P	0.0098	0.0196	0.1
7439-96-5	Manganese	0.0007	U		P	0.00035	0.0007	0.01
7440-02-0	Nickel	0.00186	U		P	0.00093	0.00186	0.005
7440-09-7	Potassium	0.143	U		P	0.0717	0.143	0.5
7782-49-2	Selenium	0.0082	U		P	0.0041	0.0082	0.02
7440-22-4	Silver	0.00104	U		P	0.00052	0.00104	0.01
7440-23-5	Sodium	0.36	U		P	0.18	0.36	0.36
7440-28-0	Thallium	0.0088	U		P	0.0044	0.0088	0.01
7440-62-2	Vanadium	0.00088	U		P	0.00044	0.00088	0.01

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 127496MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 127496MB
 Level:(low/med) LOW Date Received: 4/25/2012
 PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7440-66-6	Zinc	0.008	U		P	0.004	0.008	0.02

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127643MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Matrix: WATER Lab Sample ID: 127643MB
Level:(low/med) LOW Date Received: 4/26/2012
PercentSolids: 0 Station ID: _____

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7439-97-6	Mercury	0.000074	U		CV	0.000037	0.000074	0.0002

Color Before: _____ Clarity Before: _____ Texture : _____
Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Initial Calibration Source: 45799
45433

Continuing Calibration Source: 45798
45624

Concentration Units: (mg/L)

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R (1)	True	Found	%R (1)	Found	%R (1)	
Aluminum	40	40.800	102.0	25	25.700	102.8	24.600	98.4	P
Antimony	0.4	0.408	102.0	0.5	0.517	103.4	0.508	101.6	P
Arsenic	0.4	0.428	107.0	0.5	0.529	105.8	0.522	104.4	P
Barium	1.2	1.210	100.8	0.5	0.522	104.4	0.511	102.2	P
Beryllium	0.4	0.430	107.5	0.5	0.535	107.0	0.513	102.6	P
Cadmium	0.4	0.418	104.5	0.5	0.527	105.4	0.513	102.6	P
Calcium	40	40.500	101.2	25	25.500	102.0	24.700	98.8	P
Chromium	0.4	0.420	105.0	0.5	0.528	105.6	0.514	102.8	P
Cobalt	0.4	0.414	103.5	0.5	0.531	106.2	0.514	102.8	P
Copper	0.4	0.405	101.2	0.5	0.510	102.0	0.489	97.8	P
Iron	40	42.100	105.2	40	42.500	106.2	41.000	102.5	P
Lead	0.4	0.418	104.5	0.5	0.528	105.6	0.516	103.2	P
Magnesium	40	41.200	103.0	25	26.500	106.0	25.400	101.6	P
Manganese	0.4	0.420	105.0	0.5	0.530	106.0	0.509	101.8	P
Mercury	0.003	0.003	101.7	0.005	0.005	100.4	0.005	100.6	CV
Nickel	0.4	0.422	105.5	0.5	0.533	106.6	0.520	104.0	P
Potassium	40	40.400	101.0	25	25.000	100.0	24.300	97.2	P
Selenium	0.4	0.392	98.0	0.5	0.499	99.8	0.477	95.4	P
Silver	0.16	0.164	102.5	0.5	0.517	103.4	0.507	101.4	P
Sodium	40	40.400	101.0	25	25.300	101.2	24.600	98.4	P
Thallium	0.4	0.439	109.8	0.5	0.546	109.2	0.537	107.4	P
Vanadium	0.4	0.417	104.2	0.5	0.521	104.2	0.508	101.6	P
Zinc	0.4	0.431	107.8	0.5	0.541	108.2	0.536	107.2	P

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110

ICV is Second Source

160512 1612

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

ICV IDs: CV= ICV1073864, P= ICV1073806
CCV1 IDs: CV= CCV1073866, P= CCV1073811
CCV2 IDs: CV= CCV1073878, P= CCV1073823

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110
ICV is Second Source

160512 1612

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Initial Calibration Source:

Continuing Calibration Source: 45798

Concentration Units: (mg/L)

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R (1)	True	Found	%R (1)	Found	%R (1)	
Aluminum									P
Antimony									P
Arsenic									P
Barium									P
Beryllium									P
Cadmium									P
Calcium									P
Chromium									P
Cobalt									P
Copper									P
Iron									P
Lead									P
Magnesium									P
Manganese									P
Mercury				0.005	0.005	100.8			CV
Nickel									P
Potassium									P
Selenium									P
Silver									P
Sodium									P
Thallium									P
Vanadium									P
Zinc									P

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110

ICV is Second Source

160512 1612

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

ICV IDs:

CCV1 IDs: CV= CCV1073890

CCV2 IDs:

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110

ICV is Second Source

160512.1612

U.S. EPA - CLP
2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

AA CRDL Standard Source:

ICP CRDL Standard Source: 45319

Concentration Units: MG/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial			Final	
				True	Found	%R	Found	%R
Aluminum				0.2	0.18	89.7		
Antimony				0.05	0.05	99.4		
Arsenic				0.03	0.03	99.9		
Barium				0.01	0.01	97.6		
Beryllium				0.004	0.00	99.7		
Cadmium				0.005	0.01	93.9		
Calcium				1	0.89	88.8		
Chromium				0.01	0.01	101.2		
Cobalt				0.01	0.01	100.0		
Copper				0.01	0.01	104.6		
Iron				0.05	0.06	114.8		
Lead				0.025	0.03	106.2		
Magnesium				1	0.97	96.6		
Manganese				0.01	0.01	100.2		
Mercury								
Nickel				0.02	0.02	102.2		
Potassium				1	0.86	86.2		
Selenium				0.03	0.02	79.6		
Silver				0.01	0.01	98.7		
Sodium				1	0.93	92.7		
Thallium				0.06	0.06	95.4		
Vanadium				0.01	0.01	97.6		
Zinc				0.02	0.02	87.0		

Control Limits: No limits have been established by EPA at this time

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Preparation Blank Matrix (water/soil): WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L

Analyte	Initial Calib. Blank (mg/L)		Continuing Calibration Blank (mg/L)						Preparation Blank		M
		C	C	C	C	C	C	C	C		
Aluminum	-0.0194	J	-0.0111	J	-0.0258	J			0.0186	U	P
Antimony	0.0033	U	0.0033	U	0.0033	U			0.0066	U	P
Arsenic	0.00331	U	0.00331	U	0.00331	U			0.00662	U	P
Barium	0.00022	U	0.00022	U	0.00022	U			0.00044	U	P
Beryllium	0.000204	J	0.000172	J	0.000152	J			0.00024	U	P
Cadmium	0.00072	U	0.00072	U	0.00072	U			0.00144	U	P
Calcium	-0.091	J	-0.0774	J	-0.0812	J			0.078	U	P
Chromium	0.00043	U	0.00043	U	0.00043	U			0.00086	U	P
Cobalt	0.00037	U	0.00037	U	0.00037	U			0.00074	U	P
Copper	0.0027	U	0.0027	U	0.0027	U			0.0054	U	P
Iron	0.0139	J	0.0241	J	0.00838	J			0.0151	J	P
Lead	0.0037	U	0.0037	U	0.0037	U			0.0074	U	P
Magnesium	0.0098	U	0.0155	J	0.0098	U			0.0196	U	P
Manganese	-0.000453	J	-0.000527	J	0.00035	U			0.0007	U	P
Mercury	0.000037	U	0.000037	U	-3.83E-05	J	0.000037	U	0.000074	U	CV
Nickel	0.00093	U	0.00093	U	0.00093	U			0.00186	U	P
Potassium	0.0717	U	0.0717	U	0.0717	U			0.143	U	P
Selenium	0.0041	U	0.0056	J	0.0041	U			0.0082	U	P
Silver	0.000642	J	0.000753	J	0.000617	J			0.00104	U	P
Sodium	0.18	U	0.18	U	0.18	U			0.36	U	P
Thallium	0.0044	U	0.0044	U	0.0044	U			0.0088	U	P
Vanadium	0.00044	U	0.00044	U	0.00044	U			0.00088	U	P
Zinc	0.004	U	0.004	U	0.004	U			0.008	U	P

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
Lab Code : PEL Case No. SAS No: SDG No.: 3505816

ICB IDs: CV= ICB1073865, P= ICB1073807
CCB1 IDs: CV= CCB1073867, P= CCB1073812
CCB2 IDs: CV= CCB1073879, P= CCB1073824
CCB3 IDs: CV= CCB1073891

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

ICP ID#: ICAP2 ICSA Source: 45241
 ICSAB Source: 45248

Concentration Units: MG/L

Analyte	True		Initial Found			Final Found		
	Sol.	Sol.	Sol.	Sol.	%R	Sol.	Sol.	%R
	A	AB	A	AB		A	AB	
Aluminum	250	250	257.675	257.71	103.1			
Antimony	0	0.6	0.004	0.613	102.2			
Arsenic	0	0.1	-0.005	0.106	105.8			
Barium	0	0.5	0	0.494	98.8			
Beryllium	0	0.5	0	0.535	107.1			
Cadmium	0	1	0	0.962	96.2			
Calcium	250	250	244.899	246.057	98.4			
Chromium	0	0.5	0	0.495	99.1			
Cobalt	0	0.5	0	0.481	96.3			
Copper	0	0.5	-0.001	0.512	102.4			
Iron	225	225	220.075	220.578	98.0			
Lead	0	0.05	0.001	0.051	102.8			
Magnesium	250	250	250.281	256.291	102.5			
Manganese	0	0.5	-0.001	0.501	100.1			
Nickel	0	1	0.001	0.981	98.1			
Potassium	0	0	-0.063					
Selenium	0	0.05	0.007	0.054	108.8			
Silver	0	0.2	-0.001	0.201	100.6			
Sodium	0	0	0.007					
Thallium	0	0.1	0.002	0.112	111.8			
Vanadium	0	0.5	0	0.495	99.0			
Zinc	0	1	-0.001	0.976	97.6			

