N60234.AR.000036
NAS SAUFLEY FIELD
5090.3a

# FINAL MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING EVENT UNDERGROUND STORAGE TANK 2406 NAS SAUFLEY FIELD FL

7/1/2014

TETRA TECH INC

# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62470-08-D-1001

# FINAL DATA REPORT
# MONITORING WELL INSTALLATION
# AND GROUNDWATER SAMPLING EVENT

## UST 2406

## JM 30

## OUTLYING LANDING FIELD SAUFLEY FIELD
## PENSACOLA, FLORIDA

## JULY 2014

TETRA TECH

NAVFAC
Naval Facilities Engineering Command
NAVFAC SOUTHEAST

NAS Jacksonville
Jacksonville, Florida 32212-0030

# FINAL DATA REPORT
# MONITORING WELL INSTALLATION
# AND GROUNDWATER SAMPLING EVENT
# UST 2406
# OUTLYING LANDING FIELD SAUFLEY
# PENSACOLA, FLORIDA
# JULY 2014
# CONTRACT NUMBER N62470-08-D-1001
# CONTRACT TASK ORDER JM30

## 1.0 SITE BACKGROUND

This report provides a description of monitoring wells installed in June and July 2013 at Outlying Landing Field (OLF) Saufley which is located in Escambia County, Florida (Figure 1-1). The monitoring well were installed in the vicinity of former underground storage tank (UST) 2406 (hereinafter Site 2406) is located in the vicinity of potable water well #4 (PW04; Figure 1-2). PW04 is located at the southwest corner of Building 2406. Most of the area in the vicinity of UST 2406 is paved with asphalt or concrete. In addition, another former tank area that contained six 20,000 gallon USTs (Figure 1-2) was located approximately 450 feet southeast of Building 2406. The USTs connected to a 10-inch diameter fuel line that distributed aviation gasoline (AVGAS) to the apron area located south of the runways.

### 1.1 SUMMARY OF PREVIOUS INVESTIGATIONS

A site assessment was conducted at Site 2406 in April and May 1996 by Naval Air Station (NAS) Pensacola Public Works Center (PWC). Ten monitoring wells (nine shallow and one deep) were installed and soil samples were collected from boreholes during the installation of the monitoring wells. Soil samples were collected at 3 foot intervals to a depth of 39 feet below land surface (bls), and analyzed for organic vapors. Organic vapors exceeding 50 parts per million (ppm) were detected in soil samples from the boreholes associated with the installation of monitoring wells MW3, MW4 and DMW10. Groundwater sampled from monitoring well MW3 (|Figure 1-3) contained ethylbenzene, toluene, total xylenes, naphthalene, total recoverable petroleum hydrocarbons (TRPH), lead, and 1,2-dibromoethane (EDB) above the State of Florida's Groundwater Cleanup Target Levels per Chapter 62-550 Florida Administrative Code (F.A.C.) and Chapter 62-777 F.A.C (hereinafter referred to as CTLs) (SDIV, 1998). NAS Pensacola PWC concluded in the 1998 Site Assessment Report (SAR) that excessively contaminated soil existed in the vicinity of MW3 and DMW10 (Figure 1-3), petroleum constituents in the groundwater in the vicinity of MW3 were present, the source could not be determined, and no free-phase product existed in the groundwater. NAS Pensacola PWC recommended the development of a Remedial Action Plan for soil and development of a Monitoring Only Plan for groundwater.

After review of the 1998 SAR (SDIV, 1998), the Florida Department of Environmental Protection (FDEP) responded with comments requiring additional assessment to further delineate the extent of the soil and

groundwater contamination, as well as, determine the source of the contamination. FDEP specifically requested an additional shallow monitoring well and an intermediate monitoring well be installed (CH2M HILL, 2003).

During July and August, 2000, an additional site assessment was conducted by Tetra Tech Inc. (Tetra Tech) in the area near potable water well PW04. Seven soil borings were advanced at the site to total depths of 42 feet. Soil samples from the borings were screened for soil contamination and five soil samples were sent to a laboratory for confirmatory analysis of gasoline and kerosene analytical group parameters Soil screening results were less than 50 ppm and the soil sample laboratory analytical results were less than the State of Florida's Soil Cleanup Target Levels (SCTLs). Three new monitoring wells were installed, one shallow well screened at the water table (MW11), one intermediate well (DMW-12 screened from 65-70 feet bls), and one deep well (DMW13 screened from 130-140 feet). Slug tests were conducted on two intermediate monitoring wells (DMW10 and DMW12) and one deep monitoring well (DMW13) to provide site specific hydraulic conductivity data. Groundwater samples were collected from DMW10, DMW12, and DMW13. These groundwater samples were also analyzed for gasoline and kerosene analytical group parameters. At this time water table wells MW3, MW4, and MW11 were dry likely due to drought conditions. Results of the additional site assessment indicated that a groundwater sample from monitoring well DMW12 contained EDB (0.024 micrograms per liter [µg/L]) and benzene (400 µg/L) at concentrations exceeding their respective CTLs of 0.02 and 1µg/L.

Based on the exceedances reported in monitoring well DMW12, the site assessment was continued and included the installation of three additional monitoring wells (DMW14, DMW15, and DMW16) surrounding monitoring well DMW12. In October and November 2001, groundwater samples were collected from six monitoring wells including: MW10, MW12, MW13, MW14, MW15, and MW16 and analyzed for gasoline and kerosene analytical group parameters.

The analytical results for the July and August 2000 sampling event indicated that benzene was present in four of the monitoring wells at concentrations ranging from 40 to 6,200 µg/L (estimated). The detected benzene concentrations exceeded its CTL of 1µg/L. Ethylbenzene, total xylenes and toluene were detected in the groundwater sample from monitoring well MW16 at concentrations of 170 µg/L, 539 µg/L, and 3,100 µg/L, respectively and exceed their respective CTLs. 1,2-Dichloroethene was detected in the groundwater sample from monitoring well MW12 at a concentration (13 µg/L) exceeding its CTL of 3 µg/L. Total xylenes, chloroform, and methylene chloride were also detected in groundwater samples collected during the sampling event; but however, at concentrations below their respective CTLs.

Because of the elevated concentrations detected in the deep monitoring wells located at the site, NAVFAC SE determined that additional investigation and assessment was warranted and authorized the work completed within this report.

In 2008, CH2M HILL performed three aggressive fluid vapor recovery (AFVR) events to evaluate the efficacy of the AFVR method for product removal. In 2009, based on the AFVR event results, CH2M HILL recommended an additional groundwater monitoring event to assess current site conditions and evaluate alternative remedial approaches.

## 2.0 JUNE AND JULY 2013 FIELD INVESTIGATION

The following is a summary of the field investigation methods used to install nine new monitoring wells (three shallow, three intermediate and three deep) and collect groundwater samples at Site 2406 conducted in June and July 2013. The well were installed and groundwater samples were collected at UST 2406 in July 2013 as described in the Final Technical Memorandum Work Plan for Additional Monitoring Well Installation and Groundwater Sampling Activities at UST Site 2406, Saufley Field, Pensacola, Florida (Tetra Tech, 2013a). All field activities were conducted in accordance with FDEP Standard Operating Procedures (SOPs) for Field Activities (FDEP, 2008).

### 2.1 MONITORING WELL INSTALLATION

Nine monitoring wells (three shallow, three intermediate, and three deep) were installed in June and July 2013 as described in the Final Technical Memorandum Work Plan for Additional Monitoring Well Installation and Groundwater Sampling Activities at UST Site 2406, Saufley Field, Pensacola, Florida (Tetra Tech, 2013a). The new monitoring well locations are shown in Figure 1-3 and monitoring well construction details are presented in Table 2-1. The depths of the monitoring wells in the petroleum-related constituent plume were based on data collected from lithologic borings conducted to approximately 140 feet bls by Tetra Tech, Inc. A cross section displaying the lithologic information at monitoring well locations previously installed by CH2M HILL is presented in Figure 2-1.

The new shallow monitoring wells were advanced to depths of 31 feet bls, 45 feet bls, 52 feet bls and screened across the water table. The depth of the intermediate and deep monitoring wells were determined based on data collected from borings completed to the orange fine sand layer, which is approximately 140 feet bls. The screen depths for the intermediate and deep monitoring wells, were determined in the field by a Tetra Tech field geologist to match intervals of soils of similar lithology and similar elevations for the shallow, intermediate, and deep monitoring wells.

Each shallow monitoring well was constructed of nominal 2-inch diameter, schedule-40 polyvinyl chloride (PVC) with 15 feet of 0.10-inch slotted screen and PVC end-cap or well point at the bottom of each well. Each intermediate and deep monitoring well was constructed of nominal- 2-inch diameter, schedule-40 PVC with 10 feet of 0.10-inch slotted screen and PVC end-cap or well point at the bottom of each well. The outside annular space of each well screen and adjacent formation sands was filled with 20/40 silica sand to approximately 2 feet above the well screen. A minimum of 1 foot of fine "choke sand" (30/65 graded) was placed above the sandpack for the shallow monitoring wells. The intermediate and deep monitoring wells have a bentonite seal, a minimum 1 foot, placed above the sand pack.

Each monitoring well was properly grouted above the "choke sand" or bentonite seal using neat Type II Portland cement and completed in a flush mount 8-inch diameter bolt down at grade. Each monitoring well vault was emplaced in 6-inch, 2-feet by 2-feet flush mount pads so that the edges are flush to the ground surface. A water-tight locking well cap was provided for each monitoring well.

Upon completion and allowing sufficient time for the grout to cure (minimum 24 hours), each shallow, intermediate and deep monitoring well was developed by over pumping with a submersible pump until it produced relatively sediment free water as determined by the Tetra Tech's on-site personnel.

## 2.2 GROUNDWATER POTENTIOMETRIC DATA COLLECTION

Groundwater potentiometric data was collected from Site 2406 monitoring wells on July 18, 2013. Depths to water level measurements were collected from the northern oriented top of well casing utilizing an electronic water level meter. The interface probe was decontaminated prior to and following each measurement in accordance with FDEP SOPs. Table 2-2 and Figures 2-2, 2-3 and 2-4 summarize the groundwater elevation data collected from the surficial, intermediate and deep zones of the aquifer in July 2013. Water level measurement field data is presented in Appendix A.

## 2.3 GROUNDWATER SAMPLING DATA COLLECTION

Tetra Tech personnel collected groundwater samples from the 9 newly installed monitoring wells from July 15 through July 20, 2013. The groundwater samples were collected in accordance with the Work Plan for Additional Monitoring Well Installation and Groundwater Sampling Activities (Tetra Tech 2012a) using low flow/low stress sampling techniques in accordance with FDEP SOPs to match the purging rate with the natural groundwater recovery rate. The monitoring well purging and sampling activities were performed utilizing a submersible pump and pre-cleaned Teflon® tubing. Following sampling operations, new tubing was used at each newly installed monitoring well. Placement of the tubing and purging techniques were determined in the field and conducted in accordance with the applicable FDEP SOPs.

Groundwater physical parameters (pH, temperature, conductivity, dissolved oxygen (DO), turbidity and ORP) were collected in the field using a multi meter and flow through cell to ensure that a representative sample was collected by reducing turbidity and removing the "stagnant" groundwater in the well casing and sand pack area. Field parameters from the July 2013 sampling events are summarized in Table 2-3. The groundwater sampling logs are provided in Appendix A.

After ensuring that the monitoring wells were sufficiently purged, groundwater samples were collected from the existing monitoring wells and submitted to fixed based laboratories. Each well sampled during the July 2013 event was analyzed for Volatile Organic Compounds (VOCs) via SW-846 8260B, Low Level Polycyclic Aromatic Hydrocarbons (PAHs) via SW-846 8270C, Total Recoverable Petroleum Hydrocarbons (TRPH) via Florida Residual Petroleum Organics (FL-PRO), and Lead (SW-846 6010C).

Analytes detected in the groundwater samples were compared to Florida CTLs per Chapters 62-550, and 62-777, F.A.C. Analytes that exceeded their respective CTLs are graphically presented on Figure 2-5 for the shallow, intermediate, and deep aquifer zones. Laboratory analytical data is provided in Appendix B.

## 2.4 QUALITY ASSURANCE/QUALTIY CONTROL SAMPLES

Quality assurance and quality control (QA/QC) samples collected during the field investigation event included trip blanks (15/1420 Trip Blank, 16/0810 Trip Blank, and 17/0710 Trip Blank), equipment rinsate blanks (JM30-RB-071613) and field duplicates. Detections of acetone and methylene chloride were found in both the trip blanks and equipment rinsate blanks. These are both common laboratory contaminants that can be attributed to lab analytical processes. None of the other target analytes were detected in any of the trip blanks or equipment rinsate blanks. Duplicate sample analytical results are presented for monitoring well OLFS-2406-MW-49I in Table 2-4; the sample and duplicable results are comparable .

## 2.5 INVESTIGATIVE DERIVED WASTE

Investigated derived waste (IDW) including equipment decontamination water and water generated during monitoring well purge and sampling activities were drummed. A Basic Ordering Agreement (BOA) subcontractor has been tasked with the disposal of the IDW.

## 2.6 EQUIPMENT DECONTAMINATION

The equipment involved in field sampling activities was decontaminated prior to and during sampling activities in accordance with FDEP SOP FC 1000 Cleaning/Decontamination Procedures (FDEP 1000).

## 3.0 DATA SUMMARY

The following presents a summary of the data collected during the well installation and monitoring activities conducted at Site 2406:

### 3.1 MONITORING WELL INSTALLATION

Lithologic borings were conducted at monitoring well locations MW29, MW49, MW54 and MW55. Based on soil samples collected at these locations, seven distinct lithologic units were encountered as described below.

| Lithologic Unit | Depth (Feet BLS) | Lithologic Unit |
|---|---|---|
| Unit 1 | ~ 0 to 30 | Sand < 15% clay |
| Unit 2 | ~ 30 to 35 | Silty clayey sand |
| Unit 3 | ~ 35 to 40 | Stiff clay, sand with clay |
| Unit 4 | ~40 to 60 | Grey silty sand and clay sand |
| Unit 5 | ~60-70 | Greenish grey clay, >85% clay, high plasticity |
| Unit 6 | ~70-95 | Dark yellow, silty fine sands, Clayey sands |
| Unit 7 | ~95-140 | Orange fine sand |

bls - below land surface
~ = approximately

Based on the soil lithology the screen intervals for the intermediate monitoring wells were selected to be in the Unit 6 of dark yellow silty fine sands and clayey sands, and the deep monitoring wells were selected to be in Unit 7 orange fine sand.

The monitoring wells were installed by Tetra Tech as part of a site wide investigation conducted by CH2M Hill. Nine monitoring wells were installed at areas in the vicinity of UST 2406. These monitoring wells were installed to provide additional data for delineation of the horizontal and vertical extent for a petroleum-related constituent plume associated with UST Site 2406.

The shallow monitoring wells MW29S, MW54S, and MW55S were installed to depths of 39 feet bls, 32 feet bls, and 51 feet bls, respectively. Monitoring wells MW49I and MW49D were co-located with existing shallow monitoring well MW49S and installed to depths of 80 feet bls and 140 feet bls, respectively. Monitoring wells MW54I and MW54D were co-located with shallow monitoring well MW54S and installed to a depth of 70 feet bls and 123 feet bls, respectively. Monitoring wells MW55I and MW55D were co-located with shallow monitoring well MW55S and installed to depths of 95 feet bls and 144 feet bls, respectively.

## 3.2 DEPTH TO GROUNDWATER MEASUREMENTS

Potentiometric surface data (Table 2-2) was collected from the Site 2406 monitoring wells on July 18, 2013. This data was used to interpret the groundwater flow direction for the newly installed monitoring wells in the shallow, intermediate and deep aquifer zones. The groundwater flow direction was generally toward the northwest and west for the shallow aquifer zone (Figure 2-2). The groundwater flow direction was generally toward the southwest for the intermediate and deep aquifer zones (Figures 2-3 and 2-4).

## 3.3 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater field parameter results for the July 2013 sampling event are summarized in Table 2-3. Groundwater sample analytical results for the July 2013 sampling event are summarized in Table 2-4 Figure 2-5 summarize the analytes in the shallow, intermediate, and deep aquifer zones that exceed the Florida GCTLs per Chapters 62-550, and 62-777, F.A.C.

- Lead exceeded its CTL of 15 µg/L in the groundwater sample collected from intermediate monitoring well OLFS-2406-MW55I, but the detected concentration was below the Natural Attenuation Default Criteria (NADC) of 150 µg/L. The turbidity measurement was 1472 nephelometric turbidity units; the high turbidity likely adversely affected the analytical result for lead.
- 1,2-Dichloroethane exceeded its CTL of 3 µg/L in a groundwater sample and its duplicate sample collected from intermediate monitoring well OLFS-2406-MW49I, but the detected concentration was below its NADC value of 300 µg/L.
- Benzene exceeded its CTL of 1 µg/L in groundwater samples collected from one intermediate aquifer zone monitoring well OLFS-2406-MW49I and one deep aquifer zone monitoring well OLFS-2406-MW55D. The concentration detected in the groundwater sample from deep aquifer zone monitoring well OLFS-2406-MW55D was below its NADC value of 100 µg/L. The concentration detected in the groundwater sample from intermediate aquifer zone monitoring well OLFS-2406-MW49I was above its NADC.
- Isopropylbenzene exceeded its CTL of 0.8 µg/L in a groundwater sample and its duplicate collected from intermediate aquifer zone monitoring well OLFS-2406-MW49I, but the detected concentration was below its NADC value of 8 µg/L.
- Total xylenes exceeded its CTL of 20 µg/L in a groundwater sample and its duplicates collected from intermediate aquifer zone monitoring well OLFS-2406-MW49I, but the detected concentration was below its NADC value of 200 µg/L.

## REFERENCES

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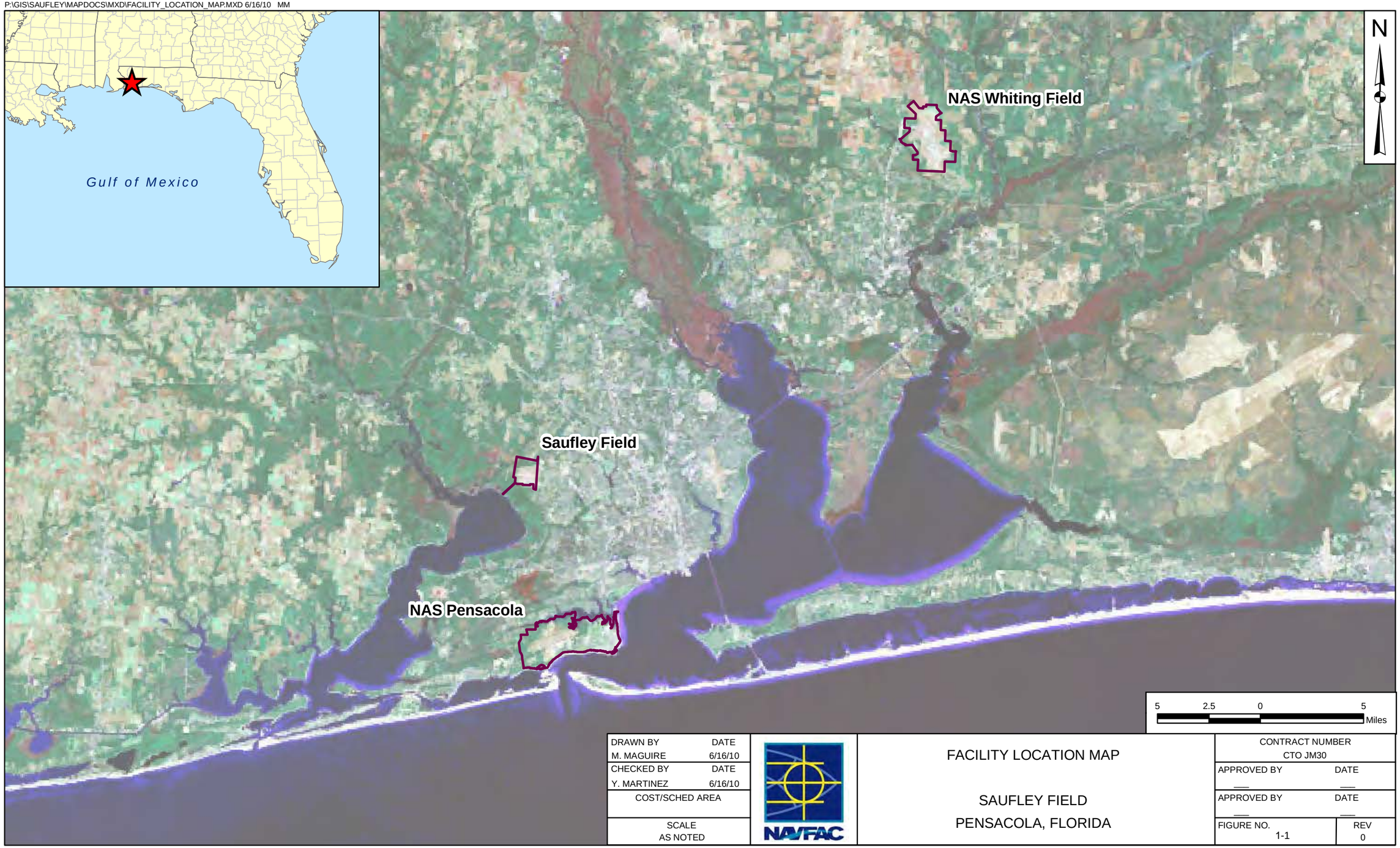
**FIGURES**

P:\GIS\SAUFLEY\MAPDOCS\MXD\FACILITY_LOCATION_MAP.MXD 6/16/10 MM

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|---|---|---|---|---|
| DRAWN BY M. MAGUIRE | DATE 6/16/10 | NAVFAC | FACILITY LOCATION MAP<br><br>SAUFLEY FIELD<br>PENSACOLA, FLORIDA | CONTRACT NUMBER CTO JM30 |
| CHECKED BY Y. MARTINEZ | DATE 6/16/10 | | | APPROVED BY ___ DATE ___ |
| COST/SCHED AREA | | | | APPROVED BY ___ DATE ___ |
| SCALE AS NOTED | | | | FIGURE NO. 1-1 / REV 0 |

PGH P:\GIS\SAUFLEY_OLF\MAPDOCS\MXD\SITE2406_SITE_MAP.MXD 01/07/14 KM

| DRAWN BY | DATE |
|---|---|
| K. MOORE | 11/27/12 |
| CHECKED BY | DATE |
| A. MURPHY | 11/27/12 |
| REVISED BY | DATE |
| | |
| SCALE | |
| AS NOTED | |

NAVFAC

SITE MAP
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| 2748 | JM26 |
| APPROVED BY | DATE |
| | |
| APPROVED BY | DATE |
| | |
| FIGURE NO. 1-2 | REV 0 |

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**Legend**

**Monitoring Wells**

- Undefined
- Deep
- Intermediate
- Piezometer
- Shallow

Note: All wells presented are prefixed with OLFS-2406-.

| DRAWN BY | DATE |
|---|---|
| D. COUCH | 11/27/13 |
| CHECKED BY | DATE |
| A. MURPHY | 01/09/14 |
| REVISED BY | DATE |
| S. PAXTON | 01/09/14 |
| SCALE | |
| AS NOTED | |

NAVFAC

MONITORING WELL LOCATION MAP
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| | |
| APPROVED BY | DATE |
| APPROVED BY | DATE |
| FIGURE NO. 1 - 3 | REV 0 |

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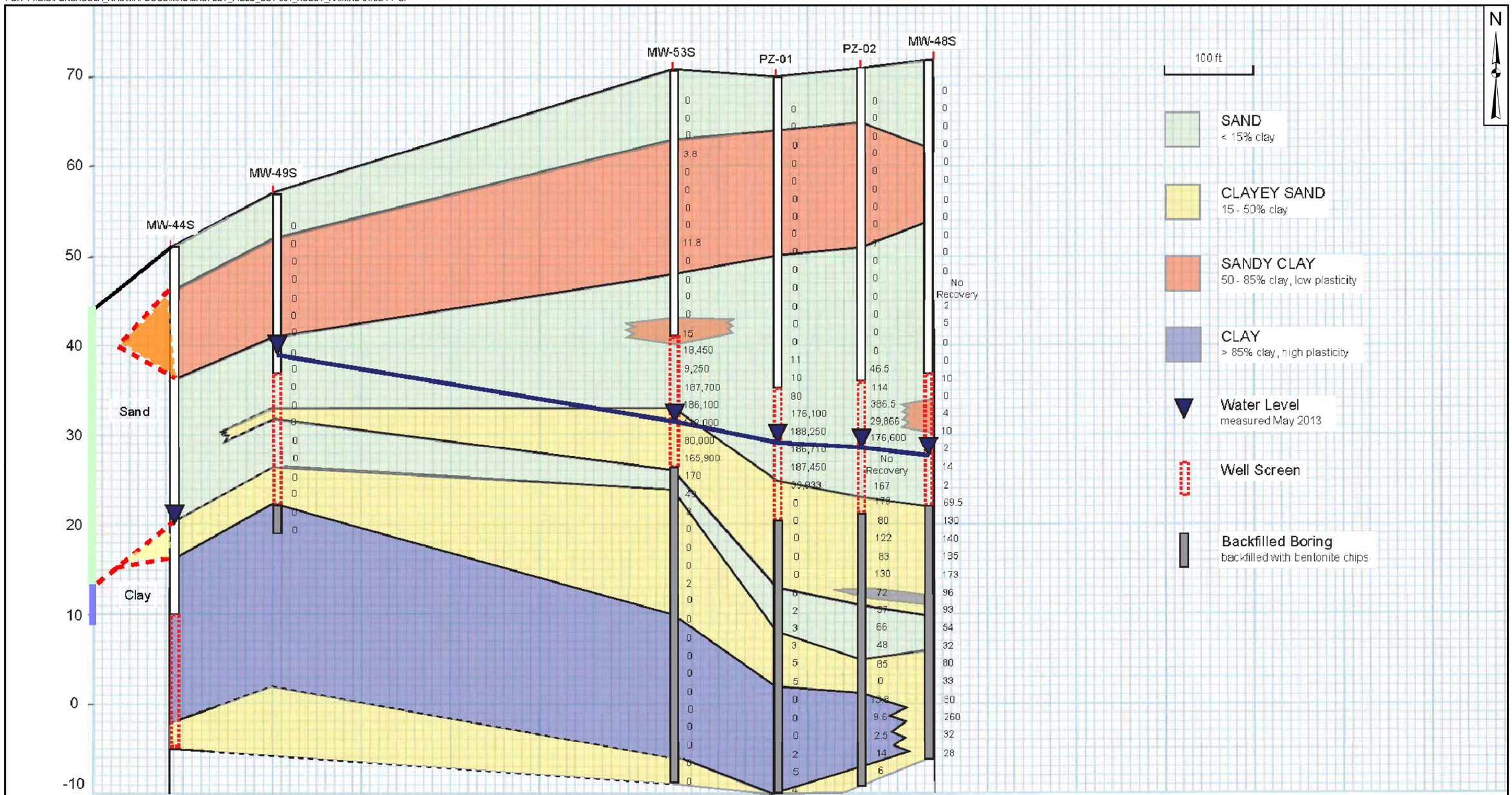


REV 12/01 FORM

| DRAWN BY | DATE |
|---|---|
| S. PAXTON | 01/08/14 |
| CHECKED BY | DATE |
| A. MURPHY | 01/08/14 |
| REVISED BY | DATE |
| SCALE AS NOTED | |

NAVFAC

CROSS SECTION A-A'
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| | |
| APPROVED BY | DATE |
| APPROVED BY | DATE |
| FIGURE NO. 2 - 1 | REV 0 |

*Note: Cross-section drawn by and provided to Tetra Tech by CH2M Hill.*

JAX M:\GIS\PROJECTS\SAUFLEY FIELD\MXD\SAUFLEY_FIELD_BLDG_2406_SHALLOW_MARCH2014.MXD 03/13/14 JM

**Legend**

**Monitoring Wells**

- Undefined
- Deep
- Intermediate
- Piezometer
- Shallow

**Groundwater Contour**

- Regular
- Inferred

Note: All wells presented are prefixed with OLFS-2406-.

| DRAWN BY | DATE |
|---|---|
| D. COUCH | 11/27/13 |
| CHECKED BY | DATE |
| A. MURPHY | 03/13/14 |
| REVISED BY | DATE |
| J.MADDEN | 03/13/14 |
| SCALE | |
| AS NOTED | |

NAVFAC

SHALLOW WELL POTENTIOMETRIC MAP
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| — | — |
| APPROVED BY | DATE |
| — | — |
| APPROVED BY | DATE |
| — | — |
| FIGURE NO. 2 - 2 | REV 0 |

JAX M:\GIS\PROJECTS\SAUFLEY FIELD\MXD\SAUFLEY_FIELD_BLDG_2406_INTERM_MARCH2014.MXD 03/13/14 JM

**Legend**

**Monitoring Wells**

- Undefined
- Deep
- Intermediate
- Piezometer
- Shallow

**Groundwater Contour**

- Regular
- Inferred

Note: All wells presented are prefixed with OLFS-2406-.

| DRAWN BY | DATE |
|---|---|
| D. COUCH | 11/27/13 |
| CHECKED BY | DATE |
| A. MURPHY | 03/13/14 |
| REVISED BY | DATE |
| J.MADDEN | 03/13/14 |
| SCALE | |
| AS NOTED | |

NAVFAC

INTERMEDIATE WELL POTENTIOMETRIC MAP
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| — | — |
| APPROVED BY | DATE |
| — | — |
| APPROVED BY | DATE |
| — | — |
| FIGURE NO. 2 - 3 | REV 0 |

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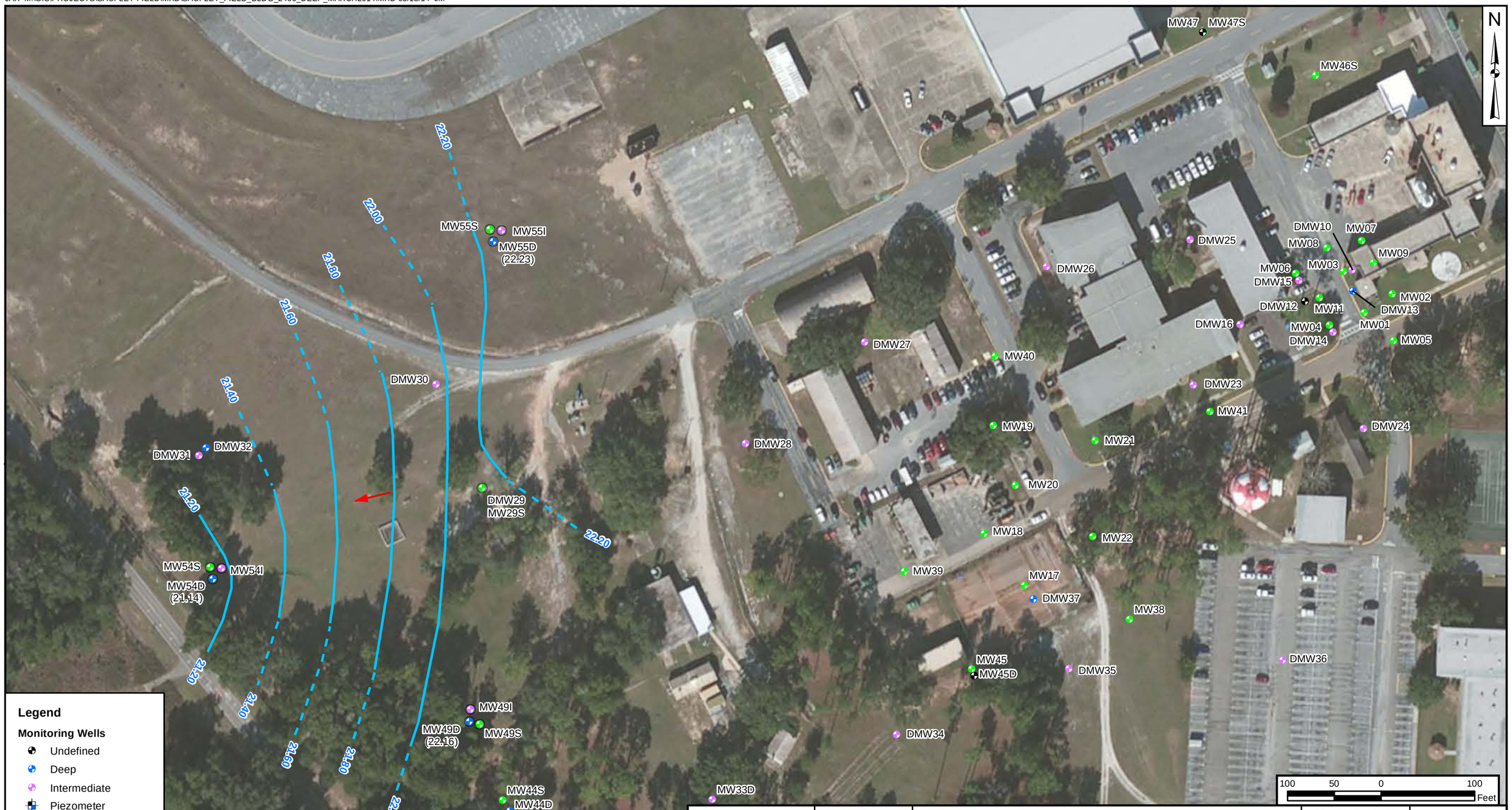


**Legend**

**Monitoring Wells**

- Undefined
- Deep
- Intermediate
- Piezometer
- Shallow

**Groundwater Contour**

- Regular
- Inferred

Note: All wells presented are prefixed with OLFS-2406-.

| DRAWN BY | DATE |
|---|---|
| D. COUCH | 11/27/13 |
| CHECKED BY | DATE |
| A. MURPHY | 03/13/14 |
| REVISED BY | DATE |
| J.MADDEN | 03/13/14 |
| SCALE | |
| AS NOTED | |

NAVFAC

DEEP WELL POTENTIOMETRIC MAP
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
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| APPROVED BY | DATE |
| | |
| APPROVED BY | DATE |
| | |
| FIGURE NO. 2 - 4 | REV 0 |

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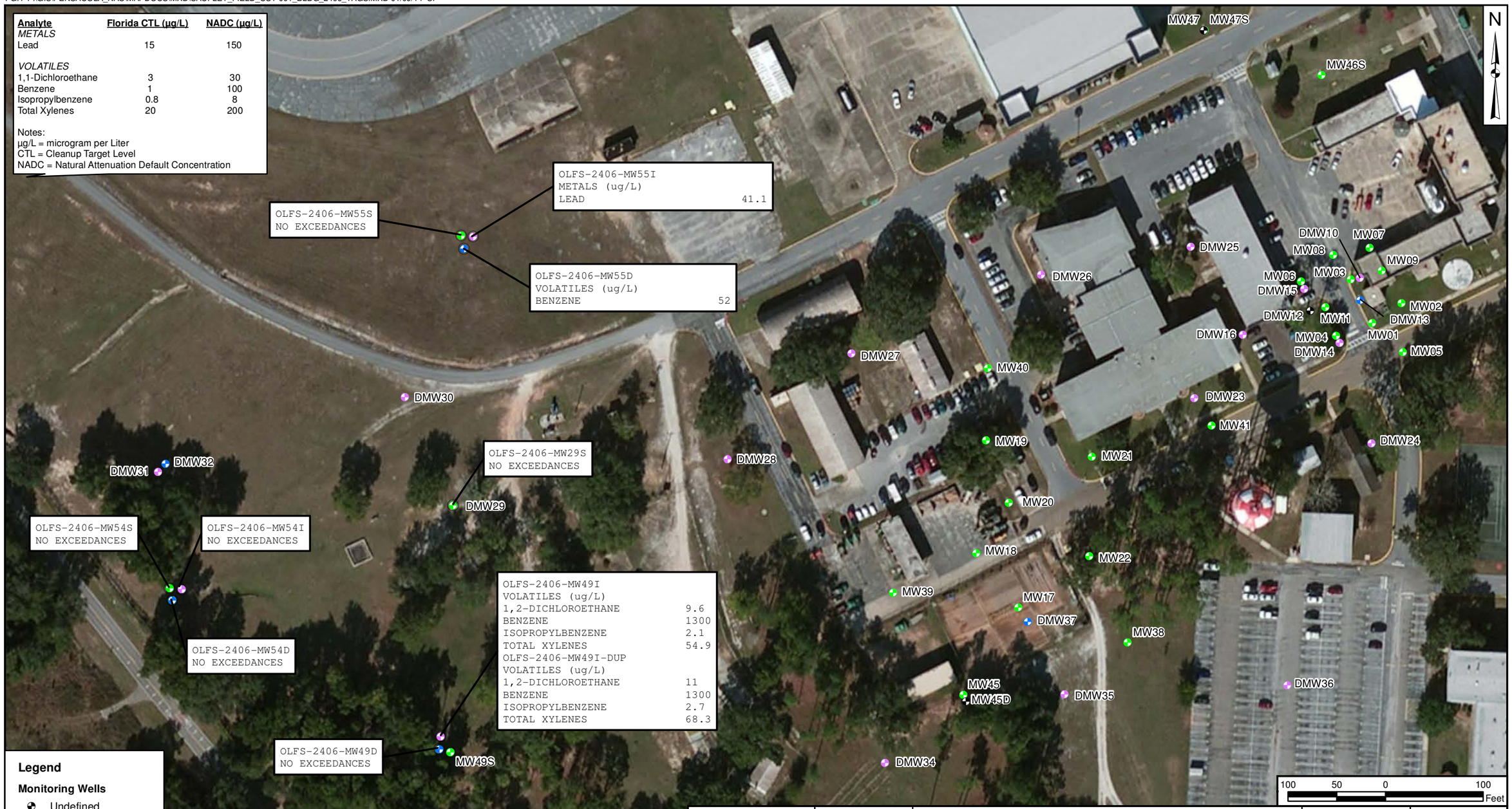
| Analyte | Florida CTL (µg/L) | NADC (µg/L) |
|---|---|---|
| *METALS* | | |
| Lead | 15 | 150 |
| *VOLATILES* | | |
| 1,1-Dichloroethane | 3 | 30 |
| Benzene | 1 | 100 |
| Isopropylbenzene | 0.8 | 8 |
| Total Xylenes | 20 | 200 |

Notes:
µg/L = microgram per Liter
CTL = Cleanup Target Level
NADC = Natural Attenuation Default Concentration




**Legend**

**Monitoring Wells**

- Undefined
- Deep
- Intermediate
- Piezometer
- Shallow

Note: All wells presented are prefixed with OLFS-2406-.

| DRAWN BY | DATE |
|---|---|
| D. COUCH | 11/27/13 |
| CHECKED BY | DATE |
| A. MURPHY | 01/09/14 |
| REVISED BY | DATE |
| S. PAXTON | 01/09/14 |
| SCALE | |
| AS NOTED | |

NAVFAC

GROUNDWATER EXCEEDANCES
SITE 2406
SAUFLEY FIELD
PENSACOLA, FLORIDA

| CONTRACT NUMBER | CTO NUMBER |
|---|---|
| | |
| APPROVED BY | DATE |
| APPROVED BY | DATE |
| FIGURE NO. 2 - 5 | REV 0 |

# TABLES

**TABLE 2-1**
**MONITORING WELL CONSTRUCTION DETAILS**
**SITE 2406**
**OUTLYING LANDING FIELD SAUFLEY**
**PENSACOLA, FLORIDA**


| Well ID | Water Level Collection Date | Top of Casing* (Elevation, feet) | Total Depth Measured in Field (Feet below land surface) | Installed Total Depth (Feet below land surface) | Screened Interval (Feet) | Water Level (Feet below top of casing) | Groundwater Elevation (feet) |
|---|---|---|---|---|---|---|---|
| MW29S | 7/3/13 | 60.50 | 38.75 | 38.0 | 23-38 | 24.38 | 36.12 |
| MW49I | 7/3/13 | 56.95 | 80.46 | 80.0 | 70-80 | 37.63 | 19.32 |
| MW49D | 7/3/13 | 56.75 | 133.87 | 130.0 | 120-130 | 37.30 | 19.45 |
| MW54S | 7/3/13 | 43.77 | 31.65 | 31.0 | 16-31 | 11.82 | 31.95 |
| MW54I | 7/3/13 | 42.97 | 69.87 | 69.5 | 59.5-69.5 | 24.45 | 18.52 |
| MW54D | 7/3/13 | 42.71 | 123.45 | 120.0 | 110-120 | 24.30 | 18.41 |
| MW55S | 7/3/13 | 65.02 | 50.54 | 51.0 | 36-51 | 37.20 | 27.82 |
| MW55I | 7/3/13 | 65.12 | 94.86 | 93.0 | 83-93 | 45.16 | 19.96 |
| MW55D | 7/3/13 | 65.29 | 143.70 | 140.0 | 130-140 | 45.76 | 19.53 |

Notes:
*North American Veritcal Datum (NAVD) 88
NA=Not applicable
Wells are flush mount surface completions

**TABLE 2-2**
**GROUNDWATER LEVEL MEASUREMENT**
**SITE 2406**
**OUTLYING LANDING FIELD SAUFLEY**
**PENSACOLA, FLORIDA**


| Well ID | Date | Top of Casing* (Elevation, feet) | Total Depth (Feet below land surface) | Water Level (Feet below top of casing) | Groundwater Elevation (feet) |
|---|---|---|---|---|---|
| MW29S | 7/15/2013 | 60.50 | 38.85 | 20.89 | 39.61 |
| | 7/18/2013 | | | 20.12 | 40.38 |
| MW49S | 7/18/2013 | 56.23 | 38.00 | 15.53 | 40.70 |
| MW49I | 7/15/2013 | 56.95 | 81.55 | 35.29 | 21.66 |
| | 7/18/2013 | | | 34.95 | 22.00 |
| MW49D | 7/15/2013 | 56.75 | 134.20 | 34.90 | 21.85 |
| | 7/18/2013 | | | 34.59 | 22.16 |
| MW54S | 7/15/2013 | 43.77 | 31.33 | 8.44 | 35.33 |
| | 7/18/2013 | | | 8.55 | 35.22 |
| MW54I | 7/15/2013 | 42.97 | 70.51 | 22.21 | 20.76 |
| | 7/18/2013 | | | 21.89 | 21.08 |
| MW54D | 7/15/2013 | 42.71 | 123.40 | 21.90 | 20.81 |
| | 7/18/2013 | | | 21.57 | 21.14 |
| MW55S | 7/15/2013 | 65.02 | 51.24 | 33.34 | 31.68 |
| | 7/18/2013 | | | 32.11 | 32.91 |
| MW55I | 7/15/2013 | 65.12 | 94.44 | 42.87 | 22.25 |
| | 7/18/2013 | | | 42.47 | 22.65 |
| MW55D | 7/15/2013 | 65.29 | 143.92 | 43.44 | 21.85 |
| | 7/18/2013 | | | 43.06 | 22.23 |

Notes:
NA = Not available
*North American Vertical Datum (NAVD) 88

**TABLE 2-3**
**GROUNDWATER FIELD PARAMETERS**
**SITE 2406**
**OUTLYING LANDING FIELD SAUFLEY**
**PENSACOLA, FLORIDA**


| Well ID | Sample Date | pH (SU) | Temperature (°C) | Conductivty (µS/cm) | Dissolved Oxygen (%, mg/L) | Turbidity (NTUs) | ORP (Milivolts) |
|---|---|---|---|---|---|---|---|
| MW29S | 7/18/13 | 6.79 | 24.96 | 236 | 47.2%, 3.92 | 1.76 | -7.0 |
| MW49I | 7/17/13 | 5.47 | 28.53 | 60 | 2.2%, 0.17 | 252 | -289.4 |
| MW49D | 7/17/13 | 6.41 | 26.28 | 107 | 10.2%, 0.82 | 3.49 | -186.7 |
| MW54S | 7/17/13 | 5.17 | 27.54 | 103 | 53.1%, 3.81 | 17.1 | 269.5 |
| MW54I | 7/17/13 | 6.23 | 24.53 | 78 | 6.0%,0.50 | 13.5 | -314.8 |
| MW54D | 7/16/13 | 5.61 | 27.65 | 63 | 73.0%, 5.59 | 8.62 | 179.3 |
| MW55S | 7/16/13 | NC | NC | NC | NC | NC | NC |
| MW55I | 7/16/13 | 6.22 | 28.81 | 248 | 15.2%, 1.17 | 1472 | 2.5 |
| MW55D | 7/15/13 | 6.08 | 26.40 | 79 | 24.9%, 2.00 | 4.33 | -77.0 |

Notes:
SU = Standard Units
°C = Degrees Centigrade
µS/cm = microSiemens per centimeter
% = percent
mg/L = milligram per Liter
NTU = nephelometric turbidity units
NC = Not Collected

**TABLE 2-4**
**GROUNDWATER ANALYTICAL RESULTS**
**SITE 2406**
**OUTLYING LANDING FIELD**
**PENSACOLA, FLORIDA**


| LOCATION | Florida CTL[1] | Florida NADC[2] | OLFS-2406-MW29S | OLFS-2406-MW49D | OLFS-2406-MW49I | | OLFS-2406-MW54D |
|---|---|---|---|---|---|---|---|
| SAMPLE ID | | | JM30-MW-29S-071813 | JM30-MW-49D-071713 | JM30-MW-49I-071713 | JM30-FD-071713 | JM30-MW-54D-071613 |
| SAMPLE DATE | | | 7/18/2013 | 7/17/2013 | 7/17/2013 | 7/17/2013 | 7/16/2013 |
| **FIELD (NTU)** | | | | | | | |
| TURBIDITY | NC | NC | 1.76 | 3.49 | 252 | | 8.62 |
| | | | | | | | |
| **METALS (UG/L)** | | | | | | | |
| LEAD | 15 | 150 | 1.07 U | 1.07 U | 10.7 | 10.9 | 3.4 J |
| | | | | | | | |
| **VOLATILES (UG/L)** | | | | | | | |
| 1,2-DICHLOROETHANE | 3 | 30 | 0.2 U | 0.2 U | **9.6** | **11** | 0.2 U |
| BENZENE | 1 | 100 | 0.26 U | 0.26 U | **1300** | **1300** | 0.26 U |
| CARBON DISULFIDE | 700 | 7000 | 0.25 U | 0.48 J | 0.34 J | 0.4 J | 0.25 U |
| CHLOROFORM | 70 | 700 | 0.32 U | 0.32 U | 0.32 U | 0.32 U | 2.3 |
| CYCLOHEXANE | NC | NC | 0.31 U | 0.31 U | 30 | 37 | 0.31 U |
| ETHYLBENZENE | 30 | 300 | 0.21 U | 0.21 U | 3.3 | 4.1 | 0.21 U |
| ISOPROPYLBENZENE | 0.8 | 8 | 0.23 U | 0.23 U | **2.1** | **2.7** | 0.23 U |
| METHYL CYCLOHEXANE | NC | NC | 0.3 U | 0.3 U | 13 | 16 | 0.3 U |
| METHYL TERT-BUTYL ETHER | 20 | 200 | 0.36 U | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| TOLUENE | 40 | 400 | 0.27 U | 0.27 U | 1.6 | 2 | 0.27 U |
| TOTAL XYLENES | 20 | 200 | 0.66 U | 0.84 U | **54.9** | **68.3** | 0.84 U |
| | | | | | | | |
| **POLYCYCLIC AROMATIC HYDROCARBONS[5] (UG/L)** | | | | | | | |
| NAPHTHALENE | 14 | 140 | 0.063 U | 0.063 U | 0.4 | 0.49 | 0.062 U |
| PHENANTHRENE | 210 | 2100 | 0.05 U | 0.05 U | 0.05 U | 0.049 U | 0.05 U |
| | | | | | | | |
| **PETROLEUM HYDROCARBONS (UG/L)** | | | | | | | |
| TOTAL PETROLEUM HYDROCARBONS | 5000 | 50000 | 140 UJ | 140 U | 440 J | 410 J | 140 U |

**Notes**

NTU = nephelometric turbidity units

UG/L = micrograms per Liter

[1]Cleanup Target Levels (CTLs) per Chapter 62-550, Florida Administrative Code (F.A.C.), Chapter 62-777, F.A.C., and Chapter 62-781, F.A.C., Table 1, February 2005

[2] Natural Attenuation Default Criteria (NADC) per Chapter 62-550, Florida Administrative Code (F.A.C.), Chapter 62-777, F.A.C., and Chapter 62-781, F.A.C., Table 1, February 2005

U = analyte, if present, was less than its method detection limit

J = Estimated value.

NC = No Criteria

**TABLE 2-4**
**GROUNDWATER ANALYTICAL RESULTS**
**SITE 2406**
**OUTLYING LANDING FIELD**
**PENSACOLA, FLORIDA**


| LOCATION<br>SAMPLE ID<br>SAMPLE DATE | **Florida CTL[1]** | **Florida NADC[2]** | **OLFS-2406-MW54I<br>JM30-MW-54I-071713<br>7/17/2013** | **OLFS-2406-MW54S<br>JM30-MW-54S-071713<br>7/17/2013** | **OLFS-2406-MW55D<br>JM30-MW-55D-071513<br>7/15/2013** | **OLFS-2406-MW55I<br>JM30-MW-55I-071613<br>7/16/2013** | **OLFS-2406-MW55S<br>JM30-MW-55S-071613<br>7/16/2013** |
|---|---|---|---|---|---|---|---|
| **FIELD (NTU)** | | | | | | | |
| TURBIDITY | NC | NC | 13.5 | 17.1 | 4.33 | 1472 | Purged dry |
| | | | | | | | |
| **METALS (UG/L)** | | | | | | | |
| LEAD | 15 | 150 | 1.07 U | 1.07 U | 1.07 U | **41.1** | 2.5 J |
| | | | | | | | |
| **VOLATILES (UG/L)** | | | | | | | |
| 1,2-DICHLOROETHANE | 3 | 30 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| BENZENE | 1 | 100 | 0.26 U | 0.26 U | **52** | 0.26 U | 0.26 U |
| CARBON DISULFIDE | 700 | 7000 | 0.36 U | 0.36 U | 0.55 U | 0.48 U | 0.28 U |
| CHLOROFORM | 70 | 700 | 0.32 U | 0.32 U | 0.7 J | 0.32 U | 0.32 U |
| CYCLOHEXANE | NC | NC | 0.31 U | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| ETHYLBENZENE | 30 | 300 | 0.21 U | 0.21 U | 0.21 U | 0.21 U | 0.21 U |
| ISOPROPYLBENZENE | 0.8 | 8 | 0.23 U | 0.23 U | 0.3 J | 0.23 U | 0.23 U |
| METHYL CYCLOHEXANE | NC | NC | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| METHYL TERT-BUTYL ETHER | 20 | 200 | 0.36 U | 0.36 U | 1.1 | 0.36 U | 0.36 U |
| TOLUENE | 40 | 400 | 0.27 U | 0.27 U | 0.27 U | 0.27 U | 0.27 U |
| TOTAL XYLENES | 20 | 200 | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U |
| | | | | | | | |
| **POLYCYCLIC AROMATIC HYDROCARBONS[5] (UG/L)** | | | | | | | |
| NAPHTHALENE | 14 | 140 | 0.064 U | 0.063 U | 0.061 U | 0.063 U | 0.062 U |
| PHENANTHRENE | 210 | 2100 | 0.051 U | 0.05 U | 0.048 U | 0.075 J | 0.051 J |
| | | | | | | | |
| **PETROLEUM HYDROCARBONS (UG/L)** | | | | | | | |
| TOTAL PETROLEUM HYDROCARBONS | 5000 | 50000 | 140 U | 140 U | 140 U | 140 UJ | 140 U |

**Notes**

NTU = nephelometric turbidity units

UG/L = micrograms per Liter

[1]Cleanup Target Levels (CTLs) per Chapter 62-550, Florida Administrative Code (F.A.C.), Chapter 62-777, F.A.C., and Chapter 62-781, F.A.C., Table 1, February 2005

[2] Natural Attenuation Default Criteria (NADC) per Chapter 62-550, Florida Administrative Code (F.A.C.), Chapter 62-777, F.A.C., and Chapter 62-781, F.A.C., Table 1, February 2005

U = analyte, if present, was less than its method detection limit

J = Estimated value.

NC = No Criteria

# APPENDIX A

## FIELD FORMS

**Included on the enclosed CD**

Tetra Tech NUS, Inc.

# GROUNDWATER LEVEL MEASUREMENT SHEET

**Project Name:** Sanfley Site 4 / UST 24CE **Project No.:** 112G02760
**Location:** Pensacola, Florida **Personnel:** A. Murphy & K Weichert
**Weather Conditions:** Cloudy **Measuring Device:**
**Tidally Influenced:** Yes ___ No ___ **Remarks:**

| Well or Piezometer Number | Date | Time | Elevation of Reference Point (feet)* | Total Well Depth (feet)* | Water Level Indicator Reading (feet)* | Thickness of Free Product (feet)* DEPTH ELEVATION | Groundwater Elevation (feet)* | Comments |
|---|---|---|---|---|---|---|---|---|
| MW 55D | 7-15-2013 | 1010 | 65.29 | 143.92' | 43.45' | 43.44' | 21.85 | |
| MW55I | | 1015 | 65.12 | 94.44' | 42.88' | 42.87' | 22.25 | |
| MW55S | | 1020 | 65.02 | 51.24' | 33.35' | 33.34' | 31.68 | |
| MW54D | | 1028 | 42.71 | 123.40' | 21.91' | 21.90' | 20.81 | |
| ~~MW54I~~ | | | | | | ~~22.21'~~ | | |
| MW54I | | 1032 | 42.97 | 70.51' | 22.22' | 22.21 | 20.76 | |
| MW54S | | 1036 | 43.77 | 31.33' | 8.44' | — | 35.33 | |
| MW 29S ~~29I~~ | | 1052 | 60.50 | 38.85' | 20.90' | 20.89' | 39.61 | |
| MW49D | | 1059 | 56.75 | 134.20' | 34.91' | 34.90' | 21.85 | |
| MW49I | | 1103 | 56.95 | 81.55' | 35.30' | 35.29' | 21.66 | |

* All measurements to the nearest 0.01 foot

Tetra Tech NUS Inc.

