

May 27, 2014

R&M No. 1771.03



Louis Howard
Alaska Department of Environmental Conservation
Contaminated Sites Program
555 Cordova Street
Anchorage, Alaska 99501

RE: **REVISED** 2013 Annual Sampling Report
Former Defense Fuel Support Point – Anchorage
ADEC File #2102.38.021 (Record Key # 1988-21-X1-119-01)
Anchorage, Alaska

Dear Mr. Howard:

R&M Consultants, Inc. (R&M) has recently completed the annual sampling event for the former Defense Fuel Support Point - Anchorage (DFSP-A) site located within the Port of Anchorage (Port). Sampling activities were based on recommendations outlined in the *Updated Long-Term Monitoring Plan, April 28, 2008* (2008 LTMP), the *Record of Decision for Cleanup, Defense Fuel Support Point-Anchorage, U.S. Defense Energy Support Center, February 18, 2003* (2003 ROD) issued by the Alaska Department of Environmental Conservation (ADEC) in cooperation with the Defense Energy Support Center and subsequent communications with ADEC, as noted within this report. A total of eight monitoring wells (MW) and two surface water sampling locations (SS) were sampled. This most recent phase of sampling was conducted to further quantify existing contamination at the site and to determine the extent of natural attenuation that is taking place.

Enclosed please find the results of the 2013 DFSP-A sampling activities, which were conducted on September 25-26, 2013. The eight wells that were sampled are designated MW2-R, MW4-R, MW15-R, MW22, MW23, MW25A, MW25B, and MW25C; surface water sample locations are designated SS14 and SS12 (Attachment B, Figure 1). Water samples taken from the monitoring wells and surface locations were submitted to SGS North America, Inc. (SGS) for laboratory analyses on September 27, 2013.

BACKGROUND

The former DFSP-A is located in the southeast corner of the Port within the Municipality of Anchorage, Alaska (Section 7, Township 13 North, Range 3 West, USGS Quadrangle Anchorage A-8 NW, Seward Meridian). Property ownership was transferred from the Department of the Army to the Port in April, 2011.

The DFSP-A served as a bulk fuel storage and distribution facility from 1942 until 1996. Several releases of diesel, gasoline, and aviation fuels were documented at the DFSP-A between 1960 and 1989, and the DFSP-A is listed in ADEC's Contaminated Sites Database under File #2102.38.021 (Record Key # 1988-21-X1-119-01).

R&M CONSULTANTS, INC.

9101 Vanguard Drive
Anchorage, Alaska 99507

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GROUNDWATER FLOW DIRECTION

Surveyed monitoring well elevations from August 2011 were used to determine current groundwater elevations. The water levels in the wells were measured prior to sampling to allow determination of the approximate groundwater elevation and flow direction (Attachment A, Table 1). The interpreted direction of groundwater flow is generally to the west and northwest (Attachment B, Figure 1).

MONITORING WELL SAMPLING AND OBSERVATIONS

In accordance with ADEC's recommendation on August 2, 2013, polyethylene bailers were not used for well purging and sampling. A submersible pump (Proactive stainless steel hurricane pump) and Teflon-lined tubing were utilized in lieu of bailers for both purging and sample collection. An additional analysis for ethylene dibromide (EDB) and 1,2-Dichloroethane (1,2- DCA) was included in the 2013 groundwater monitoring effort utilizing the new sampling methodology.

All monitoring wells were visually inspected prior to sampling. Locks installed in 2011 were intact and all monitoring wells appeared to be in relatively good condition.

All groundwater sampling was performed in accordance with the procedures presented in ADEC's *Draft Field Sampling Guidance* (May, 2010). Prior to purging and sampling, the groundwater levels and well depths for each monitoring well were measured with a water level indicator precise to 0.01 feet. The water level indicator was decontaminated between wells by soaking in a diluted phosphate solution (Alconox) and rinsing first with potable then deionized water. Water levels were compared with 2011 survey elevations and are presented in Table 1 (Attachment A). No free product was encountered in the wells; however, a hydrocarbon sheen and odor was observed at MW15-R, MW25A, MW25B, and MW25C. Field notes and monitoring well sampling logs are included as Attachment D.

Each monitoring well was purged up to three well volumes – unless the well was purged dry – utilizing a submersible pump and 3/8" Teflon-lined tubing. A new section of tubing was used for each well and was disposed of after sampling was complete. Purge water was collected in 5-gallon buckets and transported to 55-gallon drums staged near MW15-R until laboratory analysis was complete. Water that exceeds the site-specific ADEC cleanup levels is planned for disposal by Emerald Services, Inc. Purge water determined to fall below cleanup levels will be disposed of via on-site surface spillage.

Groundwater samples were submitted to SGS for laboratory analyses of the following:

- Gasoline Range Organics (GRO) by Alaska Method 101
- Diesel Range Organics (DRO) by Alaska Method 102
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) and 1,2-DCA by EPA 8260C
- EDB by EPA 8011 (Analysis performed at Test America in Arvada, CO)

SURFACE WATER SAMPLING AND OBSERVATIONS

The 2003 ROD identifies three surface water sampling locations at the former DFSP-A. Surface water no longer flows through the former DFSP-A site near SS04. As a result, SS04 is no longer a viable surface water sample location and has been deleted from this sampling program. ADEC concurred with its deletion via e-mail on August 30, 2011. Surface water sampling locations SS12 and SS14 were identified and sampled in accordance with the 2008 LTMP on September 26, 2013 (Attachment D). A light odor was detected at SS14 and a moderate sheen was noted at both locations. Most of the vegetation surrounding these drainage ditches was cleared in 2013.