ICSA: ICS1073809

ICSAB: ICS1073810

U.S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

350579701A

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Water Level:(low/med) LOW

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Control Limit %R	Spiked Sample		Sample Result (SR)		Spike Added (SA)	%R	Q	M
			C		C				
Aluminum	80 - 120	51400.00		627.75		50000	101.5		P
Antimony	80 - 120	478.00		2.81	U	500	95.6		P
Arsenic	80 - 120	549.00		3.00	U	500	109.8		P
Barium	80 - 120	1680.00		141.04		1500	102.6		P
Beryllium	80 - 120	552.00		0.03	U	500	110.4		P
Cadmium	80 - 120	523.00		0.45	U	500	104.6		P
Calcium	80 - 120	76400.00		27677.28		50000	97.6		P
Chromium	80 - 120	637.00		113.08		500	104.7		P
Cobalt	80 - 120	520.00		1.10	J	500	103.8		P
Copper	80 - 120	523.00		4.86	J	500	103.6		P
Iron	80 - 120	53100.00		1281.43		50000	103.6		P
Lead	80 - 120	529.00		7.71	J	500	104.3		P
Magnesium	80 - 120	63200.00		12818.90		50000	100.7		P
Manganese	80 - 120	559.00		27.86		500	106.2		P
Nickel	80 - 120	544.00		16.47		500	105.6		P
Potassium	80 - 120	54100.00		3248.94		50000	101.6		P
Selenium	80 - 120	495.00		4.78	J	500	98.1		P
Silver	80 - 120	208.00		0.28	U	200	104.2		P
Sodium	80 - 120	75900.00		26756.13		50000	98.4		P
Thallium	80 - 120	547.00		-2.14	U	500	109.4		P
Vanadium	80 - 120	554.00		23.95		500	106.0		P
Zinc	80 - 120	548.00		3.65	U	500	109.7		P

Comments:

U.S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

350581602A

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Water Level:(low/med) LOW

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Control Limit %R	Spiked Sample		Sample Result (SR)		Spike Added (SA)	%R	Q	M
			C	C	U				
Mercury	80 - 120	3.07		0.03	U	3	102.3		CV

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127498LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	20	52.7		50.7		3.9		P
Antimony	20	0.519		0.49		5.7		P
Arsenic	20	0.541		0.514		5.1		P
Barium	20	1.56		1.46		6.6		P
Beryllium	20	0.535		0.514		4.0		P
Cadmium	20	0.517		0.491		5.2		P
Calcium	20	52.5		50.3		4.3		P
Chromium	20	0.533		0.497		7.0		P
Cobalt	20	0.52		0.488		6.3		P
Copper	20	0.509		0.486		4.6		P
Iron	20	53.9		51.6		4.4		P
Lead	20	0.521		0.497		4.7		P
Magnesium	20	52.5		50.7		3.5		P
Manganese	20	0.524		0.5		4.7		P
Nickel	20	0.525		0.497		5.5		P
Potassium	20	52.1		50.3		3.5		P
Selenium	20	0.496		0.462		7.1		P
Silver	20	0.206		0.194		6.0		P
Sodium	20	52.3		50.3		3.9		P
Thallium	20	0.536		0.509		5.2		P
Vanadium	20	0.531		0.496		6.8		P
Zinc	20	0.542		0.505		7.1		P

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127645LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Mercury	20	0.00297		0.00298		0.3		CV

Comments:

160512 1612

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127497LCS

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45535, 45139, 44322,

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	50	52.7	105.4				-	
Antimony	0.5	0.519	103.8				-	
Arsenic	0.5	0.541	108.2				-	
Barium	1.5	1.56	104.0				-	
Beryllium	0.5	0.535	107.0				-	
Cadmium	0.5	0.517	103.4				-	
Calcium	50	52.5	105.0				-	
Chromium	0.5	0.533	106.6				-	
Cobalt	0.5	0.52	104.0				-	
Copper	0.5	0.509	101.8				-	
Iron	50	53.9	107.8				-	
Lead	0.5	0.521	104.2				-	
Magnesium	50	52.5	105.0				-	
Manganese	0.5	0.524	104.8				-	
Nickel	0.5	0.525	105.0				-	
Potassium	50	52.1	104.2				-	
Selenium	0.5	0.496	99.2				-	
Silver	0.2	0.206	103.0				-	
Sodium	50	52.3	104.6				-	
Thallium	0.5	0.536	107.2				-	
Vanadium	0.5	0.531	106.2				-	
Zinc	0.5	0.542	108.4				-	

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127498LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45535, 45139, 44322,

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	50	50.7	101.4				-	
Antimony	0.5	0.49	98.0				-	
Arsenic	0.5	0.514	102.8				-	
Barium	1.5	1.46	97.3				-	
Beryllium	0.5	0.514	102.8				-	
Cadmium	0.5	0.491	98.2				-	
Calcium	50	50.3	100.6				-	
Chromium	0.5	0.497	99.4				-	
Cobalt	0.5	0.488	97.6				-	
Copper	0.5	0.486	97.2				-	
Iron	50	51.6	103.2				-	
Lead	0.5	0.497	99.4				-	
Magnesium	50	50.7	101.4				-	
Manganese	0.5	0.5	100.0				-	
Nickel	0.5	0.497	99.4				-	
Potassium	50	50.3	100.6				-	
Selenium	0.5	0.462	92.4				-	
Silver	0.2	0.194	97.0				-	
Sodium	50	50.3	100.6				-	
Thallium	0.5	0.509	101.8				-	
Vanadium	0.5	0.496	99.2				-	
Zinc	0.5	0.505	101.0				-	

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127644LCS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45799

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	0.003	0.00297	99.0				-	

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127645LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45799

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	0.003	0.00298	99.3				-	

U.S. EPA - CLP

9

SERIAL DILUTIONS

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

350579701L

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Water

Level:(low/med) LOW

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Difference	Q	M
		C		C			
Aluminum	627.75		530.00		16	E	P
Antimony	2.81	U	33.00	U			P
Arsenic	3.00	U	33.10	U			P
Barium	141.04		136.00		3.6		P
Beryllium	0.03	U	1.20	U			P
Cadmium	0.45	U	7.20	U			P
Calcium	27677.28		25900.00		6.4		P
Chromium	113.08		109.00		3.6		P
Cobalt	1.10	J	3.70	U			P
Copper	4.86	J	27.00	U			P
Iron	1281.43		1290.00		0.67		P
Lead	7.71	J	37.00	U			P
Magnesium	12818.90		12200.00		4.8		P
Manganese	27.86		25.80	J	7.4		P
Nickel	16.47		13.10	J	20		P
Potassium	3248.94		2810.00		14		P
Selenium	4.78	J	41.00	U			P
Silver	0.28	U	5.20	U			P
Sodium	26756.13		24800.00		7.3		P
Thallium	-2.14	U	44.00	U			P
Vanadium	23.95		24.20	J	1.0		P
Zinc	3.65	U	40.00	U			P

Comments:

U.S. EPA - CLP
9
SERIAL DILUTIONS

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 350581602L

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Water Level:(low/med) LOW

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Difference	Q	M
		C		C			
Mercury	0.03	U	0.37	U			CV

Comments:

U.S. EPA - CLP

10

METHOD DETECTION LIMITS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID Number : ICAP2
 Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Raw MDL (mg/L)	CRDL (mg/L)	MDL (mg/L)	Verification Date	M
Aluminum	308.215	0.0093	0.1	0.0093	1/12/2012	P
Antimony	206.836	0.0033	0.01	0.0033	1/12/2012	P
Arsenic	188.979	0.00331	0.01	0.00331	1/12/2012	P
Barium	233.527	0.00022	0.01	0.00022	1/12/2012	P
Beryllium	234.861	0.00012	0.005	0.00012	1/12/2012	P
Cadmium	226.502	0.00072	0.005	0.00072	1/12/2012	P
Calcium	315.887	0.039	0.1	0.039	1/12/2012	P
Chromium	267.716	0.00043	0.01	0.00043	1/12/2012	P
Cobalt	228.616	0.00037	0.01	0.00037	1/12/2012	P
Copper	324.752	0.0027	0.01	0.0027	1/12/2012	P
Iron	259.939	0.0055	0.05	0.0055	1/12/2012	P
Lead	220.353	0.0037	0.015	0.0037	1/12/2012	P
Magnesium	279.077	0.0098	0.1	0.0098	1/12/2012	P
Manganese	257.61	0.00035	0.01	0.00035	1/12/2012	P
Nickel	231.604	0.00093	0.005	0.00093	1/12/2012	P
Potassium	766.49	0.0717	0.5	0.0717	1/12/2012	P
Selenium	196.026	0.0041	0.02	0.0041	1/12/2012	P
Silver	328.068	0.00052	0.01	0.00052	1/12/2012	P
Sodium	589.592	0.18	0.36	0.18	1/12/2012	P
Thallium	190.801	0.0044	0.01	0.0044	1/12/2012	P
Vanadium	292.402	0.00044	0.01	0.00044	1/12/2012	P
Zinc	206.2	0.004	0.02	0.004	1/12/2012	P

Comments:

160512 1612

U.S. EPA - CLP

10

METHOD DETECTION LIMITS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID Number : _____
 Furnace AA ID Number : FIMS

Analyte	Wave-length (nm)	Raw MDL (mg/L)	CRDL (mg/L)	MDL (mg/L)	Verification Date	M
Mercury	253.7	0.000037	0.0002	0.000037	1/13/2012	CV