# GROUNDWATER LEVEL MEASUREMENT SHEET

**Project Name:** UST 2406 / SITE 4
**Project No.:** 112G02760
**Location:** Sawyer Field, Pensacola
**Personnel:** A. Murphy K. Weichert
**Weather Conditions:** 90°+ Clear Skies
**Measuring Device:** Heron O/W
**Tidally Influenced:** Yes ___ No ___
**Remarks:** DIFFERENT O/W WL INDICATOR THAN USED PREVIOUSLY

| Well or Piezometer Number | Date | Time | Elevation of Reference Point (feet) | Total Well Depth (feet) | Water Level Indicator Reading (feet) | Thickness of Free Product (feet) | Groundwater Elevation (feet) | Comments |
|---|---|---|---|---|---|---|---|---|
| MW55D | 7-18-13 | 0810 | 65.29 | 143.92 | 43.06 | NONE | 22.23 | |
| MW55I | | 0813 | 65.12 | 94.44 | 42.47 | NONE | 22.65 | |
| MW55S | | 0814 | 65.02 | 51.24 | 32.11 | NONE | 32.91 | |
| MW54S | | 0822 | 43.77 | 31.33 | 8.55 | NONE | 35.22 | |
| MW54D | | 0824 | 42.71 | 123.46 | 21.57 | NONE | 21.14 | |
| MW54I | | 0826 | 42.97 | 70.51 | 21.89 | NONE | 21.08 | |
| MW30D | | 0831 | N/A | N/A | 38.41 | NONE | N/A | |
| MW49D | | 0835 | 56.75 | 134.20 | 34.59 | NONE | 22.16 | |
| MW49I | | 0837 | 56.95 | 81.55 | 34.95 | NONE | ~~22~~ 22.00 | |
| MW49S | | 0839 | 59.75 | NC | 15.53 | NONE | 44.22 | STICKUP |
| MW29D | | 0845 | N/A | NC | 37.93 | NONE | N/A | |
| MW29S ~~MW29D~~ | | 0847 | 60.50 | 38.85 | 20.12 | NONE | 40.38 | |

All measurements to the nearest 0.01 foot

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW29S | SAMPLE ID: ~~GLFS4-MW29S~~ JM30-MW-29S-071813 | DATE: 7-18-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 23 feet to 38 feet | STATIC DEPTH TO WATER (feet): 20.12 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

**WELL VOLUME PURGE: 1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ( 38 feet – 26.12 feet) X 0.16 gallons/foot = 2.86 gallons

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

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 26.5 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~~25~~ 25.5 | PURGING INITIATED AT: 0905 | PURGING ENDED AT: 0942 | TOTAL VOLUME PURGED (gallons): 4.9 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or ~~µS/cm~~ | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ~~ODOR~~ ORD (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0905 | 0.0 | 0.0 | 0.132 | 20.12 | PURGE INITIATED | | | | | | |
| 0930 | 3.3 | 3.3 | 0.132 | 20.79 | 6.77 | 25.08 | 242 | 43.6%/3.55 | 9.12 | CLEAR | -1.2 |
| 0936 | 0.8 | 4.1 | 0.132 | 20.85 | 6.78 | 25.11 | 241 | 41.5%/3.74 | 2.70 | CLEAR | -2.1 |
| 0942 | 0.8 | 4.9 | 0.132 | 20.86 | 6.79 | 24.96 | 236 | 47.2%/3.92 | 1.76 | CLEAR | -7.0 |
| Parameters Stabilized | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy 25.5 | SAMPLER(S) ~~SIGNATURE(S)~~: | SAMPLING INITIATED AT: 0945 | SAMPLING ENDED AT: 0955 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| JM30-MW-29S-071813 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.132 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW49I | SAMPLE ID: ~~OLFS4-MW49I~~ JM30-MW-49I-071713 | DATE: 7-17-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 70 feet to 80 feet | STATIC DEPTH TO WATER (feet): 35.10 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( ~~165~~ 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 75 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~~75~~ 73.5 | PURGING INITIATED AT: 1320 | PURGING ENDED AT: 1520 | TOTAL VOLUME PURGED (gallons): 16.925 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or mS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ~~ODOR~~ orp (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | 0.0 | 0.0 | Brownish | water | out | high flow rate to remove sediments. | | | | Flow Rate 0.4gpm | |
| 1340 | 8.0 | 8.0 | 0.105 | 49.01 | ~~Purging Equipment Volume~~ Stopped pump due to filter leak | | | | | | |
| 1400 | 0.0 | 8.0 | 0.105 | 49.01 | Purging Equipment Volume | | | | | | |
| 1415 | 1.575 | 9.575 | 0.105 | 49.09 | 5.74 | 27.16 | 74 | 4.0%/0.32 | 983 | Brown | -41.3 |
| 1435 | 2.10 | 11.675 | 0.105 | 58.10 | 5.74 | 27.32 | 74 | 1.6%/0.13 | 1922 | Brown | -270.5 |
| 1455 | 2.10 | 13.775 | 0.105 | 52.25 | 5.61 | 30.15 | 70 | 3.0%/0.23 | 788 | Brown | -256.2 |
| 1505 | 1.05 | 14.825 | 0.105 | 49.92 | 5.49 | 29.92 | 62 | 2.9%/0.22 | 640 | Lt Brown | -248.8 |
| 1515 | 1.05 | 15.875 | 0.105 | 51.10 | 5.49 | 30.56 | 61 | 2.8%/0.21 | 195 | Lt Brown | -286.6 |
| 1520 | 1.05 | 16.925 | 0.105 | 51.90 | 5.47 | 28.53 | 60 | 2.2%/0.17 | 252 | Lt Brown | -292.4 |
| Unable to reduce turbidity. Purged 5 screen volumes. Collecting sample. | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: Kelsey Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1525 | SAMPLING ENDED AT: 1545 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): ~~75~~ 73.5 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: (Y) N | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | 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 | | | |
| JM30-MW-49I-071713 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.005gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS: JM30-FD-071713

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW49D | SAMPLE ID: ~~OLFS4-MW49D~~ JM30-MW-49D-071713 | DATE: 7-17-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 123 feet to 133 feet | STATIC DEPTH TO WATER (feet): 34.60 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 128 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 128 | PURGING INITIATED AT: 1152 | PURGING ENDED AT: 1222 | TOTAL VOLUME PURGED (gallons): 3.96 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or mS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ~~ODOR (describe)~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1152 | 0.0 | 0.0 | 0.132 | 34.60 | PURGE INITIATED | | | | | | |
| 1212 | 2.64 | 2.64 | 0.132 | 34.60 | 6.40 | 26.22 | 106 | 10.6%/0.85 | 6.29 | CLEAR | -184.0 |
| 1217 | 0.66 | 3.30 | 0.132 | 34.60 | 6.41 | 26.40 | 106 | 10.4%/0.84 | 4.46 | CLEAR | -203.8 |
| 1222 | 0.66 | 3.96 | 0.132 | 34.60 | 6.41 | 26.28 | 107 | 10.2/0.82 | 3.49 | CLEAR | -186.7 |
| 1225 | Parameters Stabilized. | | | Sample Collected | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1225 | SAMPLING ENDED AT: 1235 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): 128 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |

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

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| JM30-MW-49D-071713 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.132 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| | |
|---|---|
| SITE NAME: **Saufley Field Site 4/UST2406** | SITE LOCATION: **Pensacola, Florida** |
| WELL NO: **MW54S** | SAMPLE ID: ~~GLPS4-MW54S~~ JM30-MW-54S-071713 DATE: 7-17-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 16 feet to 31 feet | STATIC DEPTH TO WATER (feet): 8.48 | PURGE PUMP TYPE OR BAILER: **Submersible** |
|---|---|---|---|---|

**WELL VOLUME PURGE: 1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ( 31 feet – ~~31~~ 8.48 feet) X ~~0~~ 0.16 gallons/foot = 3.6 gallons

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

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18 | PURGING INITIATED AT: 0927 | PURGING ENDED AT: 1055 | TOTAL VOLUME PURGED (gallons): 21.00 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or ~~mS/cm~~ | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ~~ODOR~~ (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0927 | 0.0 | 0.0 | 0.132 | 14.60 | PURGE INITIATED | | | | | | |
| 0957 | 3.96 | 3.96 | 0.132 | 15.13 | 5.46 | 27.20 | 146 | 51.5%/4.08 | 160 | cloudy | 206.5 |
| INCREASING FLOW RATE TO TRY AND REDUCE TURBIDITY TO 0.4 gpm | | | | | | | | | | | |
| 1007 | 4.0 | 7.96 | 0.4 | 17.53 | 5.31 | 26.25 | 125 | 51.5%/4.14 | 988 | cloudy | 240.6 |
| 1017 | 4.0 | 11.96 | 0.4 | 17.44 | 5.09 | 27.08 | 114 | 49.2%/3.92 | 106.3 | cloudy | 259.4 |
| 1027 | 4.0 | 15.96 | 0.4 | 17.81 | 5.23 | 27.04 | 113 | 46.6%/3.68 | 88.3 | cloudy | 278.0 |
| LARGE AMOUNT OF SEDIMENT CAME through tubing & FLOW CELL, ALLOWED TO PURGE CLEAR | | | | | | | | | | | |
| 1045 | * | * | * | 12.50 | 5.05 | 27.20 | 115 | 48.8%/3.66 | 59.9 | CLEAR | 279.9 |
| 1050 | * | * | * | 13.60 | 5.11 | 27.39 | 107 | 49.9%/3.65 | 39.0 | CLEAR | 221.2 |
| 1055 | * | 21.00 * | * | 14.26 | 5.17 | 27.54 | 103 | 53.1%/3.81 | 17.1 | CLEAR | 269.5 |
| PURGED 5 well VOLUMES. | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) ~~SIGNATURE(S)~~: | SAMPLING INITIATED AT: 1100 | SAMPLING ENDED AT: 1110 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): 18 | TUBING MATERIAL CODE: **Teflon** | FIELD-FILTERED: Y ~~N~~ Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| JM30-MW-54S-071713 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.132 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS: * DUE TO CONSTANT FLUCTUATIONS IN WATER TABLE & FLOW RATE, UNABLE TO DETERMINE TRUE FLOW RATE & VOL PURGED. APPROX 5 gallons PURGED BETWEEN 1027 - 1055

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW54I | SAMPLE ID: ~~OLF54-MW54I~~ JM90-MW-54I-07/7/13 | DATE: 7-17-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 60 feet to 70 feet | STATIC DEPTH TO WATER (feet): 21.91 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 65 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 65 | PURGING INITIATED AT: 0700 | PURGING ENDED AT: | TOTAL VOLUME PURGED (gallons): |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or mS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ORP ~~ODOR~~ (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0700 | 0.0 | 0.0 | 0.105 | 24.13 | Purge | Initiated | | | | | |
| 0725 | 2.625 | 2.625 | 0.105 | 24.75 | 10.63 | 24.73 | 193 | 19.9%/1.64 | 968 | cloudy | -247.2 |
| ~~0745~~ | ~~2.1~~ | ~~4.725~~ | ~~0.105~~ | | | | | | | | |
| 0735 | Will increase | FLOW RATE | TO | INCREASE | FLOW RATE | TO | ~~1500~~ | 0.4gpm | | | |
| 0740 | 2.0 | 5.675 | 0.4gpm | 28.79 | 10.39 | 24.35 | 167 | 6.2%/0.51 | 118 | LIGHT CLOUDY | -336.6 |
| 0750 | 4.0 | 9.675 | 0.4 | 28.89 | 7.13 | 24.17 | 93 | 4.2%/0.36 | 56.3 | LIGHT CLOUDY | -264.7 |
| 0800 | 4.0 | 13.675 | 0.4 | 28.75 | 6.54 | 24.26 | 82 | 4.7%/0.40 | 32.4 | CLEAR | -313.3 |
| 0810 | 4.0 | 17.675 | 0.4 | 28.40 | 6.36 | 24.42 | 80 | 5.3%/0.45 | 19.1 | CLEAR | -324.6 |
| 0815 | 2.0 | 19.675 | 0.4 | 28.30 | 6.29 | 24.59 | 79 | 5.4%/0.45 | 12.8 | CLEAR | -309.2 |
| 0820 | 2.0 | 21.675 | 0.4 | 28.30 | 6.23 | 24.53 | 78 | 6.0%/0.50 | 13.5 | CLEAR | 314.8 |

Parameters Stabilized. Turbidity as low as possible & stabilized. Sampling initiated.

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 0825 | SAMPLING ENDED AT: 0835 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): 65 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |

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

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| D-MW-54I-071713 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.105 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW54D | SAMPLE ID: ~~OLFS4-MW54D~~ JM30-MW-54D-071613 | DATE: 7-16-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 113 feet to 123 feet | STATIC DEPTH TO WATER (feet): 21.80 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.0006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 118 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 118 | PURGING INITIATED AT: 1327 | PURGING ENDED AT: 1400 | TOTAL VOLUME PURGED (gallons): 4.356 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or mS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ~~ORP~~ ~~ODOR~~ (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 0.0 | 2.376 | 0.132 | 21.80 | 5.70 | 26.88 | 65 | 79.5%/6.28 | 68.7 | CLEAR | 159.5 |
| 1350 | 0.66 | 3.036 | 0.136 | 21.80 | 5.63 | 27.62 | 63 | 72.8/5.74 | 19.2 | CLEAR | 163.3 |
| 1355 | 0.66 | 3.696 | 0.136 | 21.80 | 5.62 | 27.45 | 63 | 74.5/5.79 | 14.1 | CLEAR | 175.3 |
| 1400 | 0.66 | 4.356 | 0.136 | 21.80 | 5.61 | 27.65 | 63 | 73.0/5.59 | 8.62 | CLEAR | 179.3 |
| ~~1405~~ | ~~0.66~~ | ~~5.016~~ | ~~0.136~~ | ~~21.80~~ | PARAMETERS STABILIZED | | | | | | |
| 1405 | SAMPLE | | | | | | | | | | |
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**WELL CAPACITY** (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
**TUBING INSIDE DIA. CAPACITY** (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1405 | SAMPLING ENDED AT: 1415 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): ~~110~~ 118 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (N) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| JM30-MW-54D-071613 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | ~~0.136~~ 100 mL |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.136 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| | |
|---|---|
| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida |
| WELL NO: MW5SS | SAMPLE ID: ~~OLES4-MW5SS-~~ JM30-MW-SS3-071613 DATE: 7-16-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 36 feet to 51 feet | STATIC DEPTH TO WATER (feet): 29.65 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

**WELL VOLUME PURGE: 1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ( 51 feet – 29.65 feet) X 0.16 gallons/foot = 3.41 gallons

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 39 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 48 | PURGING INITIATED AT: 1145 | PURGING ENDED AT: 1225 | TOTAL VOLUME PURGED (gallons): 4.2 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or µS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ODOR (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145 | 0.0 | 0.0 | 0.105 | 29.65 | Purge Initiated | | | | | | |
| 1225 | 4.2 | 4.2 | 0.105 | After making every attempt to stabilize water level at lowest possible flow rate, well purged dry. Allowing to recharge before collecting sample | | | | | | | |
| 1235 | Recharged to a collectable level. Sample collected. | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Allen Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1235 | SAMPLING ENDED AT: 1250 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): 48 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| 130-MW-SS3-071613 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | ~~0.09 gpm~~ low-flow |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.105 |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida | |
|---|---|---|
| WELL NO: MW55I | SAMPLE ID: ~~OLPS4-MW55I~~ JM30-MW-55I-071613 | DATE: 7-16-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 85 feet to 95 feet | STATIC DEPTH TO WATER (feet): 42.82 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 90 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 90 | PURGING INITIATED AT: 0805 | PURGING ENDED AT: 1025 | TOTAL VOLUME PURGED (gallons): 6.86 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP. (°C) | COND. (circle units) µmhos/cm or µS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ODOR (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0835 | 0.0 | ~~0.08~~ 2.40 | 0.08 | | | | | | | | -2.49 |
| 0836 | .26 | 2.46 | .26 | 54.36 | 6.60 | 30.50 | 264 | 1.78 | 65.0 | BRN | — |
| PUMP CLOGGED DUE TO SEDIMENT @ 0850 (ASSUMED, MAY BE WIRING ISSUE) | | | | | | | | | | | |
| 0930 | PURGE RESTARTED | | | | | | | | | | |
| 1015 | 3.6 | 6.06 | 0.08 | 58.36 | 6.24 | 28.55 | 246 | 1.73 /16.1% | 901 | CLOUDY | 3.7 |
| 1020 | 0.4 | 6.46 | 0.08 | 50.35 | 6.23 | 28.74 | 244 | 1.24 /16.1% | 1107 | " | 3.0 |
| 1025 | 0.4 | 6.86 | 0.08 | 50.34 | 6.22 | 28.81 | 248 | 1.17 /15.2% | 1472 | " | 2.5 |
| SPOKE TO PM, ALL OTHER PARAMETERS STABILIZED OTHER THAN TURBIDITY. OK TO SAMPLE | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1030 | SAMPLING ENDED AT: 1048 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| JM30-MW-55I-071613 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 ml/min |
| | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.08 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS 0835 - SPEED UP PUMP TO TRY TO ELIMINATE TURBIDITY ⇒ 1000 mL/min / .26 gal/min (1)

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

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

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

(1) INCREASED FLOW RATE BASED ON DEVELOPMENT LOG

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Form FD 9000-24

# GROUNDWATER SAMPLING LOG

| SITE NAME: Saufley Field Site 4/UST2406 | SITE LOCATION: Pensacola, Florida |
|---|---|
| WELL NO: MW55D | SAMPLE ID: ~~QLFS4-MW55D~~ ~~[illegible]~~ JMS0 3-MW-55D-071513 DATE: 7-15-2013 |

## PURGING DATA

| WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 3/8 | WELL SCREEN INTERVAL DEPTH: 133 feet to 143 feet | STATIC DEPTH TO WATER (feet): 43.42 | PURGE PUMP TYPE OR BAILER: Submersible |
|---|---|---|---|---|

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

**EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + ( 0.006 gallons/foot X 165 feet) + 0.25 gallons = 1.24 gallons

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 138 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 138 | PURGING INITIATED AT: 1410 | PURGING ENDED AT: 1450 | TOTAL VOLUME PURGED (gallons): 4.205 |
|---|---|---|---|---|

| TIME | VOLUME PURGED (gallons) | CUMUL. VOLUME PURGED (gallons) | PURGE RATE (gpm) | DEPTH TO WATER (feet) | pH (standard units) | TEMP (°C) | COND. (circle units) µmhos/cm or mS/cm | DISSOLVED OXYGEN (circle units) mg/L or % saturation | TURBIDITY (NTUs) | COLOR (describe) | ORP ~~ODOR~~ (describe) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1425 | 0.0 | 1.58 | 0.105 | 43.42 | 6.13 | 26.09 | 81 | 2.77/33.8 | 13.5 | CLEAR | -78.5 |
| 1430 | 0.525 | 2.105 | 0.105 | 43.42 | 6.13 | 26.10 | 81 | 2.58/31.3 | 16.2 | " | 76.6 |
| 1435 | 0.525 | 2.630 | 0.105 | 43.42 | 6.14 | 26.44 | 81 | 2.43/30.2 | 5.71 | " | -74.9 |
| 1440 | 0.525 | 3.155 | 0.105 | 43.42 | 6.13 | 26.04 | 81 | 2.28/28.2 | 5.12 | " | -80.0 |
| 1445 | 0.525 | 3.68 | 0.105 | 43.42 | 6.08 | 26.21 | 80 | 2.17/26.8 | 4.44 | " | -77.3 |
| 1450 | 0.525 | 4.205 | 0.105 | 43.42 | 6.08 | 26.40 | 79 | 2.00/24.9 | 4.33 | " | -77.0 |
| PARAMETERS STABILIZED | | | | | | | | | | | |
| 1455 | SAMPLE COLLECTED | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

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

## SAMPLING DATA

| SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1455 | SAMPLING ENDED AT: 1540 |
|---|---|---|---|
| PUMP OR TUBING DEPTH IN WELL (feet): 138 | TUBING MATERIAL CODE: Teflon | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm |
| FIELD DECONTAMINATION: PUMP (Y) N | TUBING (Y) N (replaced) | DUPLICATE: Y (N) | |

| SAMPLE CONTAINER SPECIFICATION | | | | SAMPLE PRESERVATION | | | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE | SAMPLE PUMP FLOW RATE (mL per minute) |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID CODE | # CONTAINERS | MATERIAL CODE | VOLUME | PRESERVATIVE USED | TOTAL VOL ADDED IN FIELD (mL) | FINAL pH | | | |
| 30-MW55D-071513 | 3 | CG | 40ml | HCl | Preserved | <2 | TAL VOCs 8260B | ESP | 100 mlpm |
| 2 | 2 | AG | 1 L | Ice | N/A | N/A | TRPH FL-PRO | ESP | 0.105 gpm |
| | 2 | AG | 1L | HCl | Preserved | <2 | LL PAHs | ESP | |
| | 1 | P | 250 ml | HNO3 | Preserved | <2 | Lead 6010C | ESP | |
| | | | | | | | | | |
| | | | | | | | | | |

REMARKS:
157.20 Hz on Grundfos MS/MSD 0.000264

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

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

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

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1525 8551 - 9

Location SFG 4 Date 6-18/13

Project / Client NAVFAC SE

1500 decon torn down RB collection go to dump trash, will take Empty drums to SFFF.

1500 go back to SFG to load equipment

1600 back @ SFG load eq.

1620 site secured, eq packed, go to hotel



Location SANFLEY SITE 4 Date 7-15-2013

Project / Client NAVFACSE

PERSONNEL: Alex Murphy TL Fed Eng 1550
Kevin Weichert TE Env Sci III

WEATHER: 90°F CLEAR SKIES

VEHICLE: Nissan Cargo Van

PURPOSE = WL Measurements GW Collection

EQUIPMENT: WL Indicator, Grundfos Pump, Honda 2000i Generator, YSI, LaMotte

FIELD FORMS: H&S Forms, WL Forms, Cal Forms

0715: AM & KW Arrive on site

0730: Conduct H&S Meeting
: Field Hydration
Slips Trips Falls
Weather Concerns
Field Contamination

0745: Set up for Day.

0905: CH2M Hill Arrives on site. Discuss site Activities

0915: Begin popping all 9 well caps
Allow 30 min to equilibrate.

0930: Begin CALIBRATING YSI & LaMotte
see cal sheet for details

Location Saufley - Site 4 Date 7-15-2013

Project / Client NAVFAC SE

1000: Begin collecting water levels
1105: Completed collection of water levels
1115: Began development of MW 55 S with Bailer
1305: Discontinued development. Still no reduction in turbidity or evidence of potentially clearing up. Will allow to settle overnight.
1315: Decomned pump & drummed dev water
1345: Set up on MW55D to sample.
1410: Purge initiated
1420: Trip Blank collected.
1450: Parameters Stabilized.
1455: Begin Sample Collection
1540: Sample Collection Complete. CH2M Hill offsite
1555: A.M. & K.W. to Decon, EDD cal checks & pack coolers for shipment.
1630: A.M. & K.W. offsite. Site secured
1700: A.M. & K.W. leave FedEx.

7-15-2013



Location Saufley Site 4 Date 7/15-2013

Project / Client NAVFAC SE

Personnel: Alex Murphy TL FOL/SSO/Engineer
Kevin Weichert TL Env Sci I/II
Weather: 80°F Cloudy Skies
Vehicle: Nissan Cargo Van
Purpose: GW Sampling
Equipment: Honda 2000i Generator, Gasoline, Rediflo2 Pump, Water Level Indicator, YSI 556 mps, LaMotte 2020 We
Field Forms: GW Sheets, H&S Forms, COC
0700: A.M. & K.W. arrive on site
0715: Conduct H&S Tailgate meeting
0720: Prepare for day (cal equipment, etc)
0745: A.M. & K.W. set up on MW55I.
0805: Purge initiated on MW55I.
0850: Pump faulted. Unsure if due to sediment clog or wiring issue. Replacing with second pump.
0930: Purge restarted.
1025: After speaking with PM. All attempts were made to reduce turbidity. All other parameters stabilized except turbidity. OK to sample.

Location Saufley - Site 4 Date 7-16-2013

Project / Client NAVFAC SE

1030: Sample Collected. JM30-MW-55I-071613

1050: Sample collection complete. Pump & tubing to be deconned.

1115: Set Up on MW55S. Approval from PM to go ahead and purge & sample

1145: Purge initiated.

1225: After making every attempt to stabilize water level at lowest possible purge rate, well pumped dry. Allowing to recharge before collecting sample.

1235: Sample Collected. JM30-MW-55S-071613

1250: A.M. & K.W. off to decon pumps & tubing.

1315: Set up on MW-54D.

1327: Purge initiated.

1400: Purge complete. Parameters stabilized

1405: Sample collected: JM30-MW-54D-071613

1415: Sampling complete. A.M. & K.W. to Decon & end of day completion.

1445: Field Equipment Blank Collected JM30-RB-071613

1530: A.M & K.W. off-site.



Location Saufley Site 4 Date 7-17-2013

Project / Client NAVFAC SE

Personnel: Alex Murphy FOL/SSO/Env Engr I
Kevin Kleicheker Env Sci III

Weather: 90°F Clear Skies

Vehicle: Nissan Cargo Van

Purpose: GW Sampling

Equipment: Honda 2000; Grundfos, YSI, La Motte

Field Forms: GW Sheets, COCs, H&S gear

0600: A.M. & K.W. arrive on site. Conducted morning H&S meeting

0615: Prepare for day. Calibrate equipment, etc.

0645: Set Up on MW54I.

0700: Purge initiated on MW54I

0735: After making every attempt to reduce turbidity at lowest allowable possible flow rate (0.105gpm), now increasing flow rate to (0.4gpm) to blow out sediment. [About 0.105gpm is the slowest the Grundfos can pump]

0820: Purge complete. Parameters stabilized. Approx 21.675 gallons purged. Turbidity

Location Sawfley - Site 4 Date 7-17-13

Project / Client NAVFAC SE

STABILIZED AT 13.5 NTUS.

0825: Sample collected. JM30-MW-54E-071713

0840: Pump & TUBING DECONNED

0900: SET UP ON MW54S

0927: PURGE INITIATED ON MW54S

1055: Purge complete. Purged 5 well volumes. Parameters stabilized. Due to fluctuations in water table & flow rate, unable to get exact reading of flow rate. Approx 5 gallons purged between 1027 - 1055. 21.0 Gallons total purged. Was able to reduce turbidity as low as 17.0 NTUs before collection.

1100: Sample Collected JM30-MW-54S-071713

1115: Pump & Tubing Deconned

1130: Set up on MW49D.

1152: PURGE INITIATED ON MW49D.

1222: Purge complete. Parameters stabilized

1225: Sample collected. JM30-MW-49I-071713

1235: To Decon pump & tubing

1255: Set up on MW 49I.

1320: Purge initiated @ 0.4 gpm to remove sediments



Location Sawfley - Site 4 Date 7-17-2013

Project / Client NAVFAC SE

1340: REDUCED ~~TURBIDITY~~ FLOW RATE TO 0.105 gpm

1435: PULLED TUBING UP 1.5' TO ATTEMPT TO REDUCE TURBIDITY. PURGING AT LOWEST FLOW RATE PUMP ALLOWS.

1520: UNABLE TO REDUCE TURBIDITY & STABILIZE TEMP PURGED 5 SCREENED VOLUMES AT LOW FLOW.

1525: COLLECTING SAMPLE PER PM'S GO AHEAD. JM30-MW-49I-071713. DUPLICATE COLLECTED. JM30-FD-071713.

1550: A.M. & K.W. TO DECON PUMP, EQD CAL CHECKS AND PACK COOLER.

1635: A.M. & K.W OFFSITE

7-17-2013

Location SAWFLEY - SITE 4 Date 7-18-2013

Project / Client NAVFAC SE

Personnel : Alex Murphy FOL/SSO/ENV ENG. I
Kevin Weichert ENV SCI III

Weather : 90°F CLEAR Skies

Vehicle : Nissan Cargo Van

Purpose : GW Sampling

Equipment : WL Indicator, YSI, LaMotte, Honda Generator

Field Forms : H&S, WL Sheet, GW Logs, Cal Sheets

0700 : A.M. & K.W. ARRIVE on site
Conduct H&S Meeting

0720 : Pop All well caps and allow to equilibrate.

0725 : Filling empty DRUMS with clean tap water.

0800 : Begin collecting water levels

0817 . water level collection complete - Set up on MW 29S

0900 : A.M. calibrates Lamotte & YSI

0905 : Purge initiated

0942 : Purge complete. Parameters Stabilized.

0945 : Sample Collected JM30-MW-29S-071813

1000 : A.M. & K.W GO Decon pump, put cooler,



Location Sawfley - Site 4 Date 7-18-2013

Project / Client NAVFAC SE

perform EQD cal checks, and clean up site for leaving.

1145 : A.M. & K.W. offsite to Fedex & Sunbelt Rental. to ship equipment, samples, & drop off Generators.

7-18-2013

**APPENDIX B**

**LABORATORY ANALYTICAL DATA**

**Included on the enclosed CD**

**Tetra Tech** **INTERNAL CORRESPONDENCE**

| | | | |
|---|---|---|---|
| **TO:** | **F. LESESNE** | **DATE:** | **SEPTEMBER 3, 2013** |
| **FROM:** | **TERRI L. SOLOMON** | **COPIES:** | **DV FILE** |

**SUBJECT:** **INORGANIC DATA VALIDATION –LEAD**
**CTO JM30 SAUFLEY FIELD**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM30-2**

**SAMPLES:** 11/Aqueous/

| | |
|---|---|
| JM30-FD-071713 | JM30-MW-29S-071813 |
| JM30-MW-49D-071713 | JM30-MW-49I-071713 |
| JM30-MW-54D-071613 | JM30-MW-54I-071713 |
| JM30-MW-54S-071713 | JM30-MW-55I-071613 |
| JM30-MW-55S-071613 | JM30-MW55D-071513 |
| JM30-RB-071613 | |

Overview

The sample set for Saufley Field, CTO JM30, SDG CTOJM30-2, consists of ten (10) aqueous environmental samples and one (1) rinsate blank. One (1) field duplicate pair (JM30-MW-49I-071713 / JM30-FD-071713) was included within this SDG.

All samples were analyzed for lead. The samples were collected on July 15, 16, 17 and 18, 2013 and analyzed by Katahdin Analytical Services. Lead analyses were conducted using SW-846 method 6010C.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • ICP Interference Results
* • Laboratory Control Sample Recoveries
* • Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • ICP Serial Dilution Results
* • Field Duplicate Results
* • Detection Limits
* • Analyte Quantitation

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

Notes

The nondetected results were reported to the method detection limit (MDL).

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

Executive Summary

**Laboratory Performance:** None.

**Other Factors Affecting Data Quality:** Positive results reported greater than the MDL but below the LOQ were qualified as estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Data Validation", January 2010, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", October 2010.

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

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

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

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Qualifier Codes:**

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

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PROJ_NO: 02760** | NSAMPLE | JM30-FD-071713 | | | JM30-MW-29S-071813 | | | JM30-MW-49D-071713 | | | JM30-MW-49I-071713 | | |
| **SDG: CTOJM30-2** | LAB_ID | SG5070-006 | | | SG5146-001 | | | SG5070-004 | | | SG5070-005 | | |
| **FRACTION: M** | SAMP_DATE | 7/17/2013 | | | 7/18/2013 | | | 7/17/2013 | | | 7/17/2013 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | JM30-MW-49I-071713 | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| LEAD | | 10.9 | | | 1.07 | U | | 1.07 | U | | 10.7 | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PROJ_NO: 02760** | NSAMPLE | JM30-MW-54D-071613 | | | JM30-MW-54I-071713 | | | JM30-MW-54S-071713 | | | JM30-MW55D-071513 | | |
| **SDG: CTOJM30-2** | LAB_ID | SG5022-004 | | | SG5070-002 | | | SG5070-003 | | | SG4994-002 | | |
| **FRACTION: M** | SAMP_DATE | 7/16/2013 | | | 7/17/2013 | | | 7/17/2013 | | | 7/15/2013 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| LEAD | | 3.4 | J | P | 1.07 | U | | 1.07 | U | | 1.07 | U | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PROJ_NO: 02760** | NSAMPLE | JM30-MW-55I-071613 | | | JM30-MW-55S-071613 | | | JM30-RB-071613 | | |
| **SDG: CTOJM30-2** | LAB_ID | SG5022-002 | | | SG5022-003 | | | SG5022-005 | | |
| **FRACTION: M** | SAMP_DATE | 7/16/2013 | | | 7/16/2013 | | | 7/16/2013 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| LEAD | | 41.1 | | | 2.5 | J | P | 1.07 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-FD-071713

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5070-006

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 10.9 | | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-29S-071813

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5146-001

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-49D-071713

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5070-004

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-49I-071713

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5070-005

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 10.7 | | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-54D-071613

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5022-004

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 3.4 | I | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-54I-071713

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5070-002

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-54S-071713

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5070-003

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-55I-071613

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5022-002

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 41.1 | | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW-55S-071613

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5022-003

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 2.5 | I | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-MW55D-071513

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG4994-002

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

INORGANIC ANALYSIS DATA SHEET

**Lab Name: Katahdin Analytical Services** **Client Field ID:** JM30-RB-071613

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 **Lab Sample ID:** SG5022-005

**Concentration Units :** ug/L

| CAS No. | Analyte | Concentration | C | Q | M | DF | LOQ | ADJUSTED MDL | LOD |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | LEAD, TOTAL | 1.07 | U | | P | 1 | 5.0 | 1.07 | 4.0 |

**Comments:**

# APPENDIX C
# SUPPORT DOCUMENTATION

**SDG NARRATIVE**
**KATAHDIN ANALYTICAL SERVICES**
**TETRA TECH NUS**
**OLF SAUFLEY FIELD, FL – CTO JM30**
**SDG: CTOJM30-2**
**SG4994, SG5022, SG5070 and SG5146**
**PROJECT MANAGER: FRANK LESESNE**

## Sample Receipt

The following samples were received on July 16, 17, 18 and 19 2013 and were logged in under Katahdin Analytical Services work order numbers SG4994, SG5022, SG5070 and SG5146 for a hardcopy due date of August 07, 2013.

| KATAHDIN Sample No. | TTNUS Sample Identification |
|---|---|
| SG4994-1 | TRIP BLANK |
| SG4994-2 | JM30-MW55D-071513 |
| SG5022-1 | TRIP BLANK |
| SG5022-2 | JM30-MW-55I-071613 |
| SG5022-3 | JM30-MW-55S-071613 |
| SG5022-4 | JM30-MW-54D-071613 |
| SG5022-5 | JM30-RB-071613 |
| SG5070-1 | TRIP BLANK |
| SG5070-2 | JM30-MW-54I-071713 |
| SG5070-3 | JM30-MW-54S-071713 |
| SG5070-4 | JM30-MW-49D-071713 |
| SG5070-5 | JM30-MW-49I-071713 |
| SG5070-6 | JM30-FD-071713 |
| SG5146-1 | JM30-MW-29S-071813 |

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Kelly Perkins**. This narrative is an integral part of the Report of Analysis.

## Organics Analysis

The samples of SDG CTOJM30-2 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and

Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or Method for Determination of Petroleum Range Organics (Method #FL-PRO), Florida Department of Environmental Protection, November 1, 1995, and/or for the specific methods listed below or on the Report of Analysis.

Sample SG4994-2 was used for the matrix spike (MS) and matrix spike duplicate (MSD), as per client request.

8260 Analysis

Samples SG5070-5DL and 6DL were manually integrated for the analyte1,2-dichloroethane. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The target analyte carbon disulfide was detected below ½ the reporting limit in the method blank WG127394-2. According to the DoD QSM section D.1.1.1, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit. Since the method blank was acceptable, no further action was taken.

The independent check standard (file C1828), associated with the initial calibration analyzed on the C instrument on 07/12/13 had low concentrations for the target analytes acetone, 2-butanone, 1,2,3-trichlorobenzene, and methyl acetate, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL.

The calibration verification standards (files C1990 and C2057) had low responses for the target analyte chloromethane. The CV (file C2013) had low responses for the target analytes chloromethane, chloroethane, and high responses for 4-methyl-2-pentanone and bromoform. These responses resulted in %D's that exceeded the DoD QSM version 4.1 acceptance limits of 20%.

8270C SIM Analysis

The independent check standard (file G8981) associated with the initial calibration on the G instrument on 07/19/2013 had a low concentration for the target analyte dibenzo(a,h)anthracene and high concentrations for naphthalene and 2-methylnaphthalene, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

The CV (file G8992) had a low response for the target analyte dibenzo(a,h)anthracene. The CV's (files G9029 and G9045) had high responses for the surrogate fluorene-d10. The CV (file G9068) had a low response for the target analyte dibenzo(a,h)anthracene and high responses for pyrene and the surrogate fluorene-d10. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived limits for the full list of spiked compounds. Although DoD QSM acceptance limits were requested for this project, laboratory established acceptance limits were used because the DoD QSM does not list acceptance limits for 8270SIM. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these statistical acceptance limits.

Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

The LCS and LCSD WG127240-2 and 3 had high recoveries for four spiked target analytes that were outside of the laboratory established acceptance limits. The LCSD WG127240-3 also had a high recovery for the surrogate 2-methylnaphthalene-d10, which was outside the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 18 target analytes is one analyte. If the DoD QSM acceptance limits are applied, the LCS and LCSD had acceptable recoveries for the spiked analytes, after factoring the allowable number of exceedances. Therefore, no further action was taken.

The LCS WG127133-2 had high recoveries for five spiked target analytes that were outside of the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 18 target analytes is one analyte. Since the associated LCSD was acceptable, after factoring the allowable number of exceedances, no further action was taken.

FL-PRO Analysis

Samples SG5022-2, SG5070-5 and 6 had low recoveries for the two surrogates o-terphenyl and n-triacontane-d62 that were outside of the method acceptance limits. The samples were reextracted six or seven days outside of hold time and had similar deviations. The results from both extractions are reported.

Sample SG5146-1 had a low recovery for the surrogate o-terphenyl that was outside of the method acceptance limits. The recovery for the second surrogate n-triacontane-d62 was acceptable. The associated LCSD WG127381-3 had a low recovery for the surrogate o-terphenyl, but the recovery for petroleum range organics was acceptable. For these reasons, no further action was taken.

The LCS WG127831-2, LCSD WG12381-3, and MS/MSD WG127381-4 and 5 had low recoveries for one or both surrogates that were outside of the method acceptance limits. Since the spike recoveries were acceptable, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

**Metals Analysis**

The samples of SDG CTOJM30-2 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Numbers SG4994-2, SG5022-(2-5), SG5070-(2-6) and SG5146-1 were digested for ICP analysis on 07/24/13 (QC Batch GG24ICW1) in accordance with USEPA Method 3010A. Katahdin Sample Number SG4994-2 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG CTOJM30-2 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SG4994-2 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SG4994-2 is within the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for lead.

The serial dilution analysis of Katahdin Sample Number SG4994-2 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

The measured recovery of lead in post-digestion spiked aliquot of Katahdin Sample Number SG4994-2 is within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

Reporting of Metals Results

Analytical results for client samples have been reported down to the laboratory's method detection limits (MDLs) throughout the accompanying data package. These MDLs have been adjusted for each sample based on the sample amounts used in preparation and analysis. Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "I" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the MDL is listed in the concentration column. These LOQ's and MDLs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Katahdin ANALYTICAL SERVICES

nelac

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
080713

Leslie Dimond
Quality Assurance Officer

SG4444

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0834 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Saufley - Site 4 | F. Legesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER: Fed Ex | | CITY, STATE: Scarborough, ME |

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

| DATE YEAR | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | LL PAHs | TRPH | Fl-Pro | LEAD 6010C | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONTAINER TYPE PLASTIC (P) or GLASS (G) | | | | | | | | | G | G | G | G | P | | | | |
| PRESERVATIVE USED | | | | | | | | | HCl | ICE | HCl | ICE | HNO3 | | | | |
| 07/2013 | | | | | | | | | | | | | | | | | |
| 15 | 1420 | Trip Blank | QC | NA | NA | QC | LAB PREP | 3 | 3 | | | | | | | | |
| 1 | 1455 | JM30-MW55D-071513 | 55D | 133 | 143 | GW | G | 24 | 9 | 6 | 6 | 3 | | | | | MS/MSD |
| | | | | | | | | | | | | | | | | | Cool To 4°C |

| 1. RELINQUISHED BY | DATE | TIME | 1. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| K. Alex Murphy | 7-15-2013 | 1650 | Dan Medli | 7-16-13 | 1030 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |

COMMENTS

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

4/02R
FORM NO. TINUS-001

S100005

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0832 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Sanford - Site 4 | F. Legesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8464 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER: Fed Ex | | CITY, STATE: Scarborough, ME |

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

565022

| DATE YEAR 07/2013 | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B (CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: HCl) | TRPH Flo-Prep (HCl) | LLPAHs (ICE) | Lead 6010C (HNO3) | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 0810 | Trip Blank | QC | NA | NA | QC | Lab Prep | 3 | 3 | | | | | | | |
| | 1030 | JM30-MW-55I-071613 | 55I | 85 | 95 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | High Turbidity |
| | 1235 | JM30-MW-55S-071613 | 55S | 36 | 51 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | High Turbidity |
| | 1405 | JM30-MW-54D-071613 | 54D | 113 | 123 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | |
| | 1445 | JM30-RB-071613 | QC | NA | NA | QC | G | 8 | 3 | 2 | 2 | 1 | | | | |

| | DATE | TIME | | DATE | TIME |
|---|---|---|---|---|---|
| 1. RELINQUISHED BY: K. Alex Murphy | 7-16-2013 | 1550 | 1. RECEIVED BY: | 7-17-13 | 0700 |
| 2. RELINQUISHED BY | | | 2. RECEIVED BY | | |
| 3. RELINQUISHED BY | | | 3. RECEIVED BY | | |

COMMENTS

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

4/02R
FORM NO. TtNUS-001

000016

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0830 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Saufley - Site 4 | F. Lesesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER | | CITY, STATE: Scarborough, ME |

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

SG5070

| DATE YEAR 07/2013 | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | TPH Fro-Pro | LL PAHs | LEAD 6010C | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONTAINER TYPE PLASTIC (P) or GLASS (G) | | | | | | | | | G | G | G | P | | | | |
| PRESERVATIVE USED | | | | | | | | | HCl | HCl | ICE | HNO3 | | | | |
| 17 | 0710 | TRIPBLANK | QC | NA | NA | QC | LAB PREP | 3 | 3 | — | — | — | — | — | — | |
| | 0825 | JM30-MW-54I-071713 | 54I | 60 | 70 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1100 | JM30-MW-54S-071713 | 54S | 16 | 31 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1225 | JM30-MW-49D-071713 | 49D | 123 | 133 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1525 | JM30-MW-49I-071713 | 49I | 70 | 80 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | High Turbidity |
| | 0000 | JM30-FD-071713 | \ | \ | \ | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |

| 1. RELINQUISHED BY | DATE | TIME | 1. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| K. Alex Murphy | 7-17-13 | 1650 | | 7-18-13 | 0910 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| | | | | | |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |
| | | | | | |

COMMENTS

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4/02R
FORM NO. TINUS-001

000017

**Tetra Tech, Inc.**

CHAIN OF CUSTODY | NUMBER No. 0091 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Samfley Site 4 | F. Lesesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER | | CITY, STATE: Scarborough, ME |

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

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

PRESERVATIVE USED: HCl, ICE, HCl, HNO3

| DATE YEAR 07/2013 | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | LL PAHs | TRPH FL-PRO | LEAD 6010C | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0945 | 4430-MW-29S-071813 | 29S | 23 | 38 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | | |

| 1. RELINQUISHED BY | DATE | TIME | 1. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| K. Alex Murphy | 7-18-13 | 1200 | | 7-19-13 | 0820 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| | | | | | |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |
| | | | | | |

COMMENTS

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

4/02R
FORM NO. TINUS-001

0000018

# HOLDTIME

**SDG** CTOJM30-2

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | JM30-MW55D-071513 | SG4994-002 | NM | 07/15/2013 | 07/24/2013 | 07/25/2013 | 9 | 1 | 10 |
| M | UG/L | JM30-RB-071613 | SG5022-005 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-MW-55I-071613 | SG5022-002 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-MW-54S-071713 | SG5070-003 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-54I-071713 | SG5070-002 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-54D-071613 | SG5022-004 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-MW-49I-071713 | SG5070-005 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-49D-071713 | SG5070-004 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-29S-071813 | SG5146-001 | NM | 07/18/2013 | 07/24/2013 | 07/25/2013 | 6 | 1 | 7 |
| M | UG/L | JM30-FD-071713 | SG5070-006 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-55S-071613 | SG5022-003 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| OV | % | JM30-FD-071713 | SG5070-6 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | % | TRIP BLANK | SG5022-1 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | % | TRIP BLANK | SG4994-1 | NM | 07/15/2013 | 07/22/2013 | 07/22/2013 | 7 | 0 | 7 |

## COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

**Lab Name: Katahdin Analytical Services**

**SDG Name:** CTOJM30-2 **SOW No.** SW846

| Client Field ID | Lab Sample ID |
|---|---|
| JM30-FD-071713 | SG5070-006 |
| JM30-MW-29S-071813 | SG5146-001 |
| JM30-MW-49D-071713 | SG5070-004 |
| JM30-MW-49I-071713 | SG5070-005 |
| JM30-MW-54D-071613 | SG5022-004 |
| JM30-MW-54I-071713 | SG5070-002 |
| JM30-MW-54S-071713 | SG5070-003 |
| JM30-MW-55I-071613 | SG5022-002 |
| JM30-MW-55S-071613 | SG5022-003 |
| JM30-MW55D-071513 | SG4994-002 |
| JM30-MW55D-071513 | SG4994-002D |
| JM30-MW55D-071513 | SG4994-002S |
| JM30-RB-071613 | SG5022-005 |

| | |
|---|---|
| Were ICP interelement corrections applied ? | Yes |
| Were ICP background corrections applied ? | Yes |
| If yes - were raw data generated before application of background corrections ? | No |

**Comments:**

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: August 7, 2013 Title: Senior Chemist

ANALYSIS RUN LOG

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

**Instrument ID:** THERMO ICAP 6500 **File Name:** IGG25A

**Date:** 7/25/2013 **Method:** P

| Lab Sample ID | Client ID | D.F. | Time | Elements | | |
|---|---|---|---|---|---|---|
| Blank | | 1 | 14:24 | AL | CA | FE PB MG |
| Std 1 | | 1 | 14:28 | AL | CA | FE PB MG |
| ICV | | 1 | 14:33 | AL | CA | FE PB MG |
| ICB | | 1 | 14:37 | AL | CA | FE PB MG |
| PQL | | 1 | 14:41 | AL | CA | FE PB MG |
| ICSA | | 1 | 14:46 | AL | CA | FE PB MG |
| ICSAB | | 1 | 14:50 | AL | CA | FE PB MG |
| CCV | | 1 | 14:55 | AL | CA | FE PB MG |
| CCB | | 1 | 14:59 | AL | CA | FE PB MG |
| ZZZZZZ | | 1 | 15:04 | | | |
| ZZZZZZ | | 1 | 15:08 | | | |
| ZZZZZZ | | 1 | 15:13 | | | |
| ZZZZZZ | | 1 | 15:17 | | | |
| ZZZZZZ | | 5 | 15:22 | | | |
| ZZZZZZ | | 1 | 15:26 | | | |
| ZZZZZZ | | 1 | 15:31 | | | |
| ZZZZZZ | | 1 | 15:35 | | | |
| ZZZZZZ | | 1 | 15:40 | | | |
| ZZZZZZ | | 1 | 15:44 | | | |
| CCV | | 1 | 15:49 | AL | CA | FE PB MG |
| CCB | | 1 | 15:53 | AL | CA | FE PB MG |
| ZZZZZZ | | 1 | 15:57 | | | |
| ZZZZZZ | | 1 | 16:02 | | | |
| ZZZZZZ | | 5 | 16:06 | | | |
| ZZZZZZ | | 1 | 16:11 | | | |
| ZZZZZZ | | 1 | 16:15 | | | |
| ZZZZZZ | | 1 | 16:20 | | | |
| ZZZZZZ | | 1 | 16:24 | | | |
| ZZZZZZ | | 1 | 16:29 | | | |
| ZZZZZZ | | 1 | 16:33 | | | |
| ZZZZZZ | | 5 | 16:38 | | | |
| CCV | | 1 | 16:42 | AL | CA | FE PB MG |
| CCB | | 1 | 16:46 | AL | CA | FE PB MG |
| ZZZZZZ | | 1 | 16:51 | | | |
| ZZZZZZ | | 1 | 16:55 | | | |
| ZZZZZZ | | 1 | 17:00 | | | |
| ZZZZZZ | | 1 | 17:04 | | | |
| ZZZZZZ | | 1 | 17:09 | | | |
| ZZZZZZ | | 1 | 17:13 | | | |
| ZZZZZZ | | 1 | 17:17 | | | |
| ZZZZZZ | | 1 | 17:22 | | | |
| ZZZZZZ | | 1 | 17:26 | | | |
| ZZZZZZ | | 1 | 17:31 | | | |
| CCV | | 1 | 17:35 | AL | CA | FE PB MG |
| CCB | | 1 | 17:40 | AL | CA | FE PB MG |
| ZZZZZZ | | 1 | 17:44 | | | |
| ZZZZZZ | | 1 | 17:49 | | | |
| ZZZZZZ | | 1 | 17:53 | | | |
| ZZZZZZ | | 1 | 17:58 | | | |
| ZZZZZZ | | 1 | 18:02 | | | |

**FORM XIV - IN**

ANALYSIS RUN LOG

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

**Instrument ID:** THERMO ICAP 6500 **File Name:** IGG25A

**Date:** 7/25/2013 **Method:** P

| Lab Sample ID | Client ID | D.F. | Time | Elements |
|---|---|---|---|---|
| ZZZZZZ | | 10 | 18:07 | |
| ZZZZZZ | | 1 | 18:11 | |
| ZZZZZZ | | 1 | 18:16 | |
| ZZZZZZ | | 5 | 18:20 | |
| ZZZZZZ | | 1 | 18:25 | |
| CCV | | 1 | 18:29 | AL CA FE PB MG |
| CCB | | 1 | 18:34 | AL CA FE PB MG |
| ZZZZZZ | | 5 | 18:38 | |
| ZZZZZZ | | 1 | 18:43 | |
| ZZZZZZ | | 1 | 18:47 | |
| ZZZZZZ | | 1 | 18:52 | |
| ZZZZZZ | | 1 | 18:56 | |
| ZZZZZZ | | 1 | 19:01 | |
| ZZZZZZ | | 1 | 19:05 | |
| ZZZZZZ | | 1 | 19:10 | |
| ZZZZZZ | | 1 | 19:15 | |
| ZZZZZZ | | 1 | 19:19 | |
| CCV | | 1 | 19:24 | AL CA FE PB MG |
| CCB | | 1 | 19:28 | AL CA FE PB MG |
| ZZZZZZ | | 1 | 19:33 | |
| ZZZZZZ | | 1 | 19:37 | |
| ZZZZZZ | | 1 | 19:42 | |
| ZZZZZZ | | 1 | 19:46 | |
| ZZZZZZ | | 1 | 19:51 | |
| ZZZZZZ | | 5 | 19:55 | |
| ZZZZZZ | | 1 | 20:00 | |
| ZZZZZZ | | 1 | 20:04 | |
| ZZZZZZ | | 1 | 20:08 | |
| ZZZZZZ | | 1 | 20:13 | |
| CCV | | 1 | 20:17 | AL CA FE PB MG |
| CCB | | 1 | 20:22 | AL CA FE PB MG |
| ZZZZZZ | | 1 | 20:26 | |
| ZZZZZZ | | 1 | 20:31 | |
| ZZZZZZ | | 1 | 20:35 | |
| PBWGG24ICW1 | | 1 | 20:40 | PB |
| LCSWGG24ICW1 | | 1 | 20:44 | PB |
| SG4994-002 | JM30-MW55D-071513 | 1 | 20:48 | PB |
| SG4994-002L | JM30-MW55D-071513L | 5 | 20:53 | PB |
| SG4994-002A | JM30-MW55D-071513A | 1 | 20:58 | PB |
| SG4994-002D | JM30-MW55D-071513D | 1 | 21:02 | PB |
| SG4994-002S | JM30-MW55D-071513S | 1 | 21:06 | PB |
| CCV | | 1 | 21:11 | AL CA FE PB MG |
| CCB | | 1 | 21:15 | AL CA FE PB MG |
| SG5022-002 | JM30-MW-55I-071613 | 1 | 21:20 | PB |
| SG5022-003 | JM30-MW-55S-071613 | 1 | 21:24 | PB |
| SG5022-004 | JM30-MW-54D-071613 | 1 | 21:29 | PB |
| SG5022-005 | JM30-RB-071613 | 1 | 21:33 | PB |
| SG5070-002 | JM30-MW-54I-071713 | 1 | 21:38 | PB |
| SG5070-003 | JM30-MW-54S-071713 | 1 | 21:42 | PB |
| SG5070-004 | JM30-MW-49D-071713 | 1 | 21:47 | PB |
| SG5070-005 | JM30-MW-49I-071713 | 1 | 21:51 | PB |

**FORM XIV - IN**

# ANALYSIS RUN LOG

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

**Instrument ID:** THERMO ICAP 6500 **File Name:** IGG25A

**Date:** 7/25/2013 **Method:** P

| Lab Sample ID | Client ID | D.F. | Time | Elements | | | |
|---|---|---|---|---|---|---|---|
| SG5070-006 | JM30-FD-071713 | 1 | 21:56 | | | | PB |
| SG5146-001 | JM30-MW-29S-071813 | 1 | 22:00 | | | | PB |
| CCV | | 1 | 22:05 | AL | CA | FE | PB MG |
| CCB | | 1 | 22:09 | AL | CA | FE | PB MG |

PREPARATION LOG

**Lab Name: Katahdin Analytical Services** **QC Batch ID:** GG24ICW1

**Matrix:** WATER **SDG Name:** CTOJM30-2

**Method:** P **Prep Date:** 07/24/2013

| Client ID | Lab Sample ID | Initial (L) | Final (L) | Bottle ID |
|---|---|---|---|---|
| LCSWGG24ICW1 | LCSWGG24ICW1 | 0.05 | 0.05 | |
| PBWGG24ICW1 | PBWGG24ICW1 | 0.05 | 0.05 | |
| JM30-MW55D-071513 | SG4994-002 | 0.05 | 0.05 | J |
| JM30-MW55D-071513D | SG4994-002D | 0.05 | 0.05 | J |
| JM30-MW55D-071513S | SG4994-002S | 0.05 | 0.05 | J |
| JM30-MW-55I-071613 | SG5022-002 | 0.05 | 0.05 | D |
| JM30-MW-55S-071613 | SG5022-003 | 0.05 | 0.05 | D |
| JM30-MW-54D-071613 | SG5022-004 | 0.05 | 0.05 | D |
| JM30-RB-071613 | SG5022-005 | 0.05 | 0.05 | D |
| JM30-MW-54I-071713 | SG5070-002 | 0.05 | 0.05 | D |
| JM30-MW-54S-071713 | SG5070-003 | 0.05 | 0.05 | D |
| JM30-MW-49D-071713 | SG5070-004 | 0.05 | 0.05 | D |
| JM30-MW-49I-071713 | SG5070-005 | 0.05 | 0.05 | D |
| JM30-FD-071713 | SG5070-006 | 0.05 | 0.05 | D |
| JM30-MW-29S-071813 | SG5146-001 | 0.05 | 0.05 | D |

INSTRUMENT DETECTION LIMITS

**Lab Name: Katahdin Analytical Services** **Instrument Code:** 1

**Instrument Name:** THERMO ICAP 6500 **Date:** 5/21/2012

Concentration Units: ug/L

| Analyte | CRDL | IDL | M |
|---|---|---|---|
| ALUMINUM | 300 | 16.80 | P |
| CALCIUM | 100 | 8.73 | P |
| IRON | 100 | 3.95 | P |
| LEAD | 5.0 | 1.04 | P |
| MAGNESIUM | 100 | 7.72 | P |

LIMITS of DETECTION

**Lab Name: Katahdin Analytical Services** **Instrument Code:** 1

**Instrument Name:** THERMO ICAP 6500 **Date:** 1/19/2011

| Analyte | LOD | Units | M | EPA Prep./Anal. Method |
|---|---|---|---|---|
| LEAD | 4.00 | ug/L | P | SW846 3010A / SW846 6010C |

METHOD DETECTION LIMITS

**Lab Name: Katahdin Analytical Services** **Instrument Code:** 1

**Instrument Name:** THERMO ICAP 6500 **Date:** 1/19/2011

| Analyte | MDL | Units | M | EPA Prep./Anal. Method |
|---|---|---|---|---|
| LEAD | 1.07 | ug/L | P | SW846 3010A / SW846 6010C |

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

## SAMPLE: ICV

**File:** IGG25A Jul 25, 2013 14:33

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 10000.0 | 9867.00 | 98.7 |
| CALCIUM | 10000.0 | 10160.00 | 101.6 |
| IRON | 10000.0 | 9974.00 | 99.7 |
| LEAD | 400.0 | 402.90 | 100.7 |
| MAGNESIUM | 10000.0 | 10080.00 | 100.8 |

## SAMPLE: CCV

**File:** IGG25A Jul 25, 2013 14:55

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12620.00 | 101.0 |
| CALCIUM | 12500.0 | 12540.00 | 100.3 |
| IRON | 12500.0 | 12610.00 | 100.9 |
| LEAD | 500.0 | 514.00 | 102.8 |
| MAGNESIUM | 12500.0 | 13010.00 | 104.1 |

(1) Control Limits: Mercury 80-120; Other Metals 90-110

**FORM II (Part 1) - IN**

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 15:49

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12950.00 | 103.6 |
| CALCIUM | 12500.0 | 12800.00 | 102.4 |
| IRON | 12500.0 | 12920.00 | 103.4 |
| LEAD | 500.0 | 509.20 | 101.8 |
| MAGNESIUM | 12500.0 | 12860.00 | 102.9 |

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 16:42

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12640.00 | 101.1 |
| CALCIUM | 12500.0 | 12500.00 | 100.0 |
| IRON | 12500.0 | 12530.00 | 100.2 |
| LEAD | 500.0 | 504.40 | 100.9 |
| MAGNESIUM | 12500.0 | 12770.00 | 102.2 |

(1) Control Limits: Mercury 80-120; Other Metals 90-110

**FORM II (Part 1) - IN**

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 17:35

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 13110.00 | 104.9 |
| CALCIUM | 12500.0 | 13070.00 | 104.6 |
| IRON | 12500.0 | 13150.00 | 105.2 |
| LEAD | 500.0 | 508.50 | 101.7 |
| MAGNESIUM | 12500.0 | 12870.00 | 103.0 |

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 18:29

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12530.00 | 100.2 |
| CALCIUM | 12500.0 | 12770.00 | 102.2 |
| IRON | 12500.0 | 12640.00 | 101.1 |
| LEAD | 500.0 | 519.70 | 103.9 |
| MAGNESIUM | 12500.0 | 13140.00 | 105.1 |

(1) Control Limits: Mercury 80-120; Other Metals 90-110

**FORM II (Part I) - IN**

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 19:24

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12820.00 | 102.6 |
| CALCIUM | 12500.0 | 13170.00 | 105.4 |
| IRON | 12500.0 | 12720.00 | 101.8 |
| LEAD | 500.0 | 532.50 | 106.5 |
| MAGNESIUM | 12500.0 | 13500.00 | 108.0 |

**SAMPLE: CCV**

**File:** 1GG25A Jul 25, 2013 20:17

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12630.00 | 101.0 |
| CALCIUM | 12500.0 | 13070.00 | 104.6 |
| IRON | 12500.0 | 12600.00 | 100.8 |
| LEAD | 500.0 | 527.20 | 105.4 |
| MAGNESIUM | 12500.0 | 13370.00 | 107.0 |

(1) Control Limits: Mercury 80-120; Other Metals 90-110

**FORM II (Part 1) - IN**

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCV**

**File:** IGG25A Jul 25, 2013 21:11

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12780.00 | 102.2 |
| CALCIUM | 12500.0 | 13260.00 | 106.1 |
| IRON | 12500.0 | 12870.00 | 103.0 |
| LEAD | 500.0 | 534.80 | 107.0 |
| MAGNESIUM | 12500.0 | 13520.00 | 108.2 |

**SAMPLE: CCV**

**File:** IGG25A Jul 25, 2013 22:05

| Analyte | True | Found | %R (1) |
|---|---|---|---|
| ALUMINUM | 12500.0 | 12600.00 | 100.8 |
| CALCIUM | 12500.0 | 13130.00 | 105.0 |
| IRON | 12500.0 | 12670.00 | 101.4 |
| LEAD | 500.0 | 538.00 | 107.6 |
| MAGNESIUM | 12500.0 | 13630.00 | 109.0 |

(1) Control Limits: Mercury 80-120; Other Metals 90-110

**FORM II (Part 1) - IN**

2C

PQL STANDARD FOR AA AND ICP

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: PQL**

File: IGG25A Jul 25, 2013 14:41

| Analyte | TRUE | FOUND | % R |
|---|---|---|---|
| ALUMINUM | 300.0 | 302.70 | 100.9 |
| CALCIUM | 100.0 | 98.26 | 98.3 |
| IRON | 100.0 | 103.30 | 103.3 |
| LEAD | 5.0 | 5.00 | 100.0 |
| MAGNESIUM | 100.0 | 114.10 | 114.1 |

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: ICB**

File: IGG25A Jul 25, 2013 14:37

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -15.820 | 1 |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 14:59

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -12.030 | 1 |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 15:53

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | 8.730 | U |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 16:46

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -9.840 | I |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 17:40

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -11.880 | I |
| IRON | 4.461 | I |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 18:34

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -10.300 | I |
| IRON | 6.260 | I |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 19:28

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | 8.730 | U |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 20:22

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | 8.730 | U |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

**SAMPLE: CCB**

File: IGG25A Jul 25, 2013 21:15

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | -17.060 | I |
| IRON | 4.599 | I |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

## SAMPLE: CCB

File: IGG25A Jul 25, 2013 22:09

| Analyte | Result | C |
|---|---|---|
| ALUMINUM | 16.800 | U |
| CALCIUM | 8.730 | U |
| IRON | 3.950 | U |
| LEAD | 1.040 | U |
| MAGNESIUM | 7.720 | U |

3P

PREPARATION BLANKS

**Lab Name: Katahdin Analytical Services** **Sample ID:** PBWGG24ICW1

**Matrix:** WATER **SDG Name:** CTOJM30-2

**QC Batch ID:** GG24ICW1

**Concentration Units :** ug/L

| Analyte | RESULT | C |
|---|---|---|
| LEAD | 1.07 | U |

ICP INTERFERENCE CHECK SAMPLE

**Lab Name: Katahdin Analytical Services** **SDG Name:** CTOJM30-2

Concentration Units: ug/L

**SAMPLE: ICSA**

File: 1GG25A Jul 25, 2013 14:46

| Analyte | TRUE | FOUND | % R |
|---|---|---|---|
| ALUMINUM | 500000 | 495800 | 99.2 |
| CALCIUM | 500000 | 471800 | 94.4 |
| IRON | 200000 | 190100 | 95.0 |
| LEAD | 0 | 4 | |
| MAGNESIUM | 500000 | 435200 | 87.0 |

**SAMPLE: ICSAB**

File: 1GG25A Jul 25, 2013 14:50

| Analyte | TRUE | FOUND | % R |
|---|---|---|---|
| ALUMINUM | 500000 | 474000 | 94.8 |
| CALCIUM | 500000 | 465600 | 93.1 |
| IRON | 200000 | 180700 | 90.3 |
| LEAD | 50 | 45 | 90.0 |
| MAGNESIUM | 500000 | 443100 | 88.6 |

5A

SPIKE SAMPLE RECOVERY

**Lab Name: Katahdin Analytical Services** | **Client Field ID:** JM30-MW55D-071513S

**Matrix:** WATER | **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 | **Lab Sample ID:** SG4994-002S

**Concentration Units :** ug/L

| Analyte | Spiked Sample Result | C | Sample Result | C | Spike Added | %R | Q | Control Limits (%R) Low | High | M |
|---|---|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 108.1000 | | -0.1880 | U | 100 | 108.1 | | 80 | 120 | P |

**Comments:**

5B

POST DIGEST SPIKE SAMPLE RECOVERY

**Lab Name: Katahdin Analytical Services** | **Client Field ID:** JM30-MW55D-071513S

**Matrix:** WATER | **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 | **Lab Sample ID:** SG4994-002A

**Concentration Units : ug/L**

| Analyte | Spiked Sample Result | C | Sample Result | C | Spike Added | %R | Q | Control Limits (%R) Low | High | M |
|---|---|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 530.2000 | | -0.1880 | U | 500 | 106.0 | | 75 | 125 | P |

**Comments:**

DUPLICATES

**Lab Name: Katahdin Analytical Services** | **Client Field ID:** JM30-MW55D-071513D

**Matrix:** WATER | **SDG Name:** CTOJM30-2

**Percent Solids:** 0.00 | **Lab Sample ID:** SG4994-002D

**Concentration Units :** ug/L

| Analyte | Control Limits | Sample Result | C | Duplicate Result | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | | -0.1880 | U | -0.1090 | U | | | P |

**Comments:**

LABORATORY CONTROL SAMPLES

**Lab Name: Katahdin Analytical Services** **Sample ID:** LCSWGG241CW1

**Matrix:** WATER **SDG Name:** CTOJM30-2

**QC Batch ID:** GG241CW1

**Concentration Units :** ug/L

| Analyte | TRUE | FOUND | % R | LIMITS (%) | |
|---|---|---|---|---|---|
| LEAD | 100.00 | 108.90 | 108.9 | 80 | 120 |

ICP SERIAL DILUTION

**Lab Name: Katahdin Analytical Services**

**Matrix:** WATER

**Client Field ID:** JM30-MW55D-071513L

**SDG Name:** CTOJM30-2

**Lab Sample ID:** SG4994-002L

**Concentration Units: ug/L**

| Analyte | Sample Result | C | Dilution Result | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | -0.19 | U | -4.75 | U | | | P |

Sample JM30-MW-555-071613
Lead rep. result 2.5 ug/L

## SG5022-003

Method Name: K6010-2011 Method Revision: 845
Analyst Name: EAM
Acquire Date: 7/25/2013 9:24:43PM Sample Type: Unknown

| Elem | Flags | Avg | Units | Stddev | %RSD | Intensity Ratio |
|---|---|---|---|---|---|---|
| Ag3280_A | | 0.2333 | ug/L | 0.2731 | 117.1 | -43.80 |
| Al3961_R | | 4,528 | ug/L | 110.6 | 2.443 | 1,873 |
| As1891_A | | 3.497 | ug/L | 0.5025 | 14.37 | -0.9611 |
| Au2427_A | | -0.5386 | ug/L | 1.639 | 304.4 | -3.174 |
| B_2089_A | | 17.21 | ug/L | 0.2985 | 1.734 | 16.75 |
| Ba4554_R | | 63.65 | ug/L | 1.855 | 2.914 | 1,738 |
| Be3130_R | | 0.1634 | ug/L | 0.1062 | 65.00 | -5.292 |
| Ca3158_R | | 10,030 | ug/L | 233.9 | 2.331 | 7,131 |
| Cd2265_A | | 0.01308 | ug/L | 0.04663 | 356.5 | 4.601 |
| Co2286_A | | 2.729 | ug/L | 0.3615 | 13.25 | 16.65 |
| Cr2677_A | | 25.25 | ug/L | 0.1102 | 0.4363 | 330.7 |
| Cu3273_A | | 4.677 | ug/L | 0.2648 | 5.661 | 77.61 |
| Fe2599_R | | 5,588 | ug/L | 174.1 | 3.115 | 4,506 |
| K_7664_R | | 2,302 | ug/L | 43.58 | 1.893 | 981.9 |
| Li6707_R | | 0.09416 | ug/L | 0.1599 | 169.8 | 7.512 |
| Mg2025_A | | 2,666 | ug/L | 72.12 | 2.705 | 481.3 |
| Mn2576_R | | 285.6 | ug/L | 6.676 | 2.337 | 1,267 |
| Mo2020_A | | 5.827 | ug/L | 0.05025 | 0.8625 | 9.739 |
| Na5895_R | | 6,523 | ug/L | 82.47 | 1.264 | 7,351 |
| Ni2316_A | | 14.67 | ug/L | 0.4286 | 2.921 | 22.48 |
| Pb2203_A | | 2.515 | ug/L | 1.116 | 44.37 | 1.635 |
| Sb2068_A | | 0.4053 | ug/L | 1.352 | 333.5 | 1.053 |
| Se1960_A | | 1.210 | ug/L | 5.613 | 463.8 | -0.7660 |
| Si2516_R | | 9,254 | ug/L | 280.9 | 3.035 | 2,015 |
| Sn1899_A | | 0.7888 | ug/L | 1.099 | 139.3 | 0.3437 |
| Sr4215_R | | 36.77 | ug/L | 0.9707 | 2.640 | 1,303 |
| Ti3349_A | | 58.08 | ug/L | 1.884 | 3.245 | 1,367 |
| Tl1908_A | | 0.4398 | ug/L | 0.9158 | 208.2 | -0.6761 |
| V_2924_A | | 9.733 | ug/L | 0.2120 | 2.178 | 92.31 |
| Zn2062_A | | 8.735 | ug/L | 0.2991 | 3.424 | 24.48 |
| Y_3600_R | | 12,406 | Cts/S | 112.67 | 0.90814 | 12,406 |
| Y_2243_A | | 6,780.5 | Cts/S | 142.72 | 2.1049 | 6,780.5 |
| Y_3600_A | | 204,520 | Cts/S | 1,208.8 | 0.59107 | 204,520 |

## SG5022-004

Method Name: K6010-2011 Method Revision: 845
Analyst Name: EAM
Acquire Date: 7/25/2013 9:29:14PM Sample Type: Unknown

| Elem | Flags | Avg | Units | Stddev | %RSD | Intensity Ratio |
|---|---|---|---|---|---|---|
| Ag3280_A | | 0.2221 | ug/L | 0.2429 | 109.4 | -31.58 |
| Al3961_R | | 916.9 | ug/L | 20.19 | 2.202 | 373.9 |
| As1891_A | | 0.8090 | ug/L | 0.7412 | 91.62 | -1.483 |
| Au2427_A | | 0.7322 | ug/L | 0.8060 | 110.1 | -0.2122 |
| B_2089_A | | 16.26 | ug/L | 0.7688 | 4.729 | 15.86 |
| Ba4554_R | | 31.42 | ug/L | 0.4018 | 1.279 | 842.1 |
| Be3130_R | | 0.1106 | ug/L | 0.006620 | 5.985 | -6.918 |
| Ca3158_R | | 4,416 | ug/L | 15.10 | 0.3419 | 3,102 |
| Cd2265_A | | -0.05119 | ug/L | 0.02079 | 40.62 | 1.494 |
| Co2286_A | | 0.8684 | ug/L | 0.006889 | 0.7933 | 10.58 |
| Cr2677_A | | 17.40 | ug/L | 0.02789 | 0.1603 | 232.1 |
| Cu3273_A | | 4.133 | ug/L | 0.2656 | 6.426 | 72.42 |
| Fe2599_R | | 2,737 | ug/L | 6.797 | 0.2483 | 2,183 |
| K_7664_R | | 661.0 | ug/L | 18.59 | 2.812 | 242.3 |
| Li6707_R | | -1.591 | ug/L | 0.3110 | 19.55 | -4.343 |
| Mg2025_A | | 836.4 | ug/L | 6.523 | 0.7799 | 150.3 |
| Mn2576_R | | 34.52 | ug/L | 0.1079 | 0.3125 | 148.7 |
| Mo2020_A | | 3.884 | ug/L | 0.08671 | 2.232 | 6.379 |

**Tetra Tech INC** **INTERNAL CORRESPONDENCE**

| | | | |
|---|---|---|---|
| **TO:** | **F. LESESNE** | **DATE:** | **OCTOBER 1, 2013** |
| **FROM:** | **JOSEPH KALINYAK** | **COPIES:** | **DV FILE** |

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC / PAH / TPH**
**SAUFLEY FIELD, CTO JM30**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM30-2**

**SAMPLES:** 14 / Aqueous / VOC

| | | |
|---|---|---|
| JM30-FD-071713 | JM30-MW-29S-071813 | JM30-MW-49D-071713 |
| JM30-MW-49I-071713 | JM30-MW-54D-071613 | JM30-MW-54I-071713 |
| JM30-MW-54S-071713 | JM30-MW-55I-071613 | JM30-MW-55S-071613 |
| JM30-MW55D-071513 | JM30-RB-071613 | TRIP BLANK_20130715 |
| TRIP BLANK_20130716 | TRIP BLANK_20130717 | |

11 / Aqueous / PAH / TPH

| | | |
|---|---|---|
| JM30-FD-071713 | JM30-MW-29S-071813 | JM30-MW-49D-071713 |
| JM30-MW-49I-071713 | JM30-MW-54D-071613 | JM30-MW-54I-071713 |
| JM30-MW-54S-071713 | JM30-MW-55I-071613 | JM30-MW-55S-071613 |
| JM30-MW55D-071513 | JM30-RB-071613 | |

**Overview**

The sample set for Saufley Field, CTO JM30, SDG CTOJM30-2 consisted of fourteen (14) aqueous samples including three (3) aqueous trip blank samples, and one (1) aqueous rinse blank sample. All samples were analyzed for volatile organic compounds (VOC), as indicated above. Eleven (11) aqueous samples were analyzed for polycyclic aromatic hydrocarbons (PAH), and total petroleum hydrocarbons (TPH), as indicated above. One (1) field duplicate sample pair was included in the Sample Delivery Group (SDG); JM30-FD-071713 / JM30-MW-49I-071713.

The samples were collected by Tetra Tech on July 15, 16, 17, and 18, 2013 and analyzed by Katahdin Analytical Services, Inc. All analyses were conducted using USEPA SW-846 Methods 8260B for VOC, 8270C for PAHs, and FL-PRO for TPH, analytical and reporting protocols.

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

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- Initial and Continuing Calibration
- Laboratory Blank Analyses
- Surrogate Recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- * Internal Standard Recoveries
- * Field Duplicate Precision
- * Compound Quantitation

* • Compound Identification
* • Detection Limits

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

## VOC

The following VOC laboratory contaminants were detected in the method blank and trip blank samples at the following maximum concentrations.

| Analyte | Maximum Conc. µg/L | Action Level µg/L |
|---|---|---|
| Carbon disulfide (1) | 0.33 | 1.65 |
| Acetone (2) | 3.5 | 35.0 |

(1) Method blank sample WG127394-2 affecting samples JM30-MW-54D-071613, JM30-MW-54I-071713, JM30-MW-54S-071713, JM30-MW-55I-071613, JM30-MW-55S-071613, JM30-MW55D-071513, JM30-RB-071613, TRIP BLANK_20130715, TRIP BLANK_20130716, and TRIP BLANK_20130717.
(2) TRIP BLANK_20130715 affecting all samples.

An action level of ten times for the common laboratory contaminant acetone and five times for carbon disulfide was established to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample results less than the action level were qualified as non-detected, (U), for blank contamination. The trip blank samples and the rinse blank sample were not qualified for blank contamination issues.

The VOC initial calibration relative standard deviation (RSD) was greater than the 15% quality control limit for 2-hexanone on instrument GCMS-C on 7/12/13 affecting all VOC samples.

**Affected Samples:** All VOC samples
**Action:** The affected sample non-detected 2-hexanone results were qualified estimated, (UJ).

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for chloromethane for instrument GCMS-C on 07/22/13 @ 11:06.

**Affected Samples:**

| | | |
|---|---|---|
| JM30-MW-54D-071613 | JM30-MW-54I-071713 | JM30-MW-54S-071713 |
| JM30-MW-55I-071613 | JM30-MW-55S-071613 | JM30-MW55D-071513 |
| JM30-RB-071613 | TRIP BLANK_20130715 | TRIP BLANK_20130716 |
| TRIP BLANK_20130717 | | |

**Actions:** The positive and non-detected sample chloromethane results were qualified estimated, (J) and (UJ), respectively.

The CCV %Ds were greater than the 20% quality control limit for chloromethane, chloroethane, 4-methyl-2-pentanone, and bromoform for instrument GCMS-C on 07/23/13 @ 08:00.

**Affected Samples:**

| | | |
|---|---|---|
| JM30-FD-071713 | JM30-MW-49D-071713 | JM30-MW-49I-071713 |

**Actions:** The non-detected sample chloromethane, chloroethane, 4-methyl-2-pentanone, and bromoform results were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for chloromethane for instrument GCMS-C on 07/25/13 @ 08:55.

**Affected Sample:** JM30-MW-29S-071813

**Actions:** The non-detected sample chloromethane result was qualified estimated, (UJ).

The VOC matrix spike (MS) %R (low) and the MS/MS duplicate (MSD) result relative percent difference (RPD) were non-compliant for methyl acetate for spiked sample JM30-MW55D-071513.

**Affected Samples:** JM30-MW55D-071513

**Actions:** The non-detected methyl acetate result was not qualified as the MSD %R and the associated laboratory control sample were compliant.

## PAH

The CCV %D was greater than the 20% quality control limit for dibenzo(a,h)anthracene for instrument GCMS-G on 07/22/13 @ 10:21. No validation action was taken as only a method blank sample was affected.

The CCV %Ds were greater than the 20% quality control limit for pyrene and dibenzo(a,h)anthracene for instrument GCMS-G on 07/26/13 @ 11:45.

**Affected Samples:** JM30-FD-071713 and JM30-MW-29S-071813

**Actions:** The non-detected sample pyrene and dibenzo(a,h)anthracene results were qualified estimated, (UJ).

The laboratory control sample (LCS)/LCS duplicate (LCSD) RPD for 2-methylnaphthalene was greater than the 30% quality control limit for batch WG127133. No validation action was taken as both the LCS and the LCSD %Rs were compliant.

## TPH

The surrogate %Rs were less than the quality control limit for o-terphenyl (OTP) and n-triacontane-d62 (NTD) for samples JM30-FD-071713, JM30-MW-49I-071713, and JM30-MW-55I-071613. The samples were re-extracted and re-analyzed with improved compliant surrogate %Rs for NTD and improved but non-compliant %Rs for OTP. However, the samples were re-extracted outside of the sample to extraction hold time of 7 days.

**Affected Samples:**

JM30-FD-071713 JM30-MW-49I-071713 JM30-MW-55I-071613

**Actions:** The sample re-analysis results were reported/validated for the samples. Detected and non-detected TPH results were qualified estimated, (J) and (UJ), because the collection to extraction holding time was exceeded by six (6) days, and the o-terphenyl %Rs were below the quality control limit.

The surrogate %R for OTP was less than the quality control limit for sample JM30-MW-29S-071813. The sample was not re-analyzed.

**Affected Sample:** JM30-MW-29S-071813

**Actions:** The sample non-detected TPH result was qualified estimated, (UJ).

## Additional Comments

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

Samples JM30-MW-49I-071713 and JM30-FD-071713 were analyzed both undiluted and at a 10X dilution for VOCs. Only the benzene results, which were greater than the highest calibration level in the undiluted sample analysis, were validated/reported from the sample 10X dilution results.

## Executive Summary

**Laboratory Performance:** VOC analyte results were qualified for method blank and trip blank contamination. VOC sample analyte results were qualified for initial calibration RSD and CCV %D non-compliances. PAH sample analyte results were qualified for CCV %D non-compliances. TPH sample results were qualified for hold time and surrogate recovery non-compliances.

**Other Factors Affecting Data Quality:** Positive results reported below the LOQ but above the MDL were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the USEPA SW-846 Methods 8260B, 8270C, and FL-PRO, the USEPA Functional Guidelines for Organic Data Validation (June 2008), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (July 2013).

Tetra Tech
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# Appendix A

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

**Qualifier Codes:**

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

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02760** | NSAMPLE | TRIP BLANK_20130715 | | |
| **SDG: CTOJM30-2** | LAB_ID | SG4994-1 | | |
| **FRACTION: OV** | SAMP_DATE | 7/15/2013 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | UG/L | | |
| | PCT_SOLIDS | 0.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| 1,1,1-TRICHLOROETHANE | | 0.2 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.38 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.33 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.31 | U | |
| 1,1-DICHLOROETHANE | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.35 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.2 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.37 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.5 | U | |
| 1,2-DIBROMOETHANE | | 0.22 | U | |
| 1,2-DICHLOROBENZENE | | 0.15 | U | |
| 1,2-DICHLOROETHANE | | 0.2 | U | |
| 1,2-DICHLOROPROPANE | | 0.25 | U | |
| 1,3-DICHLOROBENZENE | | 0.26 | U | |
| 1,4-DICHLOROBENZENE | | 0.24 | U | |
| 2-BUTANONE | | 1.3 | U | |
| 2-HEXANONE | | 1.7 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.3 | U | |
| ACETONE | | 3.5 | J | P |
| BENZENE | | 0.26 | U | |
| BROMOCHLOROMETHANE | | 0.21 | U | |
| BROMODICHLOROMETHANE | | 0.33 | U | |
| BROMOFORM | | 0.23 | U | |
| BROMOMETHANE | | 0.49 | U | |
| CARBON DISULFIDE | | 0.25 | U | |
| CARBON TETRACHLORIDE | | 0.22 | U | |
| CHLOROBENZENE | | 0.22 | U | |
| CHLORODIBROMOMETHANE | | 0.3 | U | |
| CHLOROETHANE | | 0.55 | U | |
| CHLOROFORM | | 0.32 | U | |
| CHLOROMETHANE | | 0.36 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.21 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.19 | U | |
| CYCLOHEXANE | | 0.31 | U | |
| DICHLORODIFLUOROMETHANE | | 0.24 | U | |
| ETHYLBENZENE | | 0.21 | U | |

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02760** | NSAMPLE | TRIP BLANK_20130715 | | |
| **SDG: CTOJM30-2** | LAB_ID | SG4994-1 | | |
| **FRACTION: OV** | SAMP_DATE | 7/15/2013 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | UG/L | | |
| | PCT_SOLIDS | 0.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| ISOPROPYLBENZENE | | 0.23 | U | |
| M+P-XYLENES | | 0.59 | U | |
| METHYL ACETATE | | 0.53 | U | |
| METHYL CYCLOHEXANE | | 0.3 | U | |
| METHYL TERT-BUTYL ETHER | | 0.36 | U | |
| METHYLENE CHLORIDE | | 1.1 | U | |
| O-XYLENE | | 0.25 | U | |
| STYRENE | | 0.23 | U | |
| TETRACHLOROETHENE | | 0.4 | U | |
| TOLUENE | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.25 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.2 | U | |
| TRICHLOROETHENE | | 0.28 | U | |
| TRICHLOROFLUOROMETHANE | | 0.24 | U | |
| VINYL CHLORIDE | | 0.25 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-FD-071713 | | | JM30-FD-071713DL | | | JM30-MW-29S-071813 | | | JM30-MW-49D-071713 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-6 | | | SG5070-6DL | | | SG5146-1 | | | SG5070-4 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/17/2013 | | | 7/18/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | JM30-MW-49I-071713 | | | JM30-MW-49I-071713 | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1-TRICHLOROETHANE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.38 | U | | | | | 0.38 | U | | 0.38 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.33 | U | | | | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.31 | U | | | | | 0.31 | U | | 0.31 | U | |
| 1,1-DICHLOROETHANE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.35 | U | | | | | 0.35 | U | | 0.35 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.37 | U | | | | | 0.37 | U | | 0.37 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.5 | U | | | | | 0.5 | U | | 0.5 | U | |
| 1,2-DIBROMOETHANE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| 1,2-DICHLOROBENZENE | | 0.15 | U | | | | | 0.15 | U | | 0.15 | U | |
| 1,2-DICHLOROETHANE | | 11 | | | | | | 0.2 | U | | 0.2 | U | |
| 1,2-DICHLOROPROPANE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |
| 1,3-DICHLOROBENZENE | | 0.26 | U | | | | | 0.26 | U | | 0.26 | U | |
| 1,4-DICHLOROBENZENE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| 2-BUTANONE | | 1.3 | U | | | | | 1.3 | U | | 1.3 | U | |
| 2-HEXANONE | | 1.7 | UJ | C | | | | 1.7 | UJ | C | 1.7 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.3 | UJ | C | | | | 1.3 | U | | 1.3 | UJ | C |
| ACETONE | | 2.2 | U | | | | | 2.2 | U | | 2.2 | U | |
| BENZENE | | | | | 1300 | | | 0.26 | U | | 0.26 | U | |
| BROMOCHLOROMETHANE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| BROMODICHLOROMETHANE | | 0.33 | U | | | | | 0.33 | U | | 0.33 | U | |
| BROMOFORM | | 0.23 | UJ | C | | | | 0.23 | U | | 0.23 | UJ | C |
| BROMOMETHANE | | 0.49 | U | | | | | 0.49 | U | | 0.49 | U | |
| CARBON DISULFIDE | | 0.4 | J | P | | | | 0.25 | U | | 0.48 | J | P |
| CARBON TETRACHLORIDE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| CHLOROBENZENE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| CHLORODIBROMOMETHANE | | 0.3 | U | | | | | 0.3 | U | | 0.3 | U | |
| CHLOROETHANE | | 0.55 | UJ | C | | | | 0.55 | U | | 0.55 | UJ | C |
| CHLOROFORM | | 0.32 | U | | | | | 0.32 | U | | 0.32 | U | |
| CHLOROMETHANE | | 0.36 | UJ | C | | | | 0.36 | UJ | C | 0.36 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.19 | U | | | | | 0.19 | U | | 0.19 | U | |
| CYCLOHEXANE | | 37 | | | | | | 0.31 | U | | 0.31 | U | |
| DICHLORODIFLUOROMETHANE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| ETHYLBENZENE | | 4.1 | | | | | | 0.21 | U | | 0.21 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-49I-071713 | | | JM30-MW-49I-071713DL | | | JM30-MW-54D-071613 | | | JM30-MW-54I-071713 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-5 | | | SG5070-5DL | | | SG5022-4 | | | SG5070-2 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/17/2013 | | | 7/16/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1-TRICHLOROETHANE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.38 | U | | | | | 0.38 | U | | 0.38 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.33 | U | | | | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.31 | U | | | | | 0.31 | U | | 0.31 | U | |
| 1,1-DICHLOROETHANE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.35 | U | | | | | 0.35 | U | | 0.35 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.37 | U | | | | | 0.37 | U | | 0.37 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.5 | U | | | | | 0.5 | U | | 0.5 | U | |
| 1,2-DIBROMOETHANE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| 1,2-DICHLOROBENZENE | | 0.15 | U | | | | | 0.15 | U | | 0.15 | U | |
| 1,2-DICHLOROETHANE | | 9.6 | | | | | | 0.2 | U | | 0.2 | U | |
| 1,2-DICHLOROPROPANE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |
| 1,3-DICHLOROBENZENE | | 0.26 | U | | | | | 0.26 | U | | 0.26 | U | |
| 1,4-DICHLOROBENZENE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| 2-BUTANONE | | 1.3 | U | | | | | 1.3 | U | | 1.3 | U | |
| 2-HEXANONE | | 1.7 | UJ | C | | | | 1.7 | UJ | C | 1.7 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.3 | UJ | C | | | | 1.3 | U | | 1.3 | U | |
| ACETONE | | 2.2 | U | | | | | 2.2 | U | | 2.2 | U | |
| BENZENE | | | | | 1300 | | | 0.26 | U | | 0.26 | U | |
| BROMOCHLOROMETHANE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| BROMODICHLOROMETHANE | | 0.33 | U | | | | | 0.33 | U | | 0.33 | U | |
| BROMOFORM | | 0.23 | UJ | C | | | | 0.23 | U | | 0.23 | U | |
| BROMOMETHANE | | 0.49 | U | | | | | 0.49 | U | | 0.49 | U | |
| CARBON DISULFIDE | | 0.34 | J | P | | | | 0.25 | U | | 0.36 | U | A |
| CARBON TETRACHLORIDE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| CHLOROBENZENE | | 0.22 | U | | | | | 0.22 | U | | 0.22 | U | |
| CHLORODIBROMOMETHANE | | 0.3 | U | | | | | 0.3 | U | | 0.3 | U | |
| CHLOROETHANE | | 0.55 | UJ | C | | | | 0.55 | U | | 0.55 | U | |
| CHLOROFORM | | 0.32 | U | | | | | 2.3 | | | 0.32 | U | |
| CHLOROMETHANE | | 0.36 | UJ | C | | | | 0.36 | UJ | C | 0.36 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.21 | U | | | | | 0.21 | U | | 0.21 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.19 | U | | | | | 0.19 | U | | 0.19 | U | |
| CYCLOHEXANE | | 30 | | | | | | 0.31 | U | | 0.31 | U | |
| DICHLORODIFLUOROMETHANE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| ETHYLBENZENE | | 3.3 | | | | | | 0.21 | U | | 0.21 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-54S-071713 | | | JM30-MW55D-071513 | | | JM30-MW-55I-071613 | | | JM30-MW-55S-071613 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-3 | | | SG4994-2 | | | SG5022-2 | | | SG5022-3 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/15/2013 | | | 7/16/2013 | | | 7/16/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1-TRICHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 1,1-DICHLOROETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| 1,2-DIBROMOETHANE | | 0.22 | U | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| 1,2-DICHLOROBENZENE | | 0.15 | U | | 0.15 | U | | 0.15 | U | | 0.15 | U | |
| 1,2-DICHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,2-DICHLOROPROPANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,3-DICHLOROBENZENE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| 1,4-DICHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| 2-BUTANONE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 1.3 | U | |
| 2-HEXANONE | | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 1.3 | U | |
| ACETONE | | 2.2 | U | | 2.2 | U | | 2.4 | U | A | 2.3 | U | A |
| BENZENE | | 0.26 | U | | 52 | | | 0.26 | U | | 0.26 | U | |
| BROMOCHLOROMETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| BROMODICHLOROMETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| BROMOFORM | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| BROMOMETHANE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| CARBON DISULFIDE | | 0.36 | U | A | 0.55 | U | A | 0.48 | U | A | 0.28 | U | A |
| CARBON TETRACHLORIDE | | 0.22 | U | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| CHLOROBENZENE | | 0.22 | U | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| CHLORODIBROMOMETHANE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| CHLOROETHANE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| CHLOROFORM | | 0.32 | U | | 0.7 | J | P | 0.32 | U | | 0.32 | U | |
| CHLOROMETHANE | | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.19 | U | | 0.19 | U | | 0.19 | U | | 0.19 | U | |
| CYCLOHEXANE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| DICHLORODIFLUOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| ETHYLBENZENE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-RB-071613 | | | TRIP BLANK_20130716 | | | TRIP BLANK_20130717 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5022-5 | | | SG5022-1 | | | SG5070-1 | | |
| FRACTION: OV | SAMP_DATE | 7/16/2013 | | | 7/16/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1-TRICHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 1,1-DICHLOROETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| 1,2-DIBROMOETHANE | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| 1,2-DICHLOROBENZENE | | 0.15 | U | | 0.15 | U | | 0.15 | U | |
| 1,2-DICHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,2-DICHLOROPROPANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,3-DICHLOROBENZENE | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| 1,4-DICHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| 2-BUTANONE | | 4.8 | J | P | 1.3 | U | | 1.3 | U | |
| 2-HEXANONE | | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.3 | U | | 1.3 | U | | 1.3 | U | |
| ACETONE | | 5.7 | | | 3 | J | P | 2.2 | U | |
| BENZENE | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| BROMOCHLOROMETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| BROMODICHLOROMETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| BROMOFORM | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| BROMOMETHANE | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| CARBON DISULFIDE | | 0.33 | U | A | 0.25 | U | | 0.25 | U | |
| CARBON TETRACHLORIDE | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| CHLOROBENZENE | | 0.22 | U | | 0.22 | U | | 0.22 | U | |
| CHLORODIBROMOMETHANE | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| CHLOROETHANE | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| CHLOROFORM | | 0.32 | U | | 0.32 | U | | 0.32 | U | |
| CHLOROMETHANE | | 0.36 | UJ | C | 0.84 | J | CP | 0.36 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.19 | U | | 0.19 | U | | 0.19 | U | |
| CYCLOHEXANE | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| DICHLORODIFLUOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| ETHYLBENZENE | | 0.21 | U | | 0.21 | U | | 0.21 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-FD-071713 | | | JM30-FD-071713DL | | | JM30-MW-29S-071813 | | | JM30-MW-49D-071713 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-6 | | | SG5070-6DL | | | SG5146-1 | | | SG5070-4 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/17/2013 | | | 7/18/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | JM30-MW-49I-071713 | | | JM30-MW-49I-071713 | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ISOPROPYLBENZENE | | 2.7 | | | | | | 0.23 | U | | 0.23 | U | |
| M+P-XYLENES | | 66 | | | | | | 0.59 | U | | 0.59 | U | |
| METHYL ACETATE | | 0.53 | U | | | | | 0.53 | U | | 0.53 | U | |
| METHYL CYCLOHEXANE | | 16 | | | | | | 0.3 | U | | 0.3 | U | |
| METHYL TERT-BUTYL ETHER | | 0.36 | U | | | | | 0.36 | U | | 0.36 | U | |
| METHYLENE CHLORIDE | | 1.1 | U | | | | | 1.1 | U | | 1.1 | U | |
| O-XYLENE | | 2.3 | | | | | | 0.25 | U | | 0.25 | U | |
| STYRENE | | 0.23 | U | | | | | 0.23 | U | | 0.23 | U | |
| TETRACHLOROETHENE | | 0.4 | U | | | | | 0.4 | U | | 0.4 | U | |
| TOLUENE | | 2 | | | | | | 0.27 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| TRICHLOROETHENE | | 0.28 | U | | | | | 0.28 | U | | 0.28 | U | |
| TRICHLOROFLUOROMETHANE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| VINYL CHLORIDE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-49I-071713 | | | JM30-MW-49I-071713DL | | | JM30-MW-54D-071613 | | | JM30-MW-54I-071713 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-5 | | | SG5070-5DL | | | SG5022-4 | | | SG5070-2 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/17/2013 | | | 7/16/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ISOPROPYLBENZENE | | 2.1 | | | | | | 0.23 | U | | 0.23 | U | |
| M+P-XYLENES | | 53 | | | | | | 0.59 | U | | 0.59 | U | |
| METHYL ACETATE | | 0.53 | U | | | | | 0.53 | U | | 0.53 | U | |
| METHYL CYCLOHEXANE | | 13 | | | | | | 0.3 | U | | 0.3 | U | |
| METHYL TERT-BUTYL ETHER | | 0.36 | U | | | | | 0.36 | U | | 0.36 | U | |
| METHYLENE CHLORIDE | | 1.1 | U | | | | | 1.1 | U | | 1.1 | U | |
| O-XYLENE | | 1.9 | | | | | | 0.25 | U | | 0.25 | U | |
| STYRENE | | 0.23 | U | | | | | 0.23 | U | | 0.23 | U | |
| TETRACHLOROETHENE | | 0.4 | U | | | | | 0.4 | U | | 0.4 | U | |
| TOLUENE | | 1.6 | | | | | | 0.27 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.2 | U | | | | | 0.2 | U | | 0.2 | U | |
| TRICHLOROETHENE | | 0.28 | U | | | | | 0.28 | U | | 0.28 | U | |
| TRICHLOROFLUOROMETHANE | | 0.24 | U | | | | | 0.24 | U | | 0.24 | U | |
| VINYL CHLORIDE | | 0.25 | U | | | | | 0.25 | U | | 0.25 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-54S-071713 | | | JM30-MW55D-071513 | | | JM30-MW-55I-071613 | | | JM30-MW-55S-071613 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-3 | | | SG4994-2 | | | SG5022-2 | | | SG5022-3 | | |
| FRACTION: OV | SAMP_DATE | 7/17/2013 | | | 7/15/2013 | | | 7/16/2013 | | | 7/16/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ISOPROPYLBENZENE | | 0.23 | U | | 0.3 | J | P | 0.23 | U | | 0.23 | U | |
| M+P-XYLENES | | 0.59 | U | | 0.59 | U | | 0.59 | U | | 0.59 | U | |
| METHYL ACETATE | | 0.53 | U | | 0.53 | U | | 0.53 | U | | 0.53 | U | |
| METHYL CYCLOHEXANE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| METHYL TERT-BUTYL ETHER | | 0.36 | U | | 1.1 | | | 0.36 | U | | 0.36 | U | |
| METHYLENE CHLORIDE | | 1.1 | U | | 1.1 | U | | 1.1 | U | | 1.1 | U | |
| O-XYLENE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| STYRENE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| TETRACHLOROETHENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| TOLUENE | | 0.27 | U | | 0.27 | U | | 0.27 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| TRICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| TRICHLOROFLUOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| VINYL CHLORIDE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-RB-071613 | | | TRIP BLANK_20130716 | | | TRIP BLANK_20130717 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5022-5 | | | SG5022-1 | | | SG5070-1 | | |
| FRACTION: OV | SAMP_DATE | 7/16/2013 | | | 7/16/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ISOPROPYLBENZENE | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| M+P-XYLENES | | 0.59 | U | | 0.59 | U | | 0.59 | U | |
| METHYL ACETATE | | 0.53 | U | | 0.53 | U | | 0.53 | U | |
| METHYL CYCLOHEXANE | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| METHYL TERT-BUTYL ETHER | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| METHYLENE CHLORIDE | | 1.1 | U | | 1.1 | U | | 1.1 | U | |
| O-XYLENE | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| STYRENE | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| TETRACHLOROETHENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| TOLUENE | | 0.48 | J | P | 0.27 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| TRICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| TRICHLOROFLUOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| VINYL CHLORIDE | | 0.25 | U | | 0.25 | U | | 0.25 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-FD-071713 | | | JM30-MW-29S-071813 | | | JM30-MW-49D-071713 | | | JM30-MW-49I-071713 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-6RA | | | SG5146-1RA | | | SG5070-4 | | | SG5070-5 | | |
| FRACTION: PAH | SAMP_DATE | 7/17/2013 | | | 7/18/2013 | | | 7/17/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | JM30-MW-49I-071713 | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.065 | U | | 0.067 | U | | 0.067 | U | | 0.067 | U | |
| 2-METHYLNAPHTHALENE | | 0.074 | U | | 0.076 | U | | 0.075 | U | | 0.075 | U | |
| ACENAPHTHENE | | 0.062 | U | | 0.063 | U | | 0.063 | U | | 0.063 | U | |
| ACENAPHTHYLENE | | 0.052 | U | | 0.053 | U | | 0.053 | U | | 0.053 | U | |
| ANTHRACENE | | 0.042 | U | | 0.044 | U | | 0.043 | U | | 0.043 | U | |
| BENZO(A)ANTHRACENE | | 0.044 | U | | 0.046 | U | | 0.045 | U | | 0.045 | U | |
| BENZO(A)PYRENE | | 0.063 | U | | 0.065 | U | | 0.065 | U | | 0.065 | U | |
| BENZO(B)FLUORANTHENE | | 0.086 | U | | 0.088 | U | | 0.087 | U | | 0.087 | U | |
| BENZO(G,H,I)PERYLENE | | 0.062 | U | | 0.064 | U | | 0.064 | U | | 0.064 | U | |
| BENZO(K)FLUORANTHENE | | 0.047 | U | | 0.048 | U | | 0.048 | U | | 0.048 | U | |
| CHRYSENE | | 0.035 | U | | 0.036 | U | | 0.035 | U | | 0.035 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.067 | UJ | C | 0.069 | UJ | C | 0.069 | U | | 0.069 | U | |
| FLUORANTHENE | | 0.07 | U | | 0.072 | U | | 0.072 | U | | 0.072 | U | |
| FLUORENE | | 0.059 | U | | 0.06 | U | | 0.06 | U | | 0.06 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.05 | U | | 0.051 | U | | 0.051 | U | | 0.051 | U | |
| NAPHTHALENE | | 0.49 | | | 0.063 | U | | 0.063 | U | | 0.4 | | |
| PHENANTHRENE | | 0.049 | U | | 0.05 | U | | 0.05 | U | | 0.05 | U | |
| PYRENE | | 0.057 | UJ | C | 0.058 | UJ | C | 0.058 | U | | 0.058 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-54D-071613 | | | JM30-MW-54I-071713 | | | JM30-MW-54S-071713 | | | JM30-MW55D-071513 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5022-4 | | | SG5070-2 | | | SG5070-3 | | | SG4994-2 | | |
| FRACTION: PAH | SAMP_DATE | 7/16/2013 | | | 7/17/2013 | | | 7/17/2013 | | | 7/15/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.066 | U | | 0.068 | U | | 0.067 | U | | 0.065 | U | |
| 2-METHYLNAPHTHALENE | | 0.075 | U | | 0.077 | U | | 0.076 | U | | 0.073 | U | |
| ACENAPHTHENE | | 0.062 | U | | 0.064 | U | | 0.063 | U | | 0.061 | U | |
| ACENAPHTHYLENE | | 0.052 | U | | 0.054 | U | | 0.053 | U | | 0.051 | U | |
| ANTHRACENE | | 0.043 | U | | 0.044 | U | | 0.044 | U | | 0.042 | U | |
| BENZO(A)ANTHRACENE | | 0.045 | U | | 0.046 | U | | 0.046 | U | | 0.044 | U | |
| BENZO(A)PYRENE | | 0.064 | U | | 0.066 | U | | 0.065 | U | | 0.063 | U | |
| BENZO(B)FLUORANTHENE | | 0.086 | U | | 0.089 | U | | 0.088 | U | | 0.085 | U | |
| BENZO(G,H,I)PERYLENE | | 0.063 | U | | 0.065 | U | | 0.064 | U | | 0.062 | U | |
| BENZO(K)FLUORANTHENE | | 0.048 | U | | 0.049 | U | | 0.048 | U | | 0.047 | U | |
| CHRYSENE | | 0.035 | U | | 0.036 | U | | 0.036 | U | | 0.034 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.068 | U | | 0.07 | U | | 0.069 | U | | 0.067 | U | |
| FLUORANTHENE | | 0.071 | U | | 0.073 | U | | 0.072 | U | | 0.07 | U | |
| FLUORENE | | 0.059 | U | | 0.061 | U | | 0.06 | U | | 0.058 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.05 | U | | 0.052 | U | | 0.051 | U | | 0.05 | U | |
| NAPHTHALENE | | 0.062 | U | | 0.064 | U | | 0.063 | U | | 0.061 | U | |
| PHENANTHRENE | | 0.05 | U | | 0.051 | U | | 0.05 | U | | 0.048 | U | |
| PYRENE | | 0.057 | U | | 0.059 | U | | 0.058 | U | | 0.056 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-55I-071613 | | | JM30-MW-55S-071613 | | | JM30-RB-071613 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5022-2 | | | SG5022-3 | | | SG5022-5 | | |
| FRACTION: PAH | SAMP_DATE | 7/16/2013 | | | 7/16/2013 | | | 7/16/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.067 | U | | 0.065 | U | | 0.064 | U | |
| 2-METHYLNAPHTHALENE | | 0.075 | U | | 0.074 | U | | 0.073 | U | |
| ACENAPHTHENE | | 0.063 | U | | 0.062 | U | | 0.06 | U | |
| ACENAPHTHYLENE | | 0.053 | U | | 0.052 | U | | 0.051 | U | |
| ANTHRACENE | | 0.043 | U | | 0.042 | U | | 0.042 | U | |
| BENZO(A)ANTHRACENE | | 0.045 | U | | 0.044 | U | | 0.043 | U | |
| BENZO(A)PYRENE | | 0.065 | U | | 0.063 | U | | 0.062 | U | |
| BENZO(B)FLUORANTHENE | | 0.087 | U | | 0.086 | U | | 0.084 | U | |
| BENZO(G,H,I)PERYLENE | | 0.064 | U | | 0.062 | U | | 0.061 | U | |
| BENZO(K)FLUORANTHENE | | 0.048 | U | | 0.047 | U | | 0.046 | U | |
| CHRYSENE | | 0.035 | U | | 0.035 | U | | 0.034 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.069 | U | | 0.067 | U | | 0.066 | U | |
| FLUORANTHENE | | 0.072 | U | | 0.07 | U | | 0.069 | U | |
| FLUORENE | | 0.06 | U | | 0.059 | U | | 0.058 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.051 | U | | 0.05 | U | | 0.049 | U | |
| NAPHTHALENE | | 0.063 | U | | 0.062 | U | | 0.06 | U | |
| PHENANTHRENE | | 0.075 | J | P | 0.051 | J | P | 0.048 | U | |
| PYRENE | | 0.058 | U | | 0.057 | U | | 0.056 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-FD-071713RE | | | JM30-MW-29S-071813 | | | JM30-MW-49D-071713 | | | JM30-MW-49I-071713RE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5070-6RE | | | SG5146-1 | | | SG5070-4 | | | SG5070-5RE | | |
| FRACTION: PET | SAMP_DATE | 7/17/2013 | | | 7/18/2013 | | | 7/17/2013 | | | 7/17/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | JM30-MW-49I-071713 | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TOTAL PETROLEUM HYDROCARBONS | | 410 | J | HPR | 140 | UJ | R | 140 | U | | 440 | J | HPR |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-54D-071613 | | | JM30-MW-54I-071713 | | | JM30-MW-54S-071713 | | | JM30-MW55D-071513 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM30-2 | LAB_ID | SG5022-4 | | | SG5070-2 | | | SG5070-3 | | | SG4994-2 | | |
| FRACTION: PET | SAMP_DATE | 7/16/2013 | | | 7/17/2013 | | | 7/17/2013 | | | 7/15/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TOTAL PETROLEUM HYDROCARBONS | | 140 | U | | 140 | U | | 140 | U | | 140 | U | |

| PROJ_NO: 02760 | NSAMPLE | JM30-MW-55I-071613RE | | | JM30-MW-55S-071613 | | | JM30-RB-071613 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTQJM30-2 | LAB_ID | SG5022-2RE | | | SG5022-3 | | | SG5022-5 | | |
| FRACTION: PET | SAMP_DATE | 7/16/2013 | | | 7/16/2013 | | | 7/16/2013 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TOTAL PETROLEUM HYDROCARBONS | | 140 | UJ | HR | 140 | U | | 140 | U | |

## Appendix B

Results as Reported by the Laboratory

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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-5
**Client ID:** JM30-RB-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9057.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.060 | ug/L | 1 | .2 | 0.19 | 0.060 | 0.094 |
| 1-Methylnaphthalene | U | 0.064 | ug/L | 1 | .2 | 0.19 | 0.064 | 0.094 |
| 2-Methylnaphthalene | U | 0.073 | ug/L | 1 | .2 | 0.19 | 0.073 | 0.094 |
| Acenaphthylene | U | 0.051 | ug/L | 1 | .2 | 0.19 | 0.051 | 0.094 |
| Acenaphthene | U | 0.060 | ug/L | 1 | .2 | 0.19 | 0.060 | 0.094 |
| Fluorene | U | 0.058 | ug/L | 1 | .2 | 0.19 | 0.058 | 0.094 |
| Phenanthrene | U | 0.048 | ug/L | 1 | .2 | 0.19 | 0.048 | 0.094 |
| Anthracene | U | 0.042 | ug/L | 1 | .2 | 0.19 | 0.042 | 0.094 |
| Fluoranthene | U | 0.069 | ug/L | 1 | .2 | 0.19 | 0.069 | 0.094 |
| Pyrene | U | 0.056 | ug/L | 1 | .2 | 0.19 | 0.056 | 0.094 |
| Benzo(a)anthracene | U | 0.043 | ug/L | 1 | .2 | 0.19 | 0.043 | 0.094 |
| Chrysene | U | 0.034 | ug/L | 1 | .2 | 0.19 | 0.034 | 0.094 |
| Benzo(b)Fluoranthene | U | 0.084 | ug/L | 1 | .2 | 0.19 | 0.084 | 0.094 |
| Benzo(k)fluoranthene | U | 0.046 | ug/L | 1 | .2 | 0.19 | 0.046 | 0.094 |
| Benzo(a)pyrene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.094 |
| Indeno(1,2,3-cd)pyrene | U | 0.049 | ug/L | 1 | .2 | 0.19 | 0.049 | 0.094 |
| Dibenzo(a,h)anthracene | U | 0.066 | ug/L | 1 | .2 | 0.19 | 0.066 | 0.094 |
| Benzo(g,h,i)perylene | U | 0.061 | ug/L | 1 | .2 | 0.19 | 0.061 | 0.094 |
| 2-Methylnaphthalene-D10 | | 89.9 | % | | | | | |
| Fluorene-D10 | | 99.1 | % | | | | | |
| pyrene-d10 | | 82.3 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6RA
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9071.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 26-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Naphthalene** | | 0.49 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| 1-Methylnaphthalene | U | 0.065 | ug/L | 1 | .2 | 0.19 | 0.065 | 0.096 |
| 2-Methylnaphthalene | U | 0.074 | ug/L | 1 | .2 | 0.19 | 0.074 | 0.096 |
| Acenaphthylene | U | 0.052 | ug/L | 1 | .2 | 0.19 | 0.052 | 0.096 |
| Acenaphthene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| Fluorene | U | 0.059 | ug/L | 1 | .2 | 0.19 | 0.059 | 0.096 |
| Phenanthrene | U | 0.049 | ug/L | 1 | .2 | 0.19 | 0.049 | 0.096 |
| Anthracene | U | 0.042 | ug/L | 1 | .2 | 0.19 | 0.042 | 0.096 |
| Fluoranthene | U | 0.070 | ug/L | 1 | .2 | 0.19 | 0.070 | 0.096 |
| Pyrene | U | 0.057 | ug/L | 1 | .2 | 0.19 | 0.057 | 0.096 |
| Benzo(a)anthracene | U | 0.044 | ug/L | 1 | .2 | 0.19 | 0.044 | 0.096 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.19 | 0.035 | 0.096 |
| Benzo(b)Fluoranthene | U | 0.086 | ug/L | 1 | .2 | 0.19 | 0.086 | 0.096 |
| Benzo(k)fluoranthene | U | 0.047 | ug/L | 1 | .2 | 0.19 | 0.047 | 0.096 |
| Benzo(a)pyrene | U | 0.063 | ug/L | 1 | .2 | 0.19 | 0.063 | 0.096 |
| Indeno(1,2,3-cd)pyrene | U | 0.050 | ug/L | 1 | .2 | 0.19 | 0.050 | 0.096 |
| Dibenzo(a,h)anthracene | U | 0.067 | ug/L | 1 | .2 | 0.19 | 0.067 | 0.096 |
| Benzo(g,h,i)perylene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| 2-Methylnaphthalene-D10 | | 63.9 | % | | | | | |
| Fluorene-D10 | | 52.8 | % | | | | | |
| pyrene-d10 | | 62.5 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5146-1RA
**Client ID:** JM30-MW-29S-071813
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9072.D