Comments:

160512 1612

U.S. EPA - CLP

11A

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
176817
 Lab Code : PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816
 ICP ID Number : ICAP2 Date: 3/20/2010

Analyte	Wave-length	Interelement Correction Factors for:													
		Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg
Aluminum	308.215			-0.008314											
Calcium	315.887	-0.004569	0.033090												

Comments:

U.S. EPA - CLP

11A

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
176817
 Lab Code : PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816
 ICP ID Number : ICAP2 Date: 3/20/2010

Analyte	Wave-length	Interelement Correction Factors for:												
		Mn	Mo	Na	Ni	Pb	Sb	Se	Sn	Sr	Ti	Tl	V	Zn
Aluminum	308.215					-0.037936	-0.005136	0.019986	-0.011680			-0.014087		
Calcium	315.887							-0.017299		0.006602	0.002747			

Comments:

U.S. EPA - CLP

12

ICP LINEAR RANGES (SEMI-ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
ICP ID NUMBER : ICAP2 DATE : 1/19/2012

Analyte	Integ. Time (sec.)	Concentration MG/L	M
Aluminum	1	1	P
Calcium	1	1	P
Magnesium	1	1	P

Comments:

160512 1612

U.S. EPA - CLP

13

PREPARATION LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Method : 6010

EPA Sample No:	Preparation Date	Weight (gram)	Volume (mL)
127496MB	25 Apr 12		50
127497LCS	25 Apr 12		50
127498LCSD	25 Apr 12		50
IDW-LIQ-1	25 Apr 12		50

U.S. EPA - CLP

13

PREPARATION LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Method : 7470

EPA Sample No:	Preparation Date	Weight (gram)	Volume (mL)
127643MB	26 Apr 12		25
127644LCS	26 Apr 12		25
127645LCSD	26 Apr 12		25
IDW-LIQ-1	26 Apr 12		25

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816

Instrument ID Number: ICAP2 Method: P
 Start Date: 4/26/2012 End Date: 4/26/2012

EPA Sample No.	D/F	Time	%R	Analytes																									
				A	A	B	B	C	C	C	C	F	H	K	L	M	M	N	N	P	S	S	S	S	T	T	V	Z	
				G	L	S	A	E	A	D	N	O	R	U	E	G	I	G	N	O	A	I	B	B	E	N	R	I	L
CAL01	1	8:58		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CAL02	1	9:04			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CAL03	1	9:10		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CAL04	1	9:16		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CAL05	1	9:22		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CAL06	1	9:27			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICV1073806	1	9:34		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICB1073807	1	9:44		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CRD1073808	1	9:50		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICS1073809	1	9:56		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICS1073810	1	10:02		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV1073811	1	10:07		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB1073812	1	10:12		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
127496MB	1	14:52		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
127497LCS	1	14:58		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
127498LCSD	1	15:03		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZ	1	15:08																											
350579701L	5	15:14		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZ	1	15:21																											
ZZZZZ	1	15:26																											
350579701A	1	15:31		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZ	1	15:36																											
IDW-LIQ-1	1	15:42		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV1073823	1	15:49		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB1073824	1	15:54		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZ	1	16:00																											
ZZZZZ	1	16:06																											
ZZZZZ	1	16:13																											
ZZZZZ	5	16:19																											
ZZZZZ	1	16:25																											
ZZZZZ	1	16:31																											
ZZZZZ	1	16:37																											
ZZZZZ	1	16:43																											
ZZZZZ	1	16:49																											

Metals Data Package

TCLP Metals Data Package

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 6010B for ICP metals.

IV. PREPARATION

Samples were prepared according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Methods 1311 and 3010A.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Post Digestion Spike:

All acceptance criteria were met.

3. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

No spikes requested by client.

D. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Serial Dilution:

All acceptance criteria were met.

F. ICP Interference Check Samples:

All acceptance criteria were met.

G. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/02/2012

**CASE NARRATIVE
MERCURY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 7470A.

IV. PREPARATION

Samples were prepared according to PEL Laboratory's Standard Operating Procedures and EPA Methods 1311 and 7470A.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.
All percent recovery and relative percent difference (RPD) criteria were met.

2. Post Digestion Spike:

All acceptance criteria were met.

3. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

**CASE NARRATIVE
MERCURY**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

No spikes requested by client.

D. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

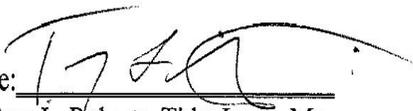
E. Serial Dilution:

All acceptance criteria were met.

F. Samples:

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/09/2012

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic
Lab Code : PEL Case No.: _____ SDG No.: 3505816
SOW No.: _____

EPA Sample No	Lab Sample ID		
<u>IDW-SOIL-1</u>	<u>350581601</u>		
Were ICP interelement corrections applied?		Yes/No	Yes
Were ICP background corrections applied?		Yes/No	Yes
If yes - were raw data generated before application of background corrections?		Yes/No	No

Comments:

Metalst Inorganic Sample Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-SOIL-1
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: SOIL Lab Sample ID: 350581601
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: IDW Soils

TCLP Analysis

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7440-38-2	Arsenic	0.0871	J		P	0.0331	0.0662	5
7440-39-3	Barium	0.309	J		P	0.0022	0.0044	100
7440-43-9	Cadmium	0.0131	J		P	0.0072	0.0144	1
7440-47-3	Chromium	0.031	J		P	0.0043	0.0086	5
7439-92-1	Lead	0.042	J		P	0.037	0.074	5
7439-97-6	Mercury	0.00074	U		CV	0.00037	0.00074	0.2
7782-49-2	Selenium	0.082	U		P	0.041	0.082	1
7440-22-4	Silver	0.0104	U		P	0.0052	0.0104	5

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Metalst Inorganic QC Summary Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127649MB

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
Matrix: WATER Lab Sample ID: 127649MB
Level:(low/med) LOW Date Received: 4/21/2012
PercentSolids: 0 Station ID: _____

TCLP Analysis

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7439-97-6	Mercury	0.00074	U		CV	0.00037	0.00074	0.2

Color Before: _____ Clarity Before: _____ Texture : _____
Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M 128521MB
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 128521MB
 Level:(low/med) LOW Date Received: 5/1/2012
 PercentSolids: 0 Station ID: _____

TCLP Analysis

CONCENTRATION UNITS: *MG/L*

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
7440-38-2	Arsenic	0.0662	U		P	0.0331	0.0662	5
7440-39-3	Barium	0.0044	U		P	0.0022	0.0044	100
7440-43-9	Cadmium	0.0144	U		P	0.0072	0.0144	1
7440-47-3	Chromium	0.0086	U		P	0.0043	0.0086	5
7439-92-1	Lead	0.074	U		P	0.037	0.074	5
7782-49-2	Selenium	0.082	U		P	0.041	0.082	1
7440-22-4	Silver	0.0104	U		P	0.0052	0.0104	5

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Initial Calibration Source: 45799
 45433

Continuing Calibration Source: 45798
 45624

Concentration Units: (mg/L)

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R (1)	True	Found	%R (1)	Found	%R (1)	
Arsenic	0.4	0.431	107.8	0.5	0.497	99.4	0.521	104.2	P
Barium	1.2	1.250	104.2	0.5	0.498	99.6	0.525	105.0	P
Cadmium	0.4	0.423	105.8	0.5	0.501	100.2	0.521	104.2	P
Chromium	0.4	0.430	107.5	0.5	0.500	100.0	0.528	105.6	P
Lead	0.4	0.437	109.2	0.5	0.510	102.0	0.531	106.2	P
Mercury	0.003	0.003	101.7	0.005	0.005	100.4	0.005	100.6	CV
Selenium	0.4	0.426	106.5	0.5	0.497	99.4	0.523	104.6	P
Silver	0.16	0.169	105.6	0.5	0.494	98.8	0.519	103.8	P

ICV IDs: CV= ICV1073864, P= ICV1076116

CCV1 IDs: CV= CCV1073866, P= CCV1076121

CCV2 IDs: CV= CCV1073878, P= CCV1076133

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110

ICV is Second Source

160512 1613

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Initial Calibration Source:

Continuing Calibration Source: 45798

Concentration Units: (mg/L)

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R (1)	True	Found	%R (1)	Found	%R (1)	
Arsenic									P
Barium									P
Cadmium									P
Chromium									P
Lead									P
Mercury				0.005	0.005	100.8			CV
Selenium									P
Silver									P

ICV IDs:

CCV1 IDs: CV= CCV1073890

CCV2 IDs:

(1) Control Limits: Mercury 80-120; Cyanide 85-115; Other Metals 90-110

ICV is Second Source

160512 1613

U.S. EPA - CLP
2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Bo
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

AA CRDL Standard Source:

ICP CRDL Standard Source: 45319

Concentration Units: MG/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial			Final	
				True	Found	%R	Found	%R
Arsenic				0.03	0.03	104.2		
Barium				0.01	0.01	100.4		
Cadmium				0.005	0.01	106.3		
Chromium				0.01	0.01	97.4		
Lead				0.025	0.02	94.0		
Mercury								
Selenium				0.03	0.03	98.2		
Silver				0.01	0.01	95.9		

Control Limits: No limits have been established by EPA at this time

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BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Samplin
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Preparation Blank Matrix (water/soil): WATER

Preparation Blank Concentration Units (ug/L or mg/Kg): MG/L

Analyte	Initial Calib. Blank (mg/L)		Continuing Calibration Blank (mg/L)						Preparation Blank		M
	(mg/L)	C	C	C	C	C	C	C	C		
Arsenic	0.0331	U	0.0331	U	0.0331	U			0.0662	U	P
Barium	0.0022	U	0.0022	U	0.0022	U			0.0044	U	P
Cadmium	0.0072	U	0.0072	U	0.0072	U			0.0144	U	P
Chromium	0.0043	U	0.0043	U	0.0043	U			0.0086	U	P
Lead	0.037	U	0.037	U	0.037	U			0.074	U	P
Mercury	0.00037	U	0.00037	U	0.00037	U	0.00037	U	0.00074	U	CV
Selenium	0.041	U	0.041	U	0.041	U			0.082	U	P
Silver	0.0052	U	0.0052	U	0.0052	U			0.0104	U	P

ICB IDs: CV= ICB1073865, P= ICB1076117

CCB1 IDs: CV= CCB1073867, P= CCB1076122

CCB2 IDs: CV= CCB1073879, P= CCB1076134

CCB3 IDs: CV= CCB1073891

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID#: ICAP2 ICSA Source: 45241
 ICSAB Source: 45248

Concentration Units: MG/L

Analyte	True		Initial Found			Final Found		
	Sol.	Sol.	Sol.	Sol.	%R	Sol.	Sol.	%R
	A	AB	A	AB		A	AB	
Arsenic	0	0.1	-0.001	0.098	97.6			
Barium	0	0.5	0	0.493	98.5			
Cadmium	0	1	0	0.955	95.5			
Chromium	0	0.5	0	0.489	97.8			
Lead	0	0.05	-0.003	0.048	96.9			
Selenium	0	0.05	-0.003	0.059	118.2			
Silver	0	0.2	0	0.2	99.8			

ICSA: ICS1076119

ICSAB: ICS1076120

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5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

350581601A

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Soil Level:(low/med) LOW

TCLP Analysis

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Control Limit %R	Spiked Sample		Sample Result (SR)		Spike Added (SA)	%R	Q	M
			C		C				
Arsenic	80 - 120	548.00	J	8.71	J	500	107.8		P
Barium	80 - 120	1590.00	J	30.90	J	1500	104.0		P
Cadmium	80 - 120	541.00	J	1.31	J	500	108.0		P
Chromium	80 - 120	548.00	J	3.10	J	500	109.0		P
Lead	80 - 120	562.00	J	4.20	J	500	111.7		P
Mercury	80 - 120	3.03	J	-0.04	U	3	100.9		CV
Selenium	80 - 120	566.00	J	-2.15	U	500	113.1		P
Silver	80 - 120	204.00	J	-0.18	U	200	102.1		P

Comments:

U.S. EPA - CLP

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DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127655LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

TCLP Analysis

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Mercury	20	0.031		0.03		3.3		CV

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

128619LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

TCLP Analysis

Concentration Units (mg/L or mg/kg): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Arsenic	20	5.17		5.41		4.5		P
Barium	20	15.1		15.6		3.3		P
Cadmium	20	5.04		5.2		3.1		P
Chromium	20	5.1		5.28		3.5		P
Lead	20	5.19		5.42		4.3		P
Selenium	20	5.13		5.39		4.9		P
Silver	20	1.97		2.04		3.5		P

Comments:

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127652LCS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45799

TCLP Analysis

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	0.03	0.031	103.3				-	

U.S. EPA - CLP

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LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

127655LCSD

Lab Code : PEL Case No.: SAS No: SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 45799

TCLP Analysis

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	0.03	0.03	100.0				-	

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7

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

128618LCS

Lab Code : PEL Case No.: SAS No: SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 44322, 45240

TCLP Analysis

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	5	5.17	103.4				-	
Barium	15	15.1	100.7				-	
Cadmium	5	5.04	100.8				-	
Chromium	5	5.1	102.0				-	
Lead	5	5.19	103.8				-	
Selenium	5	5.13	102.6				-	
Silver	2	1.97	98.5				-	

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LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/

128619LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Solid LCS Source:

Aqueous LCS Source: 44322, 45240

TCLP Analysis

Analyte	Aqueous (mg/L)			Solid				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	5	5.41	108.2				-	
Barium	15	15.6	104.0				-	
Cadmium	5	5.2	104.0				-	
Chromium	5	5.28	105.6				-	
Lead	5	5.42	108.4				-	
Selenium	5	5.39	107.8				-	
Silver	2	2.04	102.0				-	

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9

SERIAL DILUTIONS

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

350581601L

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: Soil Level:(low/med) LOW

TCLP Analysis

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Difference	Q	M
		C		C			
Arsenic	8.71	J	331.00	U			P
Barium	30.90	J	31.20	J	0.97		P
Cadmium	1.31	J	72.00	U			P
Chromium	3.10	J	43.00	U			P
Lead	4.20	J	370.00	U			P
Mercury	-0.04	U	3.70	U			CV
Selenium	-2.15	U	410.00	U			P
Silver	-0.18	U	52.00	U			P

Comments:

U.S. EPA - CLP

10

METHOD DETECTION LIMITS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID Number : ICAP2
 Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Raw MDL (mg/L)	CRDL (mg/L)	MDL (mg/L)	Verification Date	M
Arsenic	188.979	0.0331	5	0.0331	1/12/2012	P
Barium	233.527	0.0022	100	0.0022	1/12/2012	P
Cadmium	226.502	0.0072	1	0.0072	1/12/2012	P
Chromium	267.716	0.0043	5	0.0043	1/12/2012	P
Lead	220.353	0.037	5	0.037	1/12/2012	P
Selenium	196.026	0.041	1	0.041	1/12/2012	P
Silver	328.068	0.0052	5	0.0052	1/12/2012	P

Comments:

160512 1613

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METHOD DETECTION LIMITS

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID Number : _____
 Furnace AA ID Number : FIMS

Analyte	Wave-length (nm)	Raw MDL (mg/L)	CRDL (mg/L)	MDL (mg/L)	Verification Date	M
Mercury	253.7	0.00037	0.2	0.00037	1/13/2012	CV

Comments:

160512 1613

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11A

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
176817
 Lab Code : PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816
 ICP ID Number : ICAP2 Date: 3/20/2010

Analyte	Wave-length	Interelement Correction Factors for:													
		Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg
Barium	233.527		32.186100												
Chromium	267.716						44.618000								

Comments:

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11A

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
176817
 Lab Code : PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816
 ICP ID Number : ICAP2 Date: 3/20/2010

Analyte	Wave-length	Interelement Correction Factors for:												
		Mn	Mo	Na	Ni	Pb	Sb	Se	Sn	Sr	Ti	Tl	V	Zn
Barium	233.527													
Chromium	267.716						14.340200							

Comments:

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ICP LINEAR RANGES (SEMI-ANNUALLY)

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816
 ICP ID NUMBER : ICAP2 DATE : 12/8/2009

Analyte	Integ. Time (sec.)	Concentration MG/L	M
Arsenic	1	5	P
Barium	1	5	P
Cadmium	1	5	P
Chromium	1	5	P
Lead	1	5	P
Selenium	1	5	P
Silver	1	0.5	P

Comments:

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PREPARATION LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Method : 6010 TCLP

EPA Sample No:	Preparation Date	Weight (gram)	Volume (mL)
128521MB	1 May 12		5
128618LCS	1 May 12		5
128619LCSD	1 May 12		5
IDW-SOIL-1	1 May 12	5	

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PREPARATION LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sampling
Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Method : 7470 TCLP

EPA Sample No:	Preparation Date	Weight (gram)	Volume (mL)
127649MB	26 Apr 12		2.5
127652LCS	26 Apr 12		2.5
127655LCSD	26 Apr 12		2.5
IDW-SOIL-1	26 Apr 12	2.5	

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code: PEL Case No.: _____ SAS No.: _____ SDG No.: 3505816

Instrument ID Number: ICAP2 Method: P
 Start Date: 5/2/2012 End Date: 5/2/2012

EPA Sample No.	D/F	Time	%R	Analytes																									
				A	A	B	B	C	C	C	C	F	H	K	L	M	M	N	N	P	S	S	S	T	T	V	Z		
				G	L	S	A	E	A	D	N	O	R	U	E	G	I	G	N	O	A	I	B	B	E	N	R	I	L
CAL01	1	9:26		X	X	X		X		X									X	X									
CAL02	1	9:32				X		X																					
CAL03	1	9:39		X	X	X		X		X									X	X									
CAL04	1	9:45		X	X	X		X		X									X	X									
CAL05	1	9:50		X	X	X		X		X									X	X									
CAL06	1	9:55			X	X		X		X									X	X									
ICV1076116	1	10:00		X	X	X		X		X									X	X									
ICB1076117	1	10:09		X	X	X		X		X									X	X									
CRD1076118	1	10:15		X	X	X		X		X									X	X									
ICS1076119	1	10:21		X	X	X		X		X									X	X									
ICS1076120	1	10:26		X	X	X		X		X									X	X									
CCV1076121	1	10:32		X	X	X		X		X									X	X									
CCB1076122	1	10:37		X	X	X		X		X									X	X									
128521MB	1	10:56		X	X	X		X		X									X	X									
128618LCS	1	11:02		X	X	X		X		X									X	X									
128619LCSD	1	11:07		X	X	X		X		X									X	X									
IDW-SOIL-1	1	11:12		X	X	X		X		X									X	X									
350581601L	5	11:18		X	X	X		X		X									X	X									
ZZZZZ	1	11:25																											
ZZZZZ	1	11:30																											
350581601A	1	11:35		X	X	X		X		X									X	X									
ZZZZZ	1	11:41																											
ZZZZZ	5	11:47																											
CCV1076133	1	11:53		X	X	X		X		X									X	X									
CCB1076134	1	11:58		X	X	X		X		X									X	X									
ZZZZZ	1	12:02																											
ZZZZZ	1	12:08																											
ZZZZZ	1	12:14																											
ZZZZZ	1	12:21																											
ZZZZZ	1	12:27																											
ZZZZZ	1	12:33																											
ZZZZZ	1	12:39																											
ZZZZZ	1	12:45																											
ZZZZZ	1	12:50																											

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ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sam
 Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Instrument ID Number : ICAP2 Method : P
 Start Date : 5/2/2012 End Date : 5/2/2012

EPA Sample No.	D/F	Time	%R	Analytes																										
				A G	A L	B S	B A	B E	C A	C D	C N	C O	C R	C U	F E	H G	K I	L G	M N	M O	N A	N I	P B	S B	S E	S N	T R	T I	V L	Z N
<u>ZZZZZ</u>	<u>1</u>	<u>12:55</u>																												

Ph Wet Chemistry Data Package

**CASE NARRATIVE
INORGANICS-pH**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedure and EPA Method 150.1 / SM4500-H B / 9040C.