**Sample Date:** 18-JUL-13
**Received Date:** 19-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 26-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.099 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.099 |
| 2-Methylnaphthalene | U | 0.076 | ug/L | 1 | .2 | 0.20 | 0.076 | 0.099 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.099 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.099 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.099 |
| Phenanthrene | U | 0.050 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.099 |
| Anthracene | U | 0.044 | ug/L | 1 | .2 | 0.20 | 0.044 | 0.099 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.099 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.099 |
| Benzo(a)anthracene | U | 0.046 | ug/L | 1 | .2 | 0.20 | 0.046 | 0.099 |
| Chrysene | U | 0.036 | ug/L | 1 | .2 | 0.20 | 0.036 | 0.099 |
| Benzo(b)Fluoranthene | U | 0.088 | ug/L | 1 | .2 | 0.20 | 0.088 | 0.099 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.099 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.099 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.099 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.099 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.099 |
| 2-Methylnaphthalene-D10 | | 70.0 | % | | | | | |
| Fluorene-D10 | | 79.7 | % | | | | | |
| pyrene-d10 | | 86.6 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-4
**Client ID:** JM30-MW-49D-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9060.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 26-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.098 |
| 2-Methylnaphthalene | U | 0.075 | ug/L | 1 | .2 | 0.20 | 0.075 | 0.098 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.098 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.098 |
| Phenanthrene | U | 0.050 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.098 |
| Anthracene | U | 0.043 | ug/L | 1 | .2 | 0.20 | 0.043 | 0.098 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.098 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.098 |
| Benzo(a)anthracene | U | 0.045 | ug/L | 1 | .2 | 0.20 | 0.045 | 0.098 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.20 | 0.035 | 0.098 |
| Benzo(b)Fluoranthene | U | 0.087 | ug/L | 1 | .2 | 0.20 | 0.087 | 0.098 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.098 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.098 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.098 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.098 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.098 |
| 2-Methylnaphthalene-D10 | | 63.2 | % | | | | | |
| Fluorene-D10 | | 82.8 | % | | | | | |
| pyrene-d10 | | 62.5 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9061.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 26-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Naphthalene** | | 0.40 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.098 |
| 2-Methylnaphthalene | U | 0.075 | ug/L | 1 | .2 | 0.20 | 0.075 | 0.098 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.098 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.098 |
| Phenanthrene | U | 0.050 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.098 |
| Anthracene | U | 0.043 | ug/L | 1 | .2 | 0.20 | 0.043 | 0.098 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.098 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.098 |
| Benzo(a)anthracene | U | 0.045 | ug/L | 1 | .2 | 0.20 | 0.045 | 0.098 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.20 | 0.035 | 0.098 |
| Benzo(b)Fluoranthene | U | 0.087 | ug/L | 1 | .2 | 0.20 | 0.087 | 0.098 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.098 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.098 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.098 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.098 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.098 |
| 2-Methylnaphthalene-D10 | | 76.7 | % | | | | | |
| Fluorene-D10 | | 53.8 | % | | | | | |
| pyrene-d10 | | 64.1 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-4
**Client ID:** JM30-MW-54D-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9056.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.097 |
| 1-Methylnaphthalene | U | 0.066 | ug/L | 1 | .2 | 0.19 | 0.066 | 0.097 |
| 2-Methylnaphthalene | U | 0.075 | ug/L | 1 | .2 | 0.19 | 0.075 | 0.097 |
| Acenaphthylene | U | 0.052 | ug/L | 1 | .2 | 0.19 | 0.052 | 0.097 |
| Acenaphthene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.097 |
| Fluorene | U | 0.059 | ug/L | 1 | .2 | 0.19 | 0.059 | 0.097 |
| Phenanthrene | U | 0.050 | ug/L | 1 | .2 | 0.19 | 0.050 | 0.097 |
| Anthracene | U | 0.043 | ug/L | 1 | .2 | 0.19 | 0.043 | 0.097 |
| Fluoranthene | U | 0.071 | ug/L | 1 | .2 | 0.19 | 0.071 | 0.097 |
| Pyrene | U | 0.057 | ug/L | 1 | .2 | 0.19 | 0.057 | 0.097 |
| Benzo(a)anthracene | U | 0.045 | ug/L | 1 | .2 | 0.19 | 0.045 | 0.097 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.19 | 0.035 | 0.097 |
| Benzo(b)Fluoranthene | U | 0.086 | ug/L | 1 | .2 | 0.19 | 0.086 | 0.097 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.19 | 0.048 | 0.097 |
| Benzo(a)pyrene | U | 0.064 | ug/L | 1 | .2 | 0.19 | 0.064 | 0.097 |
| Indeno(1,2,3-cd)pyrene | U | 0.050 | ug/L | 1 | .2 | 0.19 | 0.050 | 0.097 |
| Dibenzo(a,h)anthracene | U | 0.068 | ug/L | 1 | .2 | 0.19 | 0.068 | 0.097 |
| Benzo(g,h,i)perylene | U | 0.063 | ug/L | 1 | .2 | 0.19 | 0.063 | 0.097 |
| 2-Methylnaphthalene-D10 | | 68.9 | % | | | | | |
| Fluorene-D10 | | 87.1 | % | | | | | |
| pyrene-d10 | | 97.6 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-2
**Client ID:** JM30-MW-541-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9058.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| 1-Methylnaphthalene | U | 0.068 | ug/L | 1 | .2 | 0.20 | 0.068 | 0.10 |
| 2-Methylnaphthalene | U | 0.077 | ug/L | 1 | .2 | 0.20 | 0.077 | 0.10 |
| Acenaphthylene | U | 0.054 | ug/L | 1 | .2 | 0.20 | 0.054 | 0.10 |
| Acenaphthene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| Fluorene | U | 0.061 | ug/L | 1 | .2 | 0.20 | 0.061 | 0.10 |
| Phenanthrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.10 |
| Anthracene | U | 0.044 | ug/L | 1 | .2 | 0.20 | 0.044 | 0.10 |
| Fluoranthene | U | 0.073 | ug/L | 1 | .2 | 0.20 | 0.073 | 0.10 |
| Pyrene | U | 0.059 | ug/L | 1 | .2 | 0.20 | 0.059 | 0.10 |
| Benzo(a)anthracene | U | 0.046 | ug/L | 1 | .2 | 0.20 | 0.046 | 0.10 |
| Chrysene | U | 0.036 | ug/L | 1 | .2 | 0.20 | 0.036 | 0.10 |
| Benzo(b)Fluoranthene | U | 0.089 | ug/L | 1 | .2 | 0.20 | 0.089 | 0.10 |
| Benzo(k)fluoranthene | U | 0.049 | ug/L | 1 | .2 | 0.20 | 0.049 | 0.10 |
| Benzo(a)pyrene | U | 0.066 | ug/L | 1 | .2 | 0.20 | 0.066 | 0.10 |
| Indeno(1,2,3-cd)pyrene | U | 0.052 | ug/L | 1 | .2 | 0.20 | 0.052 | 0.10 |
| Dibenzo(a,h)anthracene | U | 0.070 | ug/L | 1 | .2 | 0.20 | 0.070 | 0.10 |
| Benzo(g,h,i)perylene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.10 |
| 2-Methylnaphthalene-D10 | | 86.1 | % | | | | | |
| Fluorene-D10 | | 100. | % | | | | | |
| pyrene-d10 | | 111. | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-3
**Client ID:** JM30-MW-54S-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9059.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.099 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.099 |
| 2-Methylnaphthalene | U | 0.076 | ug/L | 1 | .2 | 0.20 | 0.076 | 0.099 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.099 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.099 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.099 |
| Phenanthrene | U | 0.050 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.099 |
| Anthracene | U | 0.044 | ug/L | 1 | .2 | 0.20 | 0.044 | 0.099 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.099 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.099 |
| Benzo(a)anthracene | U | 0.046 | ug/L | 1 | .2 | 0.20 | 0.046 | 0.099 |
| Chrysene | U | 0.036 | ug/L | 1 | .2 | 0.20 | 0.036 | 0.099 |
| Benzo(b)Fluoranthene | U | 0.088 | ug/L | 1 | .2 | 0.20 | 0.088 | 0.099 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.099 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.099 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.099 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.099 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.099 |
| 2-Methylnaphthalene-D10 | | 80.3 | % | | | | | |
| Fluorene-D10 | | 75.3 | % | | | | | |
| pyrene-d10 | | 90.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2
**Client ID:** JM30-MW-55I-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9054.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.098 |
| 2-Methylnaphthalene | U | 0.075 | ug/L | 1 | .2 | 0.20 | 0.075 | 0.098 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.098 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.098 |
| **Phenanthrene** | 1 | 0.075 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.098 |
| Anthracene | U | 0.043 | ug/L | 1 | .2 | 0.20 | 0.043 | 0.098 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.098 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.098 |
| Benzo(a)anthracene | U | 0.045 | ug/L | 1 | .2 | 0.20 | 0.045 | 0.098 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.20 | 0.035 | 0.098 |
| Benzo(b)Fluoranthene | U | 0.087 | ug/L | 1 | .2 | 0.20 | 0.087 | 0.098 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.098 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.098 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.098 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.098 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.098 |
| 2-Methylnaphthalene-D10 | | 61.1 | % | | | | | |
| Fluorene-D10 | | 78.7 | % | | | | | |
| pyrene-d10 | | 67.6 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-3
**Client ID:** JM30-MW-55S-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9055.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| 1-Methylnaphthalene | U | 0.065 | ug/L | 1 | .2 | 0.19 | 0.065 | 0.096 |
| 2-Methylnaphthalene | U | 0.074 | ug/L | 1 | .2 | 0.19 | 0.074 | 0.096 |
| Acenaphthylene | U | 0.052 | ug/L | 1 | .2 | 0.19 | 0.052 | 0.096 |
| Acenaphthene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| Fluorene | U | 0.059 | ug/L | 1 | .2 | 0.19 | 0.059 | 0.096 |
| **Phenanthrene** | 1 | 0.051 | ug/L | 1 | .2 | 0.19 | 0.049 | 0.096 |
| Anthracene | U | 0.042 | ug/L | 1 | .2 | 0.19 | 0.042 | 0.096 |
| Fluoranthene | U | 0.070 | ug/L | 1 | .2 | 0.19 | 0.070 | 0.096 |
| Pyrene | U | 0.057 | ug/L | 1 | .2 | 0.19 | 0.057 | 0.096 |
| Benzo(a)anthracene | U | 0.044 | ug/L | 1 | .2 | 0.19 | 0.044 | 0.096 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.19 | 0.035 | 0.096 |
| Benzo(b)Fluoranthene | U | 0.086 | ug/L | 1 | .2 | 0.19 | 0.086 | 0.096 |
| Benzo(k)fluoranthene | U | 0.047 | ug/L | 1 | .2 | 0.19 | 0.047 | 0.096 |
| Benzo(a)pyrene | U | 0.063 | ug/L | 1 | .2 | 0.19 | 0.063 | 0.096 |
| Indeno(1,2,3-cd)pyrene | U | 0.050 | ug/L | 1 | .2 | 0.19 | 0.050 | 0.096 |
| Dibenzo(a,h)anthracene | U | 0.067 | ug/L | 1 | .2 | 0.19 | 0.067 | 0.096 |
| Benzo(g,h,i)perylene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.096 |
| 2-Methylnaphthalene-D10 | | 70.8 | % | | | | | |
| Fluorene-D10 | | 79.0 | % | | | | | |
| pyrene-d10 | | 90.4 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9030.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 17-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127133

**Analysis Date:** 24-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.061 | ug/L | 1 | .2 | 0.19 | 0.061 | 0.095 |
| 1-Methylnaphthalene | U | 0.065 | ug/L | 1 | .2 | 0.19 | 0.065 | 0.095 |
| 2-Methylnaphthalene | U | 0.073 | ug/L | 1 | .2 | 0.19 | 0.073 | 0.095 |
| Acenaphthylene | U | 0.051 | ug/L | 1 | .2 | 0.19 | 0.051 | 0.095 |
| Acenaphthene | U | 0.061 | ug/L | 1 | .2 | 0.19 | 0.061 | 0.095 |
| Fluorene | U | 0.058 | ug/L | 1 | .2 | 0.19 | 0.058 | 0.095 |
| Phenanthrene | U | 0.048 | ug/L | 1 | .2 | 0.19 | 0.048 | 0.095 |
| Anthracene | U | 0.042 | ug/L | 1 | .2 | 0.19 | 0.042 | 0.095 |
| Fluoranthene | U | 0.070 | ug/L | 1 | .2 | 0.19 | 0.070 | 0.095 |
| Pyrene | U | 0.056 | ug/L | 1 | .2 | 0.19 | 0.056 | 0.095 |
| Benzo(a)anthracene | U | 0.044 | ug/L | 1 | .2 | 0.19 | 0.044 | 0.095 |
| Chrysene | U | 0.034 | ug/L | 1 | .2 | 0.19 | 0.034 | 0.095 |
| Benzo(b)Fluoranthene | U | 0.085 | ug/L | 1 | .2 | 0.19 | 0.085 | 0.095 |
| Benzo(k)fluoranthene | U | 0.047 | ug/L | 1 | .2 | 0.19 | 0.047 | 0.095 |
| Benzo(a)pyrene | U | 0.063 | ug/L | 1 | .2 | 0.19 | 0.063 | 0.095 |
| Indeno(1,2,3-cd)pyrene | U | 0.050 | ug/L | 1 | .2 | 0.19 | 0.050 | 0.095 |
| Dibenzo(a,h)anthracene | U | 0.067 | ug/L | 1 | .2 | 0.19 | 0.067 | 0.095 |
| Benzo(g,h,i)perylene | U | 0.062 | ug/L | 1 | .2 | 0.19 | 0.062 | 0.095 |
| 2-Methylnaphthalene-D10 | | 77.5 | % | | | | | |
| Fluorene-D10 | | 76.5 | % | | | | | |
| pyrene-d10 | | 79.2 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2024.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.40 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| **Benzene** | L | 620 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| **1,2-Dichloroethane** | | 11. | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| **Toluene** | | 2.0 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| **Ethylbenzene** | | 4.1 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2024.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **m+p-Xylenes** | | 66. | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| **o-Xylene** | | 2.3 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| **Isopropylbenzene** | | 2.7 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| **Cyclohexane** | | 37. | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| **Methylcyclohexane** | | 16. | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 88.8 | % | | | | | |
| Toluene-d8 | | 90.9 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 99.2 | % | | | | | |
| Dibromofluoromethane | | 87.6 | % | | | | | |



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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6DL
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2065.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 2.4 | ug/L | 10 | 2 | 20. | 2.4 | 10. |
| Chloromethane | U | 3.6 | ug/L | 10 | 2 | 20. | 3.6 | 10. |
| Vinyl Chloride | U | 2.5 | ug/L | 10 | 2 | 20. | 2.5 | 10. |
| Bromomethane | U | 4.9 | ug/L | 10 | 2 | 20. | 4.9 | 10. |
| Chloroethane | U | 5.5 | ug/L | 10 | 2 | 20. | 5.5 | 10. |
| Trichlorofluoromethane | U | 2.4 | ug/L | 10 | 2 | 20. | 2.4 | 10. |
| 1,1-Dichloroethene | U | 3.5 | ug/L | 10 | 1 | 10. | 3.5 | 5.0 |
| Carbon Disulfide | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Methylene Chloride | U | 11. | ug/L | 10 | 5 | 50. | 11. | 25. |
| Acetone | U | 22. | ug/L | 10 | 5 | 50. | 22. | 25. |
| trans-1,2-Dichloroethene | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Methyl tert-butyl Ether | U | 3.6 | ug/L | 10 | 1 | 10. | 3.6 | 5.0 |
| 1,1-Dichloroethane | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| cis-1,2-Dichloroethene | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| Bromochloromethane | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| Chloroform | U | 3.2 | ug/L | 10 | 1 | 10. | 3.2 | 5.0 |
| Carbon Tetrachloride | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| 1,1,1-Trichloroethane | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| 2-Butanone | U | 13. | ug/L | 10 | 5 | 50. | 13. | 25. |
| **Benzene** | | 1300 | ug/L | 10 | 1 | 10. | 2.6 | 5.0 |
| **1,2-Dichloroethane** | 1 | 9.6 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| Trichloroethene | U | 2.8 | ug/L | 10 | 1 | 10. | 2.8 | 5.0 |
| 1,2-Dichloropropane | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Bromodichloromethane | U | 3.3 | ug/L | 10 | 1 | 10. | 3.3 | 5.0 |
| cis-1,3-Dichloropropene | U | 1.9 | ug/L | 10 | 1 | 10. | 1.9 | 5.0 |
| Toluene | U | 2.7 | ug/L | 10 | 1 | 10. | 2.7 | 5.0 |
| 4-Methyl-2-Pentanone | U | 13. | ug/L | 10 | 5 | 50. | 13. | 25. |
| Tetrachloroethene | U | 4.0 | ug/L | 10 | 1 | 10. | 4.0 | 5.0 |
| trans-1,3-Dichloropropene | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| 1,1,2-Trichloroethane | U | 3.3 | ug/L | 10 | 1 | 10. | 3.3 | 5.0 |
| Dibromochloromethane | U | 3.0 | ug/L | 10 | 1 | 10. | 3.0 | 5.0 |
| 1,2-Dibromoethane | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| 2-Hexanone | U | 17. | ug/L | 10 | 5 | 50. | 17. | 25. |
| Chlorobenzene | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| **Ethylbenzene** | I | 3.0 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |



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ANALYTICAL SERVICES

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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6DL
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2065.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **m+p-Xylenes** | | 46. | ug/L | 10 | 2 | 20. | 5.9 | 10. |
| o-Xylene | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Styrene | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| Bromoform | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| Isopropylbenzene | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| 1,1,2,2-Tetrachloroethane | U | 3.8 | ug/L | 10 | 1 | 10. | 3.8 | 5.0 |
| 1,3-Dichlorobenzene | U | 2.6 | ug/L | 10 | 1 | 10. | 2.6 | 5.0 |
| 1,4-Dichlorobenzene | U | 2.4 | ug/L | 10 | 1 | 10. | 2.4 | 5.0 |
| 1,2-Dichlorobenzene | U | 1.5 | ug/L | 10 | 1 | 10. | 1.5 | 5.0 |
| 1,2-Dibromo-3-Chloropropane | U | 5.0 | ug/L | 10 | 1 | 10. | 5.0 | 7.5 |
| 1,2,4-Trichlorobenzene | U | 3.7 | ug/L | 10 | 1 | 10. | 3.7 | 5.0 |
| 1,2,3-Trichlorobenzene | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| Freon-113 | U | 3.1 | ug/L | 10 | 1 | 10. | 3.1 | 5.0 |
| **Cyclohexane** | | 24. | ug/L | 10 | 1 | 10. | 3.1 | 5.0 |
| Methyl acetate | U | 5.3 | ug/L | 10 | 1 | 10. | 5.3 | 7.5 |
| **Methylcyclohexane** | | 11. | ug/L | 10 | 1 | 10. | 3.0 | 5.0 |
| P-Bromofluorobenzene | | 89.8 | % | | | | | |
| Toluene-d8 | | 92.6 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 102. | % | | | | | |
| Dibromofluoromethane | | 93.0 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5146-1
**Client ID:** JM30-MW-29S-071813
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2063.D

**Sample Date:** 18-JUL-13
**Received Date:** 19-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5146-1
**Client ID:** JM30-MW-29S-071813
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2063.D

**Sample Date:** 18-JUL-13
**Received Date:** 19-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 90.1 | % | | | | | |
| Toluene-d8 | | 91.4 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 100. | % | | | | | |
| Dibromofluoromethane | | 91.2 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-4
**Client ID:** JM30-MW-49D-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2022.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.48 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-4
**Client ID:** JM30-MW-49D-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2022.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 89.1 | % | | | | | |
| Toluene-d8 | | 90.2 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 102. | % | | | | | |
| Dibromofluoromethane | | 91.9 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2023.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.34 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| **Benzene** | L | 590 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| **1,2-Dichloroethane** | | 9.6 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| **Toluene** | | 1.6 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| **Ethylbenzene** | | 3.3 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2023.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **m+p-Xylenes** | | 53. | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| **o-Xylene** | | 1.9 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| **Isopropylbenzene** | | 2.1 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| **Cyclohexane** | | 30. | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| **Methylcyclohexane** | | 13. | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 89.9 | % | | | | | |
| Toluene-d8 | | 91.6 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 102. | % | | | | | |
| Dibromofluoromethane | | 87.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5DL
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2064.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 2.4 | ug/L | 10 | 2 | 20. | 2.4 | 10. |
| Chloromethane | U | 3.6 | ug/L | 10 | 2 | 20. | 3.6 | 10. |
| Vinyl Chloride | U | 2.5 | ug/L | 10 | 2 | 20. | 2.5 | 10. |
| Bromomethane | U | 4.9 | ug/L | 10 | 2 | 20. | 4.9 | 10. |
| Chloroethane | U | 5.5 | ug/L | 10 | 2 | 20. | 5.5 | 10. |
| Trichlorofluoromethane | U | 2.4 | ug/L | 10 | 2 | 20. | 2.4 | 10. |
| 1,1-Dichloroethene | U | 3.5 | ug/L | 10 | 1 | 10. | 3.5 | 5.0 |
| Carbon Disulfide | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Methylene Chloride | U | 11. | ug/L | 10 | 5 | 50. | 11. | 25. |
| Acetone | U | 22. | ug/L | 10 | 5 | 50. | 22. | 25. |
| trans-1,2-Dichloroethene | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Methyl tert-butyl Ether | U | 3.6 | ug/L | 10 | 1 | 10. | 3.6 | 5.0 |
| 1,1-Dichloroethane | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| cis-1,2-Dichloroethene | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| Bromochloromethane | U | 2.1 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |
| Chloroform | U | 3.2 | ug/L | 10 | 1 | 10. | 3.2 | 5.0 |
| Carbon Tetrachloride | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| 1,1,1-Trichloroethane | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| 2-Butanone | U | 13. | ug/L | 10 | 5 | 50. | 13. | 25. |
| **Benzene** | | 1300 | ug/L | 10 | 1 | 10. | 2.6 | 5.0 |
| **1,2-Dichloroethane** | I | 10. | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| Trichloroethene | U | 2.8 | ug/L | 10 | 1 | 10. | 2.8 | 5.0 |
| 1,2-Dichloropropane | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Bromodichloromethane | U | 3.3 | ug/L | 10 | 1 | 10. | 3.3 | 5.0 |
| cis-1,3-Dichloropropene | U | 1.9 | ug/L | 10 | 1 | 10. | 1.9 | 5.0 |
| Toluene | U | 2.7 | ug/L | 10 | 1 | 10. | 2.7 | 5.0 |
| 4-Methyl-2-Pentanone | U | 13. | ug/L | 10 | 5 | 50. | 13. | 25. |
| Tetrachloroethene | U | 4.0 | ug/L | 10 | 1 | 10. | 4.0 | 5.0 |
| trans-1,3-Dichloropropene | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| 1,1,2-Trichloroethane | U | 3.3 | ug/L | 10 | 1 | 10. | 3.3 | 5.0 |
| Dibromochloromethane | U | 3.0 | ug/L | 10 | 1 | 10. | 3.0 | 5.0 |
| 1,2-Dibromoethane | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| 2-Hexanone | U | 17. | ug/L | 10 | 5 | 50. | 17. | 25. |
| Chlorobenzene | U | 2.2 | ug/L | 10 | 1 | 10. | 2.2 | 5.0 |
| **Ethylbenzene** | I | 3.3 | ug/L | 10 | 1 | 10. | 2.1 | 5.0 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5DL
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2064.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **m+p-Xylenes** | | 48. | ug/L | 10 | 2 | 20. | 5.9 | 10. |
| o-Xylene | U | 2.5 | ug/L | 10 | 1 | 10. | 2.5 | 5.0 |
| Styrene | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| Bromoform | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| Isopropylbenzene | U | 2.3 | ug/L | 10 | 1 | 10. | 2.3 | 5.0 |
| 1,1,2,2-Tetrachloroethane | U | 3.8 | ug/L | 10 | 1 | 10. | 3.8 | 5.0 |
| 1,3-Dichlorobenzene | U | 2.6 | ug/L | 10 | 1 | 10. | 2.6 | 5.0 |
| 1,4-Dichlorobenzene | U | 2.4 | ug/L | 10 | 1 | 10. | 2.4 | 5.0 |
| 1,2-Dichlorobenzene | U | 1.5 | ug/L | 10 | 1 | 10. | 1.5 | 5.0 |
| 1,2-Dibromo-3-Chloropropane | U | 5.0 | ug/L | 10 | 1 | 10. | 5.0 | 7.5 |
| 1,2,4-Trichlorobenzene | U | 3.7 | ug/L | 10 | 1 | 10. | 3.7 | 5.0 |
| 1,2,3-Trichlorobenzene | U | 2.0 | ug/L | 10 | 1 | 10. | 2.0 | 5.0 |
| Freon-113 | U | 3.1 | ug/L | 10 | 1 | 10. | 3.1 | 5.0 |
| **Cyclohexane** | | 25. | ug/L | 10 | 1 | 10. | 3.1 | 5.0 |
| Methyl acetate | U | 5.3 | ug/L | 10 | 1 | 10. | 5.3 | 7.5 |
| **Methylcyclohexane** | I | 10. | ug/L | 10 | 1 | 10. | 3.0 | 5.0 |
| P-Bromofluorobenzene | | 90.2 | % | | | | | |
| Toluene-d8 | | 91.3 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 104. | % | | | | | |
| Dibromofluoromethane | | 93.6 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-4
**Client ID:** JM30-MW-54D-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2003.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| **Chloroform** | | 2.3 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-4
**Client ID:** JM30-MW-54D-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2003.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 93.3 | % | | | | | |
| Toluene-d8 | | 93.9 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 112. | % | | | | | |
| Dibromofluoromethane | | 102. | % | | | | | |



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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-2
**Client ID:** JM30-MW-541-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2005.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | I | 0.36 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-2
**Client ID:** JM30-MW-541-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2005.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 91.9 | % | | | | | |
| Toluene-d8 | | 94.9 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 114. | % | | | | | |
| Dibromofluoromethane | | 103. | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-3
**Client ID:** JM30-MW-54S-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2006.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.36 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-3
**Client ID:** JM30-MW-54S-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2006.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 91.7 | % | | | | | |
| Toluene-d8 | | 94.0 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 113. | % | | | | | |
| Dibromofluoromethane | | 102. | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2
**Client ID:** JM30-MW-551-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2001.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | I | 0.48 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| **Acetone** | I | 2.4 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2
**Client ID:** JM30-MW-551-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2001.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 90.0 | % | | | | | |
| Toluene-d8 | | 93.0 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 112. | % | | | | | |
| Dibromofluoromethane | | 100. | % | | | | | |



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Katahdin
ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-3
**Client ID:** JM30-MW-55S-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2002.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.28 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| **Acetone** | 1 | 2.3 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-3
**Client ID:** JM30-MW-55S-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2002.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 92.4 | % | | | | | |
| Toluene-d8 | | 95.5 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 116. | % | | | | | |
| Dibromofluoromethane | | 102. | % | | | | | |



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Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2000.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.55 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| **Methyl tert-butyl Ether** | | 1.1 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| **Chloroform** | 1 | 0.70 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| **Benzene** | | 52. | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2000.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| **Isopropylbenzene** | 1 | 0.30 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 91.2 | % | | | | | |
| Toluene-d8 | | 92.5 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 109. | % | | | | | |
| Dibromofluoromethane | | 97.3 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-5
**Client ID:** JM30-RB-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2004.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.33 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| **Acetone** | | 5.7 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| **2-Butanone** | 1 | 4.8 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| **Toluene** | 1 | 0.48 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-5
**Client ID:** JM30-RB-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2004.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 88.8 | % | | | | | |
| Toluene-d8 | | 92.7 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 107. | % | | | | | |
| Dibromofluoromethane | | 98.2 | % | | | | | |



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ANALYTICAL SERVICES

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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-1
**Client ID:** TRIP BLANK 07/15
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1995.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| **Acetone** | I | 3.5 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-1
**Client ID:** TRIP BLANK
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1995.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 87.6 | % | | | | | |
| Toluene-d8 | | 90.5 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 102. | % | | | | | |
| Dibromofluoromethane | | 95.5 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-1 07/16
**Client ID:** TRIP BLANK
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1996.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| **Chloromethane** | J | 0.84 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| **Acetone** | J | 3.0 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-1
**Client ID:** TRIP BLANK
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1996.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 87.4 | % | | | | | |
| Toluene-d8 | | 90.6 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 107. | % | | | | | |
| Dibromofluoromethane | | 98.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc
**Lab ID:** SG5070-1
**Client ID:** TRIP BLANK
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1997.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-1
**Client ID:** TRIP BLANK
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C1997.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 88.1 | % | | | | | |
| Toluene-d8 | | 90.7 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 109. | % | | | | | |
| Dibromofluoromethane | | 96.9 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20252.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Range Organics** | I | 290 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | J | 49.9 | % | | | | | |
| n-Triacontane-D62 | J | 55.4 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-6RE
**Client ID:** JM30-FD-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20312.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 30-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127831

**Analysis Date:** 31-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Range Organics** | I | 410 | ug/L | 1 | 500 | 490 | 140 | 240 |
| o-Terphenyl | J | 67.3 | % | | | | | |
| n-Triacontane-D62 | | 73.1 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5146-1
**Client ID:** JM30-MW-29S-071813
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20253.D

**Sample Date:** 18-JUL-13
**Received Date:** 19-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | J | 63.4 | % | | | | | |
| n-Triacontane-D62 | | 76.2 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-4
**Client ID:** JM30-MW-49D-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20250.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | | 85.1 | % | | | | | |
| n-Triacontane-D62 | | 92.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20251.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Range Organics** | 1 | 450 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | J | 62.4 | % | | | | | |
| n-Triacontane-D62 | J | 65.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-5RE
**Client ID:** JM30-MW-491-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20311.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 30-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127831

**Analysis Date:** 31-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Range Organics** | 1 | 440 | ug/L | 1 | 500 | 490 | 140 | 240 |
| o-Terphenyl | J | 68.4 | % | | | | | |
| n-Triacontane-D62 | | 74.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-4
**Client ID:** JM30-MW-54D-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20246.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | | 87.2 | % | | | | | |
| n-Triacontane-D62 | | 92.8 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-2
**Client ID:** JM30-MW-54I-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20248.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | | 86.1 | % | | | | | |
| n-Triacontane-D62 | | 89.3 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5070-3
**Client ID:** JM30-MW-54S-071713
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20249.D

**Sample Date:** 17-JUL-13
**Received Date:** 18-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 470 | 140 | 240 |
| o-Terphenyl | | 84.8 | % | | | | | |
| n-Triacontane-D62 | | 93.6 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2
**Client ID:** JM30-MW-551-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20242.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | J | 19.6 | % | | | | | |
| n-Triacontane-D62 | J | 34.4 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2RE
**Client ID:** JM30-MW-55I-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20310.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 30-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127831

**Analysis Date:** 31-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 500 | 140 | 250 |
| o-Terphenyl | J | 76.8 | % | | | | | |
| n-Triacontane-D62 | | 87.5 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-3
**Client ID:** JM30-MW-55S-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20243.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | | 85.1 | % | | | | | |
| n-Triacontane-D62 | | 91.1 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20241.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 470 | 140 | 240 |
| o-Terphenyl | | 85.9 | % | | | | | |
| n-Triacontane-D62 | | 88.3 | % | | | | | |



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# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-5
**Client ID:** JM30-RB-071613
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** AGG20247.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 27-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 06-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 140 | ug/L | 1 | 500 | 480 | 140 | 240 |
| o-Terphenyl | | 83.0 | % | | | | | |
| n-Triacontane-D62 | | 85.8 | % | | | | | |



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# Appendix C

Support Documentation

# HOLDTIME

**SDG** CTOJM30-2

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | JM30-MW-55I-071613 | SG5022-002 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-FD-071713 | SG5070-006 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-55S-071613 | SG5022-003 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-MW55D-071513 | SG4994-002 | NM | 07/15/2013 | 07/24/2013 | 07/25/2013 | 9 | 1 | 10 |
| M | UG/L | JM30-MW-54S-071713 | SG5070-003 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-54I-071713 | SG5070-002 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-54D-071613 | SG5022-004 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| M | UG/L | JM30-MW-49I-071713 | SG5070-005 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-49D-071713 | SG5070-004 | NM | 07/17/2013 | 07/24/2013 | 07/25/2013 | 7 | 1 | 8 |
| M | UG/L | JM30-MW-29S-071813 | SG5146-001 | NM | 07/18/2013 | 07/24/2013 | 07/25/2013 | 6 | 1 | 7 |
| M | UG/L | JM30-RB-071613 | SG5022-005 | NM | 07/16/2013 | 07/24/2013 | 07/25/2013 | 8 | 1 | 9 |
| OV | % | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | % | TRIP BLANK | SG5070-1 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | % | TRIP BLANK | SG5022-1 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | % | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/22/2013 | 07/22/2013 | 7 | 0 | 7 |
| OV | % | JM30-FD-071713 | SG5070-6DL | NM | 07/17/2013 | 07/25/2013 | 07/25/2013 | 8 | 0 | 8 |
| OV | % | TRIP BLANK | SG4994-1 | NM | 07/15/2013 | 07/22/2013 | 07/22/2013 | 7 | 0 | 7 |
| OV | % | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | % | JM30-FD-071713 | SG5070-6 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-29S-071813 | SG5146-1 | NM | 07/18/2013 | 07/25/2013 | 07/25/2013 | 7 | 0 | 7 |
| OV | % | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | % | JM30-MW-49I-071713 | SG5070-5DL | NM | 07/17/2013 | 07/25/2013 | 07/25/2013 | 8 | 0 | 8 |
| OV | % | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | UG/L | TRIP BLANK | SG5070-1 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | UG/L | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | UG/L | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/22/2013 | 07/22/2013 | 7 | 0 | 7 |
| OV | UG/L | TRIP BLANK | SG4994-1 | NM | 07/15/2013 | 07/22/2013 | 07/22/2013 | 7 | 0 | 7 |
| OV | UG/L | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | UG/L | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/L | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | UG/L | TRIP BLANK | SG5022-1 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| OV | UG/L | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | UG/L | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/22/2013 | 07/22/2013 | 5 | 0 | 5 |
| OV | UG/L | JM30-MW-49I-071713 | SG5070-5DL | NM | 07/17/2013 | 07/25/2013 | 07/25/2013 | 8 | 0 | 8 |
| OV | UG/L | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | UG/L | JM30-MW-29S-071813 | SG5146-1 | NM | 07/18/2013 | 07/25/2013 | 07/25/2013 | 7 | 0 | 7 |
| OV | UG/L | JM30-FD-071713 | SG5070-6DL | NM | 07/17/2013 | 07/25/2013 | 07/25/2013 | 8 | 0 | 8 |
| OV | UG/L | JM30-FD-071713 | SG5070-6 | NM | 07/17/2013 | 07/23/2013 | 07/23/2013 | 6 | 0 | 6 |
| OV | UG/L | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/22/2013 | 07/22/2013 | 6 | 0 | 6 |
| SIM | % | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | % | JM30-FD-071713 | SG5070-6RA | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | % | JM30-MW-29S-071813 | SG5146-1RA | NM | 07/18/2013 | 07/19/2013 | 07/26/2013 | 1 | 7 | 8 |
| SIM | % | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | % | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/19/2013 | 07/25/2013 | 2 | 6 | 8 |
| SIM | % | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/19/2013 | 07/25/2013 | 2 | 6 | 8 |
| SIM | % | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/17/2013 | 07/24/2013 | 2 | 7 | 9 |
| SIM | % | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | % | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | % | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | % | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | UG/L | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | UG/L | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | UG/L | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | UG/L | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/19/2013 | 07/25/2013 | 3 | 6 | 9 |
| SIM | UG/L | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/17/2013 | 07/24/2013 | 2 | 7 | 9 |
| SIM | UG/L | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/19/2013 | 07/25/2013 | 2 | 6 | 8 |
| SIM | UG/L | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | UG/L | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | UG/L | JM30-MW-29S-071813 | SG5146-1RA | NM | 07/18/2013 | 07/19/2013 | 07/26/2013 | 1 | 7 | 8 |
| SIM | UG/L | JM30-FD-071713 | SG5070-6RA | NM | 07/17/2013 | 07/19/2013 | 07/26/2013 | 2 | 7 | 9 |
| SIM | UG/L | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/19/2013 | 07/25/2013 | 2 | 6 | 8 |
| TPH | % | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | % | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | % | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |
| TPH | % | JM30-MW-55I-071613 | SG5022-2RE | NM | 07/16/2013 | 07/30/2013 | 07/31/2013 | 14 | 1 | 15 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | % | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |
| TPH | % | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/22/2013 | 07/26/2013 | 7 | 4 | 11 |
| TPH | % | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/22/2013 | 07/27/2013 | 6 | 5 | 11 |
| TPH | % | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |
| TPH | % | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | % | JM30-MW-29S-071813 | SG5146-1 | NM | 07/18/2013 | 07/22/2013 | 07/27/2013 | 4 | 5 | 9 |
| TPH | % | JM30-FD-071713 | SG5070-6RE | NM | 07/17/2013 | 07/30/2013 | 07/31/2013 | 13 | 1 | 14 |
| TPH | % | JM30-FD-071713 | SG5070-6 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | % | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | % | JM30-MW-49I-071713 | SG5070-5RE | NM | 07/17/2013 | 07/30/2013 | 07/31/2013 | 13 | 1 | 14 |
| TPH | UG/L | JM30-MW-29S-071813 | SG5146-1 | NM | 07/18/2013 | 07/22/2013 | 07/27/2013 | 4 | 5 | 9 |
| TPH | UG/L | JM30-MW-55S-071613 | SG5022-3 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |
| TPH | UG/L | JM30-MW-55I-071613 | SG5022-2RE | NM | 07/16/2013 | 07/30/2013 | 07/31/2013 | 14 | 1 | 15 |
| TPH | UG/L | JM30-MW-55I-071613 | SG5022-2 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |
| TPH | UG/L | JM30-MW55D-071513 | SG4994-2 | NM | 07/15/2013 | 07/22/2013 | 07/26/2013 | 7 | 4 | 11 |
| TPH | UG/L | JM30-MW-54S-071713 | SG5070-3 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | UG/L | JM30-MW-54I-071713 | SG5070-2 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | UG/L | JM30-MW-54D-071613 | SG5022-4 | NM | 07/16/2013 | 07/22/2013 | 07/26/2013 | 6 | 4 | 10 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | UG/L | JM30-MW-49I-071713 | SG5070-5RE | NM | 07/17/2013 | 07/30/2013 | 07/31/2013 | 13 | 1 | 14 |
| TPH | UG/L | JM30-MW-49D-071713 | SG5070-4 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | UG/L | JM30-FD-071713 | SG5070-6RE | NM | 07/17/2013 | 07/30/2013 | 07/31/2013 | 13 | 1 | 14 |
| TPH | UG/L | JM30-FD-071713 | SG5070-6 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |
| TPH | UG/L | JM30-RB-071613 | SG5022-5 | NM | 07/16/2013 | 07/22/2013 | 07/27/2013 | 6 | 5 | 11 |
| TPH | UG/L | JM30-MW-49I-071713 | SG5070-5 | NM | 07/17/2013 | 07/22/2013 | 07/27/2013 | 5 | 5 | 10 |

SG4444

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0834 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Sauflley - Site 4 | F. Legesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER: FedEx | | CITY, STATE: Scarborough, ME |

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

| DATE YEAR | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | LL PAHs | TPH | Fl-Pro | LEAD 6010C | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONTAINER TYPE PLASTIC (P) or GLASS (G) | | | | | | | | | G | G | G | P | | | | | | |
| PRESERVATIVE USED | | | | | | | | | HCl | ICE | HCl | HNO3 | | | | | | |
| 07/2013 | | | | | | | | | | | | | | | | | | |
| 15 | 1420 | Trip Blank | QC | NA | NA | QC | LAB PREP | 3 | 3 | | | | | | | | | |
| 1 | 1455 | JM30-MW55D-071513 | 55D | 133 | 143 | GW | G | 24 | 9 | 6 | 6 | 3 | | | | | | MS/MSD |
| | | | | | | | | | | | | | | | | | | Cool To 4°C |

| 1. RELINQUISHED BY | DATE | TIME | 1. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| K. Alex Murphy | 7-15-2013 | 1650 | Dan Medli | 7-16-13 | 1030 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |

COMMENTS

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

4/02R
FORM NO. TINUS-001

S100001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0832 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Sanford - Site 4 | F. Legesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8424 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER: Fed Ex | | CITY, STATE: Scarborough, ME |

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

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl, HCl, ICE, HNO3

565022

| DATE YEAR 07/2013 | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | TRPH Flo-Prep | LLPAHs | Lead 6010C | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 0810 | Trip Blank | QC | NA | NA | QC | Lab Prep | 3 | 3 | | | | | | | |
| | 1030 | JM30-MW-55I-071613 | 55I | 85 | 95 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | High Turbidity |
| | 1235 | JM30-MW-55S-071613 | 55S | 36 | 51 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | High Turbidity |
| | 1405 | JM30-MW-54D-071613 | 54D | 113 | 123 | GW | G | 8 | 3 | 2 | 2 | 1 | | | | |
| | 1445 | JM30-RB-071613 | QC | NA | NA | QC | G | 8 | 3 | 2 | 2 | 1 | | | | |

| | DATE | TIME | | DATE | TIME |
|---|---|---|---|---|---|
| 1. RELINQUISHED BY: K. Alex Murphy | 7-16-2013 | 1550 | 1. RECEIVED BY: | 7-17-13 | 0700 |
| 2. RELINQUISHED BY: | | | 2. RECEIVED BY: | | |
| 3. RELINQUISHED BY: | | | 3. RECEIVED BY: | | |

COMMENTS

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

4/02R
FORM NO. TINUS-001

000016

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 0830 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Sanford - Site 4 | F. Lesesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER | | CITY, STATE: Scarborough, ME |

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

SG5070

| DATE YEAR 07/2013 | TIME | SAMPLE ID | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | TPH Fro-Pro | LL PAHs | LEAD 6010C | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | CONTAINER TYPE PLASTIC (P) or GLASS (G) | G | G | G | P | | | |
| | | | | | | | | | PRESERVATIVE USED | HCl | HCl | ICE | HNO3 | | | |
| 17 | 0710 | TRIPBLANK | QC | NA | NA | QC | LAB PREP | 3 | 3 | — | — | — | — | — | — | |
| | 0825 | JM30-MW-54I-071713 | 54I | 60 | 70 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1100 | JM30-MW-54S-071713 | 54S | 16 | 31 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1225 | JM30-MW-49D-071713 | 49D | 123 | 133 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |
| | 1525 | JM30-MW-49I-071713 | 49I | 70 | 80 | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | High Turbidity |
| | 0000 | JM30-FD-071713 | \ | \ | \ | GW | G | 8 | 3 | 2 | 2 | 1 | — | — | — | |

| 1. RELINQUISHED BY | DATE | TIME | 1. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| K. Alex Murphy | 7-17-13 | 1650 | | 7-18-13 | 0910 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| | | | | | |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |
| | | | | | |

COMMENTS

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

4/02R
FORM NO. TINUS-001

000017

**Tetra Tech, Inc.**

CHAIN OF CUSTODY | NUMBER No. 0091 | PAGE 1 OF 1

| PROJECT NO: | FACILITY: | PROJECT MANAGER | PHONE NUMBER | LABORATORY NAME AND CONTACT: |
|---|---|---|---|---|
| 112G02760 | Samfley Site 4 | F. Lesesne | 850-385-9899 | Katahdin Analytical Services |
| SAMPLERS (SIGNATURE) | | FIELD OPERATIONS LEADER: A. Murphy | PHONE NUMBER: 850-363-8484 | ADDRESS: 600 Technology Way |
| | | CARRIER/WAYBILL NUMBER | | CITY, STATE: Scarborough, ME |

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

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

PRESERVATIVE USED: HCl, ICE, HCl, HNO3

| DATE YEAR 07/2013 | TIME | SAMPLE ID (SG-5146) | LOCATION ID | TOP DEPTH (FT) | BOTTOM DEPTH (FT) | MATRIX (GW, SO, SW, SD, QC, ETC.) | COLLECTION METHOD GRAB (G) COMP (C) | No. OF CONTAINERS | VOCs 8260B | LL PAHs | TRPH FL-PRO | LEAD 6010C | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0945 | JW30-MW-29S-071813 | 29S | 23 | 38 | GW | G | 8 | 3 | 2 | 2 | 1 | |

| | | | | | |
|---|---|---|---|---|---|
| 1. RELINQUISHED BY: K. Alex Murphy | DATE: 7-18-13 | TIME: 1200 | 1. RECEIVED BY | DATE: 7-19-13 | TIME: 0920 |
| 2. RELINQUISHED BY | DATE | TIME | 2. RECEIVED BY | DATE | TIME |
| 3. RELINQUISHED BY | DATE | TIME | 3. RECEIVED BY | DATE | TIME |

COMMENTS

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

4/02R
FORM NO. TINUS-001

000018

Katahdin Analytical Services, Inc. Sample Receipt Condition Report

| | | | | | |
|---|---|---|---|---|---|
| Client: | Tetra Tech | KAS PM: | JO | Sampled By: | Client |
| Project: | | KIMS Entry By: | DM | Delivered By: | Fed Ex |
| KAS Work Order#: | SG4994 | KIMS Review By: | JO | Received By: | DM |
| SDG #: | Cooler: 1 of 1 | | | Date/Time Rec.: | 7-16-13 1030 |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | ✓ | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 5.3 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | ✓ | | | | |
| **Soil/Sediment:** Received in airtight container? | | | | ✓ | |
| Received in methanol? | | | | ✓ | |
| Methanol covering soil? | | | | ✓ | |
| 7. Trip Blank present in cooler? | ✓ | | | | |
| 8. Proper sample containers and volume? | ✓ | | | | |
| 9. Samples within hold time upon receipt? | ✓ | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | ✓ | | | | |
| Sulfide - >9 | | | | ✓ | |
| Cyanide – pH >12 | | | | ✓ | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. — Sample Receipt Condition Report

| | | |
|---|---|---|
| Client: Tetra Tech | KAS PM: JO | Sampled By: Client |
| Project: | KIMS Entry By: GW | Delivered By: Fed Ex |
| KAS Work Order#: 5G5022 | KIMS Review By: [illegible] | Received By: GW |
| SDG #: | Cooler: 1 of 2 | Date/Time Rec.: 7-17-13/0900 |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | ✓ | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 2.3 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | ✓ | | | | |
| **Soil/Sediment:** Received in airtight container? | ✓ | | | | |
| Received in methanol? | | | | ✓ | |
| Methanol covering soil? | | | | ✓ | |
| 7. Trip Blank present in cooler? | ✓ | | | | |
| 8. Proper sample containers and volume? | ✓ | | | | |
| 9. Samples within hold time upon receipt? | ✓ | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | ✓ | | | | |
| Sulfide - >9 | | | | ✓ | |
| Cyanide – pH >12 | | | | ✓ | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. — Sample Receipt Condition Report

| | | |
|---|---|---|
| Client: Tetra Tech | KAS PM: JO | Sampled By: Client |
| Project: | KIMS Entry By: Gr | Delivered By: FedEx |
| KAS Work Order#: S6 5022 | KIMS Review By: | Received By: Gr |
| SDG #: | Cooler: 2 of 2 | Date/Time Rec.: 7-17-13/09:00 |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 1.1 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | | | | | |
| **Soil/Sediment:** Received in airtight container? | | | | | |
| Received in methanol? | | | | | |
| Methanol covering soil? | | | | | |
| 7. Trip Blank present in cooler? | | | | | |
| 8. Proper sample containers and volume? | | | | | |
| 9. Samples within hold time upon receipt? | | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | | | | | |
| Sulfide – >9 | | | | | |
| Cyanide – pH >12 | | | | | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. **Sample Receipt Condition Report**

| | | |
|---|---|---|
| Client: Tetra Tech | KAS PM: JO | Sampled By: Client |
| Project: | KIMS Entry By: GN | Delivered By: FedEx |
| KAS Work Order#: 565070 | KIMS Review By: JO | Received By: GN |
| SDG #: | Cooler: 1 of 2 | Date/Time Rec.: 7-18-13/0910 |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | ✓ | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 3.0 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | ✓ | | | | |
| **Soil/Sediment:** Received in airtight container? | ✓ | | | | |
| Received in methanol? | | | | ✓ | |
| Methanol covering soil? | | | | ✓ | |
| 7. Trip Blank present in cooler? | ✓ | | | | |
| 8. Proper sample containers and volume? | ✓ | | | | |
| 9. Samples within hold time upon receipt? | ✓ | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | ✓ | | | | |
| Sulfide - >9 | | | | ✓ | |
| Cyanide – pH >12 | | | | ✓ | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. — Sample Receipt Condition Report

| | | |
|---|---|---|
| Client: Tetra Tech | KAS PM: JO | Sampled By: Client |
| Project: | KIMS Entry By: GN | Delivered By: FedEx |
| KAS Work Order#: 56 5070 | KIMS Review By: [illegible] | Received By: GN |
| SDG #: | Cooler: 2 of 2 | Date/Time Rec.: 7-18-13 / 09:10 |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | ✓ | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 4.2 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | | | | ✓ | |
| **Soil/Sediment:** Received in airtight container? | | | | ✓ | |
| Received in methanol? | | | | ✓ | |
| Methanol covering soil? | | | | ✓ | |
| 7. Trip Blank present in cooler? | | | | ✓ | |
| 8. Proper sample containers and volume? | ✓ | | | | |
| 9. Samples within hold time upon receipt? | ✓ | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | ✓ | | | | |
| Sulfide - >9 | | | | ✓ | |
| Cyanide – pH >12 | | | | ✓ | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. **Sample Receipt Condition Report**

| | | | | | |
|---|---|---|---|---|---|
| Client: Tetra Tech | | KAS PM: Jo | | Sampled By: Client | |
| Project: | | KIMS Entry By: GN | | Delivered By: Fed Ex | |
| KAS Work Order#: SG-5146 | | KIMS Review By: | | Received By: GN | |
| SDG #: | Cooler: 1 of 1 | | | Date/Time Rec.: 7-19-12/09:20 | |

| Receipt Criteria | Y | N | EX* | NA | Comments and/or Resolution |
|---|---|---|---|---|---|
| 1. Custody seals present / intact? | ✓ | | | | |
| 2. Chain of Custody present in cooler? | ✓ | | | | |
| 3. Chain of Custody signed by client? | ✓ | | | | |
| 4. Chain of Custody matches samples? | ✓ | | | | |
| 5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun. | ✓ | | | | Temp (°C): 1.9 |
| Samples received at <6 °C w/o freezing? | ✓ | | | | Note: Not required for metals analysis. |
| Ice packs or ice present? | ✓ | | | | The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data. |
| If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool? | | | | ✓ | Note: No cooling process required for metals analysis. |
| 6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea | ✓ | | | | |
| **Soil/Sediment:** Received in airtight container? | ✓ | | | | |
| Received in methanol? | | | | ✓ | |
| Methanol covering soil? | | | | ✓ | |
| 7. Trip Blank present in cooler? | | ✓ | | ✗ | |
| 8. Proper sample containers and volume? | ✓ | | | | |
| 9. Samples within hold time upon receipt? | ✓ | | | | |
| 10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 | ✓ | | | | |
| Sulfide - >9 | | | | ✓ | |
| Cyanide – pH >12 | | | | ✓ | |

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin
ANALYTICAL SERVICES

# Katahdin Analytical Services

## Login Chain of Custody Report (lno1)

*Jul. 16, 2013*
*02:06 PM*



**Login Number: SG4994**

**Account:** TETRAT001 Web
Tetra Tech NUS, Inc.

**Project:** TETRATOLFSF
OLF Saufley Field CTO JM30 Site 2

***Primary Report Address:***
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Anderson Drive
Pittsburgh,PA 15220
vanessa.good@tetratech.com

***Primary Invoice Address:***
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

***Report CC Addresses:***
***Invoice CC Addresses:***

Quote/Incoming: TETRATOLFSF

**Login Information:**

| | | |
|---|---|---|
| ANALYSIS INSTRUCTIONS | : | DOD QSM 4.2 with DoD limits and Florida flagging. ND to MDL. "I" flag between MDL and LOQ. Pest/PCB FV = 2 mL. Metals run MS/lab dup and if MS out, run post dig spike. Metals run serial dilution. |
| CHECK NO. | : | |
| CLIENT PO# | : | 1045366 112G02760- 27-CTO JM30 |
| CLIENT PROJECT MANAGE | : | |
| CONTRACT | : | |
| COOLER TEMPERATURE | : | 5.3 |
| DELIVERY SERVICES | : | Fed Ex |
| EDD FORMAT | : | KAS119QC-CSV |
| LOGIN INITIALS | : | DM |
| PM | : | JO |
| PROJECT NAME | : | OLF Saufley Field, FL- CTO JM30 |
| QC LEVEL | : | IV |
| REGULATORY LIST | : | |
| REPORT INSTRUCTIONS | : | Use Florida flagging. Summary package needs all forms. Send 2 CDs, no HC. Narrative needs to include CTO number, site name and TINUS PM name |
| SDG ID | : | CTOJM30-2 |
| SDG STATUS | : | Begin |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG4994-1 | TRIP BLANK | 15-JUL-13 14:20 | 16-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | SW8260-S | 29-JUL-13 | 40mL Vial+HCl | | |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG4994-2 | JM30-MW55D-071513 | 15-JUL-13 14:55 | 16-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 22-JUL-13 | 1L N-Amber Glass | | MS/MSD |
| Aqueous | S | SW3010-PREP | 11-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 11-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 29-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 22-JUL-13 | 1L N-Amber Glass | | |