IV. PREPARATION

No preparation required for this method.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

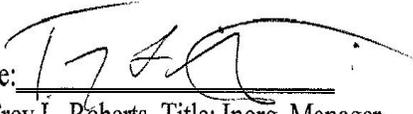
Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
INORGANICS-pH**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/11/2012

**CASE NARRATIVE
INORGANICS-pH**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHODS

Analyses were performed according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 9045C.

IV. PREPARATION

Soil samples were prepared according to the Spectrum Analytical, Inc. Laboratory's Standard Operating Procedures and EPA Method 9045.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Laboratory Control Spikes (LCS):

An LCS/LCSD set was analyzed.

All percent recovery and relative percent difference (RPD) criteria were met.

C. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

D. Samples:

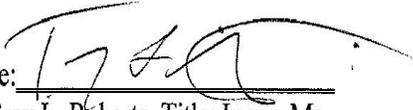
Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
INORGANICS-pH**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505816

Client: CH2M Hill

Signature: 
Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/11/2012

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic
Lab Code : PEL Case No.: _____ SDG No.: 3505816
SOW No.: _____

EPA Sample No	Lab Sample ID
<u>IDW-SOIL-1</u>	<u>350581601</u>
<u>IDW-LIQ-1</u>	<u>350581602</u>

Comments:

Wetchem_ph Inorganic Sample Data

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-SOIL-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: SOIL Lab Sample ID: 350581601
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: IDW Soils

CONCENTRATION UNITS: PH

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
1-00-6	pH	9.1			N/A			

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M IDW-LIQ-1
 Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816
 Matrix: WATER Lab Sample ID: 350581602
 Level:(low/med) LOW Date Received: 4/21/2012
 PercentSolids: 0 Station ID: IDW Water

CONCENTRATION UNITS: PH

CAS NO.	ANALYTE	Concentration	C	Q	M	MDL	LOD	LOQ
1-00-6	pH	7.39			N/A			

Color Before: _____ Clarity Before: _____ Texture : _____
 Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Wetchem_ph Inorganic QC Summary Data

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127722LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): pH

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
pH	20	7.15		7.15		0.0		N/A

Comments:

160512 1614

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127725LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: WATER Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): pH

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
pH	20	7.15		7.15		0.0		N/A

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127745LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): pH

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
pH	20	7.15		7.15		0.0		N/A

Comments:

U.S. EPA - CLP

6

DUPLICATES

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ M

127748LCSD

Lab Code : PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Matrix: SOIL Level:(low/med) LOW

% Solids for Sample: 0 % Solids for Duplicate: 0

Concentration Units (mg/L or mg/kg): pH

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
pH	20	7.15		7.15		0.0		N/A

Comments:

160512 1614

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127721LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) WATER

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	120	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127722LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) WATER

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	120	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127724LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) WATER

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	120	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127725LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) WATER

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	120	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127744LCS

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) SOIL

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	110	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127745LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) SOIL

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	110	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127747LCS

Lab Code : PEL Case No. SAS No: SDG No.: 3505816

Matrix: (soil/water) SOIL

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	110	7	7.15	102.1	

Comments:

U.S. EPA - CLP

7-CC

LABORATORY CONTROL SAMPLE

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chic

127748LCSD

Lab Code : PEL Case No. _____ SAS No: _____ SDG No.: 3505816

Matrix: (soil/water) SOIL

Concentration Units: (pH)

PARAMETER	LCS SOURCE	M	LIMITS		TRUE	FOUND	%R	C
			LOWER	UPPER				
pH	45856	N/A	90	110	7	7.15	102.1	

Comments:

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Instrument ID Number: FISHER Method: N/A
 Start Date: 4/24/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
CAL01	1	15:45		X
CAL02	1	15:46		X
CAL03	1	15:47		X
ICV	1	15:48		X
127721LCS	1	15:49		X
127722LCSD	1	15:50		X
IDW-LIQ-1	1	15:55		X
SAMDUP	1	15:56		X
ZZZZZ	1	15:57		
127724LCS	1	15:58		X
127725LCSD	1	15:59		X

* pH

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: Spectrum Analytical, Inc. Contract: NAS Key West /Boca Chica/ MW Sa
 Lab Code: PEL Case No.: _____ SAS No: _____ SDG No.: 3505816

Instrument ID Number: FISHER Method: N/A
 Start Date: 4/24/2012 End Date: 4/24/2012

EPA Sample No.	D/F	Time	%R	Analytes *:
CAL01	1	15:45		X
CAL02	1	15:46		X
CAL03	1	15:47		X
ICV	1	15:48		X
127744LCS	1	15:49		X
127745LCSD	1	15:50		X
IDW-SOIL-1	1	16:00		X
SAMDUP	1	16:01		X
ZZZZZZ	1	16:02		
ZZZZZZ	1	16:03		
ZZZZZZ	1	16:04		
127747LCS	1	16:05		X
127748LCSD	1	16:06		X

Rhode Island Division

Report Date:
27-Apr-12 14:19



- Final Report
 Re-Issued Report
 Revised Report

Laboratory Report

PEL Laboratories Inc.
8405 Benjamin Road, Suite A
Tampa, FL 33634

Work Order: L0808
Project : NAS Key West / Boca Chica / MW Sampling
Project #: 3505816

Attn: Mark Gudnason

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
L0808-01	IDW-SOIL-1	Soil	20-Apr-12 14:20	24-Apr-12 08:45
L0808-02	IDW-LIQ-1	Aqueous	20-Apr-12 14:25	24-Apr-12 08:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Pennsylvania	68-00520
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033



Authorized by:

Yihai Ding
Laboratory Director



SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

*** Data Summary Pack ***

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

WorkOrder: L0808

Client ID: PEL

Case:

HC Due: 05/03/12

Report Level: LEVEL 4

Project: NAS Key West JM22

SDG:

Fax Due: 05/03/12

Special Program: DoD

WO Name: NAS Key West / Boca Chica / MW Sampling

Fax Report:

EDD: PELAB

Location: PEL_KEY_WEST, 3505816

PO: 3505816

Comments: e-mail pdf and EDD to pm@pelab.com. No hard copy needed. Include COC with invoice. Report "J" flag.
DON't show 3 for metals CLP forms. U at RL use ISM module

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
L0808-01A	IDW-SOIL-1	04/20/2012 14:20	04/24/2012	Soil	SW1010_S	/					A2
L0808-02A	IDW-LIQ-1	04/20/2012 14:25	04/24/2012	Aqueous	SW1010_W	/					F3

3505816

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

2

04/25/2012 10:11

Lab Client Rep: Agnes R Huntley

Page 01 of 01

466



SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

*** Wet Chemistry ***

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : PEL Laboratories Inc.

Project: NAS Key West / Boca Chica / MW Sampling

Laboratory Workorder / SDG #: L0808

SW846 1010

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 1010

IV. PREPARATION

Samples were prepared following procedures in laboratory test code:
SW846 1010

V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: FLASH1
Instrument Type: WC
Description: Flash Point
Manufacturer: Koehler
Model: K16200

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Duplicate sample:

Duplicate analysis was performed on sample IDW-SOIL-4 (L0808-01ADUP).

Percent RPD was within the QC limits.

C. Samples:

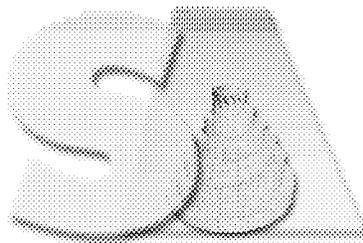
For Flashpoint analysis, the result of "No Flash" indicates that no flash was observed, or that non-ignitable vapors from the sample extinguished the test flame at the temperature indicated. Where non-flammable vapors from the sample extinguished the test flame below 140 degrees, the sample temperature was elevated to at least 140 degrees, and re-exposed to the test flame.

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: 

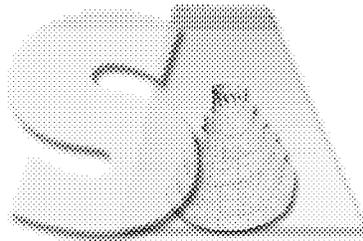
Date: 04/27/12



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Data Flag/Qualifiers:

- U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
 - estimated concentration for Tentatively Identified Compound
- B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a “trace” concentration below the reporting limit and equal to or above the detection limit.
- D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates an interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as aldol condensation byproducts.
- N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- * For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Sample ID Suffixes

- DL** Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE** Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA** Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX** Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS** Matrix Spike.
- MSD** Matrix Spike Duplicate
- DUP** Duplicate analysis
- SD** Serial Dilution
- PS** Post-digestion or Post-distillation spike. For metals or inorganic analyses

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division 04/26/2012

Client: PEL Laboratories Inc.