***Total Samples:*** **2** ***Total Analyses:*** **6**

QP
07.16.13

0000019

Katahdin ANALYTICAL SERVICES

# Katahdin Analytical Services

## Login Chain of Custody Report (lno1)

*Jul. 17, 2013*
*01:46 PM*



**Login Number: SG5022**

**Account:** TETRAT001 Web
Tetra Tech NUS, Inc.

**Project:** TETRATOLFSF
OLF Saufley Field CTO JM30 Site 2

***Primary Report Address:***
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Anderson Drive
Pittsburgh,PA 15220
vanessa.good@tetratech.com

***Primary Invoice Address:***
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

***Report CC Addresses:***
***Invoice CC Addresses:***

**Quote/Incoming:** TETRATOLFSF

**Login Information:**

| | | |
|---|---|---|
| ANALYSIS INSTRUCTIONS | : | DOD QSM 4.2 with DoD limits and Florida flagging. ND to MDL. "J" flag between MDL and LOQ. Pest/PCB FV = 2 mL. Metals run MS/lab dup and if MS out, run post dig spike. Metals run serial dilution. |
| CHECK NO. | : | |
| CLIENT PO# | : | 1045366 112G02760- 27-CTO JM30 |
| CLIENT PROJECT MANAGE | : | Frank Lesesne |
| CONTRACT | : | |
| COOLER TEMPERATURE | : | 1.1, 2.3 |
| DELIVERY SERVICES | : | Fedex |
| EDD FORMAT | : | KAS119QC-CSV |
| LOGIN INITIALS | : | GN |
| PM | : | JO |
| PROJECT NAME | : | OLF Saufley Field, FL- CTO JM30 |
| QC LEVEL | : | IV |
| REGULATORY LIST | : | |
| REPORT INSTRUCTIONS | : | Use Florida flagging. Summary package needs all forms. Send 2 CDs, no HC. Narrative needs to include CTO number, site name and TtNUS PM name. |
| SDG ID | : | CTOJM30-2 |
| SDG STATUS | : | Cont. |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5022-1 | TRIP BLANK | 16-JUL-13 08:10 | 17-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | SW8260-S | 30-JUL-13 | 40mL Vial+HCl | | |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5022-2 | JM30-MW-55I-071613 | 16-JUL-13 10:30 | 17-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 23-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 30-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 23-JUL-13 | 1L N-Amber Glass | | |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5022-3 | JM30-MW-55S-071613 | 16-JUL-13 12:35 | 17-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 23-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 30-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 23-JUL-13 | 1L N-Amber Glass | | |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5022-4 | JM30-MW-54D-071613 | 16-JUL-13 14:05 | 17-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 23-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 30-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 23-JUL-13 | 1L N-Amber Glass | | |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5022-5 | JM30-RB-071613 | 16-JUL-13 14:45 | 17-JUL-13 | | | 05-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 23-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 12-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 30-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 23-JUL-13 | 1L N-Amber Glass | | |

***Total Samples:*** *5* ***Total Analyses:*** *21*

OP 07.17.13

0000020

Katahdin
ANALYTICAL SERVICES

# Katahdin Analytical Services

## Login Chain of Custody Report (lno1)

*Jul. 18, 2013*
*12:53 PM*



**Login Number: SG5070**

**Account:** TETRAT001 Web
Tetra Tech NUS, Inc.

**Project:** TETRATOLFSF
OLF Saufley Field CTO JM30 Site 2

***Primary Report Address:***
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Anderson Drive
Pittsburgh,PA 15220
vanessa.good@tetratech.com

***Primary Invoice Address:***
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

***Report CC Addresses:***
***Invoice CC Addresses:***

**Quote/Incoming:** TETRATOLFSF

**Login Information:**

| | | |
|---|---|---|
| ANALYSIS INSTRUCTIONS | : | DOD QSM 4.2 with DoD limits and Florida flagging. ND to MDL. "I" flag between MDL and LOQ. Metals run MS/lab dup and if MS out, run post dig spike. Metals run serial dilution. |
| CHECK NO. | : | |
| CLIENT PO# | : | 1045366 112G02760- 27-CTO JM30 |
| CLIENT PROJECT MANAGE | : | Frank Lesesne |
| CONTRACT | : | |
| COOLER TEMPERATURE | : | 3.0, 4.2 |
| DELIVERY SERVICES | : | Fedex |
| EDD FORMAT | : | KAS119QC-CSV |
| LOGIN INITIALS | : | GN |
| PM | : | JO |
| PROJECT NAME | : | OLF Saufley Field, FL- CTO JM30 |
| QC LEVEL | : | IV |
| REGULATORY LIST | : | |
| REPORT INSTRUCTIONS | : | Use Florida flagging. Summary package needs all forms. Send 2 CDs, no HC. Narrative needs to include CTO number, site name and TtNUS PM name. |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | SDG ID / SDG STATUS | Receive Date | PR | Verbal Date | CTOJM30-2 Cont. | Due Date | Mailed |
|---|---|---|---|---|---|---|---|---|---|
| SG5070-1 | TRIP BLANK | 17-JUL-13 07:10 | | 18-JUL-13 | | | | 06-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |

| SG5070-2 | JM30-MW-54I-071713 | 17-JUL-13 08:25 | 18-JUL-13 | 06-AUG-13 |
|---|---|---|---|---|

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 24-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 24-JUL-13 | 1L N-Amber Glass | | |

| SG5070-3 | JM30-MW-54S-071713 | 17-JUL-13 11:00 | 18-JUL-13 | 06-AUG-13 |
|---|---|---|---|---|

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 24-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 24-JUL-13 | 1L N-Amber Glass | | |

| SG5070-4 | JM30-MW-49D-071713 | 17-JUL-13 12:25 | 18-JUL-13 | 06-AUG-13 |
|---|---|---|---|---|

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 24-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 24-JUL-13 | 1L N-Amber Glass | | |

| SG5070-5 | JM30-MW-49I-071713 | 17-JUL-13 15:25 | 18-JUL-13 | 06-AUG-13 |
|---|---|---|---|---|

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 24-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 24-JUL-13 | 1L N-Amber Glass | | |

JP 07.18.13

0000021

Katahdin
ANALYTICAL SERVICES

# Katahdin Analytical Services

## Login Chain of Custody Report (lno1)

*Jul. 18, 2013*
*12:53 PM*



**Login Number: SG5070**

**Quote/Incoming:** TETRATOLFSF

**Account:** TETRAT001 Web
Tetra Tech NUS, Inc.

**Project:** TETRATOLFSF
OLF Saufley Field CTO JM30 Site 2

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5070-6 | JM30-FD-071713 | 17-JUL-13 00:00 | 18-JUL-13 | | | 06-AUG-13 | |

| *Matrix* | | *Product* | *Hold Date (shortest)* | *Bottle Type* | *Bottle Count* | *Comments* |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 24-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 13-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 31-JUL-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 24-JUL-13 | 1L N-Amber Glass | | |

***Total Samples:*** *6* ***Total Analyses:*** *26*

QP 07.18.13

0000022

Katahdin
ANALYTICAL SERVICES

# Katahdin Analytical Services

## Login Chain of Custody Report (lno1)

*Jul. 24, 2013*
*09:18 AM*



**Login Number: SG5146**

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TETRATOLFSF
OLF Saufley Field CTO JM30 Site 2

Quote/incoming: TETRATOLFSF

*Primary Report Address:*
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Anderson Drive
Pittsburgh,PA 15220
vanessa.good@tetratech.com

*Primary Invoice Address:*
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

*Report CC Addresses:*
*Invoice CC Addresses:*

**Login Information:**

| | | |
|---|---|---|
| ANALYSIS INSTRUCTIONS | : | DOD QSM 4.2 with DoD limits and Florida flagging. ND to MDL. "I" flag between MDL and LOQ. Pest/PCB FV = 2 mL. Metals run MS/lab dup and if MS out, run post dig spike. Metals run serial dilution. |
| CHECK NO. | : | |
| CLIENT PO# | : | 1045366 112G02760- 27-CTO JM30 |
| CLIENT PROJECT MANAGE | : | Frank Lesesne |
| CONTRACT | : | |
| COOLER TEMPERATURE | : | 1.9 |
| DELIVERY SERVICES | : | Fedex |
| EDD FORMAT | : | KAS119QC-CSV |
| LOGIN INITIALS | : | GN |
| PM | : | JO |
| PROJECT NAME | : | OLF Saufley Field, FL- CTO JM30 |
| QC LEVEL | : | IV |
| REGULATORY LIST | : | |
| REPORT INSTRUCTIONS | : | Use Florida flagging. Summary package needs all forms. Send 2 CDs, no HC. Narrative needs to include CTO number, site name and TINUS |
| PM name | : | CTOJM30-2 |
| SDG STATUS | : | End |

| Laboratory Sample ID | Client Sample Number | Collect Date/Time | Receive Date | PR | Verbal Date | Due Date | Mailed |
|---|---|---|---|---|---|---|---|
| SG5146-1 | JM30-MW-29S-071813 | 18-JUL-13 09:45 | 19-JUL-13 | | | 07-AUG-13 | |

| Matrix | | Product | Hold Date (shortest) | Bottle Type | Bottle Count | Comments |
|---|---|---|---|---|---|---|
| Aqueous | S | FL-PRO | 25-JUL-13 | 1L N-Amber Glass | | |
| Aqueous | S | SW3010-PREP | 14-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW6010-LEAD | 14-JAN-14 | 250mL Plastic+HNO3 | | |
| Aqueous | S | SW8260-S | 01-AUG-13 | 40mL Vial+HCl | | |
| Aqueous | S | SW8270SIM-S | 25-JUL-13 | 1L N-Amber Glass | | |

*Total Samples:* 1 *Total Analyses:* 5

07.24.13

0000023

**SDG NARRATIVE**
**KATAHDIN ANALYTICAL SERVICES**
**TETRA TECH NUS**
**OLF SAUFLEY FIELD, FL – CTO JM30**
**SDG: CTOJM30-2**
**SG4994, SG5022, SG5070 and SG5146**
**PROJECT MANAGER: FRANK LESESNE**

## Sample Receipt

The following samples were received on July 16, 17, 18 and 19 2013 and were logged in under Katahdin Analytical Services work order numbers SG4994, SG5022, SG5070 and SG5146 for a hardcopy due date of August 07, 2013.

| KATAHDIN Sample No. | TTNUS Sample Identification |
|---|---|
| SG4994-1 | TRIP BLANK |
| SG4994-2 | JM30-MW55D-071513 |
| SG5022-1 | TRIP BLANK |
| SG5022-2 | JM30-MW-55I-071613 |
| SG5022-3 | JM30-MW-55S-071613 |
| SG5022-4 | JM30-MW-54D-071613 |
| SG5022-5 | JM30-RB-071613 |
| SG5070-1 | TRIP BLANK |
| SG5070-2 | JM30-MW-54I-071713 |
| SG5070-3 | JM30-MW-54S-071713 |
| SG5070-4 | JM30-MW-49D-071713 |
| SG5070-5 | JM30-MW-49I-071713 |
| SG5070-6 | JM30-FD-071713 |
| SG5146-1 | JM30-MW-29S-071813 |

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Kelly Perkins**. This narrative is an integral part of the Report of Analysis.

## Organics Analysis

The samples of SDG CTOJM30-2 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and

Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or Method for Determination of Petroleum Range Organics (Method #FL-PRO), Florida Department of Environmental Protection, November 1, 1995, and/or for the specific methods listed below or on the Report of Analysis.

Sample SG4994-2 was used for the matrix spike (MS) and matrix spike duplicate (MSD), as per client request.

8260 Analysis

Samples SG5070-5DL and 6DL were manually integrated for the analyte1,2-dichloroethane. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The target analyte carbon disulfide was detected below ½ the reporting limit in the method blank WG127394-2. According to the DoD QSM section D.1.1.1, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit. Since the method blank was acceptable, no further action was taken.

The independent check standard (file C1828), associated with the initial calibration analyzed on the C instrument on 07/12/13 had low concentrations for the target analytes acetone, 2-butanone, 1,2,3-trichlorobenzene, and methyl acetate, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL.

The calibration verification standards (files C1990 and C2057) had low responses for the target analyte chloromethane. The CV (file C2013) had low responses for the target analytes chloromethane, chloroethane, and high responses for 4-methyl-2-pentanone and bromoform. These responses resulted in %D's that exceeded the DoD QSM version 4.1 acceptance limits of 20%.

8270C SIM Analysis

The independent check standard (file G8981) associated with the initial calibration on the G instrument on 07/19/2013 had a low concentration for the target analyte dibenzo(a,h)anthracene and high concentrations for naphthalene and 2-methylnaphthalene, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

The CV (file G8992) had a low response for the target analyte dibenzo(a,h)anthracene. The CV's (files G9029 and G9045) had high responses for the surrogate fluorene-d10. The CV (file G9068) had a low response for the target analyte dibenzo(a,h)anthracene and high responses for pyrene and the surrogate fluorene-d10. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived limits for the full list of spiked compounds. Although DoD QSM acceptance limits were requested for this project, laboratory established acceptance limits were used because the DoD QSM does not list acceptance limits for 8270SIM. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these statistical acceptance limits.

Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

The LCS and LCSD WG127240-2 and 3 had high recoveries for four spiked target analytes that were outside of the laboratory established acceptance limits. The LCSD WG127240-3 also had a high recovery for the surrogate 2-methylnaphthalene-d10, which was outside the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 18 target analytes is one analyte. If the DoD QSM acceptance limits are applied, the LCS and LCSD had acceptable recoveries for the spiked analytes, after factoring the allowable number of exceedances. Therefore, no further action was taken.

The LCS WG127133-2 had high recoveries for five spiked target analytes that were outside of the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 18 target analytes is one analyte. Since the associated LCSD was acceptable, after factoring the allowable number of exceedances, no further action was taken.

FL-PRO Analysis

Samples SG5022-2, SG5070-5 and 6 had low recoveries for the two surrogates o-terphenyl and n-triacontane-d62 that were outside of the method acceptance limits. The samples were reextracted six or seven days outside of hold time and had similar deviations. The results from both extractions are reported.

Sample SG5146-1 had a low recovery for the surrogate o-terphenyl that was outside of the method acceptance limits. The recovery for the second surrogate n-triacontane-d62 was acceptable. The associated LCSD WG127381-3 had a low recovery for the surrogate o-terphenyl, but the recovery for petroleum range organics was acceptable. For these reasons, no further action was taken.

The LCS WG127831-2, LCSD WG12381-3, and MS/MSD WG127381-4 and 5 had low recoveries for one or both surrogates that were outside of the method acceptance limits. Since the spike recoveries were acceptable, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

**Metals Analysis**

The samples of SDG CTOJM30-2 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Numbers SG4994-2, SG5022-(2-5), SG5070-(2-6) and SG5146-1 were digested for ICP analysis on 07/24/13 (QC Batch GG24ICW1) in accordance with USEPA Method 3010A. Katahdin Sample Number SG4994-2 was prepared in duplicate and with a matrix-spiked aliquot.

# Katahdin Analytical Services, Inc.

## Manual Integration Codes For GC/MS, GC, HPLC and/or IC

| | |
|---|---|
| M1 | Peak splitting. |
| M2 | Well defined peaks on the shoulders of the other peaks. |
| M3 | There is additional area due to a coeluting interferant. |
| M4 | There are negative spikes in the baseline. |
| M5 | There are rising or falling baselines. |
| M6 | The software has failed to detect a peak or misidentified a peak. |
| M7 | Excessive peak tailing. |
| M8 | Analysis such as GRO, DRO and TPH require a baseline hold. |
| M9 | Peak was not completely integrated as in GC/MS. |
| M10 | Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS. |
| M11 | For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated. |
| M12 | Manual integration saved in method due to TurboChrom floating point error. |

## Jennifer Obrin

**From:** Lesesne, Frank [Frank.Lesesne@tetratech.com]
**Sent:** Monday, July 29, 2013 11:39 AM
**To:** Jennifer Obrin; Good, Vanessa; Carper, Kelly; Murphy, Alex
**Subject:** RE: COC for the samples received 07/18-OLF Saufley Field-SG5146

Re extract and analyze JM30-MW55I-071613 (lab sample id SG5022-2); JM30-MW49I-071713 (lab sample id SG5070-5); and JM30-FD-071713 (lab sample id SG5070-6);

**Frank Lesesne P.G.**

**Tetra Tech, Inc.**
Direct: 850.385.9866 Ext. 1353
PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

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**From:** Jennifer Obrin [mailto:jobrin@katahdinlab.com]
**Sent:** Monday, July 29, 2013 9:58 AM
**To:** Lesesne, Frank; Good, Vanessa; Carper, Kelly; Murphy, Alex
**Subject:** RE: COC for the samples received 07/18-OLF Saufley Field-SG5146

Good Morning,

The lab has come to me with a non-conformance regarding the FL-PRO analysis for some of the Saufley Field samples which I have attached. Most of the samples and associated QC had one surrogate, o-terphenyl, out low but not by very much. Three samples did have both surrogates out low but on the extractions logbook it is noted that emulsions occurred with these samples. Any re-extraction will not be within hold time since that was on 7/23 and 7/24. Please let me know how you would like the lab to proceed.

Thanks,

Jennifer Obrin
Federal Programs Project Manager
**Katahdin Analytical Services**
**A Woman-Owned Small Business Enterprise**
**DoD ELAP Accredited**
600 Technology Way
Scarborough, Maine 04074
Direct - 207.874.2400 x17
Fax - 207.775.4029

## KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

# VOLATILES DATA

# Form 5
## Volatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** CB596.D
**Instrument ID :** GCMS-C

**SDG :** CTOJM30-2
**Date Analyzed :** 12-JUL-13
**Time Analyzed :** 08:10
**Heated Purge :** No

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 22.4 | | |
| 75 | 30.0 - 60.0% of mass 95 | 51.5 | | |
| 95 | Base Peak, 100% relative abundance | 100 | | |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 | | |
| 173 | Less than 2.0% of mass 174 | 0.3 | 0.44 | 1 |
| 174 | Greater than 50.0% of mass 95 | 76.5 | | |
| 175 | 5.0 - 9.0% of mass 174 | 5.6 | 7.33 | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 76.3 | 99.73 | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 | 6.11 | 2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Initial Calibration | WG126915-6 | C1822.D | 07/12/13 | 08:34 |
| Initial Calibration | WG126915-5 | C1823.D | 07/12/13 | 09:04 |
| Initial Calibration | WG126915-4 | C1824.D | 07/12/13 | 09:35 |
| Initial Calibration | WG126915-3 | C1825.D | 07/12/13 | 10:06 |
| Initial Calibration | WG126915-2 | C1826.D | 07/12/13 | 10:36 |
| Initial Calibration | WG126915-1 | C1827.D | 07/12/13 | 11:07 |
| Independent Source | WG126915-7 | C1828.D | 07/12/13 | 11:52 |

Katahdin
NALYTICAL SERVICES

Cert No E87604

# Form 6
## Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services
**SDG:** CTOJM30-2
**Project :** OLF Saufley Field, FL- CTO JM30
**Instrument ID:** GCMS-C
**Lab File IDs :** C1827.D C1826.D C1825.D C1824.D C1823.D C1822.D
**Column ID:**
**Calibration Date(s):** 12-JUL-13 08:34
12-JUL-13 11:07

| | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Crv | | | | | Max | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.0000 | 5.0000 | 20.0000 | 50.0000 | 100.0000 | 200.0000 | New | b | m1 | m2 | %RSD | %RSD | |
| Dichlorodifluoromethane | 0.45818 | 0.51810 | 0.48756 | 0.45556 | 0.44730 | 0.40674 | AVG | | 0.46224 | | 8.16659 | 15.00000 | O |
| Chloromethane | 14800 | 63957 | 224689 | 552253 | 1060259 | 1797683 | QUA | 0.00927 | 1.79983 | 0.69033 | 0.99961 | 0.99000 | O |
| Vinyl chloride | 0.37719 | 0.40370 | 0.36137 | 0.34725 | 0.35844 | 0.28040 | AVG | | 0.35473 | | 11.65158 | 15.00000 | O |
| Bromomethane | 0.26625 | 0.24303 | 0.21149 | 0.23849 | 0.27103 | 0.23711 | AVG | | 0.24457 | | 8.88241 | 15.00000 | O |
| Chloroethane | 5795 | 28253 | 100274 | 254543 | 363404 | 595776 | QUA | 0.00881 | 3.10319 | 11.34170 | 0.99731 | 0.99000 | O |
| Trichlorofluoromethane | 0.75140 | 0.77746 | 0.75533 | 0.70240 | 0.71451 | 0.69380 | AVG | | 0.73248 | | 4.57966 | 15.00000 | O |
| 1,1-Dichloroethene | 0.27891 | 0.31511 | 0.30372 | 0.28523 | 0.29979 | 0.28911 | AVG | | 0.29531 | | 4.52269 | 15.00000 | O |
| Carbon Disulfide | 1.22060 | 1.01954 | 0.97654 | 0.92206 | 0.92130 | 0.80530 | AVG | | 0.97756 | | 14.23005 | 15.00000 | O |
| Freon-113 | 0.24126 | 0.23940 | 0.24614 | 0.24295 | 0.23565 | 0.22844 | AVG | | 0.23897 | | 2.61060 | 15.00000 | O |
| Methylene Chloride | 11922 | 46801 | 175598 | 411165 | 833817 | 1587192 | LNR | -0.03945 | 0.31620 | | 0.99900 | 0.99000 | O |
| Acetone | 0.15319 | 0.15692 | 0.15967 | 0.15244 | 0.15000 | 0.16895 | AVG | | 0.15686 | | 4.36199 | 15.00000 | O |
| trans-1,2-Dichloroethene | 0.38384 | 0.38916 | 0.37411 | 0.34812 | 0.34809 | 0.32284 | AVG | | 0.36103 | | 7.08938 | 15.00000 | O |
| Methyl tert-butyl ether | 0.72531 | 0.84326 | 0.88276 | 0.84290 | 0.84134 | 0.77055 | AVG | | 0.81769 | | 7.09733 | 15.00000 | O |
| 1,1-Dichloroethane | 0.65614 | 0.64165 | 0.60434 | 0.56453 | 0.55467 | 0.48895 | AVG | | 0.58505 | | 10.59402 | 15.00000 | O |
| cis-1,2-Dichloroethene | 0.44058 | 0.40517 | 0.39839 | 0.38373 | 0.38038 | 0.34662 | AVG | | 0.39248 | | 7.92328 | 15.00000 | O |
| Bromochloromethane | 0.20322 | 0.18811 | 0.18532 | 0.16985 | 0.16330 | 0.16403 | AVG | | 0.17897 | | 8.88310 | 15.00000 | O |
| Chloroform | 0.74500 | 0.76983 | 0.70599 | 0.66132 | 0.64197 | 0.58255 | AVG | | 0.68444 | | 10.15275 | 15.00000 | O |
| Carbon Tetrachloride | 0.25750 | 0.34326 | 0.33528 | 0.31650 | 0.33640 | 0.32350 | AVG | | 0.31874 | | 9.88648 | 15.00000 | O |
| 1,1,1-Trichloroethane | 0.60203 | 0.71322 | 0.69208 | 0.65637 | 0.66463 | 0.60295 | AVG | | 0.65521 | | 6.95224 | 15.00000 | O |
| 2-Butanone | 0.14048 | 0.19243 | 0.20662 | 0.18377 | 0.17719 | 0.17868 | AVG | | 0.17986 | | 12.30355 | 15.00000 | O |
| Benzene | 0.89910 | 0.91147 | 0.83182 | 0.76877 | 0.74410 | 0.65191 | AVG | | 0.80120 | | 12.39123 | 15.00000 | O |
| Cyclohexane | 0.39794 | 0.54672 | 0.52809 | 0.48393 | 0.48589 | 0.43627 | AVG | | 0.47981 | | 11.58965 | 15.00000 | O |
| 1,2-Dichloroethane | 0.36792 | 0.36716 | 0.33626 | 0.31560 | 0.31921 | 0.31180 | AVG | | 0.33632 | | 7.60782 | 15.00000 | O |
| Trichloroethene | 0.24588 | 0.25977 | 0.24405 | 0.22722 | 0.23443 | 0.22522 | AVG | | 0.23943 | | 5.45417 | 15.00000 | O |
| 1,2-Dichloropropane | 0.19538 | 0.19471 | 0.18793 | 0.17726 | 0.17991 | 0.17230 | AVG | | 0.18458 | | 5.17780 | 15.00000 | O |
| Bromodichloromethane | 0.34997 | 0.35077 | 0.34806 | 0.32736 | 0.33458 | 0.32268 | AVG | | 0.33890 | | 3.64311 | 15.00000 | O |
| cis-1,3-dichloropropene | 0.32346 | 0.34195 | 0.36663 | 0.34309 | 0.35241 | 0.33932 | AVG | | 0.34448 | | 4.16722 | 15.00000 | O |
| Toluene | 0.59922 | 0.65517 | 0.59132 | 0.56092 | 0.55249 | 0.50510 | AVG | | 0.57737 | | 8.77638 | 15.00000 | O |
| 4-methyl-2-pentanone | 0.14083 | 0.19260 | 0.20290 | 0.17887 | 0.17456 | 0.16506 | AVG | | 0.17580 | | 12.37333 | 15.00000 | O |
| Tetrachloroethene | 0.22454 | 0.22181 | 0.22144 | 0.21990 | 0.22914 | 0.22072 | AVG | | 0.22293 | | 1.53739 | 15.00000 | O |
| trans-1,3-Dichloropropene | 0.29113 | 0.31326 | 0.32999 | 0.30835 | 0.32208 | 0.32504 | AVG | | 0.31498 | | 4.47268 | 15.00000 | O |
| 1,1,2-Trichloroethane | 0.18197 | 0.16477 | 0.17056 | 0.14891 | 0.15224 | 0.16168 | AVG | | 0.16335 | | 7.42509 | 15.00000 | O |
| Dibromochloromethane | 0.22287 | 0.24224 | 0.24595 | 0.23769 | 0.25090 | 0.24660 | AVG | | 0.24104 | | 4.12829 | 15.00000 | O |
| 1,2-Dibromoethane | 0.22290 | 0.22904 | 0.23693 | 0.21969 | 0.23453 | 0.24734 | AVG | | 0.23174 | | 4.35269 | 15.00000 | O |
| 2-Hexanone | 0.11561 | 0.17008 | 0.18330 | 0.16531 | 0.15779 | 0.14106 | AVG | | 0.15552 | | 15.44881 | 15.00000 | WC |
| Chlorobenzene | 0.74656 | 0.74280 | 0.68843 | 0.64237 | 0.63231 | 0.54151 | AVG | | 0.66567 | | 11.65223 | 15.00000 | O |
| Ethylbenzene | 0.40561 | 0.41144 | 0.39420 | 0.37393 | 0.38067 | 0.34184 | AVG | | 0.38461 | | 6.58901 | 15.00000 | O |

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sales@katahdinlab.com

# Form 6
## Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services
**SDG:** CTOJM30-2
**Project :** OLF Saufley Field, FL- CTO JM30
**Instrument ID:** GCMS-C
**Lab File IDs :** C1827.D C1826.D C1825.D C1824.D C1823.D C1822.D
**Column ID:**
**Calibration Date(s):** 12-JUL-13 08:34
12-JUL-13 11:07

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| m+p-Xylenes | 0.42374 | 0.49642 | 0.47143 | 0.44592 | 0.43403 | 0.35001 | AVG | | 0.43692 | | 11.46521 | 15.00000 | O |
| o-Xylene | 0.38706 | 0.45119 | 0.43563 | 0.42320 | 0.43193 | 0.38006 | AVG | | 0.41818 | | 6.78911 | 15.00000 | O |
| Styrene | 0.67490 | 0.81257 | 0.81436 | 0.76708 | 0.75116 | 0.62324 | AVG | | 0.74055 | | 10.37623 | 15.00000 | O |
| Bromoform | 0.15216 | 0.15465 | 0.16733 | 0.16260 | 0.18382 | 0.19568 | AVG | | 0.16937 | | 10.10282 | 15.00000 | O |
| Isopropylbenzene | 1.81368 | 2.24863 | 2.22539 | 2.04978 | 1.90296 | 1.52516 | AVG | | 1.96093 | | 13.97607 | 15.00000 | O |
| 1,1,2,2-Tetrachloroethane | 0.51244 | 0.52475 | 0.51647 | 0.46724 | 0.47218 | 0.49206 | AVG | | 0.49752 | | 4.85074 | 15.00000 | O |
| 1,3-Dichlorobenzene | 1.03138 | 1.03724 | 1.01456 | 0.96395 | 0.96331 | 0.88216 | AVG | | 0.98210 | | 5.97067 | 15.00000 | O |
| 1,4-Dichlorobenzene | 1.30460 | 1.20351 | 1.13384 | 1.05371 | 1.04040 | 0.96458 | AVG | | 1.11677 | | 11.04452 | 15.00000 | O |
| 1,2-Dichlorobenzene | 1.00204 | 0.98319 | 0.92995 | 0.87082 | 0.88970 | 0.83610 | AVG | | 0.91863 | | 7.08615 | 15.00000 | O |
| 1,2-Dibromo-3-Chloropropane | 0.07874 | 0.09682 | 0.09244 | 0.09350 | 0.09823 | 0.11133 | AVG | | 0.09518 | | 11.05143 | 15.00000 | O |
| 1,2,4-Trichlorobenzene | 0.74151 | 0.67063 | 0.63085 | 0.59758 | 0.63844 | 0.66154 | AVG | | 0.65676 | | 7.43048 | 15.00000 | O |
| 1,2,3-Trichlorobenzene | 13302 | 55958 | 195932 | 444494 | 1007363 | 2236758 | LNR | 0.03804 | 0.51839 | | 0.99684 | 0.99000 | O |
| Methyl Acetate | 0.29808 | 0.29964 | 0.30130 | 0.30119 | 0.31255 | 0.32889 | AVG | | 0.30694 | | 3.88204 | 15.00000 | O |
| Methylcyclohexane | 0.57243 | 0.60145 | 0.60104 | 0.58257 | 0.56568 | 0.54744 | AVG | | 0.57843 | | 3.64026 | 15.00000 | O |
| Dibromofluoromethane | 0.38651 | 0.41266 | 0.39319 | 0.37564 | 0.37143 | 0.35284 | AVG | | 0.38204 | | 5.34919 | 15.00000 | |
| 1,2-Dichloroethane-D4 | 0.49617 | 0.48202 | 0.44336 | 0.42134 | 0.39709 | 0.38708 | AVG | | 0.43784 | | 10.15954 | 15.00000 | |
| Toluene-D8 | 0.83284 | 0.87641 | 0.84452 | 0.79663 | 0.75501 | 0.65922 | AVG | | 0.79410 | | 9.84254 | 15.00000 | |
| P-Bromofluorobenzene | 0.38681 | 0.37697 | 0.36558 | 0.35841 | 0.36246 | 0.35490 | AVG | | 0.36752 | | 3.29386 | 15.00000 | |

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Katahdin
NALYTICAL SERVICES

Cert No E87604

# Form 5
## Volatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** CB603.D
**Instrument ID :** GCMS-C

**SDG :** CTOJM30-2
**Date Analyzed :** 22-JUL-13
**Time Analyzed :** 09:02
**Heated Purge :** No

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 22.2 | | |
| 75 | 30.0 - 60.0% of mass 95 | 49.1 | | |
| 95 | Base Peak, 100% relative abundance | 100 | | |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 | | |
| 173 | Less than 2.0% of mass 174 | 0.0 | 0.0 | 1 |
| 174 | Greater than 50.0% of mass 95 | 85.3 | | |
| 175 | 5.0 - 9.0% of mass 174 | 6.4 | 7.54 | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 82.1 | 96.19 | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.9 | 7.17 | 2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127394-4 | C1990.D | 07/22/13 | 11:06 |
| Laboratory Control S | WG127394-1 | C1991.D | 07/22/13 | 11:37 |
| Method Blank Sample | WG127394-2 | C1994.D | 07/22/13 | 13:28 |
| TRIP BLANK | SG4994-1 | C1995.D | 07/22/13 | 13:59 |
| TRIP BLANK | SG5022-1 | C1996.D | 07/22/13 | 14:30 |
| TRIP BLANK | SG5070-1 | C1997.D | 07/22/13 | 15:01 |
| JM30-MW55D-071513 | SG4994-2 | C2000.D | 07/22/13 | 16:34 |
| JM30-MW-55I-071613 | SG5022-2 | C2001.D | 07/22/13 | 17:04 |
| JM30-MW-55S-071613 | SG5022-3 | C2002.D | 07/22/13 | 17:35 |
| JM30-MW-54D-071613 | SG5022-4 | C2003.D | 07/22/13 | 18:06 |
| JM30-RB-071613 | SG5022-5 | C2004.D | 07/22/13 | 18:39 |
| JM30-MW-54I-071713 | SG5070-2 | C2005.D | 07/22/13 | 19:11 |
| JM30-MW-54S-071713 | SG5070-3 | C2006.D | 07/22/13 | 19:45 |
| Matrix Spike | WG127394-5 | C2007.D | 07/22/13 | 20:18 |
| Matrix Spike Duplica | WG127394-6 | C2008.D | 07/22/13 | 20:50 |

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NALYTICAL SERVICES

Cert No E87604

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127394-4 **Analytical Date:** 07/22/13 11:06
**Lab File ID :** C1990.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 0.46224 | 0.43536 | 0.43536 | 0.010 | -5.81442 | 20.00000 | Averaged | |
| 2 Chloromethane | 50.00000 | 38.90554 | 0.37363 | 0.100 | -22.18893 | 20.00000 | Quadratic | * |
| 3 Vinyl chloride | 0.35473 | 0.29335 | 0.29335 | 0.010 | -17.30119 | 20.00000 | Averaged | |
| 4 Bromomethane | 0.24457 | 0.25651 | 0.25651 | 0.010 | 4.88223 | 20.00000 | Averaged | |
| 5 Chloroethane | 50.00000 | 42.54106 | 0.16808 | 0.010 | -14.91788 | 20.00000 | Quadratic | |
| 6 Trichlorofluoromethane | 0.73248 | 0.67753 | 0.67753 | 0.010 | -7.50198 | 20.00000 | Averaged | |
| 9 1,1-Dichloroethene | 0.29531 | 0.28500 | 0.28500 | 0.100 | -3.49252 | 20.00000 | Averaged | |
| 10 Carbon Disulfide | 0.97756 | 0.82633 | 0.82633 | 0.010 | -15.46961 | 20.00000 | Averaged | |
| 11 Freon-113 | 0.23897 | 0.24243 | 0.24243 | 0.010 | 1.44719 | 20.00000 | Averaged | |
| 14 Methylene Chloride | 50.00000 | 50.76961 | 0.33355 | 0.010 | 1.53923 | 20.00000 | Linear | |
| 15 Acetone | 0.15686 | 0.14551 | 0.14551 | 0.010 | -7.23587 | 20.00000 | Averaged | |
| 17 trans-1,2-Dichloroethene | 0.36103 | 0.34714 | 0.34714 | 0.010 | -3.84657 | 20.00000 | Averaged | |
| 19 Methyl tert-butyl ether | 0.81769 | 0.81260 | 0.81260 | 0.010 | -0.62170 | 20.00000 | Averaged | |
| 25 1,1-Dichloroethane | 0.58505 | 0.54654 | 0.54654 | 0.100 | -6.58179 | 20.00000 | Averaged | |
| 29 cis-1,2-Dichloroethene | 0.39248 | 0.37878 | 0.37878 | 0.010 | -3.49049 | 20.00000 | Averaged | |
| 33 Bromochloromethane | 0.17897 | 0.18670 | 0.18670 | 0.010 | 4.31917 | 20.00000 | Averaged | |
| 34 Chloroform | 0.68444 | 0.66622 | 0.66622 | 0.010 | -2.66204 | 20.00000 | Averaged | |
| 35 Carbon Tetrachloride | 0.31874 | 0.33122 | 0.33122 | 0.010 | 3.91558 | 20.00000 | Averaged | |
| 38 1,1,1-Trichloroethane | 0.65521 | 0.68722 | 0.68722 | 0.010 | 4.88471 | 20.00000 | Averaged | |
| 40 2-Butanone | 0.17986 | 0.15691 | 0.15691 | 0.010 | -12.75913 | 20.00000 | Averaged | |
| 41 Benzene | 0.80120 | 0.73155 | 0.73155 | 0.010 | -8.69229 | 20.00000 | Averaged | |
| 43 Cyclohexane | 0.47981 | 0.43719 | 0.43719 | 0.010 | -8.88213 | 20.00000 | Averaged | |
| 47 1,2-Dichloroethane | 0.33632 | 0.32891 | 0.32891 | 0.010 | -2.20480 | 20.00000 | Averaged | |
| 48 Trichloroethene | 0.23943 | 0.22848 | 0.22848 | 0.010 | -4.57344 | 20.00000 | Averaged | |
| 51 1,2-Dichloropropane | 0.18458 | 0.16594 | 0.16594 | 0.010 | -10.10090 | 20.00000 | Averaged | |
| 52 Bromodichloromethane | 0.33890 | 0.34230 | 0.34230 | 0.010 | 1.00302 | 20.00000 | Averaged | |
| 53 cis-1,3-dichloropropene | 0.34448 | 0.34944 | 0.34944 | 0.010 | 1.44081 | 20.00000 | Averaged | |
| 57 Toluene | 0.57737 | 0.54786 | 0.54786 | 0.010 | -5.11123 | 20.00000 | Averaged | |
| 58 4-methyl-2-pentanone | 0.17580 | 0.17160 | 0.17160 | 0.010 | -2.39141 | 20.00000 | Averaged | |
| 59 Tetrachloroethene | 0.22293 | 0.22207 | 0.22207 | 0.010 | -0.38439 | 20.00000 | Averaged | |
| 60 trans-1,3-Dichloropropene | 0.31498 | 0.32275 | 0.32275 | 0.010 | 2.46828 | 20.00000 | Averaged | |
| 61 1,1,2-Trichloroethane | 0.16335 | 0.15337 | 0.15337 | 0.010 | -6.11480 | 20.00000 | Averaged | |
| 62 Dibromochloromethane | 0.24104 | 0.25697 | 0.25697 | 0.010 | 6.60958 | 20.00000 | Averaged | |
| 64 1,2-Dibromoethane | 0.23174 | 0.23699 | 0.23699 | 0.010 | 2.26601 | 20.00000 | Averaged | |
| 65 2-Hexanone | 0.15552 | 0.13913 | 0.13913 | 0.010 | -10.54352 | 20.00000 | Averaged | |
| 67 Chlorobenzene | 0.66567 | 0.65110 | 0.65110 | 0.300 | -2.18851 | 20.00000 | Averaged | |
| 68 Ethylbenzene | 0.38461 | 0.37160 | 0.37160 | 0.010 | -3.38455 | 20.00000 | Averaged | |
| 71 m+p-Xylenes | 0.43692 | 0.44043 | 0.44043 | 0.010 | 0.80172 | 20.00000 | Averaged | |
| 72 o-Xylene | 0.41818 | 0.41887 | 0.41887 | 0.010 | 0.16555 | 20.00000 | Averaged | |
| 73 Styrene | 0.74055 | 0.76006 | 0.76006 | 0.010 | 2.63472 | 20.00000 | Averaged | |
| 74 Bromoform | 0.16937 | 0.18835 | 0.18835 | 0.100 | 11.20652 | 20.00000 | Averaged | |

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127394-4 **Analytical Date:** 07/22/13 11:06
**Lab File ID :** C1990.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 75 Isopropylbenzene | 1.96093 | 1.92749 | 1.92749 | 0.010 | -1.70553 | 20.00000 | Averaged |
| 81 1,1,2,2-Tetrachloroethane | 0.49752 | 0.43703 | 0.43703 | 0.300 | -12.15941 | 20.00000 | Averaged |
| 90 1,3-Dichlorobenzene | 0.98210 | 0.96696 | 0.96696 | 0.010 | -1.54178 | 20.00000 | Averaged |
| 92 1,4-Dichlorobenzene | 1.11677 | 1.04469 | 1.04469 | 0.010 | -6.45449 | 20.00000 | Averaged |
| 95 1,2-Dichlorobenzene | 0.91863 | 0.88405 | 0.88405 | 0.010 | -3.76490 | 20.00000 | Averaged |
| 96 1,2-Dibromo-3-Chloropropane | 0.09518 | 0.08213 | 0.08213 | 0.010 | -13.70503 | 20.00000 | Averaged |
| 99 1,2,4-Trichlorobenzene | 0.65676 | 0.58272 | 0.58272 | 0.010 | -11.27386 | 20.00000 | Averaged |
| 102 1,2,3-Trichlorobenzene | 50.00000 | 40.26828 | 0.39777 | 0.010 | -19.46343 | 20.00000 | Linear |
| 103 Methyl Acetate | 0.30694 | 0.25315 | 0.25315 | 0.010 | -17.52381 | 20.00000 | Averaged |
| 104 Methylcyclohexane | 0.57843 | 0.54261 | 0.54261 | 0.010 | -6.19313 | 20.00000 | Averaged |
| 37 Dibromofluoromethane | 0.38204 | 0.33519 | 0.33519 | 0.010 | -12.26486 | 20.00000 | Averaged |
| 45 1,2-Dichloroethane-D4 | 0.43784 | 0.37687 | 0.37687 | 0.010 | -13.92531 | 20.00000 | Averaged |
| 55 Toluene-D8 | 0.79410 | 0.69250 | 0.69250 | 0.010 | -12.79429 | 20.00000 | Averaged |
| 76 P-Bromofluorobenzene | 0.36752 | 0.33160 | 0.33160 | 0.010 | -9.77351 | 20.00000 | Averaged |

*** = Compound out of QC criteria**

# Form 5
## Volatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** CB604.D
**Instrument ID :** GCMS-C

**SDG :** CTOJM30-2
**Date Analyzed :** 23-JUL-13
**Time Analyzed :** 07:33
**Heated Purge :** No

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 21.3 | | |
| 75 | 30.0 - 60.0% of mass 95 | 48.4 | | |
| 95 | Base Peak, 100% relative abundance | 100 | | |
| 96 | 5.0 - 9.0% of mass 95 | 5.5 | | |
| 173 | Less than 2.0% of mass 174 | 0.6 | 0.80 | 1 |
| 174 | Greater than 50.0% of mass 95 | 80.8 | | |
| 175 | 5.0 - 9.0% of mass 174 | 5.7 | 7.11 | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.9 | 96.50 | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.5 | 7.07 | 2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127436-4 | C2013.D | 07/23/13 | 08:00 |
| Laboratory Control S | WG127436-1 | C2014.D | 07/23/13 | 08:42 |
| Method Blank Sample | WG127436-2 | C2018.D | 07/23/13 | 10:58 |
| JM30-MW-49D-071713 | SG5070-4 | C2022.D | 07/23/13 | 13:03 |
| JM30-MW-49I-071713 | SG5070-5 | C2023.D | 07/23/13 | 13:34 |
| JM30-FD-071713 | SG5070-6 | C2024.D | 07/23/13 | 14:05 |

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127436-4 **Analytical Date:** 07/23/13 08:00
**Lab File ID :** C2013.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 0.46224 | 0.46997 | 0.46997 | 0.010 | 1.67303 | 20.00000 | Averaged | |
| 2 Chloromethane | 50.00000 | 39.36785 | 0.37762 | 0.100 | -21.26430 | 20.00000 | Quadratic | * |
| 3 Vinyl chloride | 0.35473 | 0.29901 | 0.29901 | 0.010 | -15.70694 | 20.00000 | Averaged | |
| 4 Bromomethane | 0.24457 | 0.26339 | 0.26339 | 0.010 | 7.69553 | 20.00000 | Averaged | |
| 5 Chloroethane | 50.00000 | 38.45343 | 0.15602 | 0.010 | -23.09314 | 20.00000 | Quadratic | * |
| 6 Trichlorofluoromethane | 0.73248 | 0.77689 | 0.77689 | 0.010 | 6.06325 | 20.00000 | Averaged | |
| 9 1,1-Dichloroethene | 0.29531 | 0.29364 | 0.29364 | 0.100 | -0.56499 | 20.00000 | Averaged | |
| 10 Carbon Disulfide | 0.97756 | 0.87329 | 0.87329 | 0.010 | -10.66600 | 20.00000 | Averaged | |
| 11 Freon-113 | 0.23897 | 0.24430 | 0.24430 | 0.010 | 2.22974 | 20.00000 | Averaged | |
| 14 Methylene Chloride | 50.00000 | 52.66849 | 0.34556 | 0.010 | 5.33699 | 20.00000 | Linear | |
| 15 Acetone | 0.15686 | 0.14092 | 0.14092 | 0.010 | -10.16516 | 20.00000 | Averaged | |
| 17 trans-1,2-Dichloroethene | 0.36103 | 0.34773 | 0.34773 | 0.010 | -3.68341 | 20.00000 | Averaged | |
| 19 Methyl tert-butyl ether | 0.81769 | 0.86468 | 0.86468 | 0.010 | 5.74739 | 20.00000 | Averaged | |
| 25 1,1-Dichloroethane | 0.58505 | 0.55512 | 0.55512 | 0.100 | -5.11482 | 20.00000 | Averaged | |
| 29 cis-1,2-Dichloroethene | 0.39248 | 0.37466 | 0.37466 | 0.010 | -4.53989 | 20.00000 | Averaged | |
| 33 Bromochloromethane | 0.17897 | 0.17954 | 0.17954 | 0.010 | 0.31736 | 20.00000 | Averaged | |
| 34 Chloroform | 0.68444 | 0.69069 | 0.69069 | 0.010 | 0.91293 | 20.00000 | Averaged | |
| 35 Carbon Tetrachloride | 0.31874 | 0.36643 | 0.36643 | 0.010 | 14.96262 | 20.00000 | Averaged | |
| 38 1,1,1-Trichloroethane | 0.65521 | 0.71716 | 0.71716 | 0.010 | 9.45426 | 20.00000 | Averaged | |
| 40 2-Butanone | 0.17986 | 0.17549 | 0.17549 | 0.010 | -2.43068 | 20.00000 | Averaged | |
| 41 Benzene | 0.80120 | 0.76622 | 0.76622 | 0.010 | -4.36505 | 20.00000 | Averaged | |
| 43 Cyclohexane | 0.47981 | 0.45801 | 0.45801 | 0.010 | -4.54379 | 20.00000 | Averaged | |
| 47 1,2-Dichloroethane | 0.33632 | 0.36155 | 0.36155 | 0.010 | 7.50043 | 20.00000 | Averaged | |
| 48 Trichloroethene | 0.23943 | 0.24699 | 0.24699 | 0.010 | 3.15887 | 20.00000 | Averaged | |
| 51 1,2-Dichloropropane | 0.18458 | 0.17503 | 0.17503 | 0.010 | -5.17153 | 20.00000 | Averaged | |
| 52 Bromodichloromethane | 0.33890 | 0.36139 | 0.36139 | 0.010 | 6.63573 | 20.00000 | Averaged | |
| 53 cis-1,3-dichloropropene | 0.34448 | 0.36042 | 0.36042 | 0.010 | 4.62731 | 20.00000 | Averaged | |
| 57 Toluene | 0.57737 | 0.58068 | 0.58068 | 0.010 | 0.57346 | 20.00000 | Averaged | |
| 58 4-methyl-2-pentanone | 0.17580 | 0.21199 | 0.21199 | 0.010 | 20.58178 | 20.00000 | Averaged | * |
| 59 Tetrachloroethene | 0.22293 | 0.23201 | 0.23201 | 0.010 | 4.07725 | 20.00000 | Averaged | |
| 60 trans-1,3-Dichloropropene | 0.31498 | 0.34573 | 0.34573 | 0.010 | 9.76515 | 20.00000 | Averaged | |
| 61 1,1,2-Trichloroethane | 0.16335 | 0.16553 | 0.16553 | 0.010 | 1.33075 | 20.00000 | Averaged | |
| 62 Dibromochloromethane | 0.24104 | 0.27314 | 0.27314 | 0.010 | 13.31695 | 20.00000 | Averaged | |
| 64 1,2-Dibromoethane | 0.23174 | 0.25557 | 0.25557 | 0.010 | 10.28443 | 20.00000 | Averaged | |
| 65 2-Hexanone | 0.15552 | 0.16290 | 0.16290 | 0.010 | 4.74060 | 20.00000 | Averaged | |
| 67 Chlorobenzene | 0.66567 | 0.66964 | 0.66964 | 0.300 | 0.59784 | 20.00000 | Averaged | |
| 68 Ethylbenzene | 0.38461 | 0.38833 | 0.38833 | 0.010 | 0.96686 | 20.00000 | Averaged | |
| 71 m+p-Xylenes | 0.43692 | 0.46269 | 0.46269 | 0.010 | 5.89688 | 20.00000 | Averaged | |
| 72 o-Xylene | 0.41818 | 0.44153 | 0.44153 | 0.010 | 5.58366 | 20.00000 | Averaged | |
| 73 Styrene | 0.74055 | 0.79853 | 0.79853 | 0.010 | 7.82954 | 20.00000 | Averaged | |
| 74 Bromoform | 0.16937 | 0.20446 | 0.20446 | 0.100 | 20.71715 | 20.00000 | Averaged | * |

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127436-4 **Analytical Date:** 07/23/13 08:00
**Lab File ID :** C2013.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 75 Isopropylbenzene | 1.96093 | 1.97609 | 1.97609 | 0.010 | 0.77316 | 20.00000 | Averaged |
| 81 1,1,2,2-Tetrachloroethane | 0.49752 | 0.48414 | 0.48414 | 0.300 | -2.68994 | 20.00000 | Averaged |
| 90 1,3-Dichlorobenzene | 0.98210 | 0.99967 | 0.99967 | 0.010 | 1.78849 | 20.00000 | Averaged |
| 92 1,4-Dichlorobenzene | 1.11677 | 1.09918 | 1.09918 | 0.010 | -1.57512 | 20.00000 | Averaged |
| 95 1,2-Dichlorobenzene | 0.91863 | 0.93449 | 0.93449 | 0.010 | 1.72588 | 20.00000 | Averaged |
| 96 1,2-Dibromo-3-Chloropropane | 0.09518 | 0.10655 | 0.10655 | 0.010 | 11.95609 | 20.00000 | Averaged |
| 99 1,2,4-Trichlorobenzene | 0.65676 | 0.64377 | 0.64377 | 0.010 | -1.97755 | 20.00000 | Averaged |
| 102 1,2,3-Trichlorobenzene | 50.00000 | 46.82347 | 0.46573 | 0.010 | -6.35306 | 20.00000 | Linear |
| 103 Methyl Acetate | 0.30694 | 0.29520 | 0.29520 | 0.010 | -3.82652 | 20.00000 | Averaged |
| 104 Methylcyclohexane | 0.57843 | 0.54353 | 0.54353 | 0.010 | -6.03352 | 20.00000 | Averaged |
| 37 Dibromofluoromethane | 0.38204 | 0.33157 | 0.33157 | 0.010 | -13.21290 | 20.00000 | Averaged |
| 45 1,2-Dichloroethane-D4 | 0.43784 | 0.39344 | 0.39344 | 0.010 | -10.14179 | 20.00000 | Averaged |
| 55 Toluene-D8 | 0.79410 | 0.69863 | 0.69863 | 0.010 | -12.02324 | 20.00000 | Averaged |
| 76 P-Bromofluorobenzene | 0.36752 | 0.33871 | 0.33871 | 0.010 | -7.84040 | 20.00000 | Averaged |

*** = Compound out of QC criteria**

# Form 5
## Volatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** CB606.D
**Instrument ID :** GCMS-C

**SDG :** CTOJM30-2
**Date Analyzed :** 25-JUL-13
**Time Analyzed :** 07:44
**Heated Purge :** No

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.7 | | |
| 75 | 30.0 - 60.0% of mass 95 | 48.1 | | |
| 95 | Base Peak, 100% relative abundance | 100 | | |
| 96 | 5.0 - 9.0% of mass 95 | 6.2 | | |
| 173 | Less than 2.0% of mass 174 | 0.3 | 0.34 | 1 |
| 174 | Greater than 50.0% of mass 95 | 77.4 | | |
| 175 | 5.0 - 9.0% of mass 174 | 6.7 | 8.67 | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.1 | 99.55 | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.6 | 5.99 | 2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127569-4 | C2057.D | 07/25/13 | 08:55 |
| Laboratory Control S | WG127569-1 | C2058.D | 07/25/13 | 09:37 |
| Method Blank Sample | WG127569-2 | C2061.D | 07/25/13 | 11:26 |
| JM30-MW-29S-071813 | SG5146-1 | C2063.D | 07/25/13 | 12:28 |
| JM30-MW-49I-071713 | SG5070-5DL | C2064.D | 07/25/13 | 12:59 |
| JM30-FD-071713 | SG5070-6DL | C2065.D | 07/25/13 | 13:30 |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127569-4 **Analytical Date:** 07/25/13 08:55
**Lab File ID :** C2057.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 0.46224 | 0.41914 | 0.41914 | 0.010 | -9.32365 | 20.00000 | Averaged | |
| 2 Chloromethane | 50.00000 | 38.04958 | 0.36622 | 0.100 | -23.90083 | 20.00000 | Quadratic | * |
| 3 Vinyl chloride | 0.35473 | 0.29019 | 0.29019 | 0.010 | -18.19206 | 20.00000 | Averaged | |
| 4 Bromomethane | 0.24457 | 0.24622 | 0.24622 | 0.010 | 0.67545 | 20.00000 | Averaged | |
| 5 Chloroethane | 50.00000 | 41.58593 | 0.16531 | 0.010 | -16.82813 | 20.00000 | Quadratic | |
| 6 Trichlorofluoromethane | 0.73248 | 0.67828 | 0.67828 | 0.010 | -7.39947 | 20.00000 | Averaged | |
| 9 1,1-Dichloroethene | 0.29531 | 0.27770 | 0.27770 | 0.100 | -5.96176 | 20.00000 | Averaged | |
| 10 Carbon Disulfide | 0.97756 | 0.81964 | 0.81964 | 0.010 | -16.15409 | 20.00000 | Averaged | |
| 11 Freon-113 | 0.23897 | 0.21041 | 0.21041 | 0.010 | -11.95145 | 20.00000 | Averaged | |
| 14 Methylene Chloride | 50.00000 | 49.57643 | 0.32600 | 0.010 | -0.84714 | 20.00000 | Linear | |
| 15 Acetone | 0.15686 | 0.15645 | 0.15645 | 0.010 | -0.26297 | 20.00000 | Averaged | |
| 17 trans-1,2-Dichloroethene | 0.36103 | 0.32927 | 0.32927 | 0.010 | -8.79689 | 20.00000 | Averaged | |
| 19 Methyl tert-butyl ether | 0.81769 | 0.82235 | 0.82235 | 0.010 | 0.57020 | 20.00000 | Averaged | |
| 25 1,1-Dichloroethane | 0.58505 | 0.54156 | 0.54156 | 0.100 | -7.43271 | 20.00000 | Averaged | |
| 29 cis-1,2-Dichloroethene | 0.39248 | 0.36939 | 0.36939 | 0.010 | -5.88379 | 20.00000 | Averaged | |
| 33 Bromochloromethane | 0.17897 | 0.17943 | 0.17943 | 0.010 | 0.25820 | 20.00000 | Averaged | |
| 34 Chloroform | 0.68444 | 0.66214 | 0.66214 | 0.010 | -3.25817 | 20.00000 | Averaged | |
| 35 Carbon Tetrachloride | 0.31874 | 0.35602 | 0.35602 | 0.010 | 11.69532 | 20.00000 | Averaged | |
| 38 1,1,1-Trichloroethane | 0.65521 | 0.68345 | 0.68345 | 0.010 | 4.31033 | 20.00000 | Averaged | |
| 40 2-Butanone | 0.17986 | 0.16225 | 0.16225 | 0.010 | -9.78975 | 20.00000 | Averaged | |
| 41 Benzene | 0.80120 | 0.72828 | 0.72828 | 0.010 | -9.10083 | 20.00000 | Averaged | |
| 43 Cyclohexane | 0.47981 | 0.44219 | 0.44219 | 0.010 | -7.83996 | 20.00000 | Averaged | |
| 47 1,2-Dichloroethane | 0.33632 | 0.34252 | 0.34252 | 0.010 | 1.84159 | 20.00000 | Averaged | |
| 48 Trichloroethene | 0.23943 | 0.23399 | 0.23399 | 0.010 | -2.27203 | 20.00000 | Averaged | |
| 51 1,2-Dichloropropane | 0.18458 | 0.16466 | 0.16466 | 0.010 | -10.79257 | 20.00000 | Averaged | |
| 52 Bromodichloromethane | 0.33890 | 0.34809 | 0.34809 | 0.010 | 2.70978 | 20.00000 | Averaged | |
| 53 cis-1,3-dichloropropene | 0.34448 | 0.34353 | 0.34353 | 0.010 | -0.27472 | 20.00000 | Averaged | |
| 57 Toluene | 0.57737 | 0.54975 | 0.54975 | 0.010 | -4.78274 | 20.00000 | Averaged | |
| 58 4-methyl-2-pentanone | 0.17580 | 0.17871 | 0.17871 | 0.010 | 1.65159 | 20.00000 | Averaged | |
| 59 Tetrachloroethene | 0.22293 | 0.22207 | 0.22207 | 0.010 | -0.38486 | 20.00000 | Averaged | |
| 60 trans-1,3-Dichloropropene | 0.31498 | 0.32202 | 0.32202 | 0.010 | 2.23643 | 20.00000 | Averaged | |
| 61 1,1,2-Trichloroethane | 0.16335 | 0.14953 | 0.14953 | 0.010 | -8.46060 | 20.00000 | Averaged | |
| 62 Dibromochloromethane | 0.24104 | 0.25652 | 0.25652 | 0.010 | 6.42054 | 20.00000 | Averaged | |
| 64 1,2-Dibromoethane | 0.23174 | 0.23418 | 0.23418 | 0.010 | 1.05240 | 20.00000 | Averaged | |
| 65 2-Hexanone | 0.15552 | 0.14272 | 0.14272 | 0.010 | -8.23053 | 20.00000 | Averaged | |
| 67 Chlorobenzene | 0.66567 | 0.64070 | 0.64070 | 0.300 | -3.75053 | 20.00000 | Averaged | |
| 68 Ethylbenzene | 0.38461 | 0.36600 | 0.36600 | 0.010 | -4.83939 | 20.00000 | Averaged | |
| 71 m+p-Xylenes | 0.43692 | 0.44521 | 0.44521 | 0.010 | 1.89652 | 20.00000 | Averaged | |
| 72 o-Xylene | 0.41818 | 0.42406 | 0.42406 | 0.010 | 1.40765 | 20.00000 | Averaged | |
| 73 Styrene | 0.74055 | 0.76271 | 0.76271 | 0.010 | 2.99238 | 20.00000 | Averaged | |
| 74 Bromoform | 0.16937 | 0.18801 | 0.18801 | 0.100 | 11.00296 | 20.00000 | Averaged | |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127569-4 **Analytical Date:** 07/25/13 08:55
**Lab File ID :** C2057.D **Instrument ID:** GCMS-C
**Initial Calibration Date(s):** 07/12/13 08:34 07/12/13 11:07 **Column ID:**

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 75 Isopropylbenzene | 1.96093 | 1.92251 | 1.92251 | 0.010 | -1.95966 | 20.00000 | Averaged |
| 81 1,1,2,2-Tetrachloroethane | 0.49752 | 0.43201 | 0.43201 | 0.300 | -13.16728 | 20.00000 | Averaged |
| 90 1,3-Dichlorobenzene | 0.98210 | 0.94003 | 0.94003 | 0.010 | -4.28362 | 20.00000 | Averaged |
| 92 1,4-Dichlorobenzene | 1.11677 | 1.03039 | 1.03039 | 0.010 | -7.73471 | 20.00000 | Averaged |
| 95 1,2-Dichlorobenzene | 0.91863 | 0.86938 | 0.86938 | 0.010 | -5.36130 | 20.00000 | Averaged |
| 96 1,2-Dibromo-3-Chloropropane | 0.09518 | 0.08638 | 0.08638 | 0.010 | -9.24499 | 20.00000 | Averaged |
| 99 1,2,4-Trichlorobenzene | 0.65676 | 0.58082 | 0.58082 | 0.010 | -11.56335 | 20.00000 | Averaged |
| 102 1,2,3-Trichlorobenzene | 50.00000 | 41.24482 | 0.40790 | 0.010 | -17.51035 | 20.00000 | Linear |
| 103 Methyl Acetate | 0.30694 | 0.26049 | 0.26049 | 0.010 | -15.13416 | 20.00000 | Averaged |
| 104 Methylcyclohexane | 0.57843 | 0.48861 | 0.48861 | 0.010 | -15.52922 | 20.00000 | Averaged |
| 37 Dibromofluoromethane | 0.38204 | 0.33338 | 0.33338 | 0.010 | -12.73727 | 20.00000 | Averaged |
| 45 1,2-Dichloroethane-D4 | 0.43784 | 0.39218 | 0.39218 | 0.010 | -10.43009 | 20.00000 | Averaged |
| 55 Toluene-D8 | 0.79410 | 0.71112 | 0.71112 | 0.010 | -10.45049 | 20.00000 | Averaged |
| 76 P-Bromofluorobenzene | 0.36752 | 0.34370 | 0.34370 | 0.010 | -6.48069 | 20.00000 | Averaged |

*** = Compound out of QC criteria**

# Form 4
# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** C1994.D
**Instrument ID :** GCMS-C
**Heated Purge :** No

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127394-2
**Date Analyzed :** 22-JUL-13
**Time Analyzed :** 13:28

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127394-1 | C1991.D | 07/22/13 | 11:37 |
| TRIP BLANK | SG4994-1 | C1995.D | 07/22/13 | 13:59 |
| TRIP BLANK | SG5022-1 | C1996.D | 07/22/13 | 14:30 |
| TRIP BLANK | SG5070-1 | C1997.D | 07/22/13 | 15:01 |
| JM30-MW55D-071513 | SG4994-2 | C2000.D | 07/22/13 | 16:34 |
| JM30-MW-55I-071613 | SG5022-2 | C2001.D | 07/22/13 | 17:04 |
| JM30-MW-55S-071613 | SG5022-3 | C2002.D | 07/22/13 | 17:35 |
| JM30-MW-54D-071613 | SG5022-4 | C2003.D | 07/22/13 | 18:06 |
| JM30-RB-071613 | SG5022-5 | C2004.D | 07/22/13 | 18:39 |
| JM30-MW-54I-071713 | SG5070-2 | C2005.D | 07/22/13 | 19:11 |
| JM30-MW-54S-071713 | SG5070-3 | C2006.D | 07/22/13 | 19:45 |
| Matrix Spike | WG127394-5 | C2007.D | 07/22/13 | 20:18 |
| Matrix Spike Duplica | WG127394-6 | C2008.D | 07/22/13 | 20:50 |

Katahdin
ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:**
**Lab ID:** WG127394-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C1994.D

**Sample Date:**
**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | I | 0.33 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |



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# Report of Analytical Results

**Client:**
**Lab ID:** WG127394-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C1994.D

**Sample Date:**
**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 88.8 | % | | | | | |
| Toluene-d8 | | 88.8 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 99.3 | % | | | | | |
| Dibromofluoromethane | | 95.6 | % | | | | | |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127394-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C1991.D

**Sample Date:**
**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 101. | 50.0 | 50.6 | ug/L | 30-155 |
| Chloromethane | 80.0 | 50.0 | 40.0 | ug/L | 40-125 |
| Vinyl Chloride | 83.4 | 50.0 | 41.7 | ug/L | 50-145 |
| Bromomethane | 107. | 50.0 | 53.6 | ug/L | 30-145 |
| Chloroethane | 82.6 | 50.0 | 41.3 | ug/L | 60-135 |
| Trichlorofluoromethane | 88.2 | 50.0 | 44.1 | ug/L | 60-145 |
| 1,1-Dichloroethene | 95.2 | 50.0 | 47.6 | ug/L | 70-130 |
| Carbon Disulfide | 84.4 | 50.0 | 42.2 | ug/L | 35-160 |
| Methylene Chloride | 101. | 50.0 | 50.3 | ug/L | 55-140 |
| Acetone | 86.0 | 50.0 | 43.0 | ug/L | 40-140 |
| trans-1,2-Dichloroethene | 92.0 | 50.0 | 46.0 | ug/L | 60-140 |
| Methyl tert-butyl Ether | 105. | 100. | 105. | ug/L | 65-125 |
| 1,1-Dichloroethane | 92.2 | 50.0 | 46.1 | ug/L | 70-135 |
| cis-1,2-Dichloroethene | 93.6 | 50.0 | 46.8 | ug/L | 70-125 |
| Bromochloromethane | 106. | 50.0 | 53.0 | ug/L | 65-130 |
| Chloroform | 96.4 | 50.0 | 48.2 | ug/L | 65-135 |
| Carbon Tetrachloride | 97.8 | 50.0 | 48.9 | ug/L | 65-140 |
| 1,1,1-Trichloroethane | 98.8 | 50.0 | 49.4 | ug/L | 65-130 |
| 2-Butanone | 79.0 | 50.0 | 39.5 | ug/L | 30-150 |
| Benzene | 89.6 | 50.0 | 44.8 | ug/L | 80-120 |
| 1,2-Dichloroethane | 99.2 | 50.0 | 49.6 | ug/L | 70-130 |
| Trichloroethene | 94.4 | 50.0 | 47.2 | ug/L | 70-125 |
| 1,2-Dichloropropane | 95.4 | 50.0 | 47.7 | ug/L | 75-125 |
| Bromodichloromethane | 103. | 50.0 | 51.6 | ug/L | 75-120 |
| cis-1,3-Dichloropropene | 103. | 50.0 | 51.3 | ug/L | 70-130 |
| Toluene | 93.4 | 50.0 | 46.7 | ug/L | 75-120 |
| 4-Methyl-2-Pentanone | 104. | 50.0 | 51.8 | ug/L | 60-135 |
| Tetrachloroethene | 92.6 | 50.0 | 46.3 | ug/L | 45-150 |
| trans-1,3-Dichloropropene | 110. | 50.0 | 55.1 | ug/L | 55-140 |
| 1,1,2-Trichloroethane | 96.0 | 50.0 | 48.0 | ug/L | 75-125 |
| Dibromochloromethane | 111. | 50.0 | 55.6 | ug/L | 60-135 |
| 1,2-Dibromoethane | 105. | 50.0 | 52.6 | ug/L | 80-120 |
| 2-Hexanone | 85.8 | 50.0 | 42.9 | ug/L | 55-130 |
| Chlorobenzene | 104. | 50.0 | 52.2 | ug/L | 80-120 |
| Ethylbenzene | 95.4 | 50.0 | 47.7 | ug/L | 75-125 |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127394-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C1991.D

**Sample Date:**
**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| m+p-Xylenes | 103. | 100. | 103. | ug/L | 75-130 |
| o-Xylene | 109. | 50.0 | 54.5 | ug/L | 80-120 |
| Styrene | 104. | 50.0 | 52.0 | ug/L | 65-135 |
| Bromoform | 111. | 50.0 | 55.5 | ug/L | 70-130 |
| Isopropylbenzene | 105. | 50.0 | 52.3 | ug/L | 75-125 |
| 1,1,2,2-Tetrachloroethane | 89.6 | 50.0 | 44.8 | ug/L | 65-130 |
| 1,3-Dichlorobenzene | 106. | 50.0 | 53.2 | ug/L | 75-125 |
| 1,4-Dichlorobenzene | 94.8 | 50.0 | 47.4 | ug/L | 75-125 |
| 1,2-Dichlorobenzene | 104. | 50.0 | 51.9 | ug/L | 70-120 |
| 1,2-Dibromo-3-Chloropropane | 93.4 | 50.0 | 46.7 | ug/L | 50-130 |
| 1,2,4-Trichlorobenzene | 89.8 | 50.0 | 44.9 | ug/L | 65-135 |
| 1,2,3-Trichlorobenzene | 84.8 | 50.0 | 42.4 | ug/L | 55-140 |
| Freon-113 | 97.0 | 50.0 | 48.5 | ug/L | 73-126 |
| Cyclohexane | 88.4 | 50.0 | 44.2 | ug/L | 71-133 |
| Methyl acetate | 74.4 | 50.0 | 37.2 | ug/L | 70-132 |
| Methylcyclohexane | 92.6 | 50.0 | 46.3 | ug/L | 73-125 |
| P-Bromofluorobenzene | 89.6 | | | | 75-120 |
| Toluene-d8 | 88.7 | | | | 85-120 |
| 1,2-Dichloroethane-d4 | 87.7 | | | | 70-120 |
| Dibromofluoromethane | 88.2 | | | | 85-115 |



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# Form 4
# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** C2018.D
**Instrument ID :** GCMS-C
**Heated Purge :** No

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127436-2
**Date Analyzed :** 23-JUL-13
**Time Analyzed :** 10:58

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127436-1 | C2014.D | 07/23/13 | 08:42 |
| JM30-MW-49D-071713 | SG5070-4 | C2022.D | 07/23/13 | 13:03 |
| JM30-MW-49I-071713 | SG5070-5 | C2023.D | 07/23/13 | 13:34 |
| JM30-FD-071713 | SG5070-6 | C2024.D | 07/23/13 | 14:05 |

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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:**
**Lab ID:** WG127436-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C2018.D

**Sample Date:**
**Received Date:**
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |



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# Report of Analytical Results

**Client:**
**Lab ID:** WG127436-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C2018.D

**Sample Date:**
**Received Date:**
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 88.9 | % | | | | | |
| Toluene-d8 | | 92.8 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 105. | % | | | | | |
| Dibromofluoromethane | | 94.8 | % | | | | | |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127436-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C2014.D

**Sample Date:**
**Received Date:**
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 98.4 | 50.0 | 49.2 | ug/L | 30-155 |
| Chloromethane | 76.2 | 50.0 | 38.1 | ug/L | 40-125 |
| Vinyl Chloride | 79.4 | 50.0 | 39.7 | ug/L | 50-145 |
| Bromomethane | 102. | 50.0 | 50.9 | ug/L | 30-145 |
| Chloroethane | 66.8 | 50.0 | 33.4 | ug/L | 60-135 |
| Trichlorofluoromethane | 86.0 | 50.0 | 43.0 | ug/L | 60-145 |
| 1,1-Dichloroethene | 94.4 | 50.0 | 47.2 | ug/L | 70-130 |
| Carbon Disulfide | 82.2 | 50.0 | 41.1 | ug/L | 35-160 |
| Methylene Chloride | 99.2 | 50.0 | 49.6 | ug/L | 55-140 |
| Acetone | 88.6 | 50.0 | 44.3 | ug/L | 40-140 |
| trans-1,2-Dichloroethene | 86.2 | 50.0 | 43.1 | ug/L | 60-140 |
| Methyl tert-butyl Ether | 100. | 100. | 100. | ug/L | 65-125 |
| 1,1-Dichloroethane | 89.6 | 50.0 | 44.8 | ug/L | 70-135 |
| cis-1,2-Dichloroethene | 91.4 | 50.0 | 45.7 | ug/L | 70-125 |
| Bromochloromethane | 92.6 | 50.0 | 46.3 | ug/L | 65-130 |
| Chloroform | 93.8 | 50.0 | 46.9 | ug/L | 65-135 |
| Carbon Tetrachloride | 100. | 50.0 | 50.0 | ug/L | 65-140 |
| 1,1,1-Trichloroethane | 96.0 | 50.0 | 48.0 | ug/L | 65-130 |
| 2-Butanone | 92.2 | 50.0 | 46.1 | ug/L | 30-150 |
| Benzene | 86.4 | 50.0 | 43.2 | ug/L | 80-120 |
| 1,2-Dichloroethane | 99.0 | 50.0 | 49.5 | ug/L | 70-130 |
| Trichloroethene | 92.4 | 50.0 | 46.2 | ug/L | 70-125 |
| 1,2-Dichloropropane | 91.0 | 50.0 | 45.5 | ug/L | 75-125 |
| Bromodichloromethane | 99.6 | 50.0 | 49.8 | ug/L | 75-120 |
| cis-1,3-Dichloropropene | 97.2 | 50.0 | 48.6 | ug/L | 70-130 |
| Toluene | 91.6 | 50.0 | 45.8 | ug/L | 75-120 |
| 4-Methyl-2-Pentanone | 117. | 50.0 | 58.7 | ug/L | 60-135 |
| Tetrachloroethene | 93.4 | 50.0 | 46.7 | ug/L | 45-150 |
| trans-1,3-Dichloropropene | 108. | 50.0 | 54.0 | ug/L | 55-140 |
| 1,1,2-Trichloroethane | 96.8 | 50.0 | 48.4 | ug/L | 75-125 |
| Dibromochloromethane | 108. | 50.0 | 54.2 | ug/L | 60-135 |
| 1,2-Dibromoethane | 108. | 50.0 | 53.8 | ug/L | 80-120 |
| 2-Hexanone | 101. | 50.0 | 50.4 | ug/L | 55-130 |
| Chlorobenzene | 104. | 50.0 | 51.9 | ug/L | 80-120 |
| Ethylbenzene | 95.2 | 50.0 | 47.6 | ug/L | 75-125 |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127436-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C2014.D

**Sample Date:**
**Received Date:**
**Extract Date:** 23-JUL-13
**Extracted By:** DJP
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127436

**Analysis Date:** 23-JUL-13
**Analyst:** DJP
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| m+p-Xylenes | 104. | 100. | 104. | ug/L | 75-130 |
| o-Xylene | 106. | 50.0 | 53.0 | ug/L | 80-120 |
| Styrene | 103. | 50.0 | 51.4 | ug/L | 65-135 |
| Bromoform | 115. | 50.0 | 57.4 | ug/L | 70-130 |
| Isopropylbenzene | 101. | 50.0 | 50.6 | ug/L | 75-125 |
| 1,1,2,2-Tetrachloroethane | 95.6 | 50.0 | 47.8 | ug/L | 65-130 |
| 1,3-Dichlorobenzene | 105. | 50.0 | 52.6 | ug/L | 75-125 |
| 1,4-Dichlorobenzene | 94.0 | 50.0 | 47.0 | ug/L | 75-125 |
| 1,2-Dichlorobenzene | 103. | 50.0 | 51.6 | ug/L | 70-120 |
| 1,2-Dibromo-3-Chloropropane | 108. | 50.0 | 54.1 | ug/L | 50-130 |
| 1,2,4-Trichlorobenzene | 96.6 | 50.0 | 48.3 | ug/L | 65-135 |
| 1,2,3-Trichlorobenzene | 94.8 | 50.0 | 47.4 | ug/L | 55-140 |
| Freon-113 | 95.6 | 50.0 | 47.8 | ug/L | 73-126 |
| Cyclohexane | 88.0 | 50.0 | 44.0 | ug/L | 71-133 |
| Methyl acetate | 77.6 | 50.0 | 38.8 | ug/L | 70-132 |
| Methylcyclohexane | 90.4 | 50.0 | 45.2 | ug/L | 73-125 |
| P-Bromofluorobenzene | 88.3 | | | | 75-120 |
| Toluene-d8 | 87.7 | | | | 85-120 |
| 1,2-Dichloroethane-d4 | 86.3 | | | | 70-120 |
| Dibromofluoromethane | 86.6 | | | | 85-115 |



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# Form 4
# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** C2061.D
**Instrument ID :** GCMS-C
**Heated Purge :** No

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127569-2
**Date Analyzed :** 25-JUL-13
**Time Analyzed :** 11:26

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127569-1 | C2058.D | 07/25/13 | 09:37 |
| JM30-MW-29S-071813 | SG5146-1 | C2063.D | 07/25/13 | 12:28 |
| JM30-MW-49I-071713 | SG5070-5DL | C2064.D | 07/25/13 | 12:59 |
| JM30-FD-071713 | SG5070-6DL | C2065.D | 07/25/13 | 13:30 |

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ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:**
**Lab ID:** WG127569-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C2061.D

**Sample Date:**
**Received Date:**
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| Carbon Disulfide | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methyl tert-butyl Ether | U | 0.36 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Chloroform | U | 0.32 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Benzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |



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# Report of Analytical Results

**Client:**
**Lab ID:** WG127569-2
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** C2061.D

**Sample Date:**
**Received Date:**
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| m+p-Xylenes | U | 0.59 | ug/L | 1 | 2 | 2.0 | 0.59 | 1.0 |
| o-Xylene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Styrene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Bromoform | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| Isopropylbenzene | U | 0.23 | ug/L | 1 | 1 | 1.0 | 0.23 | 0.50 |
| 1,1,2,2-Tetrachloroethane | U | 0.38 | ug/L | 1 | 1 | 1.0 | 0.38 | 0.50 |
| 1,3-Dichlorobenzene | U | 0.26 | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,4-Dichlorobenzene | U | 0.24 | ug/L | 1 | 1 | 1.0 | 0.24 | 0.50 |
| 1,2-Dichlorobenzene | U | 0.15 | ug/L | 1 | 1 | 1.0 | 0.15 | 0.50 |
| 1,2-Dibromo-3-Chloropropane | U | 0.50 | ug/L | 1 | 1 | 1.0 | 0.50 | 0.75 |
| 1,2,4-Trichlorobenzene | U | 0.37 | ug/L | 1 | 1 | 1.0 | 0.37 | 0.50 |
| 1,2,3-Trichlorobenzene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Freon-113 | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Cyclohexane | U | 0.31 | ug/L | 1 | 1 | 1.0 | 0.31 | 0.50 |
| Methyl acetate | U | 0.53 | ug/L | 1 | 1 | 1.0 | 0.53 | 0.75 |
| Methylcyclohexane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| P-Bromofluorobenzene | | 90.8 | % | | | | | |
| Toluene-d8 | | 92.0 | % | | | | | |
| 1,2-Dichloroethane-d4 | | 102. | % | | | | | |
| Dibromofluoromethane | | 93.7 | % | | | | | |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127569-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C2058.D

**Sample Date:**
**Received Date:**
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 91.2 | 50.0 | 45.6 | ug/L | 30-155 |
| Chloromethane | 69.6 | 50.0 | 34.8 | ug/L | 40-125 |
| Vinyl Chloride | 78.2 | 50.0 | 39.1 | ug/L | 50-145 |
| Bromomethane | 101. | 50.0 | 50.5 | ug/L | 30-145 |
| Chloroethane | 68.2 | 50.0 | 34.1 | ug/L | 60-135 |
| Trichlorofluoromethane | 85.4 | 50.0 | 42.7 | ug/L | 60-145 |
| 1,1-Dichloroethene | 93.6 | 50.0 | 46.8 | ug/L | 70-130 |
| Carbon Disulfide | 79.4 | 50.0 | 39.7 | ug/L | 35-160 |
| Methylene Chloride | 96.4 | 50.0 | 48.2 | ug/L | 55-140 |
| Acetone | 84.4 | 50.0 | 42.2 | ug/L | 40-140 |
| trans-1,2-Dichloroethene | 86.0 | 50.0 | 43.0 | ug/L | 60-140 |
| Methyl tert-butyl Ether | 103. | 100. | 103. | ug/L | 65-125 |
| 1,1-Dichloroethane | 88.4 | 50.0 | 44.2 | ug/L | 70-135 |
| cis-1,2-Dichloroethene | 91.6 | 50.0 | 45.8 | ug/L | 70-125 |
| Bromochloromethane | 97.0 | 50.0 | 48.5 | ug/L | 65-130 |
| Chloroform | 94.4 | 50.0 | 47.2 | ug/L | 65-135 |
| Carbon Tetrachloride | 101. | 50.0 | 50.6 | ug/L | 65-140 |
| 1,1,1-Trichloroethane | 97.8 | 50.0 | 48.9 | ug/L | 65-130 |
| 2-Butanone | 89.0 | 50.0 | 44.5 | ug/L | 30-150 |
| Benzene | 86.8 | 50.0 | 43.4 | ug/L | 80-120 |
| 1,2-Dichloroethane | 97.2 | 50.0 | 48.6 | ug/L | 70-130 |
| Trichloroethene | 94.0 | 50.0 | 47.0 | ug/L | 70-125 |
| 1,2-Dichloropropane | 88.8 | 50.0 | 44.4 | ug/L | 75-125 |
| Bromodichloromethane | 102. | 50.0 | 51.2 | ug/L | 75-120 |
| cis-1,3-Dichloropropene | 100. | 50.0 | 50.2 | ug/L | 70-130 |
| Toluene | 94.0 | 50.0 | 47.0 | ug/L | 75-120 |
| 4-Methyl-2-Pentanone | 118. | 50.0 | 59.0 | ug/L | 60-135 |
| Tetrachloroethene | 94.4 | 50.0 | 47.2 | ug/L | 45-150 |
| trans-1,3-Dichloropropene | 112. | 50.0 | 55.9 | ug/L | 55-140 |
| 1,1,2-Trichloroethane | 99.6 | 50.0 | 49.8 | ug/L | 75-125 |
| Dibromochloromethane | 113. | 50.0 | 56.6 | ug/L | 60-135 |
| 1,2-Dibromoethane | 108. | 50.0 | 54.2 | ug/L | 80-120 |
| 2-Hexanone | 98.8 | 50.0 | 49.4 | ug/L | 55-130 |
| Chlorobenzene | 104. | 50.0 | 52.1 | ug/L | 80-120 |
| Ethylbenzene | 95.6 | 50.0 | 47.8 | ug/L | 75-125 |



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# LCS Recovery Report

**Client:**
**Lab ID:** WG127569-1
**Client ID:** LCS
**Project:**
**SDG:** CTOJM30-2
**LCS File ID:** C2058.D

**Sample Date:**
**Received Date:**
**Extract Date:** 25-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127569

**Analysis Date:** 25-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Recovery (%) | Conc Added | Conc Recovered | Conc Units | Limits |
|---|---|---|---|---|---|
| m+p-Xylenes | 104. | 100. | 104. | ug/L | 75-130 |
| o-Xylene | 109. | 50.0 | 54.4 | ug/L | 80-120 |
| Styrene | 105. | 50.0 | 52.5 | ug/L | 65-135 |
| Bromoform | 119. | 50.0 | 59.7 | ug/L | 70-130 |
| Isopropylbenzene | 107. | 50.0 | 53.3 | ug/L | 75-125 |
| 1,1,2,2-Tetrachloroethane | 99.6 | 50.0 | 49.8 | ug/L | 65-130 |
| 1,3-Dichlorobenzene | 107. | 50.0 | 53.3 | ug/L | 75-125 |
| 1,4-Dichlorobenzene | 95.4 | 50.0 | 47.7 | ug/L | 75-125 |
| 1,2-Dichlorobenzene | 106. | 50.0 | 52.9 | ug/L | 70-120 |
| 1,2-Dibromo-3-Chloropropane | 110. | 50.0 | 55.0 | ug/L | 50-130 |
| 1,2,4-Trichlorobenzene | 96.4 | 50.0 | 48.2 | ug/L | 65-135 |
| 1,2,3-Trichlorobenzene | 98.4 | 50.0 | 49.2 | ug/L | 55-140 |
| Freon-113 | 88.4 | 50.0 | 44.2 | ug/L | 73-126 |
| Cyclohexane | 90.4 | 50.0 | 45.2 | ug/L | 71-133 |
| Methyl acetate | 78.8 | 50.0 | 39.4 | ug/L | 70-132 |
| Methylcyclohexane | 88.8 | 50.0 | 44.4 | ug/L | 73-125 |
| P-Bromofluorobenzene | 89.8 | | | | 75-120 |
| Toluene-d8 | 87.8 | | | | 85-120 |
| 1,2-Dichloroethane-d4 | 87.8 | | | | 70-120 |
| Dibromofluoromethane | 85.9 | | | | 85-115 |



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Cert No E87604

# MS/MSD Recovery Report

**MS ID:** WG127394-5
**MSD ID:** WG127394-6
**Sample ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:**
**SDG:** CTOJM30-2
**MS File ID:** C2007.D

**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394
**Report Date:** 26-JUL-13
**MSD File ID:** C2008.D

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA

| Compound | MS Spike | MSD Spike | Conc Units | Samp Conc | MS Conc | MSD Conc | MS Rec (%) | MSD Rec (%) | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 50.0 | 50.0 | ug/L | U0.24 | 66. | 63. | 132. | 126. | 5 | 30 | 30-155 |
| Chloromethane | 50.0 | 50.0 | ug/L | U0.36 | 48. | 49. | 97.0 | 98.0 | 1 | 30 | 40-125 |
| Vinyl Chloride | 50.0 | 50.0 | ug/L | U0.25 | 53. | 53. | 105. | 106. | 0 | 30 | 50-145 |
| Bromomethane | 50.0 | 50.0 | ug/L | U0.49 | 55. | 62. | 109. | 123. | 12 | 30 | 30-145 |
| Chloroethane | 50.0 | 50.0 | ug/L | U0.55 | 52. | 47. | 104. | 94.8 | 10 | 30 | 60-135 |
| Trichlorofluoromethane | 50.0 | 50.0 | ug/L | U0.24 | 60. | 55. | 119. | 110. | 8 | 30 | 60-145 |
| ,1-Dichloroethene | 50.0 | 50.0 | ug/L | U0.35 | 60. | 57. | 121. | 115. | 5 | 30 | 70-130 |
| Carbon Disulfide | 50.0 | 50.0 | ug/L | 10.55 | 51. | 52. | 102. | 102. | 0 | 30 | 35-160 |
| Methylene Chloride | 50.0 | 50.0 | ug/L | U1.1 | 57. | 56. | 114. | 112. | 2 | 30 | 55-140 |
| Acetone | 50.0 | 50.0 | ug/L | U2.2 | 39. | 42. | 78.4 | 84.0 | 7 | 30 | 40-140 |
| rans-1,2-Dichloroethene | 50.0 | 50.0 | ug/L | U0.25 | 51. | 50. | 103. | 99.6 | 3 | 30 | 60-140 |
| Methyl tert-butyl Ether | 100. | 100. | ug/L | 1.1 | 100 | 110 | 101. | 113. | 11 | 30 | 65-125 |
| ,1-Dichloroethane | 50.0 | 50.0 | ug/L | U0.21 | 56. | 54. | 112. | 107. | 4 | 30 | 70-135 |
| is-1,2-Dichloroethene | 50.0 | 50.0 | ug/L | U0.21 | 53. | 51. | 105. | 101. | 4 | 30 | 70-125 |
| Bromochloromethane | 50.0 | 50.0 | ug/L | U0.21 | 52. | 51. | 105. | 101. | 3 | 30 | 65-130 |
| Chloroform | 50.0 | 50.0 | ug/L | 10.70 | 56. | 54. | 111. | 106. | 4 | 30 | 65-135 |
| Carbon Tetrachloride | 50.0 | 50.0 | ug/L | U0.22 | 59. | 59. | 118. | 118. | 0 | 30 | 65-140 |
| ,1,1-Trichloroethane | 50.0 | 50.0 | ug/L | U0.20 | 60. | 56. | 121. | 113. | 7 | 30 | 65-130 |
| -Butanone | 50.0 | 50.0 | ug/L | U1.3 | 45. | 46. | 90.0 | 92.2 | 2 | 30 | 30-150 |
| Benzene | 50.0 | 50.0 | ug/L | 52. | 96. | 96. | 89.0 | 88.2 | 0 | 30 | 80-120 |
| ,2-Dichloroethane | 50.0 | 50.0 | ug/L | U0.20 | 57. | 55. | 114. | 109. | 4 | 30 | 70-130 |
| Trichloroethene | 50.0 | 50.0 | ug/L | U0.28 | 53. | 53. | 106. | 107. | 0 | 30 | 70-125 |
| ,2-Dichloropropane | 50.0 | 50.0 | ug/L | U0.25 | 52. | 50. | 103. | 99.6 | 4 | 30 | 75-125 |
| Bromodichloromethane | 50.0 | 50.0 | ug/L | U0.33 | 57. | 56. | 113. | 111. | 2 | 30 | 75-120 |
| is-1,3-Dichloropropene | 50.0 | 50.0 | ug/L | U0.19 | 52. | 53. | 104. | 107. | 2 | 30 | 70-130 |
| Toluene | 50.0 | 50.0 | ug/L | U0.27 | 52. | 52. | 103. | 104. | 0 | 30 | 75-120 |
| -Methyl-2-Pentanone | 50.0 | 50.0 | ug/L | U1.3 | 58. | 62. | 116. | 125. | 7 | 30 | 60-135 |
| Tetrachloroethene | 50.0 | 50.0 | ug/L | U0.40 | 49. | 50. | 98.0 | 101. | 3 | 30 | 45-150 |
| rans-1,3-Dichloropropene | 50.0 | 50.0 | ug/L | U0.20 | 57. | 58. | 114. | 116. | 2 | 30 | 55-140 |
| ,1,2-Trichloroethane | 50.0 | 50.0 | ug/L | U0.33 | 53. | 52. | 105. | 104. | 1 | 30 | 75-125 |
| Dibromochloromethane | 50.0 | 50.0 | ug/L | U0.30 | 56. | 56. | 113. | 113. | 0 | 30 | 60-135 |
| ,2-Dibromoethane | 50.0 | 50.0 | ug/L | U0.22 | 54. | 56. | 108. | 111. | 3 | 30 | 80-120 |
| -Hexanone | 50.0 | 50.0 | ug/L | U1.7 | 47. | 48. | 94.6 | 96.8 | 2 | 30 | 55-130 |



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# MS/MSD Recovery Report

**MS ID:** WG127394-5
**MSD ID:** WG127394-6
**Sample ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:**
**SDG:** CTOJM30-2
**MS File ID:** C2007.D

**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394
**Report Date:** 26-JUL-13
**MSD File ID:** C2008.D

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA

| Compound | MS Spike | MSD Spike | Conc Units | Samp Conc | MS Conc | MSD Conc | MS Rec (%) | MSD Rec (%) | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | 50.0 | 50.0 | ug/L | U0.22 | 55. | 55. | 109. | 110. | 1 | 30 | 80-120 |
| Ethylbenzene | 50.0 | 50.0 | ug/L | U0.21 | 51. | 52. | 102. | 104. | 2 | 30 | 75-125 |
| m+p-Xylenes | 100. | 100. | ug/L | U0.59 | 110 | 110 | 112. | 112. | 0 | 30 | 75-130 |
| o-Xylene | 50.0 | 50.0 | ug/L | U0.25 | 58. | 57. | 117. | 115. | 2 | 30 | 80-120 |
| Styrene | 50.0 | 50.0 | ug/L | U0.23 | 55. | 54. | 110. | 109. | 1 | 30 | 65-135 |
| Bromoform | 50.0 | 50.0 | ug/L | U0.23 | 56. | 58. | 112. | 117. | 4 | 30 | 70-130 |
| Isopropylbenzene | 50.0 | 50.0 | ug/L | U0.30 | 57. | 58. | 113. | 116. | 2 | 30 | 75-125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 50.0 | ug/L | U0.38 | 50. | 52. | 99.0 | 103. | 4 | 30 | 65-130 |
| 1,3-Dichlorobenzene | 50.0 | 50.0 | ug/L | U0.26 | 55. | 56. | 109. | 111. | 2 | 30 | 75-125 |
| 1,4-Dichlorobenzene | 50.0 | 50.0 | ug/L | U0.24 | 49. | 50. | 98.8 | 100. | 2 | 30 | 75-125 |
| 1,2-Dichlorobenzene | 50.0 | 50.0 | ug/L | U0.15 | 55. | 55. | 109. | 110. | 0 | 30 | 70-120 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 50.0 | ug/L | U0.50 | 53. | 57. | 107. | 114. | 6 | 30 | 50-130 |
| 1,2,4-Trichlorobenzene | 50.0 | 50.0 | ug/L | U0.37 | 46. | 50. | 92.4 | 100. | 8 | 30 | 65-135 |
| 1,2,3-Trichlorobenzene | 50.0 | 50.0 | ug/L | U0.20 | 43. | 50. | 86.0 | 99.4 | 14 | 30 | 55-140 |
| Freon-113 | 50.0 | 50.0 | ug/L | U0.31 | 43. | 56. | 86.2 | 111. | 25 | 30 | 73-126 |
| Cyclohexane | 50.0 | 50.0 | ug/L | U0.31 | 58. | 58. | 117. | 116. | 1 | 30 | 71-133 |
| Methyl acetate | 50.0 | 50.0 | ug/L | U0.53 | J30. | 42. | 59.4 | 84.0 | 34* | 30 | 70-132 |
| Methylcyclohexane | 50.0 | 50.0 | ug/L | U0.30 | 43. | 54. | 85.6 | 109. | 24 | 30 | 73-125 |
| 4-Bromofluorobenzene | | | | | | | 93.9 | 91.8 | | | 75-120 |
| Toluene-d8 | | | | | | | 90.4 | 89.4 | | | 85-120 |
| 1,2-Dichloroethane-d4 | | | | | | | 102. | 96.1 | | | 70-120 |
| Dibromofluoromethane | | | | | | | 92.1 | 89.3 | | | 85-115 |



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# Form 2
## System Monitoring Compound Recovery

**Lab Name:** Katahdin Analytical Services **Project:** OLF Saufley Field, FL- CTO JM30 **Matrix:** AQ
**Lab Code:** KAS **SDG:** CTOJM30-2

| Client Sample ID | Lab Sample ID | Col. ID | BFB | # | DBF | # | DCA | # | TOL | # |
|---|---|---|---|---|---|---|---|---|---|---|
| TRIP BLANK | SG4994-1 | | 87.6 | | 95.5 | | 102. | | 90.5 | |
| JM30-MW55D-071513 | SG4994-2 | | 91.2 | | 97.3 | | 109. | | 92.5 | |
| TRIP BLANK | SG5022-1 | | 87.4 | | 98.8 | | 107. | | 90.6 | |
| JM30-MW-551-071613 | SG5022-2 | | 90.0 | | 100. | | 112. | | 93.0 | |
| JM30-MW-55S-071613 | SG5022-3 | | 92.4 | | 102. | | 116. | | 95.5 | |
| JM30-MW-54D-071613 | SG5022-4 | | 93.3 | | 102. | | 112. | | 93.9 | |
| JM30-RB-071613 | SG5022-5 | | 88.8 | | 98.2 | | 107. | | 92.7 | |
| TRIP BLANK | SG5070-1 | | 88.1 | | 96.9 | | 109. | | 90.7 | |
| JM30-MW-541-071713 | SG5070-2 | | 91.9 | | 103. | | 114. | | 94.9 | |
| JM30-MW-54S-071713 | SG5070-3 | | 91.7 | | 102. | | 113. | | 94.0 | |
| JM30-MW-49D-071713 | SG5070-4 | | 89.1 | | 91.9 | | 102. | | 90.2 | |
| JM30-MW-491-071713 | SG5070-5 | | 89.9 | | 87.8 | | 102. | | 91.6 | |
| JM30-MW-491-071713 | SG5070-5DL | | 90.2 | | 93.6 | | 104. | | 91.3 | |
| JM30-FD-071713 | SG5070-6 | | 88.8 | | 87.6 | | 99.2 | | 90.9 | |
| JM30-FD-071713 | SG5070-6DL | | 89.8 | | 93.0 | | 102. | | 92.6 | |
| JM30-MW-29S-071813 | SG5146-1 | | 90.1 | | 91.2 | | 100. | | 91.4 | |
| Laboratory Control S | WG127394-1 | | 89.6 | | 88.2 | | 87.7 | | 88.7 | |
| Method Blank Sample | WG127394-2 | | 88.8 | | 95.6 | | 99.3 | | 88.8 | |
| Matrix Spike | WG127394-5 | | 93.9 | | 92.1 | | 102. | | 90.4 | |
| Matrix Spike Duplica | WG127394-6 | | 91.8 | | 89.3 | | 96.1 | | 89.4 | |
| Laboratory Control S | WG127436-1 | | 88.3 | | 86.6 | | 86.3 | | 87.7 | |
| Method Blank Sample | WG127436-2 | | 88.9 | | 94.8 | | 105. | | 92.8 | |
| Laboratory Control S | WG127569-1 | | 89.8 | | 85.9 | | 87.8 | | 87.8 | |
| Method Blank Sample | WG127569-2 | | 90.8 | | 93.7 | | 102. | | 92.0 | |

| | | QC Limits |
|---|---|---|
| DCA | 1,2-DICHLOROETHANE-D4 | 70-120 |
| BFB | P-BROMOFLUOROBENZENE | 75-120 |
| DBF | DIBROMOFLUOROMETHANE | 85-115 |
| TOL | TOLUENE-D8 | 85-120 |

# Form 2
## System Monitoring Compound Recovery

**Lab Name:** Katahdin Analytical Services **Project:** OLF Saufley Field, FL- CTO JM30 **Matrix:** AQ
**Lab Code:** KAS **SDG:** CTOJM30-2

# = Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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# Form 8
## Internal Standard Area and RT Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM
**Lab ID :** WG126915-4
**Lab File ID :** C1824.D

**SDG:** CTOJM30-2
**Analytical Date:** 07/12/13 09:35
**Instrument ID:** GCMS-C

| | | PENTAFLUOROBENZENE | | 1,4-DIFLUOROBENZENE | | CHLOROBENZENE-D5 | |
|---|---|---|---|---|---|---|---|
| | | Area # | RT # | Area # | RT # | Area # | RT # |
| | Std . | 1228024 | 8.18 | 1937274 | 8.85 | 1861922 | 12.34 |
| | Upper Limit | 2456048 | 8.68 | 3874548 | 9.35 | 3723844 | 12.84 |
| | Lower Limit | 614012 | 7.68 | 968637 | 8.35 | 930961 | 11.84 |
| Client Sample ID | Lab Sample ID | | | | | | |
| Continuing Calibrati | WG127394-4 | 1083761 | 8.19 | 1689811 | 8.84 | 1693417 | 12.34 |
| Laboratory Control S | WG127394-1 | 1084849 | 8.19 | 1707038 | 8.84 | 1713258 | 12.34 |
| Method Blank Sample | WG127394-2 | 934812 | 8.19 | 1526083 | 8.84 | 1534405 | 12.34 |
| TRIP BLANK | SG4994-1 | 904356 | 8.18 | 1485581 | 8.84 | 1490183 | 12.34 |
| TRIP BLANK | SG5022-1 | 874768 | 8.19 | 1442580 | 8.84 | 1440982 | 12.34 |
| TRIP BLANK | SG5070-1 | 854119 | 8.18 | 1433349 | 8.84 | 1439541 | 12.34 |
| JM30-MW55D-071513 | SG4994-2 | 868522 | 8.18 | 1400754 | 8.84 | 1425537 | 12.34 |
| JM30-MW-55I-071613 | SG5022-2 | 840942 | 8.19 | 1406225 | 8.84 | 1411567 | 12.34 |
| JM30-MW-55S-07161: | SG5022-3 | 840728 | 8.19 | 1396597 | 8.84 | 1419420 | 12.34 |
| JM30-MW-54D-07161: | SG5022-4 | 847031 | 8.18 | 1390643 | 8.84 | 1418094 | 12.34 |
| JM30-RB-071613 | SG5022-5 | 858878 | 8.19 | 1414153 | 8.84 | 1411253 | 12.34 |
| JM30-MW-54I-071713 | SG5070-2 | 821885 | 8.18 | 1372767 | 8.84 | 1375559 | 12.34 |
| JM30-MW-54S-07171: | SG5070-3 | 832737 | 8.18 | 1378073 | 8.84 | 1371111 | 12.34 |
| Matrix Spike | WG127394-5 | 901197 | 8.19 | 1480535 | 8.84 | 1498871 | 12.34 |
| Matrix Spike Duplica | WG127394-6 | 978765 | 8.19 | 1544206 | 8.84 | 1558591 | 12.34 |
| Continuing Calibrati | WG127436-4 | 1012506 | 8.19 | 1565847 | 8.85 | 1567671 | 12.34 |
| Laboratory Control S | WG127436-1 | 1069062 | 8.19 | 1649740 | 8.85 | 1631575 | 12.34 |
| Method Blank Sample | WG127436-2 | 919102 | 8.19 | 1458809 | 8.84 | 1442781 | 12.34 |
| JM30-MW-49D-07171: | SG5070-4 | 864846 | 8.19 | 1365471 | 8.84 | 1393452 | 12.34 |
| JM30-MW-49I-071713 | SG5070-5 | 944969 | 8.19 | 1480654 | 8.84 | 1458182 | 12.34 |
| JM30-FD-071713 | SG5070-6 | 963901 | 8.19 | 1523977 | 8.84 | 1478958 | 12.34 |
| Continuing Calibrati | WG127569-4 | 1042457 | 8.18 | 1598643 | 8.84 | 1609293 | 12.34 |
| Laboratory Control S | WG127569-1 | 1056507 | 8.18 | 1645970 | 8.84 | 1659293 | 12.34 |
| Method Blank Sample | WG127569-2 | 910394 | 8.19 | 1436254 | 8.84 | 1457553 | 12.34 |
| JM30-MW-29S-07181: | SG5146-1 | 894778 | 8.18 | 1416341 | 8.84 | 1434377 | 12.34 |
| JM30-MW-49I-071713 | SG5070-5DL | 886471 | 8.18 | 1408619 | 8.84 | 1410814 | 12.34 |
| JM30-FD-071713 | SG5070-6DL | 899672 | 8.18 | 1414856 | 8.84 | 1432158 | 12.34 |

# Form 8
## Internal Standard Area and RT Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM
**Lab ID :** WG126915-4
**Lab File ID :** C1824.D

**SDG:** CTOJM30-2
**Analytical Date:** 07/12/13 09:35
**Instrument ID:** GCMS-C

| | | 1,4-DICHLOROBENZENE-D4 | | | |
|---|---|---|---|---|---|
| | | Area | # | RT | # |
| | Std . | 1018130 | | 15.69 | |
| | Upper Limit | 2036260 | | 16.19 | |
| | Lower Limit | 509065 | | 15.19 | |
| Client Sample ID | Lab Sample ID | | | | |
| Continuing Calibrati | WG127394-4 | 996218 | | 15.69 | |
| Laboratory Control S | WG127394-1 | 1001071 | | 15.69 | |
| Method Blank Sample | WG127394-2 | 837718 | | 15.69 | |
| TRIP BLANK | SG4994-1 | 822235 | | 15.69 | |
| TRIP BLANK | SG5022-1 | 797869 | | 15.69 | |
| TRIP BLANK | SG5070-1 | 788813 | | 15.69 | |
| JM30-MW55D-071513 | SG4994-2 | 785190 | | 15.69 | |
| JM30-MW-551-071613 | SG5022-2 | 779651 | | 15.69 | |
| JM30-MW-55S-07161: | SG5022-3 | 781367 | | 15.69 | |
| JM30-MW-54D-07161: | SG5022-4 | 784734 | | 15.69 | |
| JM30-RB-071613 | SG5022-5 | 786590 | | 15.69 | |
| JM30-MW-541-071713 | SG5070-2 | 762110 | | 15.69 | |
| JM30-MW-54S-07171: | SG5070-3 | 765529 | | 15.69 | |
| Matrix Spike | WG127394-5 | 900386 | | 15.69 | |
| Matrix Spike Duplica | WG127394-6 | 921607 | | 15.69 | |
| Continuing Calibrati | WG127436-4 | 948020 | | 15.69 | |
| Laboratory Control S | WG127436-1 | 983207 | | 15.70 | |
| Method Blank Sample | WG127436-2 | 801349 | | 15.69 | |
| JM30-MW-49D-07171: | SG5070-4 | 773133 | | 15.69 | |
| JM30-MW-491-071713 | SG5070-5 | 814945 | | 15.69 | |
| JM30-FD-071713 | SG5070-6 | 819665 | | 15.69 | |
| Continuing Calibrati | WG127569-4 | 953616 | | 15.69 | |
| Laboratory Control S | WG127569-1 | 981981 | | 15.69 | |
| Method Blank Sample | WG127569-2 | 801903 | | 15.69 | |
| JM30-MW-29S-07181: | SG5146-1 | 795573 | | 15.69 | |
| JM30-MW-491-071713 | SG5070-5DL | 796316 | | 15.69 | |
| JM30-FD-071713 | SG5070-6DL | 785306 | | 15.69 | |

# Form 8
# Internal Standard Area and RT Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM
**Lab ID :** WG126915-4
**Lab File ID :** C1824.D

**SDG:** CTOJM30-2
**Analytical Date:** 07/12/13 09:35
**Instrument ID:** GCMS-C

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# SIM DATA

# Form 5
## Semivolatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** GD235.D
**Instrument ID :** GCMS-G

**SDG :** CTOJM30-2
**Date Analyzed :** 19-JUL-13
**Time Analyzed :** 14:04

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 39.4 | | |
| 68 | Less than 2.0% of mass 69 | 0.4 | 1.22 | 1 |
| 69 | Less than 100.0% of mass 198 | 35.7 | | |
| 70 | Less than 2.0% of mass 69 | 0.2 | 0.48 | 1 |
| 127 | 40.0 - 60.0% of mass 198 | 50.7 | | |
| 197 | Less than 1.0% of mass 198 | 0.1 | | |
| 198 | Base Peak, 100% relative abundance | 100 | | |
| 199 | 5.0 - 9.0% of mass 198 | 7.0 | | |
| 275 | 10.0 - 30.0% of mass 198 | 20.0 | | |
| 365 | 1.0 - 100.0% of mass 198 | 2.8 | | |
| 441 | 0.0 - 100.0% of mass 443 | 11.6 | 72.43 | 2 |
| 442 | 40.0 - 100.0% of mass 198 | 80.4 | | |
| 443 | 17.0 - 23.0% of mass 442 | 16.0 | 19.87 | 3 |

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Initial Calibration | WG127255-4 | G8975.D | 07/19/13 | 15:11 |
| Initial Calibration | WG127255-5 | G8976.D | 07/19/13 | 15:58 |
| Initial Calibration | WG127255-6 | G8977.D | 07/19/13 | 16:44 |
| Initial Calibration | WG127255-7 | G8978.D | 07/19/13 | 17:30 |
| Initial Calibration | WG127255-3 | G8979.D | 07/19/13 | 18:16 |
| Initial Calibration | WG127255-2 | G8980.D | 07/19/13 | 19:01 |
| Independent Source | WG127255-8 | G8981.D | 07/19/13 | 19:46 |
| Laboratory Control S | WG127133-2 | G8983.D | 07/19/13 | 21:16 |
| Laboratory Control S | WG127133-3 | G8984.D | 07/19/13 | 22:00 |

# Form 6
## Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services
**SDG:** CTOJM30-2
**Project :** OLF Saufley Field, FL- CTO JM30
**Instrument ID:** GCMS-G
**Lab File IDs :** G8980.D G8979.D G8975.D G8976.D G8977.D G8978.D
**Column ID:**
**Calibration Date(s):** 19-JUL-13 15:11
19-JUL-13 19:01

| | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Crv | | | | | Max | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.200000( | 0.500000( | 1.0000 | 2.0000 | 5.0000 | 8.0000 | New | b | m1 | m2 | %RSD | %RSD | |
| Naphthalene | 27626 | 43452 | 96527 | 194325 | 515699 | 820919 | LNR | -0.12270 | 0.77825 | | 0.99928 | 0.99000 | O |
| 2-Methylnaphthalene | 18782 | 41034 | 75788 | 132620 | 318955 | 497352 | LNR | -0.35838 | 0.46495 | | 0.99589 | 0.99000 | O |
| 1-Methylnaphthalene | 15043 | 35750 | 69065 | 124013 | 313314 | 457982 | QUA | -0.01755 | 1.52224 | 0.17818 | 0.99975 | 0.99000 | O |
| Acenaphthylene | 2.12372 | 2.21309 | 2.26921 | 2.23840 | 2.23875 | 2.14830 | AVG | | 2.20524 | | 2.58632 | 15.00000 | O |
| Acenaphthene | 1.31333 | 1.36611 | 1.40941 | 1.35143 | 1.33956 | 1.28107 | AVG | | 1.34348 | | 3.28544 | 15.00000 | O |
| Fluorene | 1.38258 | 1.38278 | 1.44122 | 1.32146 | 1.34599 | 1.27325 | AVG | | 1.35788 | | 4.26951 | 15.00000 | O |
| Phenanthrene | 1.16458 | 1.24723 | 1.26170 | 1.19662 | 1.24481 | 1.19992 | AVG | | 1.21915 | | 3.09377 | 15.00000 | O |
| Anthracene | 1.35389 | 1.59720 | 1.55256 | 1.42285 | 1.36740 | 1.32634 | AVG | | 1.43671 | | 7.82637 | 15.00000 | O |
| Fluoranthene | 1.13617 | 1.11489 | 1.15760 | 1.00584 | 1.06201 | 0.99796 | AVG | | 1.07908 | | 6.27759 | 15.00000 | O |
| Pyrene | 2.00836 | 2.22911 | 2.02767 | 1.86090 | 1.88305 | 1.90438 | AVG | | 1.98558 | | 6.91458 | 15.00000 | O |
| Benzo(a)anthracene | 1.25344 | 1.11402 | 1.19470 | 1.00920 | 1.16362 | 1.12817 | AVG | | 1.14386 | | 7.23575 | 15.00000 | O |
| Chrysene | 10044 | 17922 | 33967 | 56710 | 170217 | 222461 | LNR | -0.18172 | 1.18998 | | 0.99867 | 0.99000 | O |
| Benzo(b)fluoranthene | 1.38323 | 1.49813 | 1.37503 | 1.31511 | 1.17268 | 1.19447 | AVG | | 1.32311 | | 9.32926 | 15.00000 | O |
| Benzo(k)fluoranthene | 9150 | 14406 | 34282 | 50458 | 190020 | 234971 | LNR | -0.06330 | 1.74804 | | 0.99940 | 0.99000 | O |
| Benzo(a)pyrene | 1.70887 | 1.58028 | 1.35725 | 1.24814 | 1.23966 | 1.21489 | AVG | | 1.39152 | | 14.8093( | 15.00000 | O |
| Indeno(1,2,3-cd)pyrene | 1.32043 | 1.30261 | 1.18560 | 1.15861 | 1.19423 | 1.14231 | AVG | | 1.21730 | | 6.20400 | 15.00000 | O |
| Dibenzo(a,h)anthracene | 1.03864 | 1.26084 | 0.92984 | 0.91236 | 0.95818 | 0.91600 | AVG | | 1.00264 | | 13.44741 | 15.00000 | O |
| Benzo(g,h,i)perylene | 1.28253 | 1.25416 | 1.09219 | 1.05911 | 1.07503 | 1.02937 | AVG | | 1.13207 | | 9.53507 | 15.00000 | O |
| 2-Methylnaphthalene-D10 | 0.48044 | 0.46123 | 0.47262 | 0.40515 | 0.37846 | 0.35925 | AVG | | 0.42619 | | 12.20562 | 15.00000 | |
| Fluorene-D10 | 9055 | 17005 | 30157 | 52432 | 145349 | 213537 | LNR | -0.16058 | 0.74766 | | 0.99804 | 0.99000 | |
| Pyrene-D10 | 1.31265 | 1.31418 | 1.21633 | 1.10804 | 1.14864 | 1.16883 | AVG | | 1.21145 | | 7.12722 | 15.00000 | |