Client Sample ID: IDW-SOIL-1

Lab ID: L0808-01

Project: NAS Key West / Boca Chica / MW Samplin

Collection Date: 04/20/12 14:20

Analyses	Result Qual	LOD	LOQ Units	DF	Date Analyzed	Batch ID
SW846 1010 -- FLASHPOINT BY PENSKY-MARTENS CLOSED-CUP METHOD						
Ignitability	NO FLASH @ 140	140	200 °F		1 04/26/2012 10:45	R66757

Qualifiers: ND - Not Detected at the Limit of Detection
 J - Analyte detected below Limit of Quantitation
 B - Analyte detected in the associated Method Blank
 DF - Dilution Factor
 ^ Qualified to Limit of Detection (LOD)

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 LOQ - Limit of Quantitation
 LOD - Limit of Detection

mm11.12.11.A

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division 04/26/2012

Client: PEL Laboratories Inc.

Client Sample ID: IDW-LIQ-1

Lab ID: L0808-02

Project: NAS Key West / Boca Chica / MW Samplin

Collection Date: 04/20/12 14:25

Analyses	Result Qual	LOD	LOQ Units	DF	Date Analyzed	Batch ID
SW846 1010 -- FLASHPOINT BY PENSKY-MARTENS CLOSED-CUP METHOD						
Ignitability	NO FLASH @ 140	140	200 °F		1 04/26/2012 11:25	R66757

Qualifiers: ND - Not Detected at the Limit of Detection
 J - Analyte detected below Limit of Quantitation
 B - Analyte detected in the associated Method Blank
 DF - Dilution Factor
 ^ Qualified to Limit of Detection (LOD)

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 LOQ - Limit of Quantitation
 LOD - Limit of Detection

mm11.12.11.A

ANALYTICAL QC SUMMARY REPORT

CLIENT: PEL Laboratories Inc.

Work Order: L0808

SW1010_S

Project: NAS Key West / Boca Chica / MW Sampling

SW846 1010 -- FLASHPOINT by Pensky-Martens Closed-Cup Method

Sample ID: L0808-01ADUP	SampType: DUP	TestCode: SW1010_S	Prep Date: 04/26/12 10:55	Run ID: FLASH1_120426A						
Client ID: IDW-SOIL-1	Batch ID: R66757	Units: °F	Analysis Date: 04/26/12 11:05	SeqNo: 1725591						
Analyte	Result	LOD	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ignitability	NO FLASH @ 1.40	1.40	0	0	0	0	0	0	0	20

Qualifiers: ND - Not Detected at the Limit of Detection S - Recovery outside accepted recovery limits LOD - Limit of Detection B - Analyte detected in the associated Method Blank
 J - Analyte detected below Limit of Quantitation R - RPD outside accepted recovery limits LOQ - Limit of Quantitation ^ Qualified to the Limit of Detection (LOD)

Chain of Custody Documentation

3505816 MK



1000 Abernathy Rd, Ste 1600
Atlanta, GA 30328
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

3505816
M

*COC NUMBER:
426847-042012-02

NAS Key West TFS	PROJECT NUMBER: 426847	LAB NAME AND CONTACT: PEL/M. Gudmason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Bethany Garvey	RECIPIENT 1 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling	CTO OR DO NUMBER:	LAB PO NUMBER: 813 888 9507 x 242	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company): Greg Rowell	RECIPIENT 2 (Address, Tel No., and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT: Greg Rowell	PROJECT TEL NO AND FAX NO. greg.rowell@ch2m.com	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):	RECIPIENT 3 (Address, Tel No., and Fax No.):

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)													SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								8200S VOC	8220D SPC	8270SIM	FL-RO/TRA	Alfa	Sulfide	Nitrate/NH4	ALK	TOC	BOB1	8451	6010/470				
1	TFS-MW-17-RS	M5	W	4-20-12	1025	28	3	2	2	2	2								QC	4-20-12	5		
2	TFS-MW-17	MW-17	GW	4-20-12	1105	28	3	2	2	2	X	1	X	X	3			N	4-20-12	5			
3	TFS-MW-17-M5	M5	GW	4-26-12	1110	28	3	2	2	2								QC	4-26-12	5			
4	TFS-MW-17-M5D	M5D	GW	4-26-12	1110	28	3	2	2	2								QC	4-26-12	5			
5	TFS-MW-TB3	TB3	W	4-26-12	—	28	2											QC	4-26-12	5			
6	IDW-5016-1	IDW soils	S	4-28-12	1420	28	1	1	X									SW	TCLPs -01	00			
7	IDW-LIQ-1	IDW water	GW	4-28-12	1425	28	3	1	1	1					1	1	1	AW	-02	01			

SAMPLER(S) AND COMPANY: (please print) Nikki Monroe/CH2M HILL	COURIER AND SHIPPING NUMBER: FEDEX 1010 sent to Rhode Island	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use): Temp. 2.8, 3.0, 4.2 PHK 2 8260, FL-RO, TOC
--	---	---

RELINQUISHED BY Nikki Monroe	DATE 4-20-12	TIME 1700	RECEIVED BY MARIANNA KEOWE	DATE 4-21-12	TIME 09:15
---------------------------------	-----------------	--------------	-------------------------------	-----------------	---------------

Distribution: Original - Laboratory (To be returned with Analytical Report); Copy 1 - Project File; Copy 2 - PMO

Sample 02 = 8081 amber broken in transit

Form CC1001, Rev 06/00

3505816

476

3505816
HHC

NAS Key: West TFS	PROJECT NUMBER: 426847	LAB NAME AND CONTACT: PEL / M. Gudrason	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Bethany Garvey	RECIPIENT 1 (Address, Tel No. , and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT PHASE/SITE/TASK: MW Sampling	CYO OR DO NUMBER:	LAB PO NUMBER: 813 888 9507 x 242	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company): Greg Rowell	RECIPIENT 2 (Address, Tel No. , and Fax No.): Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta GA 30328 678-579-8067 fax 770-604-9095 phone
PROJECT CONTACT: Greg Rowell	PROJECT TEL NO AND FAX NO. greg.rowell@ch2m.com	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):	RECIPIENT 3 (Address, Tel No. , and Fax No.):

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)												SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								8082	9040C	10100L	9045											
1	IDW-SOIL-1	IDW soils	S	4-20-12	1420		28	X		X	X									SW	TCLPs-01	06
2	IDW-LIQ-1	IDW waters	GW	4-20-12	1425		28	X	X	X										LW	02	07
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

SAMPLER(S) AND COMPANY: (please print) N.H.K. Monroe / CH2M HILL		COURIER AND SHIPPING NUMBER: FEDEX		SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)			
RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
Printed Name and Signature: N.H.K. Monroe / [Signature]		4-20-12	1700	Printed Name and Signature: FEDEX		4-20-12	1700
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature: Marianna Keshaw / M.K.		4-21-12	0915

Distribution: Original - Laboratory (To be returned with Analytical Report); Copy 1 - Project File; Copy 2 - PMO

Form C/1001, Rev 06/00

3505816

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FedEx Express **NEW Package US Airbill**

FedEx Tracking Number

8993 7167 6205

0200 Form ID No.

FedEx Retrieval Copy

1 From
 Date 4-20-12
 Sender's Name Nikki Monroe Phone 504 473 1399
 Company CH2M HILL
 Address 30419 Seagrave Trail
 City Big Pine Key State FL ZIP 33043

2 Your Internal Billing Reference
3 To
 Recipient's Name Sample Receiving Phone 813 888-9507
 Company PEL

Address 8405 Benjamin Rd Dept./Floor/Suite/Room A
 Address Tampa Fla State FL ZIP 33624



8993 7167 6205

4 Express Package Service * To most locations.
 NOTE: Service order has changed. Please select carefully. **Packages up to 150 lbs.**
 For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day
 06 FedEx First Overnight
 Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
 01 FedEx Priority Overnight
 Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
 05 FedEx Standard Overnight
 Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
 49 NEW FedEx 2Day A.M.
 Second business morning.* Saturday Delivery NOT available.
 03 FedEx 2Day
 Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
 20 FedEx Express Saver
 Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit \$500.
 06 FedEx Envelope* 02 FedEx Pak* 03 FedEx Box 04 FedEx Tube 01 Other

6 Special Handling and Delivery Signature Options
 03 SATURDAY DELIVERY

No Signature Required
 Package may be left without obtaining a signature for delivery.
 10 Direct Signature
 Someone at recipient's address may sign for delivery. Fee applies.
 34 Indirect Signature
 If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
 One box must be checked.
 No 04 Yes
 As per attached Shipper's Declaration. Yes
 Shipper's Declaration not required. 06 Dry Ice
 Dry Ice, 9, UN 1845
 Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. Cargo Aircraft Only

7 Payment Bill to:
 Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No.

1 Sender Acct. No. in Section will be billed. 2 Recipient 3 Third Party 4 Credit Card 5 Cash/Check

Total Packages 3 Total Weight 115 lbs. Credit Card Auth. 612

Your liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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3505816

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pH LOG SHEET

WO#: 3505816

Client/Project NAS Key West

SampNumber	Method	Matrix	pH	Containers	Temp	Acid	
350581602	FL-PRO	W	< 2	(1)		H2SO4	nlabus 23-Apr-12
350581602	8260	W	< 2	(3)		HCL	nlabus 23-Apr-12
350581602	7470	W	< 2	(1)		HNO3	nlabus 23-Apr-12
350581602	6010	W	< 2	(1)		HNO3	nlabus 23-Apr-12

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SAMPLE RECEIPT CONFIRMATION SHEET

Client Information			
SDG:	3505816	Req:	91013
Client:	CH2M Hill	Project:	Boca Chica Truck Fill Stand - JP-5
Level:	4	Date Rec'd:	4/21/2012 9:15:00 AM
Rec'd via:	Fed-Ex	Due Date:	5/7/2012

Sample Verification			
Samples/Cooler Secure?	<input type="text" value="Yes"/>	All Samples on COC accounted For?	<input type="text" value="Yes"/>
Temperature of Samples(Celsius)	<input type="text" value="2.8C-4.2C"/>	All Samples Rec'd Intact?	<input type="text" value="No"/>
pH Verified?	<input type="text" value="Yes"/>	Sample Vol. Sufficient For Analysis	<input type="text" value="Yes"/>
pH WNL?	<input type="text" value="Yes"/>	Samples Rec'd W/I Hold Time?	<input type="text" value="Yes"/>
Soil Origin (Domestic/Foreign):	<input type="text" value="Domestic"/>	Are All Samples to be Analyzed?	<input type="text" value="Yes"/>
Site Location/Project on COC?	<input type="text" value="Yes"/>	Correct Sample Containers?	<input type="text" value="Yes"/>
Client Project # on COC?	<input type="text" value="Yes"/>	COC Comments written on COC?	<input type="text" value="Yes"/>
Project Mgr. Indicated on COC?	<input type="text" value="Yes"/>	Samplers Initials on COC?	<input type="text" value="Yes"/>
COC relinquished/Dated by Client?	<input type="text" value="Yes"/>	Sample Date/Time Indicated?	<input type="text" value="Yes"/>
COC Received/Dated by SA?	<input type="text" value="Yes"/>	TAT Requested:	<input type="text" value="STD"/>
Specific Subcontract Indicated?	<input type="text" value="No"/>	Client Requests Verbal Results?	<input type="text" value="No"/>
Samples Received By	<input type="text" value="Fed-Ex"/>	Client Requests Faxed Results?	<input type="text" value="No"/>
SA to Conduct ALL Analyses?	<input type="text" value="No"/>	Specific tests noted on COC	
Radioactivity Check?	<input type="text" value="No"/>		
COC Present?	<input type="text" value="Yes"/>		

LABEL REVIEW _____

PEER REVIEW _____



Spectrum Analytical, Inc.

8405 Benjamin Rd., Suite A
Tampa, FL 33634
(P) 813-888-9507 (F) 813-889-7128

CHAIN-OF-CUSTODY RECORD

Monday, April 23, 2012 4:56:18 PM

WorkOrder: 3505816

Send to:

Mitkem
175 Metro Center Blvd.
Warwick, RI 02886
Phone: 401-732-3400 FAX:

Project: NAS Key West
Project Name NAS Key West / Boca Chica / MW Sampling

Report To: Mark Gudnason, Ext 1

Report Level: ⁴ *MDL U*

Report RLU or MDLU: *MDL U*
J Code results between *MDL* and *RL*

Q5m 4.2

Sample ID	LabID	Collection Date	Date Needed	Mtx	ST	Cont	Requested Tests										Comments		
							1010												
IDW-SOIL-1	350581601	4/20/2012 2:20:00 PM	5/4/2012	S	N	1	X												
IDW-LIQ-1	350581602	4/20/2012 2:20:00 PM	5/4/2012	W	N	1	X												

2:25 mL
4-23-12

3505816

Comments: DODv4.2 LOD=2xMDL. Send ELD. □ / 8260B, 8270D, 6010C / Use only the clients samples for QC (MS/MSD). Do not report any samples that do not appear on the COC. In-house lab QC limits must accompany report, regardless if we are using them are not. Any preliminary reports are expected to contain analytical results/values that will NOT change from the results/values reported in the final data package. For 8270, SOW spike required. See Section Leader. □

Date/Time	Date/Time
Relinquished by: _____	Received by: _____
Relinquished by: _____	Received by: _____
Relinquished by: _____	Received by: _____

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Client: CH2M Hill

WONo: 3505816

Profile Name: NAS Key West

Profile #: 91013

MATRIX S

Sample #	Bottle	Parameter	Check	Received	Date
01	003	6010_TCL P TCLP Metals by 1311/6010	In	Nicole Labus	4/23/2012 5:10:13 PM
01	001	6010_TCL P TCLP Metals by 1311/6010	Out	Justin Bowman	4/24/2012 11:06:55 AM
01	001	6010_TCL P TCLP Metals by 1311/6010	In	Justin Bowman	4/24/2012 2:30:53 PM
01	005	6010_TCL P TCLP Metals by 1311/6010	In	Justin Bowman	4/26/2012 10:43:45 AM
01	005	6010_TCL P TCLP Metals by 1311/6010	Out	Justin Bowman	4/26/2012 10:46:25 AM
01	005	6010_TCL P TCLP Metals by 1311/6010	In	Justin Bowman	4/26/2012 6:02:53 PM
01	005	6010_TCL P TCLP Metals by 1311/6010	Out	Justin Bowman	5/1/2012 11:10:19 AM
01	005	6010_TCL P TCLP Metals by 1311/6010	In	Justin Bowman	5/1/2012 5:40:24 PM
01	003	7470_TCL P 7470 TCLP Mercury	In	Nicole Labus	4/23/2012 5:10:15 PM
01	001	7470_TCL P 7470 TCLP Mercury	Out	Justin Bowman	4/24/2012 11:06:56 AM
01	001	7470_TCL P 7470 TCLP Mercury	In	Justin Bowman	4/24/2012 2:30:53 PM
01	005	7470_TCL P 7470 TCLP Mercury	In	Justin Bowman	4/26/2012 10:43:45 AM
01	005	7470_TCL P 7470 TCLP Mercury	Out	Justin Bowman	4/26/2012 10:46:26 AM
01	005	7470_TCL P 7470 TCLP Mercury	In	Justin Bowman	4/26/2012 6:02:53 PM
01	003	8081_TCL P Pesticides TCLP	In	Nicole Labus	4/23/2012 5:10:15 PM
01	001	8081_TCL P Pesticides TCLP	Out	Justin Bowman	4/24/2012 11:06:57 AM
01	001	8081_TCL P Pesticides TCLP	In	Justin Bowman	4/24/2012 2:30:54 PM
01	007	8081_TCL P Pesticides TCLP	In	Justin Bowman	4/26/2012 10:45:36 AM
01	007	8081_TCL P Pesticides TCLP	Consumed	Ryan Bennett	5/2/2012 12:24:27 PM
01	003	8082 PCB	In	Nicole Labus	4/23/2012 5:10:16 PM
01	002	8082 PCB	Out	Tammy Reuter	4/24/2012 5:49:31 PM
01	002	8082 PCB	In	Tammy Reuter	4/24/2012 5:49:46 PM
01	003	8151_TCL P Herbicides TCLP	In	Nicole Labus	4/23/2012 5:10:16 PM
01	001	8151_TCL P Herbicides TCLP	Out	Justin Bowman	4/24/2012 11:07:00 AM

WONo: 3505816

Profile Name: NAS Key West

Profile #: 91013

01	001	8151_TCL P	Herbicides TCLP	In	Justin Bowman	4/24/2012 2:30:55 PM
01	008	8151_TCL P	Herbicides TCLP	In	Justin Bowman	4/26/2012 10:45:47 AM
01	008	8151_TCL P	Herbicides TCLP	Consumed	Ryan Bennett	5/3/2012 10:52:35 AM
01	003	8260_TCL P	Volatiles in Soil by 1311/8260	In	Nicole Labus	4/23/2012 5:10:16 PM
01	001	8260_TCL P	Volatiles in Soil by 1311/8260	Out	Justin Bowman	4/24/2012 11:07:14 AM
01	001	8260_TCL P	Volatiles in Soil by 1311/8260	In	Justin Bowman	4/24/2012 2:30:55 PM
01	002	8260_TCL P	Volatiles in Soil by 1311/8260	Out	Justin Bowman	4/25/2012 9:45:37 AM
01	002	8260_TCL P	Volatiles in Soil by 1311/8260	In	Justin Bowman	4/25/2012 4:16:32 PM
01	006	8260_TCL P	Volatiles in Soil by 1311/8260	In	Justin Bowman	4/26/2012 10:44:00 AM
01	006	8260_TCL P	Volatiles in Soil by 1311/8260	Consumed	Marcell Stephens	5/9/2012 10:47:43 AM
01	003	8270_TCL P	TCLP Semivolatiles by 8270	In	Nicole Labus	4/23/2012 5:10:17 PM
01	001	8270_TCL P	TCLP Semivolatiles by 8270	Out	Justin Bowman	4/24/2012 11:07:02 AM
01	001	8270_TCL P	TCLP Semivolatiles by 8270	In	Justin Bowman	4/24/2012 2:30:56 PM
01	009	8270_TCL P	TCLP Semivolatiles by 8270	In	Justin Bowman	4/26/2012 10:46:04 AM
01	009	8270_TCL P	TCLP Semivolatiles by 8270	Consumed	Ryan Bennett	5/3/2012 10:51:18 AM
01	003	9045	Corosivity - pH	In	Nicole Labus	4/23/2012 5:10:17 PM
01	001	9045	Corosivity - pH	Out	Justin Bowman	4/24/2012 11:07:13 AM
01	001	9045	Corosivity - pH	In	Justin Bowman	4/24/2012 2:30:57 PM
01	003	Dry Weight	Dry Weight	In	Nicole Labus	4/23/2012 5:10:17 PM
01	002	Dry Weight	Dry Weight	In	Justin Bowman	4/25/2012 4:16:34 PM
01	002	Dry Weight	Dry Weight	Out	Justin Bowman	4/25/2012 4:18:21 PM
01	002	Dry Weight	Dry Weight	In	Justin Bowman	4/25/2012 4:18:32 PM
01	003	FL-PRO	Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 5:10:18 PM
01	003	FL-PRO	Petroleum Hydrocarbons	Out	Christelle Abadia	4/24/2012 10:33:57 AM
01	003	FL-PRO	Petroleum Hydrocarbons	In	Christelle Abadia	4/24/2012 12:34:09 PM
01	002	FL-PRO	Petroleum Hydrocarbons	Out	Tammy Reuter	4/24/2012 5:50:17 PM

5/14/2012 2:52:05 PM

Spectrum Analytical, Inc.