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

# Form 5
## Semivolatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** GD236.D
**Instrument ID :** GCMS-G

**SDG :** CTOJM30-2
**Date Analyzed :** 22-JUL-13
**Time Analyzed :** 10:02

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 40.8 | | |
| 68 | Less than 2.0% of mass 69 | 0.5 | 1.50 | 1 |
| 69 | Less than 100.0% of mass 198 | 36.2 | | |
| 70 | Less than 2.0% of mass 69 | 0.2 | 0.49 | 1 |
| 127 | 40.0 - 60.0% of mass 198 | 52.0 | | |
| 197 | Less than 1.0% of mass 198 | 0.0 | | |
| 198 | Base Peak, 100% relative abundance | 100 | | |
| 199 | 5.0 - 9.0% of mass 198 | 6.6 | | |
| 275 | 10.0 - 30.0% of mass 198 | 20.1 | | |
| 365 | 1.0 - 100.0% of mass 198 | 2.8 | | |
| 441 | 0.0 - 100.0% of mass 443 | 11.7 | 71.72 | 2 |
| 442 | 40.0 - 100.0% of mass 198 | 83.0 | | |
| 443 | 17.0 - 23.0% of mass 442 | 16.3 | 19.66 | 3 |

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127374-2 | G8992.D | 07/22/13 | 10:21 |
| Method Blank Sample | WG127133-1RA | G8993.D | 07/22/13 | 11:06 |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127374-2 **Analytical Date:** 07/22/13 10:21
**Lab File ID :** G8992.D **Instrument ID:** GCMS-G
**Initial Calibration Date(s):** 07/19/13 15:11 07/19/13 19:01 **Column ID:**

| Compound | RRF/Amount | RF1 | CCAL RRF1 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 21 Naphthalene | 1.00000 | 1.02052 | 0.87062 | 0.010 | 2.05224 | 20.00000 | Linear | |
| 27 2-Methylnaphthalene | 1.00000 | 1.11715 | 0.65272 | 0.010 | 11.71468 | 20.00000 | Linear | |
| 28 1-Methylnaphthalene | 1.00000 | 0.99493 | 0.60862 | 0.010 | -0.50663 | 20.00000 | Quadratic | |
| 39 Acenaphthylene | 2.20524 | 2.29749 | 2.29749 | 0.010 | 4.18327 | 20.00000 | Averaged | |
| 42 Acenaphthene | 1.34348 | 1.41149 | 1.41149 | 0.010 | 5.06207 | 20.01000 | Averaged | |
| 50 Fluorene | 1.35788 | 1.44093 | 1.44093 | 0.010 | 6.11603 | 20.00000 | Averaged | |
| 60 Phenanthrene | 1.21915 | 1.20226 | 1.20226 | 0.010 | -1.38504 | 20.00000 | Averaged | |
| 61 Anthracene | 1.43671 | 1.54126 | 1.54126 | 0.010 | 7.27764 | 20.00000 | Averaged | |
| 64 Fluoranthene | 1.07908 | 1.17335 | 1.17335 | 0.010 | 8.73602 | 20.01000 | Averaged | |
| 66 Pyrene | 1.98558 | 2.26973 | 2.26973 | 0.010 | 14.31066 | 20.00000 | Averaged | |
| 68 Benzo(a)anthracene | 1.14386 | 1.20816 | 1.20816 | 0.010 | 5.62143 | 20.00000 | Averaged | |
| 70 Chrysene | 1.00000 | 1.13060 | 1.51838 | 0.010 | 13.05993 | 20.00000 | Linear | |
| 74 Benzo(b)fluoranthene | 1.32311 | 1.17498 | 1.17498 | 0.010 | -11.19535 | 20.00000 | Averaged | |
| 75 Benzo(k)fluoranthene | 1.00000 | 1.03658 | 1.90049 | 0.010 | 3.65784 | 20.00000 | Linear | |
| 76 Benzo(a)pyrene | 1.39152 | 1.26799 | 1.26799 | 0.010 | -8.87704 | 20.01000 | Averaged | |
| 78 Indeno(1,2,3-cd)pyrene | 1.21730 | 1.01745 | 1.01745 | 0.010 | -16.41775 | 20.00000 | Averaged | |
| 79 Dibenzo(a,h)anthracene | 1.00264 | 0.77603 | 0.77603 | 0.010 | -22.60114 | 20.00000 | Averaged | * |
| 80 Benzo(g,h,i)perylene | 1.13207 | 0.99238 | 0.99238 | 0.010 | -12.33867 | 20.00000 | Averaged | |
| 26 2-Methylnaphthalene-D10 | 0.42619 | 0.46219 | 0.46219 | 0.010 | 8.44695 | 20.00000 | Averaged | |
| 48 Fluorene-D10 | 1.00000 | 0.99747 | 0.84181 | 0.010 | -0.25324 | 20.00000 | Linear | |
| 65 Pyrene-D10 | 1.21145 | 1.33968 | 1.33968 | 0.010 | 10.58550 | 20.00000 | Averaged | |

*** = Compound out of QC criteria**

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sales@katahdinlab.com

# Form 5
## Semivolatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** GD238.D
**Instrument ID :** GCMS-G

**SDG :** CTOJM30-2
**Date Analyzed :** 24-JUL-13
**Time Analyzed :** 10:45

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 37.7 | | |
| 68 | Less than 2.0% of mass 69 | 0.4 | 1.07 | 1 |
| 69 | Less than 100.0% of mass 198 | 34.4 | | |
| 70 | Less than 2.0% of mass 69 | 0.2 | 0.60 | 1 |
| 127 | 40.0 - 60.0% of mass 198 | 49.5 | | |
| 197 | Less than 1.0% of mass 198 | 0.3 | | |
| 198 | Base Peak, 100% relative abundance | 100 | | |
| 199 | 5.0 - 9.0% of mass 198 | 6.7 | | |
| 275 | 10.0 - 30.0% of mass 198 | 20.3 | | |
| 365 | 1.0 - 100.0% of mass 198 | 2.7 | | |
| 441 | 0.0 - 100.0% of mass 443 | 12.3 | 71.95 | 2 |
| 442 | 40.0 - 100.0% of mass 198 | 85.4 | | |
| 443 | 17.0 - 23.0% of mass 442 | 17.0 | 19.95 | 3 |

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127495-2 | G9029.D | 07/24/13 | 11:05 |
| JM30-MW55D-071513 | SG4994-2 | G9030.D | 07/24/13 | 11:51 |
| Matrix Spike | WG127133-4 | G9031.D | 07/24/13 | 12:34 |
| Matrix Spike Duplica | WG127133-5 | G9032.D | 07/24/13 | 13:18 |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127495-2 **Analytical Date:** 07/24/13 11:05
**Lab File ID :** G9029.D **Instrument ID:** GCMS-G
**Initial Calibration Date(s):** 07/19/13 15:11 07/19/13 19:01 **Column ID:**

| Compound | RRF/Amount | RF1 | CCAL RRF1 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 21 Naphthalene | 1.00000 | 0.82071 | 0.71512 | 0.010 | -17.92855 | 20.00000 | Linear | |
| 27 2-Methylnaphthalene | 1.00000 | 1.10240 | 0.64586 | 0.010 | 10.24014 | 20.00000 | Linear | |
| 28 1-Methylnaphthalene | 1.00000 | 1.19444 | 0.71837 | 0.010 | 19.44357 | 20.00000 | Quadratic | |
| 39 Acenaphthylene | 2.20524 | 2.09908 | 2.09908 | 0.010 | -4.81386 | 20.00000 | Averaged | |
| 42 Acenaphthene | 1.34348 | 1.32003 | 1.32003 | 0.010 | -1.74566 | 20.01000 | Averaged | |
| 50 Fluorene | 1.35788 | 1.46993 | 1.46993 | 0.010 | 8.25143 | 20.00000 | Averaged | |
| 60 Phenanthrene | 1.21915 | 1.11559 | 1.11559 | 0.010 | -8.49451 | 20.00000 | Averaged | |
| 61 Anthracene | 1.43671 | 1.63585 | 1.63585 | 0.010 | 13.86121 | 20.00000 | Averaged | |
| 64 Fluoranthene | 1.07908 | 1.19587 | 1.19587 | 0.010 | 10.82334 | 20.01000 | Averaged | |
| 66 Pyrene | 1.98558 | 1.92941 | 1.92941 | 0.010 | -2.82866 | 20.00000 | Averaged | |
| 68 Benzo(a)anthracene | 1.14386 | 1.08978 | 1.08978 | 0.010 | -4.72761 | 20.00000 | Averaged | |
| 70 Chrysene | 1.00000 | 1.14553 | 1.53614 | 0.010 | 14.55251 | 20.00000 | Linear | |
| 74 Benzo(b)fluoranthene | 1.32311 | 1.24518 | 1.24518 | 0.010 | -5.88977 | 20.00000 | Averaged | |
| 75 Benzo(k)fluoranthene | 1.00000 | 1.04352 | 1.91262 | 0.010 | 4.35152 | 20.00000 | Linear | |
| 76 Benzo(a)pyrene | 1.39152 | 1.31542 | 1.31542 | 0.010 | -5.46829 | 20.01000 | Averaged | |
| 78 Indeno(1,2,3-cd)pyrene | 1.21730 | 1.06187 | 1.06187 | 0.010 | -12.76848 | 20.00000 | Averaged | |
| 79 Dibenzo(a,h)anthracene | 1.00264 | 0.87102 | 0.87102 | 0.010 | -13.12778 | 20.00000 | Averaged | |
| 80 Benzo(g,h,i)perylene | 1.13207 | 0.98087 | 0.98087 | 0.010 | -13.35559 | 20.00000 | Averaged | |
| 26 2-Methylnaphthalene-D10 | 0.42619 | 0.50705 | 0.50705 | 0.010 | 18.97352 | 20.00000 | Averaged | |
| 48 Fluorene-D10 | 1.00000 | 1.25560 | 1.03481 | 0.010 | 25.56008 | 20.00000 | Linear | * |
| 65 Pyrene-D10 | 1.21145 | 1.21198 | 1.21198 | 0.010 | 0.04435 | 20.00000 | Averaged | |

*** = Compound out of QC criteria**

# Form 5
## Semivolatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** GD239.D
**Instrument ID :** GCMS-G

**SDG :** CTOJM30-2
**Date Analyzed :** 25-JUL-13
**Time Analyzed :** 12:53

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 41.2 | | |
| 68 | Less than 2.0% of mass 69 | 0.3 | 0.99 | 1 |
| 69 | Less than 100.0% of mass 198 | 34.5 | | |
| 70 | Less than 2.0% of mass 69 | 0.2 | 0.67 | 1 |
| 127 | 40.0 - 60.0% of mass 198 | 52.2 | | |
| 197 | Less than 1.0% of mass 198 | 0.2 | | |
| 198 | Base Peak, 100% relative abundance | 100 | | |
| 199 | 5.0 - 9.0% of mass 198 | 6.3 | | |
| 275 | 10.0 - 30.0% of mass 198 | 19.6 | | |
| 365 | 1.0 - 100.0% of mass 198 | 2.6 | | |
| 441 | 0.0 - 100.0% of mass 443 | 11.8 | 72.51 | 2 |
| 442 | 40.0 - 100.0% of mass 198 | 82.3 | | |
| 443 | 17.0 - 23.0% of mass 442 | 16.3 | 19.75 | 3 |

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127557-2 | G9045.D | 07/25/13 | 13:17 |
| Method Blank Sample | WG127240-1 | G9047.D | 07/25/13 | 14:44 |
| Laboratory Control S | WG127240-2 | G9049.D | 07/25/13 | 16:11 |
| Laboratory Control S | WG127240-3 | G9050.D | 07/25/13 | 16:55 |
| JM30-MW-55I-071613 | SG5022-2 | G9054.D | 07/25/13 | 19:48 |
| JM30-MW-55S-071613 | SG5022-3 | G9055.D | 07/25/13 | 20:31 |
| JM30-MW-54D-071613 | SG5022-4 | G9056.D | 07/25/13 | 21:15 |
| JM30-RB-071613 | SG5022-5 | G9057.D | 07/25/13 | 21:58 |
| JM30-MW-54I-071713 | SG5070-2 | G9058.D | 07/25/13 | 22:41 |
| JM30-MW-54S-071713 | SG5070-3 | G9059.D | 07/25/13 | 23:24 |
| JM30-MW-49D-071713 | SG5070-4 | G9060.D | 07/26/13 | 00:07 |
| JM30-MW-49I-071713 | SG5070-5 | G9061.D | 07/26/13 | 00:50 |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127557-2 **Analytical Date:** 07/25/13 13:17
**Lab File ID :** G9045.D **Instrument ID:** GCMS-G
**Initial Calibration Date(s):** 07/19/13 15:11 07/19/13 19:01 **Column ID:**

| Compound | $\overline{\text{RRF}}$/Amount | RF1 | CCAL RRF1 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 21 Naphthalene | 1.00000 | 0.83568 | 0.72676 | 0.010 | -16.43223 | 20.00000 | Linear | |
| 27 2-Methylnaphthalene | 1.00000 | 1.14778 | 0.66696 | 0.010 | 14.77816 | 20.00000 | Linear | |
| 28 1-Methylnaphthalene | 1.00000 | 1.05652 | 0.64282 | 0.010 | 5.65209 | 20.00000 | Quadratic | |
| 39 Acenaphthylene | 2.20524 | 2.17896 | 2.17896 | 0.010 | -1.19176 | 20.00000 | Averaged | |
| 42 Acenaphthene | 1.34348 | 1.39596 | 1.39596 | 0.010 | 3.90569 | 20.01000 | Averaged | |
| 50 Fluorene | 1.35788 | 1.48655 | 1.48655 | 0.010 | 9.47554 | 20.00000 | Averaged | |
| 60 Phenanthrene | 1.21915 | 1.24955 | 1.24955 | 0.010 | 2.49382 | 20.00000 | Averaged | |
| 61 Anthracene | 1.43671 | 1.64549 | 1.64549 | 0.010 | 14.53210 | 20.00000 | Averaged | |
| 64 Fluoranthene | 1.07908 | 1.19845 | 1.19845 | 0.010 | 11.06277 | 20.01000 | Averaged | |
| 66 Pyrene | 1.98558 | 1.86744 | 1.86744 | 0.010 | -5.94951 | 20.00000 | Averaged | |
| 68 Benzo(a)anthracene | 1.14386 | 1.15822 | 1.15822 | 0.010 | 1.25523 | 20.00000 | Averaged | |
| 70 Chrysene | 1.00000 | 0.89723 | 1.24068 | 0.010 | -10.27703 | 20.00000 | Linear | |
| 74 Benzo(b)fluoranthene | 1.32311 | 1.29542 | 1.29542 | 0.010 | -2.09241 | 20.00000 | Averaged | |
| 75 Benzo(k)fluoranthene | 1.00000 | 0.98113 | 1.80357 | 0.010 | -1.88701 | 20.00000 | Linear | |
| 76 Benzo(a)pyrene | 1.39152 | 1.30411 | 1.30411 | 0.010 | -6.28156 | 20.01000 | Averaged | |
| 78 Indeno(1,2,3-cd)pyrene | 1.21730 | 1.10264 | 1.10264 | 0.010 | -9.41917 | 20.00000 | Averaged | |
| 79 Dibenzo(a,h)anthracene | 1.00264 | 0.84508 | 0.84508 | 0.010 | -15.71440 | 20.00000 | Averaged | |
| 80 Benzo(g,h,i)perylene | 1.13207 | 1.02780 | 1.02780 | 0.010 | -9.21054 | 20.00000 | Averaged | |
| 26 2-Methylnaphthalene-D10 | 0.42619 | 0.48201 | 0.48201 | 0.010 | 13.09710 | 20.00000 | Averaged | |
| 48 Fluorene-D10 | 1.00000 | 1.29092 | 1.06122 | 0.010 | 29.09245 | 20.00000 | Linear | * |
| 65 Pyrene-D10 | 1.21145 | 1.12510 | 1.12510 | 0.010 | -7.12774 | 20.00000 | Averaged | |

*** = Compound out of QC criteria**

# Form 5
## Semivolatile Organic Instrument Performance Check

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** GD240.D
**Instrument ID :** GCMS-G

**SDG :** CTOJM30-2
**Date Analyzed :** 26-JUL-13
**Time Analyzed :** 11:23

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 38.7 | | |
| 68 | Less than 2.0% of mass 69 | 0.4 | 1.29 | 1 |
| 69 | Less than 100.0% of mass 198 | 33.9 | | |
| 70 | Less than 2.0% of mass 69 | 0.1 | 0.44 | 1 |
| 127 | 40.0 - 60.0% of mass 198 | 50.5 | | |
| 197 | Less than 1.0% of mass 198 | 0.3 | | |
| 198 | Base Peak, 100% relative abundance | 100 | | |
| 199 | 5.0 - 9.0% of mass 198 | 6.9 | | |
| 275 | 10.0 - 30.0% of mass 198 | 19.6 | | |
| 365 | 1.0 - 100.0% of mass 198 | 2.3 | | |
| 441 | 0.0 - 100.0% of mass 443 | 10.0 | 73.62 | 2 |
| 442 | 40.0 - 100.0% of mass 198 | 72.3 | | |
| 443 | 17.0 - 23.0% of mass 442 | 13.5 | 18.73 | 3 |

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibrati | WG127621-2 | G9068.D | 07/26/13 | 11:45 |
| JM30-FD-071713 | SG5070-6RA | G9071.D | 07/26/13 | 14:19 |
| JM30-MW-29S-071813 | SG5146-1RA | G9072.D | 07/26/13 | 15:02 |

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG127621-2 **Analytical Date:** 07/26/13 11:45
**Lab File ID :** G9068.D **Instrument ID:** GCMS-G
**Initial Calibration Date(s):** 07/19/13 15:11 07/19/13 19:01 **Column ID:**

| Compound | RRF/Amount | RF1 | CCAL RRF1 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type | |
|---|---|---|---|---|---|---|---|---|
| 21 Naphthalene | 1.00000 | 1.04738 | 0.89152 | 0.010 | 4.73820 | 20.00000 | Linear | |
| 27 2-Methylnaphthalene | 1.00000 | 1.19429 | 0.68858 | 0.010 | 19.42901 | 20.00000 | Linear | |
| 28 1-Methylnaphthalene | 1.00000 | 1.03030 | 0.62830 | 0.010 | 3.03031 | 20.00000 | Quadratic | |
| 39 Acenaphthylene | 2.20524 | 2.28571 | 2.28571 | 0.010 | 3.64894 | 20.00000 | Averaged | |
| 42 Acenaphthene | 1.34348 | 1.43195 | 1.43195 | 0.010 | 6.58503 | 20.01000 | Averaged | |
| 50 Fluorene | 1.35788 | 1.50898 | 1.50898 | 0.010 | 11.12795 | 20.00000 | Averaged | |
| 60 Phenanthrene | 1.21915 | 1.25320 | 1.25320 | 0.010 | 2.79343 | 20.00000 | Averaged | |
| 61 Anthracene | 1.43671 | 1.61562 | 1.61562 | 0.010 | 12.45342 | 20.00000 | Averaged | |
| 64 Fluoranthene | 1.07908 | 1.06870 | 1.06870 | 0.010 | -0.96172 | 20.01000 | Averaged | |
| 66 Pyrene | 1.98558 | 2.44520 | 2.44520 | 0.010 | 23.14808 | 20.00000 | Averaged | * |
| 68 Benzo(a)anthracene | 1.14386 | 1.23078 | 1.23078 | 0.010 | 7.59947 | 20.00000 | Averaged | |
| 70 Chrysene | 1.00000 | 1.18277 | 1.58047 | 0.010 | 18.27723 | 20.00000 | Linear | |
| 74 Benzo(b)fluoranthene | 1.32311 | 1.16460 | 1.16460 | 0.010 | -11.98020 | 20.00000 | Averaged | |
| 75 Benzo(k)fluoranthene | 1.00000 | 1.18715 | 2.16369 | 0.010 | 18.71468 | 20.00000 | Linear | |
| 76 Benzo(a)pyrene | 1.39152 | 1.38014 | 1.38014 | 0.010 | -0.81780 | 20.01000 | Averaged | |
| 78 Indeno(1,2,3-cd)pyrene | 1.21730 | 1.08465 | 1.08465 | 0.010 | -10.89747 | 20.00000 | Averaged | |
| 79 Dibenzo(a,h)anthracene | 1.00264 | 0.76704 | 0.76704 | 0.010 | -23.49802 | 20.00000 | Averaged | * |
| 80 Benzo(g,h,i)perylene | 1.13207 | 1.11144 | 1.11144 | 0.010 | -1.82220 | 20.00000 | Averaged | |
| 26 2-Methylnaphthalene-D10 | 0.42619 | 0.46869 | 0.46869 | 0.010 | 9.97120 | 20.00000 | Averaged | |
| 48 Fluorene-D10 | 1.00000 | 1.22973 | 1.01547 | 0.010 | 22.97344 | 20.00000 | Linear | * |
| 65 Pyrene-D10 | 1.21145 | 1.38073 | 1.38073 | 0.010 | 13.97345 | 20.00000 | Averaged | |

*** = Compound out of QC criteria**

# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** G8993.D
**Instrument ID :** GCMS-G
**Matrix :** AQ

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127133-1RA
**Date Extracted :** 17-JUL-13
**Date Analyzed :** 22-JUL-13
**Time Analyzed :** 11:06

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127133-2 | G8983.D | 07/19/13 | 21:16 |
| Laboratory Control S | WG127133-3 | G8984.D | 07/19/13 | 22:00 |
| JM30-MW55D-071513 | SG4994-2 | G9030.D | 07/24/13 | 11:51 |
| Matrix Spike | WG127133-4 | G9031.D | 07/24/13 | 12:34 |
| Matrix Spike Duplica | WG127133-5 | G9032.D | 07/24/13 | 13:18 |

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# Report of Analytical Results

**Client:**
**Lab ID:** WG127133-1RA
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** G8993.D

**Sample Date:**
**Received Date:**
**Extract Date:** 17-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127133

**Analysis Date:** 22-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| 1-Methylnaphthalene | U | 0.068 | ug/L | 1 | .2 | 0.20 | 0.068 | 0.10 |
| 2-Methylnaphthalene | U | 0.077 | ug/L | 1 | .2 | 0.20 | 0.077 | 0.10 |
| Acenaphthylene | U | 0.054 | ug/L | 1 | .2 | 0.20 | 0.054 | 0.10 |
| Acenaphthene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| Fluorene | U | 0.061 | ug/L | 1 | .2 | 0.20 | 0.061 | 0.10 |
| Phenanthrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.10 |
| Anthracene | U | 0.044 | ug/L | 1 | .2 | 0.20 | 0.044 | 0.10 |
| Fluoranthene | U | 0.073 | ug/L | 1 | .2 | 0.20 | 0.073 | 0.10 |
| Pyrene | U | 0.059 | ug/L | 1 | .2 | 0.20 | 0.059 | 0.10 |
| Benzo(a)anthracene | U | 0.046 | ug/L | 1 | .2 | 0.20 | 0.046 | 0.10 |
| Chrysene | U | 0.036 | ug/L | 1 | .2 | 0.20 | 0.036 | 0.10 |
| Benzo(b)Fluoranthene | U | 0.089 | ug/L | 1 | .2 | 0.20 | 0.089 | 0.10 |
| Benzo(k)fluoranthene | U | 0.049 | ug/L | 1 | .2 | 0.20 | 0.049 | 0.10 |
| Benzo(a)pyrene | U | 0.066 | ug/L | 1 | .2 | 0.20 | 0.066 | 0.10 |
| Indeno(1,2,3-cd)pyrene | U | 0.052 | ug/L | 1 | .2 | 0.20 | 0.052 | 0.10 |
| Dibenzo(a,h)anthracene | U | 0.070 | ug/L | 1 | .2 | 0.20 | 0.070 | 0.10 |
| Benzo(g,h,i)perylene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.10 |
| 2-Methylnaphthalene-D10 | | 75.9 | % | | | | | |
| Fluorene-D10 | | 73.0 | % | | | | | |
| pyrene-d10 | | 87.1 | % | | | | | |



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# LCS/LCSD Recovery Report

**LCS ID:** WG127133-2
**LCSD ID:** WG127133-3
**Project:**
**SDG:** CTOJM30-2
**Report Date:** 29-JUL-13
**LCS File ID:** G8983.D

**Received Date:**
**Extract Date:** 17-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127133
**LCSD File ID:** G8984.D

**Analysis Date:** 19-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA

| Compound | Spike Amt | LCS Conc | LCS Rec (%) | LCSD Conc | LCSD Rec (%) | Conc Units | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 2.00 | J2.07 | 104. | 1.55 | 77.5 | ug/L | 29 | 30 | 46-84 |
| 1-Methylnaphthalene | 2.00 | J1.66 | 83.0 | 1.24 | 62.0 | ug/L | 29 | 30 | 51-82 |
| 2-Methylnaphthalene | 2.00 | 2.18 | 109. | 1.61 | 80.5 | ug/L | 30* | 30 | 51-114 |
| Acenaphthylene | 2.00 | 1.68 | 84.0 | 1.45 | 72.5 | ug/L | 15 | 30 | 55-105 |
| Acenaphthene | 2.00 | 1.69 | 84.5 | 1.50 | 75.0 | ug/L | 12 | 30 | 53-90 |
| Fluorene | 2.00 | 1.76 | 88.0 | 1.45 | 72.5 | ug/L | 19 | 30 | 53-95 |
| Phenanthrene | 2.00 | 1.99 | 99.5 | 1.68 | 84.0 | ug/L | 17 | 30 | 73-100 |
| Anthracene | 2.00 | J1.95 | 97.5 | 1.64 | 82.0 | ug/L | 17 | 30 | 70-95 |
| Fluoranthene | 2.00 | 2.02 | 101. | 1.68 | 84.0 | ug/L | 18 | 30 | 81-109 |
| Pyrene | 2.00 | J2.12 | 106. | 1.77 | 88.5 | ug/L | 18 | 30 | 71-104 |
| Benzo(a)anthracene | 2.00 | 1.85 | 92.5 | 1.50 | 75.0 | ug/L | 21 | 30 | 70-110 |
| Chrysene | 2.00 | J2.35 | 118. | J1.98 | 99.0 | ug/L | 17 | 30 | 70-95 |
| Benzo(b)Fluoranthene | 2.00 | 2.02 | 101. | 1.68 | 84.0 | ug/L | 18 | 30 | 67-102 |
| Benzo(k)fluoranthene | 2.00 | 1.92 | 96.0 | 1.61 | 80.5 | ug/L | 18 | 30 | 68-103 |
| Benzo(a)pyrene | 2.00 | 1.80 | 90.0 | 1.51 | 75.5 | ug/L | 18 | 30 | 63-98 |
| Indeno(1,2,3-cd)pyrene | 2.00 | 1.88 | 94.0 | 1.66 | 83.0 | ug/L | 12 | 30 | 61-112 |
| Dibenzo(a,h)anthracene | 2.00 | 1.79 | 89.5 | 1.60 | 80.0 | ug/L | 11 | 30 | 66-108 |
| Benzo(g,h,i)perylene | 2.00 | 1.90 | 95.0 | 1.71 | 85.5 | ug/L | 10 | 30 | 62-106 |
| 1-Methylnaphthalene-D10 | | | 79.4 | | 60.0 | | | | 43-92 |
| Fluorene-D10 | | | 77.7 | | 62.7 | | | | 29-101 |
| Pyrene-d10 | | | 86.5 | | 70.6 | | | | 53-166 |



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# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** G9047.D
**Instrument ID :** GCMS-G
**Matrix :** AQ

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127240-1
**Date Extracted :** 19-JUL-13
**Date Analyzed :** 25-JUL-13
**Time Analyzed :** 14:44

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127240-2 | G9049.D | 07/25/13 | 16:11 |
| Laboratory Control S | WG127240-3 | G9050.D | 07/25/13 | 16:55 |
| JM30-MW-55I-071613 | SG5022-2 | G9054.D | 07/25/13 | 19:48 |
| JM30-MW-55S-071613 | SG5022-3 | G9055.D | 07/25/13 | 20:31 |
| JM30-MW-54D-071613 | SG5022-4 | G9056.D | 07/25/13 | 21:15 |
| JM30-RB-071613 | SG5022-5 | G9057.D | 07/25/13 | 21:58 |
| JM30-MW-54I-071713 | SG5070-2 | G9058.D | 07/25/13 | 22:41 |
| JM30-MW-54S-071713 | SG5070-3 | G9059.D | 07/25/13 | 23:24 |
| JM30-MW-49D-071713 | SG5070-4 | G9060.D | 07/26/13 | 00:07 |
| JM30-MW-49I-071713 | SG5070-5 | G9061.D | 07/26/13 | 00:50 |
| JM30-FD-071713 | SG5070-6RA | G9071.D | 07/26/13 | 14:19 |
| JM30-MW-29S-071813 | SG5146-1RA | G9072.D | 07/26/13 | 15:02 |

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# Report of Analytical Results

**Client:**
**Lab ID:** WG127240-1
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** G9047.D

**Sample Date:**
**Received Date:**
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| 1-Methylnaphthalene | U | 0.068 | ug/L | 1 | .2 | 0.20 | 0.068 | 0.10 |
| 2-Methylnaphthalene | U | 0.077 | ug/L | 1 | .2 | 0.20 | 0.077 | 0.10 |
| Acenaphthylene | U | 0.054 | ug/L | 1 | .2 | 0.20 | 0.054 | 0.10 |
| Acenaphthene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.10 |
| Fluorene | U | 0.061 | ug/L | 1 | .2 | 0.20 | 0.061 | 0.10 |
| Phenanthrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.10 |
| Anthracene | U | 0.044 | ug/L | 1 | .2 | 0.20 | 0.044 | 0.10 |
| Fluoranthene | U | 0.073 | ug/L | 1 | .2 | 0.20 | 0.073 | 0.10 |
| Pyrene | U | 0.059 | ug/L | 1 | .2 | 0.20 | 0.059 | 0.10 |
| Benzo(a)anthracene | U | 0.046 | ug/L | 1 | .2 | 0.20 | 0.046 | 0.10 |
| Chrysene | U | 0.036 | ug/L | 1 | .2 | 0.20 | 0.036 | 0.10 |
| Benzo(b)Fluoranthene | U | 0.089 | ug/L | 1 | .2 | 0.20 | 0.089 | 0.10 |
| Benzo(k)fluoranthene | U | 0.049 | ug/L | 1 | .2 | 0.20 | 0.049 | 0.10 |
| Benzo(a)pyrene | U | 0.066 | ug/L | 1 | .2 | 0.20 | 0.066 | 0.10 |
| Indeno(1,2,3-cd)pyrene | U | 0.052 | ug/L | 1 | .2 | 0.20 | 0.052 | 0.10 |
| Dibenzo(a,h)anthracene | U | 0.070 | ug/L | 1 | .2 | 0.20 | 0.070 | 0.10 |
| Benzo(g,h,i)perylene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.10 |
| 2-Methylnaphthalene-D10 | | 74.8 | % | | | | | |
| Fluorene-D10 | | 95.0 | % | | | | | |
| pyrene-d10 | | 101. | % | | | | | |



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# LCS/LCSD Recovery Report

**LCS ID:** WG127240-2
**LCSD ID:** WG127240-3
**Project:**
**SDG:** CTOJM30-2
**Report Date:** 29-JUL-13
**LCS File ID:** G9049.D

**Received Date:**
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240
**LCSD File ID:** G9050.D

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA

| Compound | Spike Amt | LCS Conc | LCS Rec (%) | LCSD Conc | LCSD Rec (%) | Conc Units | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 2.00 | J1.91 | 95.5 | J1.87 | 93.5 | ug/L | 2 | 30 | 46-84 |
| -Methylnaphthalene | 2.00 | J1.97 | 98.5 | J1.98 | 99.0 | ug/L | 0 | 30 | 51-82 |
| -Methylnaphthalene | 2.00 | J2.32 | 116. | J2.43 | 122. | ug/L | 5 | 30 | 51-114 |
| Acenaphthylene | 2.00 | 1.46 | 73.0 | 1.46 | 73.0 | ug/L | 0 | 30 | 55-105 |
| Acenaphthene | 2.00 | 1.56 | 78.0 | 1.52 | 76.0 | ug/L | 2 | 30 | 53-90 |
| Fluorene | 2.00 | 1.61 | 80.5 | 1.71 | 85.5 | ug/L | 6 | 30 | 53-95 |
| Phenanthrene | 2.00 | 1.70 | 85.0 | 1.76 | 88.0 | ug/L | 3 | 30 | 73-100 |
| Anthracene | 2.00 | 1.78 | 89.0 | 1.83 | 91.5 | ug/L | 3 | 30 | 70-95 |
| Fluoranthene | 2.00 | 1.82 | 91.0 | 1.98 | 99.0 | ug/L | 8 | 30 | 81-109 |
| Pyrene | 2.00 | 1.96 | 98.0 | 1.84 | 92.0 | ug/L | 6 | 30 | 71-104 |
| Benzo(a)anthracene | 2.00 | 1.70 | 85.0 | 1.78 | 89.0 | ug/L | 4 | 30 | 70-110 |
| Chrysene | 2.00 | J1.92 | 96.0 | J1.93 | 96.5 | ug/L | 0 | 30 | 70-95 |
| Benzo(b)Fluoranthene | 2.00 | 1.58 | 79.0 | 1.67 | 83.5 | ug/L | 6 | 30 | 67-102 |
| Benzo(k)fluoranthene | 2.00 | 1.76 | 88.0 | 1.76 | 88.0 | ug/L | 0 | 30 | 68-103 |
| Benzo(a)pyrene | 2.00 | 1.55 | 77.5 | 1.55 | 77.5 | ug/L | 0 | 30 | 63-98 |
| ndeno(1,2,3-cd)pyrene | 2.00 | 1.72 | 86.0 | 1.50 | 75.0 | ug/L | 14 | 30 | 61-112 |
| Dibenzo(a,h)anthracene | 2.00 | 1.62 | 81.0 | 1.39 | 69.5 | ug/L | 15 | 30 | 66-108 |
| Benzo(g,h,i)perylene | 2.00 | 1.79 | 89.5 | 1.57 | 78.5 | ug/L | 13 | 30 | 62-106 |
| -Methylnaphthalene-D10 | | | 80.7 | | 107.J | | | | 43-92 |
| Fluorene-D10 | | | 94.5 | | 83.2 | | | | 29-101 |
| yrene-d10 | | | 92.0 | | 85.6 | | | | 53-166 |



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# MS/MSD Recovery Report

**MS ID:** WG127133-4
**MSD ID:** WG127133-5
**Sample ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:**
**SDG:** CTOJM30-2
**MS File ID:** G9031.D

**Received Date:**
**Extract Date:** 17-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127133
**Report Date:** 29-JUL-13
**MSD File ID:** G9032.D

**Analysis Date:** 24-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA

| Compound | MS Spike | MSD Spike | Conc Units | Samp Conc | MS Conc | MSD Conc | MS Rec (%) | MSD Rec (%) | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.92 | 1.94 | ug/L | U0.061 | J1.8 | J1.7 | 93.6 | 87.0 | 6 | 30 | 46-84 |
| -Methylnaphthalene | 1.92 | 1.94 | ug/L | U0.065 | 1.6 | 1.4 | 81.6 | 74.7 | 8 | 30 | 51-82 |
| -Methylnaphthalene | 1.92 | 1.94 | ug/L | U0.073 | 2.2 | 1.9 | 113. | 99.9 | 11 | 30 | 51-114 |
| Acenaphthylene | 1.92 | 1.94 | ug/L | U0.051 | 1.4 | 1.3 | 74.9 | 68.0 | 9 | 30 | 55-105 |
| Acenaphthene | 1.92 | 1.94 | ug/L | U0.061 | 1.5 | 1.4 | 77.5 | 73.1 | 5 | 30 | 53-90 |
| Fluorene | 1.92 | 1.94 | ug/L | U0.058 | 1.7 | 1.6 | 88.4 | 80.8 | 8 | 30 | 53-95 |
| Phenanthrene | 1.92 | 1.94 | ug/L | U0.048 | 1.8 | 1.7 | 91.5 | 87.0 | 4 | 30 | 73-100 |
| Anthracene | 1.92 | 1.94 | ug/L | U0.042 | 1.7 | 1.6 | 88.4 | 80.8 | 8 | 30 | 70-95 |
| Fluoranthene | 1.92 | 1.94 | ug/L | U0.070 | 1.8 | 1.8 | 96.2 | 90.6 | 5 | 30 | 81-109 |
| Pyrene | 1.92 | 1.94 | ug/L | U0.056 | 1.8 | 1.7 | 94.6 | 89.6 | 4 | 30 | 71-104 |
| Benzo(a)anthracene | 1.92 | 1.94 | ug/L | U0.044 | 1.8 | 1.5 | 91.5 | 78.3 | 15 | 30 | 70-110 |
| Chrysene | 1.92 | 1.94 | ug/L | U0.034 | 1.8 | 1.8 | 94.6 | 94.2 | 0 | 30 | 70-95 |
| Benzo(b)Fluoranthene | 1.92 | 1.94 | ug/L | U0.085 | 1.6 | 1.3 | 85.3 | 68.0 | 22 | 30 | 67-102 |
| Benzo(k)fluoranthene | 1.92 | 1.94 | ug/L | U0.047 | 1.7 | 1.7 | 86.3 | 88.1 | 3 | 30 | 68-103 |
| Benzo(a)pyrene | 1.92 | 1.94 | ug/L | U0.063 | 1.4 | 1.4 | 71.8 | 70.0 | 1 | 30 | 63-98 |
| ndeno(1,2,3-cd)pyrene | 1.92 | 1.94 | ug/L | U0.050 | 1.5 | 1.4 | 78.5 | 70.0 | 10 | 30 | 61-112 |
| Dibenzo(a,h)anthracene | 1.92 | 1.94 | ug/L | U0.067 | 1.4 | 1.3 | 75.4 | 67.5 | 10 | 30 | 66-108 |
| Benzo(g,h,i)perylene | 1.92 | 1.94 | ug/L | U0.062 | 1.5 | 1.3 | 76.4 | 68.5 | 10 | 30 | 62-106 |
| -Methylnaphthalene-D10 | | | | | | | 80.7 | 67.7 | | | 43-92 |
| Fluorene-D10 | | | | | | | 76.8 | 72.8 | | | 29-101 |
| yrene-d10 | | | | | | | 80.5 | 75.6 | | | 53-166 |



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# Form 2
## System Monitoring Compound Recovery

**Lab Name:** Katahdin Analytical Services **Project:** OLF Saufley Field, FL- CTO JM30 **Matrix:** AQ
**Lab Code:** KAS **SDG:** CTOJM30-2

| Client Sample ID | Lab Sample ID | Col. ID | 2MN | # | FLO | # | PYR | # |
|---|---|---|---|---|---|---|---|---|
| JM30-MW55D-071513 | SG4994-2 | | 77.5 | | 76.5 | | 79.2 | |
| JM30-MW-55I-071613 | SG5022-2 | | 61.1 | | 78.7 | | 67.6 | |
| JM30-MW-55S-071613 | SG5022-3 | | 70.8 | | 79.0 | | 90.4 | |
| JM30-MW-54D-071613 | SG5022-4 | | 68.9 | | 87.1 | | 97.6 | |
| JM30-RB-071613 | SG5022-5 | | 89.9 | | 99.1 | | 82.3 | |
| JM30-MW-54I-071713 | SG5070-2 | | 86.1 | | 100. | | 111. | |
| JM30-MW-54S-071713 | SG5070-3 | | 80.3 | | 75.3 | | 90.8 | |
| JM30-MW-49D-071713 | SG5070-4 | | 63.2 | | 82.8 | | 62.5 | |
| JM30-MW-49I-071713 | SG5070-5 | | 76.7 | | 53.8 | | 64.1 | |
| JM30-FD-071713 | SG5070-6RA | | 63.9 | | 52.8 | | 62.5 | |
| JM30-MW-29S-071813 | SG5146-1RA | | 70.0 | | 79.7 | | 86.6 | |
| Method Blank Sample | WG127133-1RA | | 75.9 | | 73.0 | | 87.1 | |
| Laboratory Control S | WG127133-2 | | 79.4 | | 77.7 | | 86.5 | |
| Laboratory Control S | WG127133-3 | | 60.0 | | 62.7 | | 70.6 | |
| Matrix Spike | WG127133-4 | | 80.7 | | 76.8 | | 80.5 | |
| Matrix Spike Duplica | WG127133-5 | | 67.7 | | 72.8 | | 75.6 | |
| Method Blank Sample | WG127240-1 | | 74.8 | | 95.0 | | 101. | |
| Laboratory Control S | WG127240-2 | | 80.7 | | 94.5 | | 92.0 | |
| Laboratory Control S | WG127240-3 | | 107. | J | 83.2 | | 85.6 | |

| | | QC Limits |
|---|---|---|
| 2MN | 2-METHYLNAPHTHALENE-D10 | 43-92 |
| FLO | FLUORENE-D10 | 29-101 |
| PYR | PYRENE-D10 | 53-166 |

# = Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
NALYTICAL SERVICES

Cert No E87604

# Form 8
# Internal Standard Area and RT Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM
**Lab ID :** WG127255-4
**Lab File ID :** G8975.D

**SDG:** CTOJM30-2
**Analytical Date:** 07/19/13 15:11
**Instrument ID:** GCMS-G

| | | 1,4-DICHLOROBENZENE-D4 | | | NAPHTHALENE-D8 | | | ACENAPHTHENE-D10 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Area | # | RT | Area | # | RT | Area | # | RT |
| | Std . | 27539 | | 8.93 | 86899 | | 11.76 | 28362 | | 15.83 |
| | Upper Limit | 55078 | | 9.43 | 173798 | | 12.26 | 56724 | | 16.33 |
| | Lower Limit | 13769.5 | | 8.43 | 43449.5 | | 11.26 | 14181 | | 15.33 |
| Client Sample ID | Lab Sample ID | | | | | | | | | |
| Laboratory Control S | WG127133-2 | 28031 | | 8.93 | 72539 | | 11.74 | 24984 | | 15.83 |
| Laboratory Control S | WG127133-3 | 28790 | | 8.93 | 86978 | | 11.74 | 26226 | | 15.83 |
| Continuing Calibrati | WG127374-2 | 29070 | | 8.93 | 102001 | | 11.74 | 34269 | | 15.82 |
| Method Blank Sample | WG127133-1RA | 30645 | | 8.93 | 83495 | | 11.74 | 33932 | | 15.83 |
| Continuing Calibrati | WG127495-2 | 19943 | | 8.92 | 75012 | | 11.74 | 29829 | | 15.82 |
| JM30-MW55D-071513 | SG4994-2 | 23619 | | 8.92 | 70339 | | 11.71 | 30197 | | 15.82 |
| Matrix Spike | WG127133-4 | 22691 | | 8.91 | 66328 | | 11.74 | 27346 | | 15.82 |
| Matrix Spike Duplica | WG127133-5 | 24535 | | 8.91 | 70624 | | 11.74 | 28353 | | 15.81 |
| Continuing Calibrati | WG127557-2 | 20748 | | 8.90 | 65748 | | 11.70 | 22501 | | 15.77 |
| Method Blank Sample | WG127240-1 | 17860 | | 8.90 | 66300 | | 11.70 | 21882 | | 15.79 |
| Laboratory Control S | WG127240-2 | 22045 | | 8.90 | 51599 | | 11.70 | 24190 | | 15.77 |
| Laboratory Control S | WG127240-3 | 18649 | | 8.90 | 46119 | | 11.70 | 23304 | | 15.77 |
| JM30-MW-55I-071613 | SG5022-2 | 24698 | | 8.90 | 87157 | | 11.70 | 32470 | | 15.77 |
| JM30-MW-55S-07161: | SG5022-3 | 24051 | | 8.90 | 84574 | | 11.70 | 30909 | | 15.77 |
| JM30-MW-54D-07161: | SG5022-4 | 22879 | | 8.90 | 79716 | | 11.70 | 28742 | | 15.79 |
| JM30-RB-071613 | SG5022-5 | 23697 | | 8.90 | 65906 | | 11.70 | 31383 | | 15.77 |
| JM30-MW-54I-071713 | SG5070-2 | 22973 | | 8.90 | 57315 | | 11.70 | 28091 | | 15.79 |
| JM30-MW-54S-07171: | SG5070-3 | 22505 | | 8.90 | 69709 | | 11.70 | 31209 | | 15.77 |
| JM30-MW-49D-07171: | SG5070-4 | 23999 | | 8.90 | 88952 | | 11.70 | 33587 | | 15.79 |
| JM30-MW-49I-071713 | SG5070-5 | 23845 | | 8.90 | 58434 | | 11.70 | 32089 | | 15.77 |
| Continuing Calibrati | WG127621-2 | 26571 | | 8.88 | 78372 | | 11.70 | 27635 | | 15.77 |
| JM30-FD-071713 | SG5070-6RA | 25172 | | 8.90 | 65899 | | 11.70 | 27308 | | 15.77 |
| JM30-MW-29S-07181: | SG5146-1RA | 22728 | | 8.90 | 78521 | | 11.70 | 30059 | | 15.77 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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# Form 8
## Internal Standard Area and RT Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM
**Lab ID :** WG127255-4
**Lab File ID :** G8975.D

**SDG:** CTOJM30-2
**Analytical Date:** 07/19/13 15:11
**Instrument ID:** GCMS-G

| | | PHENANTHRENE-D10 | | | CHRYSENE-D12 | | | PERYLENE-D12 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Area | # | RT | Area | # | RT | Area | # | RT |
| | Std . | 33814 | | 19.33 | 20674 | | 25.62 | 14448 | | 28.77 |
| | Upper Limit | 67628 | | 19.83 | 41348 | | 26.12 | 28896 | | 29.27 |
| | Lower Limit | 16907 | | 18.83 | 10337 | | 25.12 | 7224 | | 28.27 |
| Client Sample ID | Lab Sample ID | | | | | | | | | |
| Laboratory Control S | WG127133-2 | 30761 | | 19.33 | 17545 | | 25.62 | 13584 | | 28.77 |
| Laboratory Control S | WG127133-3 | 31407 | | 19.33 | 17783 | | 25.62 | 13850 | | 28.77 |
| Continuing Calibrati | WG127374-2 | 44075 | | 19.31 | 24318 | | 25.60 | 18226 | | 28.75 |
| Method Blank Sample | WG127133-1RA | 45367 | | 19.33 | 22705 | | 25.60 | 15508 | | 28.75 |
| Continuing Calibrati | WG127495-2 | 42220 | | 19.33 | 27574 | | 25.62 | 20682 | | 28.77 |
| JM30-MW55D-071513 | SG4994-2 | 43580 | | 19.33 | 24955 | | 25.60 | 19037 | | 28.75 |
| Matrix Spike | WG127133-4 | 39360 | | 19.31 | 23312 | | 25.60 | 18337 | | 28.75 |
| Matrix Spike Duplica | WG127133-5 | 39310 | | 19.31 | 23267 | | 25.60 | 17869 | | 28.75 |
| Continuing Calibrati | WG127557-2 | 30249 | | 19.27 | 20218 | | 25.56 | 14462 | | 28.70 |
| Method Blank Sample | WG127240-1 | 29144 | | 19.27 | 13811 | | 25.56 | 10139 | | 28.70 |
| Laboratory Control S | WG127240-2 | 32160 | | 19.27 | 17731 | | 25.56 | 13219 | | 28.70 |
| Laboratory Control S | WG127240-3 | 33613 | | 19.27 | 21631 | | 25.56 | 15381 | | 28.70 |
| JM30-MW-55I-071613 | SG5022-2 | 46961 | | 19.25 | 30719 | | 25.54 | 23015 | | 28.68 |
| JM30-MW-55S-07161: | SG5022-3 | 42194 | | 19.27 | 23141 | | 25.56 | 17734 | | 28.68 |
| JM30-MW-54D-07161. | SG5022-4 | 38652 | | 19.27 | 18525 | | 25.56 | 13837 | | 28.70 |
| JM30-RB-071613 | SG5022-5 | 45080 | | 19.27 | 28769 | | 25.56 | 22858 | | 28.70 |
| JM30-MW-54I-071713 | SG5070-2 | 39308 | | 19.27 | 16577 | | 25.56 | 10736 | | 28.70 |
| JM30-MW-54S-07171: | SG5070-3 | 45902 | | 19.27 | 23380 | | 25.56 | 14175 | | 28.70 |
| JM30-MW-49D-07171. | SG5070-4 | 50576 | | 19.27 | 31826 | | 25.56 | 22320 | | 28.70 |
| JM30-MW-49I-071713 | SG5070-5 | 43923 | | 19.27 | 21448 | | 25.56 | 14973 | | 28.70 |
| Continuing Calibrati | WG127621-2 | 34766 | | 19.27 | 16177 | | 25.56 | 11287 | | 28.70 |
| JM30-FD-071713 | SG5070-6RA | 35602 | | 19.27 | 16280 | | 25.56 | 11750 | | 28.69 |
| JM30-MW-29S-07181: | SG5146-1RA | 43712 | | 19.25 | 29604 | | 25.54 | 22474 | | 28.69 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# FL-PRO DATA

# Form 8
# GC Analytical Sequence

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Instrument ID :** GC10

**SDG :** CTOJM30-2
**Column ID :** A

| Client Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed | OTP | | |
|---|---|---|---|---|---|---|
| Initial Calibration | WG128015-5 | 07/26/13 | 11:13 | 10.44 | 15.29 | |
| Initial Calibration | WG128015-4 | 07/26/13 | 11:52 | 10.44 | 15.29 | |
| Initial Calibration | WG128015-2 | 07/26/13 | 12:31 | 10.44 | 15.29 | |
| Initial Calibration | WG128015-1 | 07/26/13 | 13:10 | 10.44 | 15.29 | |
| Initial Calibration | WG128015-3 | 07/26/13 | 13:49 | 10.44 | 15.29 | |
| Independent Source | WG128015-6 | 07/26/13 | 14:39 | 10.44 | 15.29 | |
| Method Blank Sample | WG127381-1 | 07/26/13 | 15:39 | 10.42 | 15.29 | |
| Laboratory Control S | WG127381-2 | 07/26/13 | 16:18 | 10.42 | 15.29 | |
| Laboratory Control S | WG127381-3 | 07/26/13 | 16:58 | 10.42 | 15.28 | |
| Matrix Spike | WG127381-4 | 07/26/13 | 17:37 | 10.42 | 15.28 | |
| Matrix Spike Duplica | WG127381-5 | 07/26/13 | 18:16 | 10.42 | 15.28 | |
| JM30-MW55D-071513 | SG4994-2 | 07/26/13 | 20:13 | 10.42 | 15.29 | |
| JM30-MW-55I-071613 | SG5022-2 | 07/26/13 | 20:52 | 10.42 | 15.27 | |
| JM30-MW-55S-071613 | SG5022-3 | 07/26/13 | 21:31 | 10.42 | 15.29 | |
| Continuing Calibrati | WG128015-7 | 07/26/13 | 22:49 | 10.44 | 15.29 | |
| JM30-MW-54D-071613 | SG5022-4 | 07/26/13 | 23:28 | 10.42 | 15.29 | |
| JM30-RB-071613 | SG5022-5 | 07/27/13 | 00:07 | 10.42 | 15.29 | |
| JM30-MW-54I-071713 | SG5070-2 | 07/27/13 | 00:46 | 10.42 | 15.29 | |
| JM30-MW-54S-071713 | SG5070-3 | 07/27/13 | 01:25 | 10.42 | 15.28 | |
| JM30-MW-49D-071713 | SG5070-4 | 07/27/13 | 02:04 | 10.42 | 15.29 | |
| JM30-MW-49I-071713 | SG5070-5 | 07/27/13 | 02:42 | 10.42 | 15.28 | |
| JM30-FD-071713 | SG5070-6 | 07/27/13 | 03:21 | 10.42 | 15.28 | |
| JM30-MW-29S-071813 | SG5146-1 | 07/27/13 | 04:00 | 10.42 | 15.28 | |
| Continuing Calibrati | WG128015-8 | 07/27/13 | 05:18 | 10.44 | 15.29 | |
| Continuing Calibrati | WG128015-9 | 07/31/13 | 10:06 | 10.43 | 15.28 | |
| Method Blank Sample | WG127831-1 | 07/31/13 | 12:42 | 10.41 | 15.28 | |
| Laboratory Control S | WG127831-2 | 07/31/13 | 13:21 | 10.41 | 15.27 | |
| Laboratory Control S | WG127831-3 | 07/31/13 | 14:00 | 10.42 | 15.28 | |
| JM30-MW-55I-071613 | SG5022-2RE | 07/31/13 | 14:39 | 10.42 | 15.28 | |
| JM30-MW-49I-071713 | SG5070-5RE | 07/31/13 | 15:18 | 10.42 | 15.28 | |
| JM30-FD-071713 | SG5070-6RE | 07/31/13 | 15:57 | 10.42 | 15.28 | |
| Continuing Calibrati | WG128015-10 | 07/31/13 | 17:15 | 10.43 | 15.28 | |

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Cert No E87604

# Form 6
## Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File IDs :** AGG20231.LAGG20230.LAGG20232.L AGG20229.LAGG20228.L

**SDG:** CTOJM30-2
**Instrument ID:** GC10
**Column ID:** A
**Calibration Date(s):** 26-JUL-13 10:34 26-JUL-13 13:49

| | Level 1 5.0000 | Level 2 20.0000 | Level 3 50.0000 | Level 4 100.0000 | Level 5 200.0000 | | Crv New | b | m1 | m2 | %RSD | Max %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organic | 3089102 | 12636617 | 29064611 | 60208084 | 122271060 | | LNR | 7.40184 | 35900 | | 0.99976 | 0.99000 | M ( |
| C-8 | 181933 | 731463 | 1715023 | 3597538 | 7399389 | | LNR | 1.05675 | 36959 | | 0.99955 | 0.99000 | O |
| C-10 | 179016 | 749462 | 1739250 | 3724105 | 7629535 | | LNR | 1.27141 | 38167 | | 0.99946 | 0.99000 | O |
| C-12 | 175693 | 743553 | 1750024 | 3747522 | 7665333 | | LNR | 1.33539 | 38372 | | 0.99950 | 0.99000 | O |
| C-14 | 180367 | 756314 | 1748066 | 3765084 | 7677765 | | LNR | 1.22555 | 38427 | | 0.99947 | 0.99000 | O |
| C-16 | 182823 | 754185 | 1751923 | 3777081 | 7684649 | | LNR | 1.19425 | 38470 | | 0.99949 | 0.99000 | O |
| C-18 | 188749 | 776459 | 1784336 | 3853299 | 7821892 | | LNR | 1.09221 | 39150 | | 0.99949 | 0.99000 | O |
| C-20 | 190254 | 769795 | 1772595 | 2897952 | 5891299 | | LNR | -3.67435 | 29019 | | 0.99674 | 0.99000 | O |
| C-22 | 189757 | 766624 | 1814396 | 3037617 | 6260195 | | LNR | -2.63046 | 30883 | | 0.99764 | 0.99000 | O |
| C-24 | 188458 | 749611 | 1697810 | 3194570 | 6695340 | | LNR | -0.48887 | 33143 | | 0.99917 | 0.99000 | O |
| C-26 | 194578 | 747032 | 1690170 | 3581426 | 6950490 | | LNR | -0.53461 | 34805 | | 0.99962 | 0.99000 | O |
| C-28 | 218772 | 778314 | 1732495 | 3663153 | 7147609 | | LNR | -0.68229 | 35718 | | 0.99964 | 0.99000 | O |
| C-30 | 192475 | 795453 | 1747341 | 3679252 | 7257458 | | LNR | -0.32754 | 36269 | | 0.99971 | 0.99000 | O |
| C-32 | 182906 | 746924 | 1714008 | 3693105 | 7412365 | | LNR | 0.75824 | 37115 | | 0.99961 | 0.99000 | O |
| C-34 | 172985 | 732428 | 1684206 | 3667824 | 7401790 | | LNR | 1.12303 | 37091 | | 0.99949 | 0.99000 | O |
| C-36 | 169313 | 721822 | 1658556 | 3607947 | 7516848 | | LNR | 1.89380 | 37605 | | 0.99896 | 0.99000 | O |
| C-38 | 156767 | 682840 | 1580679 | 3457880 | 7142775 | | LNR | 1.84020 | 35776 | | 0.99912 | 0.99000 | O |
| C-40 | 144249 | 634331 | 1483724 | 3262729 | 6716319 | | LNR | 1.90824 | 33672 | | 0.99915 | 0.99000 | O |
| O-Terphenyl | 10302658 | 10032499 | 9941055 | 10236461 | 10225858 | | LNR | 0.22789 | 40635 | | 0.99891 | 0.99000 | |
| n-Triacontane-D62 | 9023242 | 8760852 | 8483761 | 8952633 | 8598295 | | LNR | 0.81290 | 29308 | | 0.99675 | 0.99000 | |

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30 **SDG:** CTOJM30-2
**Lab ID :** WG128015-7 **Analytical Date:** 07/26/13 22:49
**Lab File ID:** AGG20245.D **Instrument ID:** GC10
**Initial Calibration Date(s):** 07/26/13 10:34 07/26/13 13:49 **Column ID:** A

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 1 Petroleum Range Organic | 850 | 841 | 35300 | 0.010 | -1.00436 | 25.00000 | Linear |
| 2 C-8 | 50.00000 | 48.16255 | 34820 | 0.010 | -3.67489 | 25.00000 | Linear |
| 3 C-10 | 50.00000 | 48.31247 | 35908 | 0.010 | -3.37507 | 25.00000 | Linear |
| 4 C-12 | 50.00000 | 48.21646 | 35979 | 0.010 | -3.56708 | 25.00000 | Linear |
| 5 C-14 | 50.00000 | 48.25923 | 36147 | 0.010 | -3.48153 | 25.00000 | Linear |
| 6 C-16 | 50.00000 | 48.26811 | 36219 | 0.010 | -3.46379 | 25.00000 | Linear |
| 8 C-18 | 50.00000 | 48.24126 | 36918 | 0.010 | -3.51749 | 25.00000 | Linear |
| 10 C-20 | 50.00000 | 57.39336 | 36670 | 0.010 | 14.78673 | 25.00000 | Linear |
| 11 C-22 | 50.00000 | 57.26127 | 37483 | 0.010 | 14.52255 | 25.00000 | Linear |
| 12 C-24 | 50.00000 | 49.12716 | 34942 | 0.010 | -1.74569 | 25.00000 | Linear |
| 13 C-26 | 50.00000 | 49.47899 | 34815 | 0.010 | -1.04202 | 25.00000 | Linear |
| 14 C-28 | 50.00000 | 49.71670 | 35794 | 0.010 | -0.56661 | 25.00000 | Linear |
| 16 C-30 | 50.00000 | 49.35017 | 36035 | 0.010 | -1.29966 | 25.00000 | Linear |
| 17 C-32 | 50.00000 | 48.40481 | 35368 | 0.010 | -3.19038 | 25.00000 | Linear |
| 18 C-34 | 50.00000 | 48.14281 | 34880 | 0.010 | -3.71438 | 25.00000 | Linear |
| 19 C-36 | 50.00000 | 47.59287 | 34370 | 0.010 | -4.81426 | 25.00000 | Linear |
| 20 C-38 | 50.00000 | 47.79509 | 32882 | 0.010 | -4.40982 | 25.00000 | Linear |
| 21 C-40 | 50.00000 | 47.73963 | 30864 | 0.010 | -4.52075 | 25.00000 | Linear |
| 9 O-Terphenyl | 250 | 252 | 40945 | 0.010 | 0.85214 | 25.00000 | Linear |
| 15 n-Triacontane-D62 | 300 | 295 | 28697 | 0.010 | -1.81303 | 25.00000 | Linear |

*** = Compound out of QC criteria**

# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**SDG:** CTOJM30-2
**Lab ID :** WG128015-8
**Analytical Date:** 07/27/13 05:18
**Lab File ID :** AGG20255.D
**Instrument ID:** GC10
**Initial Calibration Date(s):** 07/26/13 10:34 07/26/13 13:49
**Column ID:** A

| Compound | RRF/Amount | RF20 | CCAL RRF20 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 1 Petroleum Range Organic | 340 | 340 | 35399 | 0.010 | -0.04580 | 25.00000 | Linear |
| 2 C-8 | 20.00000 | 20.09341 | 35179 | 0.010 | 0.46706 | 25.00000 | Linear |
| 3 C-10 | 20.00000 | 20.27498 | 36265 | 0.010 | 1.37491 | 25.00000 | Linear |
| 4 C-12 | 20.00000 | 20.10505 | 36012 | 0.010 | 0.52523 | 25.00000 | Linear |
| 5 C-14 | 20.00000 | 20.11040 | 36285 | 0.010 | 0.55200 | 25.00000 | Linear |
| 6 C-16 | 20.00000 | 20.14781 | 36457 | 0.010 | 0.73904 | 25.00000 | Linear |
| 8 C-18 | 20.00000 | 20.13590 | 37278 | 0.010 | 0.67951 | 25.00000 | Linear |
| 10 C-20 | 20.00000 | 20.31466 | 36900 | 0.010 | 1.57330 | 25.00000 | Linear |
| 11 C-22 | 20.00000 | 20.64576 | 36856 | 0.010 | 3.22882 | 25.00000 | Linear |
| 12 C-24 | 20.00000 | 19.23982 | 36194 | 0.010 | -3.80088 | 25.00000 | Linear |
| 13 C-26 | 20.00000 | 20.03261 | 35793 | 0.010 | 0.16307 | 25.00000 | Linear |
| 14 C-28 | 20.00000 | 20.51676 | 37182 | 0.010 | 2.58379 | 25.00000 | Linear |
| 16 C-30 | 20.00000 | 19.13580 | 35295 | 0.010 | -4.32099 | 25.00000 | Linear |
| 17 C-32 | 20.00000 | 19.82878 | 35390 | 0.010 | -0.85608 | 25.00000 | Linear |
| 18 C-34 | 20.00000 | 19.78298 | 34606 | 0.010 | -1.08508 | 25.00000 | Linear |
| 19 C-36 | 20.00000 | 19.97131 | 33990 | 0.010 | -0.14347 | 25.00000 | Linear |
| 20 C-38 | 20.00000 | 19.80027 | 32127 | 0.010 | -0.99865 | 25.00000 | Linear |
| 21 C-40 | 20.00000 | 19.70795 | 29967 | 0.010 | -1.46024 | 25.00000 | Linear |
| 9 O-Terphenyl | 250 | 243 | 39430 | 0.010 | -2.87570 | 25.00000 | Linear |
| 15 n-Triacontane-D62 | 300 | 292 | 28416 | 0.010 | -2.77289 | 25.00000 | Linear |

*** = Compound out of QC criteria**

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab ID :** WG128015-9
**Lab File ID :** AGG20306.D
**Initial Calibration Date(s):** 07/26/13 10:34 07/26/13 13:49

**SDG:** CTOJM30-2
**Analytical Date:** 07/31/13 10:06
**Instrument ID:** GC10
**Column ID:** A

| Compound | RRF/Amount | RF50 | CCAL RRF50 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 1 Petroleum Range Organic | 850 | 828 | 34518 | 0.010 | -2.54116 | 25.00000 | Linear |
| 2 C-8 | 50.00000 | 48.12784 | 34794 | 0.010 | -3.74432 | 25.00000 | Linear |
| 3 C-10 | 50.00000 | 47.52828 | 35309 | 0.010 | -4.94345 | 25.00000 | Linear |
| 4 C-12 | 50.00000 | 47.36402 | 35324 | 0.010 | -5.27196 | 25.00000 | Linear |
| 5 C-14 | 50.00000 | 47.21461 | 35345 | 0.010 | -5.57079 | 25.00000 | Linear |
| 6 C-16 | 50.00000 | 47.16634 | 35371 | 0.010 | -5.66731 | 25.00000 | Linear |
| 8 C-18 | 50.00000 | 47.25178 | 36143 | 0.010 | -5.49643 | 25.00000 | Linear |
| 10 C-20 | 50.00000 | 58.06168 | 35830 | 0.010 | 16.12336 | 25.00000 | Linear |
| 11 C-22 | 50.00000 | 56.43913 | 36485 | 0.010 | 12.87826 | 25.00000 | Linear |
| 12 C-24 | 50.00000 | 50.35939 | 33705 | 0.010 | 0.71879 | 25.00000 | Linear |
| 13 C-26 | 50.00000 | 47.72970 | 33597 | 0.010 | -4.54061 | 25.00000 | Linear |
| 14 C-28 | 50.00000 | 47.91207 | 34714 | 0.010 | -4.17586 | 25.00000 | Linear |
| 16 C-30 | 50.00000 | 47.33007 | 34569 | 0.010 | -5.33986 | 25.00000 | Linear |
| 17 C-32 | 50.00000 | 46.93560 | 34278 | 0.010 | -6.12881 | 25.00000 | Linear |
| 18 C-34 | 50.00000 | 47.10965 | 34114 | 0.010 | -5.78070 | 25.00000 | Linear |
| 19 C-36 | 50.00000 | 47.34899 | 34187 | 0.010 | -5.30202 | 25.00000 | Linear |
| 20 C-38 | 50.00000 | 47.08330 | 32372 | 0.010 | -5.83340 | 25.00000 | Linear |
| 21 C-40 | 50.00000 | 47.43771 | 30661 | 0.010 | -5.12458 | 25.00000 | Linear |
| 9 O-Terphenyl | 250 | 246 | 40017 | 0.010 | -1.42945 | 25.00000 | Linear |
| 15 n-Triacontane-D62 | 300 | 285 | 27793 | 0.010 | -4.89695 | 25.00000 | Linear |

*** = Compound out of QC criteria**

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# Form 7
## Calibration Verification Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab ID :** WG128015-10
**Lab File ID:** AGG20314.D
**Initial Calibration Date(s):** 07/26/13 10:34 07/26/13 13:49

**SDG:** CTOJM30-2
**Analytical Date:** 07/31/13 17:15
**Instrument ID:** GC10
**Column ID:** A

| Compound | RRF/Amount | RF20 | CCAL RRF20 | Min | %D/ %Drift | Max %D/ %Drift | Curve Type |
|---|---|---|---|---|---|---|---|
| 1 Petroleum Range Organic | 340 | 336 | 34630 | 0.010 | -1.13444 | 25.00000 | Linear |
| 2 C-8 | 20.00000 | 19.95234 | 34918 | 0.010 | -0.23832 | 25.00000 | Linear |
| 3 C-10 | 20.00000 | 19.85192 | 35458 | 0.010 | -0.74041 | 25.00000 | Linear |
| 4 C-12 | 20.00000 | 19.70989 | 35254 | 0.010 | -1.45055 | 25.00000 | Linear |
| 5 C-14 | 20.00000 | 19.58371 | 35273 | 0.010 | -2.08143 | 25.00000 | Linear |
| 6 C-16 | 20.00000 | 19.54831 | 35304 | 0.010 | -2.25847 | 25.00000 | Linear |
| 8 C-18 | 20.00000 | 19.82109 | 36662 | 0.010 | -0.89456 | 25.00000 | Linear |
| 10 C-20 | 20.00000 | 21.09546 | 35940 | 0.010 | 5.47729 | 25.00000 | Linear |
| 11 C-22 | 20.00000 | 20.44668 | 35635 | 0.010 | 2.23340 | 25.00000 | Linear |
| 12 C-24 | 20.00000 | 20.54914 | 34863 | 0.010 | 2.74572 | 25.00000 | Linear |
| 13 C-26 | 20.00000 | 19.36148 | 34625 | 0.010 | -3.19258 | 25.00000 | Linear |
| 14 C-28 | 20.00000 | 19.72053 | 36437 | 0.010 | -1.39736 | 25.00000 | Linear |
| 16 C-30 | 20.00000 | 20.02081 | 36900 | 0.010 | 0.10406 | 25.00000 | Linear |
| 17 C-32 | 20.00000 | 19.23447 | 34287 | 0.010 | -3.82765 | 25.00000 | Linear |
| 18 C-34 | 20.00000 | 19.28402 | 33681 | 0.010 | -3.57989 | 25.00000 | Linear |
| 19 C-36 | 20.00000 | 19.80832 | 33684 | 0.010 | -0.95839 | 25.00000 | Linear |
| 20 C-38 | 20.00000 | 19.54884 | 31677 | 0.010 | -2.25578 | 25.00000 | Linear |
| 21 C-40 | 20.00000 | 18.60590 | 28112 | 0.010 | -6.97051 | 25.00000 | Linear |
| 9 O-Terphenyl | 250 | 237 | 38559 | 0.010 | -5.01742 | 25.00000 | Linear |
| 15 n-Triacontane-D62 | 300 | 285 | 27793 | 0.010 | -4.89840 | 25.00000 | Linear |

*** = Compound out of QC criteria**

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# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** AGG20234.D
**Instrument ID :** GC10
**Matrix :** AQ

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127381-1
**Date Extracted :** 22-JUL-13
**Date Analyzed :** 26-JUL-13
**Time Analyzed :** 15:39

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127381-2 | AGG20235 | 07/26/13 | 16:18 |
| Laboratory Control S | WG127381-3 | AGG20236 | 07/26/13 | 16:58 |
| Matrix Spike | WG127381-4 | AGG20237 | 07/26/13 | 17:37 |
| Matrix Spike Duplica | WG127381-5 | AGG20238 | 07/26/13 | 18:16 |
| JM30-MW55D-071513 | SG4994-2 | AGG20241 | 07/26/13 | 20:13 |
| JM30-MW-55I-071613 | SG5022-2 | AGG20242 | 07/26/13 | 20:52 |
| JM30-MW-55S-071613 | SG5022-3 | AGG20243 | 07/26/13 | 21:31 |
| JM30-MW-54D-071613 | SG5022-4 | AGG20246 | 07/26/13 | 23:28 |
| JM30-RB-071613 | SG5022-5 | AGG20247 | 07/27/13 | 00:07 |
| JM30-MW-54I-071713 | SG5070-2 | AGG20248 | 07/27/13 | 00:46 |
| JM30-MW-54S-071713 | SG5070-3 | AGG20249 | 07/27/13 | 01:25 |
| JM30-MW-49D-071713 | SG5070-4 | AGG20250 | 07/27/13 | 02:04 |
| JM30-MW-49I-071713 | SG5070-5 | AGG20251 | 07/27/13 | 02:42 |
| JM30-FD-071713 | SG5070-6 | AGG20252 | 07/27/13 | 03:21 |
| JM30-MW-29S-071813 | SG5146-1 | AGG20253 | 07/27/13 | 04:00 |

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# Report of Analytical Results

**Client:**
**Lab ID:** WG127381-1
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** AGG20234.D

**Sample Date:**
**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 05-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 150 | ug/L | 1 | 500 | 500 | 150 | 250 |
| o-Terphenyl | | 88.0 | % | | | | | |
| n-Triacontane-D62 | | 96.7 | % | | | | | |



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# LCS/LCSD Recovery Report

**LCS ID:** WG127381-2
**LCSD ID:** WG127381-3
**Project:**
**SDG:** CTOJM30-2
**Report Date:** 05-AUG-13
**LCS File ID:** AGG20235.D

**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381
**LCSD File ID:** AGG20236.D

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA

| Compound | Spike Amt | LCS Conc | LCS Rec (%) | LCSD Conc | LCSD Rec (%) | Conc Units | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | 1700 | 1500 | 88.2 | 1400 | 82.4 | ug/L | 7 | 30 | 55-118 |
| -Terphenyl | | | 84.0 | | 80.0J | | | | 82-142 |
| -Triacontane-D62 | | | 86.7 | | 80.0 | | | | 70-130 |



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# Method Blank Summary

**Lab Name :** Katahdin Analytical Services
**Project :** OLF Saufley Field, FL- CTO JM30
**Lab File ID :** AGG20307.D
**Instrument ID :** GC10
**Matrix :** AQ

**SDG :** CTOJM30-2
**Lab Sample ID :** WG127831-1
**Date Extracted :** 30-JUL-13
**Date Analyzed :** 31-JUL-13
**Time Analyzed :** 12:42

This Method Blank applies to the following samples, LCS, MS and MSD:

| Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Laboratory Control S | WG127831-2 | AGG20308 | 07/31/13 | 13:21 |
| Laboratory Control S | WG127831-3 | AGG20309 | 07/31/13 | 14:00 |
| JM30-MW-55I-071613 | SG5022-2RE | AGG20310 | 07/31/13 | 14:39 |
| JM30-MW-49I-071713 | SG5070-5RE | AGG20311 | 07/31/13 | 15:18 |
| JM30-FD-071713 | SG5070-6RE | AGG20312 | 07/31/13 | 15:57 |

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# Report of Analytical Results

**Client:**
**Lab ID:** WG127831-1
**Client ID:** Method Blank Sample
**Project:**
**SDG:** CTOJM30-2
**Lab File ID:** AGG20307.D

**Sample Date:**
**Received Date:**
**Extract Date:** 30-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127831

**Analysis Date:** 31-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 05-AUG-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | U | 150 | ug/L | 1 | 500 | 500 | 150 | 250 |
| o-Terphenyl | | 85.0 | % | | | | | |
| n-Triacontane-D62 | | 95.0 | % | | | | | |



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# LCS/LCSD Recovery Report

**LCS ID:** WG127831-2
**LCSD ID:** WG127831-3
**Project:**
**SDG:** CTOJM30-2
**Report Date:** 05-AUG-13
**LCS File ID:** AGG20308.D

**Received Date:**
**Extract Date:** 30-JUL-13
**Extracted By:** JH
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127831
**LCSD File ID:** AGG20309.D

**Analysis Date:** 31-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA

| Compound | Spike Amt | LCS Conc | LCS Rec (%) | LCSD Conc | LCSD Rec (%) | Conc Units | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | 1700 | 1100 | 64.7 | 1300 | 76.5 | ug/L | 17 | 30 | 55-118 |
| -Terphenyl | | | 63.0J | | 83.0 | | | | 82-142 |
| -Triacontane-D62 | | | 70.0J | | 91.7 | | | | 70-130 |



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# MS/MSD Recovery Report

**MS ID:** WG127381-4
**MSD ID:** WG127381-5
**Sample ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:**
**SDG:** CTOJM30-2
**MS File ID:** AGG20237.D

**Received Date:**
**Extract Date:** 22-JUL-13
**Extracted By:** KF
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127381
**Report Date:** 05-AUG-13
**MSD File ID:** AGG20238.D

**Analysis Date:** 26-JUL-13
**Analyst:** AC
**Analysis Method:** FL-PRO
**Matrix:** AQ
**% Solids:** NA

| Compound | MS Spike | MSD Spike | Conc Units | Samp Conc | MS Conc | MSD Conc | MS Rec (%) | MSD Rec (%) | RPD (%) | RPD Limit | Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Petroleum Range Organics | 1600 | 1600 | ug/L | U140 | 1400 | 1300 | 87.3 | 81.0 | 7 | 30 | 55-118 |
| -Terphenyl | | | | | | | 77.4J | 76.4J | | | 82-142 |
| -Triacontane-D62 | | | | | | | 76.0 | 79.5 | | | 70-130 |



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# Form 2
## System Monitoring Compound Recovery

**Lab Name:** Katahdin Analytical Services **Project:** OLF Saufley Field, FL- CTO JM30 **Matrix:** AQ
**Lab Code:** KAS **SDG:** CTOJM30-2

| Client Sample ID | Lab Sample ID | Col. ID | NTD | # | OTP | # |
|---|---|---|---|---|---|---|
| JM30-MW55D-071513 | SG4994-2 | A | 88.3 | | 85.9 | |
| JM30-MW-55I-071613 | SG5022-2 | A | 34.4 | J | 19.6 | J |
| JM30-MW-55I-071613 | SG5022-2RE | A | 87.5 | | 76.8 | J |
| JM30-MW-55S-071613 | SG5022-3 | A | 91.1 | | 85.1 | |
| JM30-MW-54D-071613 | SG5022-4 | A | 92.8 | | 87.2 | |
| JM30-RB-071613 | SG5022-5 | A | 85.8 | | 83.0 | |
| JM30-MW-54I-071713 | SG5070-2 | A | 89.3 | | 86.1 | |
| JM30-MW-54S-071713 | SG5070-3 | A | 93.6 | | 84.8 | |
| JM30-MW-49D-071713 | SG5070-4 | A | 92.8 | | 85.1 | |
| JM30-MW-49I-071713 | SG5070-5 | A | 65.8 | J | 62.4 | J |
| JM30-MW-49I-071713 | SG5070-5RE | A | 74.8 | | 68.4 | J |
| JM30-FD-071713 | SG5070-6 | A | 55.4 | J | 49.9 | J |
| JM30-FD-071713 | SG5070-6RE | A | 73.1 | | 67.3 | J |
| JM30-MW-29S-071813 | SG5146-1 | A | 76.2 | | 63.4 | J |
| Method Blank Sample | WG127381-1 | A | 96.7 | | 88.0 | |
| Laboratory Control S | WG127381-2 | A | 86.7 | | 84.0 | |
| Laboratory Control S | WG127381-3 | A | 80.0 | | 80.0 | J |
| Matrix Spike | WG127381-4 | A | 76.0 | | 77.4 | J |
| Matrix Spike Duplica | WG127381-5 | A | 79.5 | | 76.4 | J |
| Method Blank Sample | WG127831-1 | A | 95.0 | | 85.0 | |
| Laboratory Control S | WG127831-2 | A | 70.0 | J | 63.0 | J |
| Laboratory Control S | WG127831-3 | A | 91.7 | | 83.0 | |

* reported / validate

| | | QC Limits |
|---|---|---|
| OTP | O-TERPHENYL | 82-142 |
| NTD | N-TRIACONTANE-D62 | 70-130 |

# = Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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# SAUFLEY FIELD
# WATER DATA
# CTOJM30-2

| FRACTION | CHEMICAL | JM30-FD-071713 | UNITS | JM30-MW-49I-071713 | RPD | D |
|---|---|---|---|---|---|---|
| OV | 1,2-DICHLOROETHANE | 11 | UG/L | 9.6 | 13.59 | 1.40 |
| OV | CARBON DISULFIDE | 0.4 J | UG/L | 0.34 J | 16.22 | 0.06 |
| OV | CYCLOHEXANE | 37 | UG/L | 30 | 20.90 | 7.00 |
| OV | ETHYLBENZENE | 4.1 | UG/L | 3.3 | 21.62 | 0.80 |
| OV | ISOPROPYLBENZENE | 2.7 | UG/L | 2.1 | 25.00 | 0.60 |
| OV | M+P-XYLENES | 66 | UG/L | 53 | 21.85 | 13.00 |
| OV | METHYL CYCLOHEXANE | 16 | UG/L | 13 | 20.69 | 3.00 |
| OV | O-XYLENE | 2.3 | UG/L | 1.9 | 19.05 | 0.40 |
| OV | TOLUENE | 2 | UG/L | 1.6 | 22.22 | 0.40 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# SAUFLEY FIELD
# WATER DATA
# CTOJM30-2

| FRACTION | CHEMICAL | JM30-FD-071713DL | UNITS | JM30-MW-49I-071713DL | RPD | D |
|---|---|---|---|---|---|---|
| OV | BENZENE | 1300 | UG/L | 1300 | 0.00 | 0.00 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# SAUFLEY FIELD
# WATER DATA
# CTOJM30-2

| FRACTION | CHEMICAL | JM30-FD-071713 | UNITS | JM30-MW-49I-071713 | RPD | D |
|---|---|---|---|---|---|---|
| PAH | NAPHTHALENE | 0.49 | UG/L | 0.4 | 20.22 | 0.09 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# SAUFLEY FIELD
# WATER DATA
# CTOJM30-2

| FRACTION | CHEMICAL | JM30-FD-071713RE | UNITS | JM30-MW-49I-071713RE | RPD | D |
|---|---|---|---|---|---|---|
| PET | TOTAL PETROLEUM HYDROCARBON | 410 J | UG/L | 440 J | 7.06 | 30.00 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

| **VOC CALCULATION** | SAMPLE | | |
|---|---|---|---|
| | **JM30-MW55D-071513** | | |
| TARGET ANALYTE | **benzene** | | |
| ANALYTE RESPONSE | 1163395 | | |
| INTERNAL STANDARD | 1,4-difluorobenzene | | |
| I.S. RESPONSE | 1400754 | | |
| I.S. CONCENTRATION | 50 | µg/l | |
| ANALYTE CAL. RF | 0.8012 | | |
| DILUTION FACTOR (DF) | 1 | | |
| INITIAL SAMPLE VOLUME - V1 | 5 | ml | |
| FINAL SAMPLE VOLUME - V2 | 5 | | |

$$\frac{\text{(ANALYTE RESPONSE) x ( I.S. CONCENTRATION) X DF x V2}}{\text{(I.S. RESPONSE) x (CAL. R.F.) x V1}} = 51.83 \ \mu g/l$$

Katahdin
ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG4994-2
**Client ID:** JM30-MW55D-071513
**Project:** OLF Saufley Field, FL- CTO
**SDG:** CTOJM30-2
**Lab File ID:** C2000.D

**Sample Date:** 15-JUL-13
**Received Date:** 16-JUL-13
**Extract Date:** 22-JUL-13
**Extracted By:** REC
**Extraction Method:** SW846 5030
**Lab Prep Batch:** WG127394

**Analysis Date:** 22-JUL-13
**Analyst:** REC
**Analysis Method:** SW846 8260B
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 26-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| Chloromethane | U | 0.36 | ug/L | 1 | 2 | 2.0 | 0.36 | 1.0 |
| Vinyl Chloride | U | 0.25 | ug/L | 1 | 2 | 2.0 | 0.25 | 1.0 |
| Bromomethane | U | 0.49 | ug/L | 1 | 2 | 2.0 | 0.49 | 1.0 |
| Chloroethane | U | 0.55 | ug/L | 1 | 2 | 2.0 | 0.55 | 1.0 |
| Trichlorofluoromethane | U | 0.24 | ug/L | 1 | 2 | 2.0 | 0.24 | 1.0 |
| 1,1-Dichloroethene | U | 0.35 | ug/L | 1 | 1 | 1.0 | 0.35 | 0.50 |
| **Carbon Disulfide** | 1 | 0.55 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Methylene Chloride | U | 1.1 | ug/L | 1 | 5 | 5.0 | 1.1 | 2.5 |
| Acetone | U | 2.2 | ug/L | 1 | 5 | 5.0 | 2.2 | 2.5 |
| trans-1,2-Dichloroethene | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| **Methyl tert-butyl Ether** | | 1.1 | ug/L | 1 | 1 | 1.0 | 0.36 | 0.50 |
| 1,1-Dichloroethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| cis-1,2-Dichloroethene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| Bromochloromethane | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |
| **Chloroform** | 1 | 0.70 | ug/L | 1 | 1 | 1.0 | 0.32 | 0.50 |
| Carbon Tetrachloride | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 1,1,1-Trichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 2-Butanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| **Benzene** | | 52. | ug/L | 1 | 1 | 1.0 | 0.26 | 0.50 |
| 1,2-Dichloroethane | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| Trichloroethene | U | 0.28 | ug/L | 1 | 1 | 1.0 | 0.28 | 0.50 |
| 1,2-Dichloropropane | U | 0.25 | ug/L | 1 | 1 | 1.0 | 0.25 | 0.50 |
| Bromodichloromethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| cis-1,3-Dichloropropene | U | 0.19 | ug/L | 1 | 1 | 1.0 | 0.19 | 0.50 |
| Toluene | U | 0.27 | ug/L | 1 | 1 | 1.0 | 0.27 | 0.50 |
| 4-Methyl-2-Pentanone | U | 1.3 | ug/L | 1 | 5 | 5.0 | 1.3 | 2.5 |
| Tetrachloroethene | U | 0.40 | ug/L | 1 | 1 | 1.0 | 0.40 | 0.50 |
| trans-1,3-Dichloropropene | U | 0.20 | ug/L | 1 | 1 | 1.0 | 0.20 | 0.50 |
| 1,1,2-Trichloroethane | U | 0.33 | ug/L | 1 | 1 | 1.0 | 0.33 | 0.50 |
| Dibromochloromethane | U | 0.30 | ug/L | 1 | 1 | 1.0 | 0.30 | 0.50 |
| 1,2-Dibromoethane | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| 2-Hexanone | U | 1.7 | ug/L | 1 | 5 | 5.0 | 1.7 | 2.5 |
| Chlorobenzene | U | 0.22 | ug/L | 1 | 1 | 1.0 | 0.22 | 0.50 |
| Ethylbenzene | U | 0.21 | ug/L | 1 | 1 | 1.0 | 0.21 | 0.50 |



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Data File: \\target_server\gg\chem\gcms-c.i\C072213.b\C2000.D
Report Date: 26-Jul-2013 13:27

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-c.i\C072213.b\C2000.D
Lab Smp Id: SG4994-2 Client Smp ID: JM30-MW55D-071513
Inj Date : 22-JUL-2013 16:34 MS Autotune Date: 13-JUN-2013 12:48
Operator : REC Inst ID: gcms-c.i
Smp Info : SG4994-2
Misc Info : WG127394,WG126915-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-c.i\C072213.b\C826A74.m
Meth Date : 26-Jul-2013 13:21 gcms-c.i Quant Type: ISTD
Cal Date : 12-JUL-2013 11:07 Cal File: C1827.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) | REVIEW CODE |
|---|---|---|---|---|---|---|---|---|
| 10 Carbon Disulfide | 76 | 3.920 | 3.924 | (0.479) | 9288 | 0.54698 | 0.55(a) | |
| 19 Methyl tert-butyl ether | 73 | 5.300 | 5.297 | (0.648) | 16270 | 1.14549 | 1.1 | |
| 34 Chloroform | 83 | 7.309 | 7.306 | (0.893) | 8326 | 0.70031 | 0.70(a) | |
| $ 37 Dibromofluoromethane | 113 | 7.552 | 7.549 | (0.923) | 322913 | 48.6587 | 48.6 | |
| 41 Benzene | 78 | 8.060 | 8.057 | (0.912) | 1163395 | 51.8319 | 51.8 | |
| * 42 Pentafluorobenzene | 168 | 8.187 | 8.186 | (1.000) | 860524 | 50.0000 | | |
| $ 45 1,2-Dichloroethane-D4 | 65 | 8.232 | 8.236 | (1.006) | 415419 | 54.6204 | 54.6 | |
| * 49 1,4-Difluorobenzene | 114 | 8.839 | 8.844 | (1.000) | 1400754 | 50.0000 | | |
| $ 55 Toluene-D8 | 98 | 10.455 | 10.459 | (1.183) | 1028835 | 46.2462 | 46.2 | |
| * 66 Chlorobenzene-D5 | 117 | 12.343 | 12.340 | (1.000) | 1425537 | 50.0000 | | |
| 75 Isopropylbenzene | 105 | 13.594 | 13.591 | (0.866) | 9223 | 0.29951 | 0.30(a) | |
| $ 76 P-Bromofluorobenzene | 95 | 13.995 | 14.001 | (1.583) | 469289 | 45.5791 | 45.6 | |
| 82 1,3,5-Trimethylbenzene | 105 | 14.474 | 14.478 | (0.923) | 10559 | 0.35384 | 0.35(a) | |
| 88 1,2,4-Trimethylbenzene | 105 | 15.081 | 15.071 | (0.961) | 7699 | 0.25806 | 0.26(a) | |
| * 91 1,4-Dichlorobenzene-D4 | 152 | 15.689 | 15.693 | (1.000) | 785190 | 50.0000 | | |
| M 153 Total Alkylbenzenes | 100 | | | | 18258 | 0.61190 | 0.61(a) | |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

# Form 6
# Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services **SDG:** CTOJM30-2
**Project :** OLF Saufley Field, FL- CTO JM30 **Instrument ID:** GCMS-C
**Lab File IDs :** C1827.D C1826.D C1825.D C1824.D C1823.D C1822.D **Column ID:**
**Calibration Date(s):** 12-JUL-13 08:34 12-JUL-13 11:07

| | Level 1 1.0000 | Level 2 5.0000 | Level 3 20.0000 | Level 4 50.0000 | Level 5 100.0000 | Level 6 200.0000 | Crv New | b | m1 | m2 | %RSD | Max %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.45818 | 0.51810 | 0.48756 | 0.45556 | 0.44730 | 0.40674 | AVG | | 0.46224 | | 8.16659 | 15.00000 | O |
| Chloromethane | 14800 | 63957 | 224689 | 552253 | 1060259 | 1797683 | QUA | 0.00927 | 1.79983 | 0.69033 | 0.99961 | 0.99000 | O |
| Vinyl chloride | 0.37719 | 0.40370 | 0.36137 | 0.34725 | 0.35844 | 0.28040 | AVG | | 0.35473 | | 11.65158 | 15.00000 | O |
| Bromomethane | 0.26625 | 0.24303 | 0.21149 | 0.23849 | 0.27103 | 0.23711 | AVG | | 0.24457 | | 8.88241 | 15.00000 | O |
| Chloroethane | 5795 | 28253 | 100274 | 254543 | 363404 | 595776 | QUA | 0.00881 | 3.10319 | 11.34170 | 0.99731 | 0.99000 | O |
| Trichlorofluoromethane | 0.75140 | 0.77746 | 0.75533 | 0.70240 | 0.71451 | 0.69380 | AVG | | 0.73248 | | 4.57966 | 15.00000 | O |
| 1,1-Dichloroethene | 0.27891 | 0.31511 | 0.30372 | 0.28523 | 0.29979 | 0.28911 | AVG | | 0.29531 | | 4.52269 | 15.00000 | O |
| Carbon Disulfide | 1.22060 | 1.01954 | 0.97654 | 0.92206 | 0.92130 | 0.80530 | AVG | | 0.97756 | | 14.23005 | 15.00000 | O |
| Freon-113 | 0.24126 | 0.23940 | 0.24614 | 0.24295 | 0.23565 | 0.22844 | AVG | | 0.23897 | | 2.61060 | 15.00000 | O |
| Methylene Chloride | 11922 | 46801 | 175598 | 411165 | 833817 | 1587192 | LNR | -0.03945 | 0.31620 | | 0.99900 | 0.99000 | O |
| Acetone | 0.15319 | 0.15692 | 0.15967 | 0.15244 | 0.15000 | 0.16895 | AVG | | 0.15686 | | 4.36199 | 15.00000 | O |
| trans-1,2-Dichloroethene | 0.38384 | 0.38916 | 0.37411 | 0.34812 | 0.34809 | 0.32284 | AVG | | 0.36103 | | 7.08938 | 15.00000 | O |
| Methyl tert-butyl ether | 0.72531 | 0.84326 | 0.88276 | 0.84290 | 0.84134 | 0.77055 | AVG | | 0.81769 | | 7.09733 | 15.00000 | O |
| 1,1-Dichloroethane | 0.65614 | 0.64165 | 0.60434 | 0.56453 | 0.55467 | 0.48895 | AVG | | 0.58505 | | 10.59402 | 15.00000 | O |
| cis-1,2-Dichloroethene | 0.44058 | 0.40517 | 0.39839 | 0.38373 | 0.38038 | 0.34662 | AVG | | 0.39248 | | 7.92328 | 15.00000 | O |
| Bromochloromethane | 0.20322 | 0.18811 | 0.18532 | 0.16985 | 0.16330 | 0.16403 | AVG | | 0.17897 | | 8.88310 | 15.00000 | O |
| Chloroform | 0.74500 | 0.76983 | 0.70599 | 0.66132 | 0.64197 | 0.58255 | AVG | | 0.68444 | | 10.15275 | 15.00000 | O |
| Carbon Tetrachloride | 0.25750 | 0.34326 | 0.33528 | 0.31650 | 0.33640 | 0.32350 | AVG | | 0.31874 | | 9.88648 | 15.00000 | O |
| 1,1,1-Trichloroethane | 0.60203 | 0.71322 | 0.69208 | 0.65637 | 0.66463 | 0.60295 | AVG | | 0.65521 | | 6.95224 | 15.00000 | O |
| 2-Butanone | 0.14048 | 0.19243 | 0.20662 | 0.18377 | 0.17719 | 0.17868 | AVG | | 0.17986 | | 12.30355 | 15.00000 | O |
| Benzene | 0.89910 | 0.91147 | 0.83182 | 0.76877 | 0.74410 | 0.65191 | AVG | | 0.80120 | | 12.39123 | 15.00000 | O |
| Cyclohexane | 0.39794 | 0.54672 | 0.52809 | 0.48393 | 0.48589 | 0.43627 | AVG | | 0.47981 | | 11.58965 | 15.00000 | O |
| 1,2-Dichloroethane | 0.36792 | 0.36716 | 0.33626 | 0.31560 | 0.31921 | 0.31180 | AVG | | 0.33632 | | 7.60782 | 15.00000 | O |
| Trichloroethene | 0.24588 | 0.25977 | 0.24405 | 0.22722 | 0.23443 | 0.22522 | AVG | | 0.23943 | | 5.45417 | 15.00000 | O |
| 1,2-Dichloropropane | 0.19538 | 0.19471 | 0.18793 | 0.17726 | 0.17991 | 0.17230 | AVG | | 0.18458 | | 5.17780 | 15.00000 | O |
| Bromodichloromethane | 0.34997 | 0.35077 | 0.34806 | 0.32736 | 0.33458 | 0.32268 | AVG | | 0.33890 | | 3.64311 | 15.00000 | O |
| cis-1,3-dichloropropene | 0.32346 | 0.34195 | 0.36663 | 0.34309 | 0.35241 | 0.33932 | AVG | | 0.34448 | | 4.16722 | 15.00000 | O |
| Toluene | 0.59922 | 0.65517 | 0.59132 | 0.56092 | 0.55249 | 0.50510 | AVG | | 0.57737 | | 8.77638 | 15.00000 | O |
| 4-methyl-2-pentanone | 0.14083 | 0.19260 | 0.20290 | 0.17887 | 0.17456 | 0.16506 | AVG | | 0.17580 | | 12.37333 | 15.00000 | O |
| Tetrachloroethene | 0.22454 | 0.22181 | 0.22144 | 0.21990 | 0.22914 | 0.22072 | AVG | | 0.22293 | | 1.53739 | 15.00000 | O |
| trans-1,3-Dichloropropene | 0.29113 | 0.31326 | 0.32999 | 0.30835 | 0.32208 | 0.32504 | AVG | | 0.31498 | | 4.47268 | 15.00000 | O |
| 1,1,2-Trichloroethane | 0.18197 | 0.16477 | 0.17056 | 0.14891 | 0.15224 | 0.16168 | AVG | | 0.16335 | | 7.42509 | 15.00000 | O |
| Dibromochloromethane | 0.22287 | 0.24224 | 0.24595 | 0.23769 | 0.25090 | 0.24660 | AVG | | 0.24104 | | 4.12829 | 15.00000 | O |
| 1,2-Dibromoethane | 0.22290 | 0.22904 | 0.23693 | 0.21969 | 0.23453 | 0.24734 | AVG | | 0.23174 | | 4.35269 | 15.00000 | O |
| 2-Hexanone | 0.11561 | 0.17008 | 0.18330 | 0.16531 | 0.15779 | 0.14106 | AVG | | 0.15552 | | 15.44881 | 15.00000 | WC |
| Chlorobenzene | 0.74656 | 0.74280 | 0.68843 | 0.64237 | 0.63231 | 0.54151 | AVG | | 0.66567 | | 11.65223 | 15.00000 | O |
| Ethylbenzene | 0.40561 | 0.41144 | 0.39420 | 0.37393 | 0.38067 | 0.34184 | AVG | | 0.38461 | | 6.58901 | 15.00000 | O |

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| SVOC CALCULATION LIQUIDS | SAMPLE JM30-MW-55I-071613 | | |
|---|---|---|---|
| TARGET ANALYTE | PHENANTHRENE | | |
| ANALYTE RESPONSE | 5485 | | |
| INTERNAL STANDARD | phenanthrene-d10 | | |
| I.S. RESPONSE | 46961 | | |
| I.S. CONCENTRATION | 0.8 | ng/ul | |
| ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF) | 1.219 | | |
| VOLUME OF FINAL EXTRACT - V2 | 1 | ml | |
| VOLUME OF INITIAL EXTRACT - V1 | 1020 | ml | |
| DILUTION FACTOR (DF) | 1 | | |
| CONVERSION FACTOR - CF | 0.001 | | |

$$\frac{\text{(ANALYTE RESPONSE) X ( I.S. CONCENTRATION) X DF X V2}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (V1) X CF}} = 0.0751 \text{ ng/ml or ug/l}$$

Katahdin
ANALYTICAL SERVICES

Cert No E87604

# Report of Analytical Results

**Client:** Tetra Tech NUS, Inc.
**Lab ID:** SG5022-2
**Client ID:** JM30-MW-55I-071613
**Project:** OLF Saufley Field, FL - CTO
**SDG:** CTOJM30-2
**Lab File ID:** G9054.D

**Sample Date:** 16-JUL-13
**Received Date:** 17-JUL-13
**Extract Date:** 19-JUL-13
**Extracted By:** WAS
**Extraction Method:** SW846 3510
**Lab Prep Batch:** WG127240

**Analysis Date:** 25-JUL-13
**Analyst:** JCG
**Analysis Method:** SW846 M8270C
**Matrix:** AQ
**% Solids:** NA
**Report Date:** 29-JUL-13

| Compound | Qualifier | Result | Units | Dilution | LOQ | ADJ LOQ | ADJ MDL | ADJ LOD |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| 1-Methylnaphthalene | U | 0.067 | ug/L | 1 | .2 | 0.20 | 0.067 | 0.098 |
| 2-Methylnaphthalene | U | 0.075 | ug/L | 1 | .2 | 0.20 | 0.075 | 0.098 |
| Acenaphthylene | U | 0.053 | ug/L | 1 | .2 | 0.20 | 0.053 | 0.098 |
| Acenaphthene | U | 0.063 | ug/L | 1 | .2 | 0.20 | 0.063 | 0.098 |
| Fluorene | U | 0.060 | ug/L | 1 | .2 | 0.20 | 0.060 | 0.098 |
| **Phenanthrene** | 1 | 0.075 | ug/L | 1 | .2 | 0.20 | 0.050 | 0.098 |
| Anthracene | U | 0.043 | ug/L | 1 | .2 | 0.20 | 0.043 | 0.098 |
| Fluoranthene | U | 0.072 | ug/L | 1 | .2 | 0.20 | 0.072 | 0.098 |
| Pyrene | U | 0.058 | ug/L | 1 | .2 | 0.20 | 0.058 | 0.098 |
| Benzo(a)anthracene | U | 0.045 | ug/L | 1 | .2 | 0.20 | 0.045 | 0.098 |
| Chrysene | U | 0.035 | ug/L | 1 | .2 | 0.20 | 0.035 | 0.098 |
| Benzo(b)Fluoranthene | U | 0.087 | ug/L | 1 | .2 | 0.20 | 0.087 | 0.098 |
| Benzo(k)fluoranthene | U | 0.048 | ug/L | 1 | .2 | 0.20 | 0.048 | 0.098 |
| Benzo(a)pyrene | U | 0.065 | ug/L | 1 | .2 | 0.20 | 0.065 | 0.098 |
| Indeno(1,2,3-cd)pyrene | U | 0.051 | ug/L | 1 | .2 | 0.20 | 0.051 | 0.098 |
| Dibenzo(a,h)anthracene | U | 0.069 | ug/L | 1 | .2 | 0.20 | 0.069 | 0.098 |
| Benzo(g,h,i)perylene | U | 0.064 | ug/L | 1 | .2 | 0.20 | 0.064 | 0.098 |
| 2-Methylnaphthalene-D10 | | 61.1 | % | | | | | |
| Fluorene-D10 | | 78.7 | % | | | | | |
| pyrene-d10 | | 67.6 | % | | | | | |



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Data File: \\target_server\GG\chem\gcms-g.i\G072513.b\G9054.D
Report Date: 29-Jul-2013 11:33

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G072513.b\G9054.D
Lab Smp Id: SG5022-2 Client Smp ID: JM30-MW-55I-071613
Inj Date : 25-JUL-2013 19:48 MS Autotune Date: 20-SEP-2006 14:50
Operator : JCG Inst ID: gcms-g.i
Smp Info : SG5022-2
Misc Info : WG127557,WG127240,WG127255-4
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G072513.b\gspsim82.m
Meth Date : 25-Jul-2013 13:55 cgomez Quant Type: ISTD
Cal Date : 19-JUL-2013 19:01 Cal File: G8980.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+lmn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | Correction Factor |
| Vt | 0.00100 | Final Volume (L) |
| Vo | 1.020 | Sample Volume (L) |
| Vi | 1.000 | Volume injected (uL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN (ug/ml) | FINAL ( ug/L) | REVIEW CODE |
|---|---|---|---|---|---|---|---|---|
| * 7 1,4-Dichlorobenzene-D4 | 152 | 8.897 | 8.896 | (1.000) | 24698 | 0.80000 | (aQ) | |
| * 20 Naphthalene-D8 | 136 | 11.702 | 11.704 | (1.000) | 87157 | 0.80000 | (a) | |
| $ 26 2-Methylnaphthalene-D10 | 152 | 13.308 | 13.307 | (1.137) | 56777 | 1.22280 | 1.20 | |
| * 41 Acenaphthene-D10 | 164 | 15.769 | 15.770 | (1.000) | 32470 | 0.80000 | (a) | |
| $ 48 Fluorene-D10 | 174 | 17.010 | 17.009 | (1.079) | 51650 | 1.57360 | 1.54 | |
| * 59 Phenanthrene-D10 | 188 | 19.252 | 19.273 | (1.000) | 46961 | 0.80000 | (a) | |
| 60 Phenanthrene | 178 | 19.316 | 19.337 | (1.003) | 5485 | 0.07664 | 0.0751(a) | |
| $ 65 Pyrene-D10 | 212 | 22.599 | 22.617 | (0.885) | 62880 | 1.35174 | 1.32 | |
| * 69 Chrysene-D12 | 240 | 25.540 | 25.559 | (1.000) | 30719 | 0.80000 | (a) | |
| * 77 Perylene-D12 | 264 | 28.684 | 28.703 | (1.000) | 23015 | 0.80000 | (a) | |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

# Form 6
## Initial Calibration Summary

**Lab Name :** Katahdin Analytical Services **SDG:** CTOJM30-2
**Project :** OLF Saufley Field, FL- CTO JM30 **Instrument ID:** GCMS-G
**Lab File IDs :** G8980.D G8979.D G8975.D G8976.D G8977.D G8978.D **Column ID:**
**Calibration Date(s):** 19-JUL-13 15:11 19-JUL-13 19:01

| | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Crv | | | | | Max | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.200000( | 0.500000( | 1.0000 | 2.0000 | 5.0000 | 8.0000 | New | b | m1 | m2 | %RSD | %RSD | |
| Naphthalene | 27626 | 43452 | 96527 | 194325 | 515699 | 820919 | LNR | -0.12270 | 0.77825 | | 0.99928 | 0.99000 | O |
| 2-Methylnaphthalene | 18782 | 41034 | 75788 | 132620 | 318955 | 497352 | LNR | -0.35838 | 0.46495 | | 0.99589 | 0.99000 | O |
| 1-Methylnaphthalene | 15043 | 35750 | 69065 | 124013 | 313314 | 457982 | QUA | -0.01755 | 1.52224 | 0.17818 | 0.99975 | 0.99000 | O |
| Acenaphthylene | 2.12372 | 2.21309 | 2.26921 | 2.23840 | 2.23875 | 2.14830 | AVG | | 2.20524 | | 2.58632 | 15.00000 | O |
| Acenaphthene | 1.31333 | 1.36611 | 1.40941 | 1.35143 | 1.33956 | 1.28107 | AVG | | 1.34348 | | 3.28544 | 15.00000 | O |
| Fluorene | 1.38258 | 1.38278 | 1.44122 | 1.32146 | 1.34599 | 1.27325 | AVG | | 1.35788 | | 4.26951 | 15.00000 | O |
| Phenanthrene | 1.16458 | 1.24723 | 1.26170 | 1.19662 | 1.24481 | 1.19992 | AVG | | 1.21915 | | 3.09377 | 15.00000 | O |
| Anthracene | 1.35389 | 1.59720 | 1.55256 | 1.42285 | 1.36740 | 1.32634 | AVG | | 1.43671 | | 7.82637 | 15.00000 | O |
| Fluoranthene | 1.13617 | 1.11489 | 1.15760 | 1.00584 | 1.06201 | 0.99796 | AVG | | 1.07908 | | 6.27759 | 15.00000 | O |
| Pyrene | 2.00836 | 2.22911 | 2.02767 | 1.86090 | 1.88305 | 1.90438 | AVG | | 1.98558 | | 6.91458 | 15.00000 | O |
| Benzo(a)anthracene | 1.25344 | 1.11402 | 1.19470 | 1.00920 | 1.16362 | 1.12817 | AVG | | 1.14386 | | 7.23575 | 15.00000 | O |
| Chrysene | 10044 | 17922 | 33967 | 56710 | 170217 | 222461 | LNR | -0.18172 | 1.18998 | | 0.99867 | 0.99000 | O |
| Benzo(b)fluoranthene | 1.38323 | 1.49813 | 1.37503 | 1.31511 | 1.17268 | 1.19447 | AVG | | 1.32311 | | 9.32926 | 15.00000 | O |
| Benzo(k)fluoranthene | 9150 | 14406 | 34282 | 50458 | 190020 | 234971 | LNR | -0.06330 | 1.74804 | | 0.99940 | 0.99000 | O |
| Benzo(a)pyrene | 1.70887 | 1.58028 | 1.35725 | 1.24814 | 1.23966 | 1.21489 | AVG | | 1.39152 | | 14.8093( | 15.00000 | O |
| Indeno(1,2,3-cd)pyrene | 1.32043 | 1.30261 | 1.18560 | 1.15861 | 1.19423 | 1.14231 | AVG | | 1.21730 | | 6.20400 | 15.00000 | O |
| Dibenzo(a,h)anthracene | 1.03864 | 1.26084 | 0.92984 | 0.91236 | 0.95818 | 0.91600 | AVG | | 1.00264 | | 13.44741 | 15.00000 | O |
| Benzo(g,h,i)perylene | 1.28253 | 1.25416 | 1.09219 | 1.05911 | 1.07503 | 1.02937 | AVG | | 1.13207 | | 9.53507 | 15.00000 | O |
| 2-Methylnaphthalene-D10 | 0.48044 | 0.46123 | 0.47262 | 0.40515 | 0.37846 | 0.35925 | AVG | | 0.42619 | | 12.2056: | 15.00000 | |
| Fluorene-D10 | 9055 | 17005 | 30157 | 52432 | 145349 | 213537 | LNR | -0.16058 | 0.74766 | | 0.99804 | 0.99000 | |
| Pyrene-D10 | 1.31265 | 1.31418 | 1.21633 | 1.10804 | 1.14864 | 1.16883 | AVG | | 1.21145 | | 7.12722 | 15.00000 | |

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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