Page 2 of 3

3505816

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WONo: 3505816

Profile Name: NAS Key West

Profile #: 91013

01	002	FL-PRO	Petroleum Hydrocarbons	In	Tammy Reuter	4/24/2012 5:50:28 PM
----	-----	--------	------------------------	----	--------------	----------------------

MATRIX W

Sample #	Bottle	Parameter	Check	Received	Date
02	007	6010 Metals	In	Nicole Labus	4/23/2012 5:08:55 PM
02	007	6010 Metals	Out	Justin Bowman	4/25/2012 5:04:13 PM
02	007	6010 Metals	In	Justin Bowman	4/25/2012 5:29:13 PM
02	007	7470 Mercury	In	Nicole Labus	4/23/2012 5:08:55 PM
02	007	7470 Mercury	Out	Justin Bowman	4/26/2012 9:38:29 AM
02	007	7470 Mercury	In	Justin Bowman	4/26/2012 6:02:22 PM
02	005	8081 Pesticides	In	Nicole Labus	4/23/2012 5:09:09 PM
02	003	8081 Pesticides	In	Nicole Labus	4/23/2012 5:09:21 PM
02	005	8081 Pesticides	Consumed	Duffie Young	4/25/2012 7:23:50 PM
02	004	8082 PCB	In	Nicole Labus	4/23/2012 5:09:15 PM
02	005	8082 PCB	Consumed	Duffie Young	4/25/2012 7:23:51 PM
02	003	8151 Herbicides	In	Nicole Labus	4/21/2012 9:15:00 AM
02	003	8151 Herbicides	Consumed	Duffie Young	4/26/2012 7:52:37 PM
02	010	8260 Volatile Organic Compounds	In	Nicole Labus	4/23/2012 5:09:35 PM
02	009	8260 Volatile Organic Compounds	In	Nicole Labus	4/23/2012 5:09:47 PM
02	008	8260 Volatile Organic Compounds	In	Nicole Labus	4/23/2012 5:09:48 PM
02	008	8260 Volatile Organic Compounds	Consumed	Marcell Stephens	5/4/2012 9:52:46 AM
02	004	8270 GCMS semivolatile	In	Nicole Labus	4/23/2012 5:09:15 PM
02	004	8270 GCMS semivolatile	Consumed	Duffie Young	4/26/2012 7:53:22 PM
02	006	9040C pH	In	Nicole Labus	4/23/2012 5:09:02 PM
02	006	9040C pH	Out	Justin Bowman	4/24/2012 11:08:27 AM
02	006	9040C pH	In	Justin Bowman	4/24/2012 4:05:41 PM
02	002	FL-PRO Petroleum Hydrocarbons	In	Nicole Labus	4/23/2012 5:09:26 PM
02	002	FL-PRO Petroleum Hydrocarbons	Consumed	Christelle Abadia	4/27/2012 10:33:01 AM

Addendum

Letter of Acceptance

Customer Name: CH2M Hill
Date and Time Received: 4/21/2012 9:15:00 AM
Date to be Reported: 5/4/2012
Laboratory Submission Number/SDG: 3505816

Project: NAS Key West /Boca Chica/ MW Sampling 426847

Samples: The submission consisted of 2 samples, including QC, with sample identification shown in the attached data tables.

Tests: The Samples will be analyzed for EPA methods: 1010OL, 6010, 6010_TCLP, 7470, 7470_TCLP, 8081, 8081_TCLP, 8082, 8151, 8151_TCLP, 8260, 8260_TCLP, 8270, 8270_TCLP, 9040C, 9045, FL-PRO.

Sample Custody/COC discrepancies:

None.

Notes:

Temp 2.8C, 3.0C, 4.2C
pH<2 8260, FLPRO, 6010
Sample 02; 1 -8081 amber broken in transit
1010OL= Rhode Island

Distribution of Report to:

CH2M Hill
Attn: Greg Rowell

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. Spectrum Analytical letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar materials.

Log-in Report

Level: 4

Total of: 21 analyses on 2 samples (including QC)

25-Apr-12

Report/SDG #: 3505816

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
IDW-SOIL-1	350581601	IDW Soils	S	4/20/2012 2:20:00 PM	4/21/2012 9:15:00 AM

Method

1010OL	Flashpoint	1010
6010_TCLP	TCLP Metals by 1311/6010	6010
7470_TCLP	7470 TCLP Mercury	7470
8081_TCLP	Pesticides TCLP	8081
8082	PCB	8082
8151_TCLP	Herbicides TCLP	8151
8260_TCLP	Volatiles in Soil by 1311/8260	8260
8270_TCLP	TCLP Semivolatiles by 8270	8270
9045	Corosivity - pH	9045
Dry Weight	Dry Weight	Dry Weight
FL-PRO	Petroleum Hydrocarbons	FL-PRO

SampleID	LAB ID	StationID	Matrix	SampleDate	ReceiveDate
IDW-LIQ-1	350581602	IDW Water	W	4/20/2012 2:20:00 PM	4/21/2012 9:15:00 AM

Method

1010OL	Flashpoint	1010
6010	Metals	6010
7470	Mercury	7470
8081	Pesticides	8081
8082	PCB	8082
8151	Herbicides	8151
8260	Volatile Organic Compounds	8260
8270	GCMS semivolatile	8270
9040C	pH	9040C
FL-PRO	Petroleum Hydrocarbons	FL-PRO

Mark Gudnason [Tampa]

From: Greg.Rowell@CH2M.com
Sent: Monday, April 23, 2012 3:27 PM
To: Mark Gudnason [Tampa]
Subject: RE: NAS KW waste samples

Yes. Thx.

From: Mark Gudnason [Tampa] [mailto:mgudnason@pelab.com]
 Sent: Monday, April 23, 2012 3:23 PM
 To: Rowell, Greg/ATL
 Subject: RE: NAS KW waste samples

OK, so we will log in the water and solid per your bottle order

Soil IDW - 28 day TAT

TCLP Volatiles	1311/8260B	III 1 0
TCLP Semi Volatiles	1311/8270D	III 1 0
TCLP Pesticides	1311/8081B	III 1 0
TCLP Herbicides	1311/8151A	III 1 0
TCLP Metals	1311/6010C/7470A	III 1 0
PCBs	8082A	III 1 0
TRPH	FL-PRO	III 1 0
Corrosivity	9045D as pH	III 1 0
Ignitability	1010/1030	III 1 0

Liquid IDW - 28 day TAT

TCL Volatiles	8260B	III 1 0
TCL Semi Volatiles	8270D	III 1 0
TCL Pesticides	8081B	III 1 0
TCL Herbicides	8151A	III 1 0
TCL Metals	6010C/7470A	III 1 0
PCBs	8082A	III 1 0
TRPH	FL-PRO	III 1 0
Corrosivity	9040C as pH	III 1 0
Ignitability	1010	III 1 0

From: Greg.Rowell@CH2M.com [mailto:Greg.Rowell@CH2M.com]
 Sent: Monday, April 23, 2012 2:14 PM
 To: Mark Gudnason [Tampa]
 Subject: RE: NAS KW waste samples

For liquid, COC appears to include 8270SIM; instead it should be 8082 (PCBs). Also add ignitability.

For soil, yes run the profile listed below instead only the COC parameters.

From: Mark Gudnason [Tampa] [mailto:mgudnason@pelab.com]
 Sent: Monday, April 23, 2012 2:06 PM
 To: Rowell, Greg/ATL
 Subject: RE: NAS KW waste samples

We have enough to run the listed parameters below. The COC did not list those tests.

Do you want us to run the below for the water and soil wastes?
 Mark

From: Greg.Rowell@CH2M.com [mailto:Greg.Rowell@CH2M.com]
 Sent: Monday, April 23, 2012 2:03 PM
 To: Mark Gudnason [Tampa]
 Subject: RE: NAS KW waste samples

Is there enough sample to run the analyses in the profile? I assume the issue is with the IDW Soil?

From: Mark Gudnason [Tampa] [mailto:mgudnason@pelab.com]
 Sent: Monday, April 23, 2012 1:52 PM
 To: Rowell, Greg/ATL
 Subject: NAS KW waste samples

Greg,

The COC is not matching what i have in my profile for the water and soil waste samples. Should we log in what the bottle order and profile have?

Soil IDW - 28 day TAT

TCLP Volatiles	1311/8260B	III 1 0
TCLP Semi Volatiles	1311/8270D	III 1 0
TCLP Pesticides	1311/8081B	III 1 0
TCLP Herbicides	1311/8151A	III 1 0
TCLP Metals	1311/6010C/7470A	III 1 0

PCBs	8082A	III 1 0
TRPH	FL-PRO	III 1 0
Corrosivity	9045D as pH	III 1 0
Ignitability	1010/1030	III 1 0

Liquid IDW - 28 day TAT

TCL Volatiles	8260B	III 1 0
TCL Semi Volatiles	8270D	III 1 0
TCL Pesticides	8081B	III 1 0
TCL Herbicides	8151A	III 1 0
TCL Metals	6010C/7470A	III 1 0
PCBs	8082A	III 1 0
TRPH	FL-PRO	III 1 0
Corrosivity	9040C as pH	III 1 0
Ignitability	1010	III 1 0

End Of Report