Surface water samples were submitted to SGS for laboratory analyses of the following:

- BTEX by EPA 8260C; the sum of the BTEX constituents provides the total aromatic hydrocarbons (TAH) value for the sample.
- Polynuclear aromatic hydrocarbons (PAH) by EPA Method 8270C; this value added to the TAH provides the total aqueous hydrocarbons (TAqH) value for the sample.

LABORATORY ANALYTICAL RESULTS

All water samples were submitted to SGS on September 27, 2013. SGS is an Environmental Protection Agency (EPA) and ADEC approved laboratory. The analyte EDB was tested by Test America of Arvada, Colorado. Standard Chain-of-Custody procedures for laboratory samples were followed. The EPA published memo regarding lead scavengers (21 May 2010) states that EPA method 8011 – used to analyze for EDB – allows for a 14-day holding time for unpreserved, refrigerated samples. The temperature blanks included in each of the sample coolers registered at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ upon submittal to SGS and TestAmerica, indicating that all samples were kept within the appropriate temperature limits during transport to each lab. Laboratory analytical results were received on October 14, 2013 (Attachment C). Groundwater laboratory analytical results are presented in Table 2 (Attachment A).

Benzene was detected in groundwater collected from monitoring well MW15-R at 0.371 mg/L, which exceeds site-specific cleanup standards. Detected levels of benzene in groundwater from monitoring wells MW25A, MW25B, and MW25C were below cleanup levels. Ethylbenzene and total xylenes were also detected below cleanup levels in monitoring wells MW15-R, MW25A, MW25B, and MW25C. Toluene was detected below cleanup levels in groundwater from monitoring well MW25C.

Detected levels of GRO were below the ADEC site-specific cleanup standard of 13.0 mg/L in groundwater collected from MW15-R, MW25A, MW25B, and MW25C. GRO was not detected in the remaining wells.

Detected levels of DRO were below the ADEC site-specific cleanup standard of 15.0 mg/L in groundwater collected from MW4-R, MW15-R, MW23, MW25A, MW25B, and MW25C. DRO was not detected in the remaining wells.

EDB and 1,2-DCA were not detected in any groundwater samples.

Laboratory analysis detected TAH and TAqH above ADEC site-specific cleanup levels in water from SS14 at 0.010 mg/L and 0.0196 mg/L respectively. Detected levels of TAH and TAqH in water from SS12 were below cleanup levels.

QUALITY ASSURANCE/ QUALITY CONTROL

Duplicate samples were obtained at a rate of one per ten samples. One duplicate groundwater sample was collected from MW2-R on September 25, 2013 and submitted in the same manner as the regular samples; the duplicate sample was labeled DFSPA-MW2-RD. Analytical results for contaminants were in good agreement between the normal and the duplicate groundwater samples; both samples were non-detect for all analytes.

Three trip blanks for AK101, EPA8260, and EPA8011 were prepared by the laboratory, taken to the site and handled like all other samples. No DRO, GRO, or BTEX constituents were detected in the trip blanks, indicating that handling and ambient conditions did not contribute to levels of contamination detected in some samples. Method blanks were prepared and analyzed by SGS for all parameters. No analytes were detected at the practical quantitation limit (PQL) for any method blank parameter. A laboratory data review checklist was completed and is included with this report (Attachment C).

SUMMARY AND CONCLUSIONS

Current groundwater sampling results continue to show a general decline in contamination levels with fluctuations among some contaminants. Most detectable analytical results fall well below site-specific cleanup levels with the exception of MW15-R where benzene levels continue to exceed cleanup levels at 0.371 mg/L. DRO levels in MW25A, MW25B, and MW25C are below cleanup levels for the first time.

Based on ADEC correspondence, if EDB and 1,2-DCA are not detected above ADEC cleanup levels (EDB 0.00005 mg/L and 1,2-DCA 0.005 mg/L), they may be eliminated as contaminants of concern. Continued sampling for EDB, 1,2-DCA or additional testing for the presence of lead in groundwater is not recommended.

Based on the information presented herein, it is recommended that the annual groundwater sampling regimen continue for all monitoring wells at the DFSP-A to include analysis for GRO, DRO, and BTEX.

Analytical results from the surface sampling locations have been variable over the past years with TAH and TAqH results typically exceeding cleanup levels at SS14. Analytical results from 2012 were below cleanup levels; however both TAH and TAqH at SS14 exceed cleanup levels for 2013. Continued sampling is recommended to further characterize contaminant attenuation, and no change is proposed for the surface water sampling regimen for SS12 and SS14.

CLOSURE

This brief letter report has been prepared for the exclusive use of the Port of Anchorage and their representatives in the study of this site. The findings presented within this report are based on limited sampling and laboratory analyses conducted by R&M. Since opinions of conditions prevailing on a particular site must be based on the work authorized by the client, all findings/data must be construed as representative of the site at a particular moment in time and the result of services performed within the scope, limitations, and cost of the work requested. Changes in the conditions of this site may occur with the passage of time and may be due to natural processes or the works of man. In addition, changes in government codes, either State or Federal regulations or laws, may occur. Due to such changes, which are beyond our control, observations and recommendations applicable to this site may need to be revised wholly or in part from time to time.

R&M Consultants, Inc. performed this work in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No warranty, express or implied, beyond exercise of reasonable care and professional diligence, is made. Should you require additional information regarding the investigation or this report, please contact us.

Sincerely,

R&M CONSULTANTS, INC.



Kristi M. McLean, LEED AP BD+C
Environmental Specialist

Reviewed by:



Kevin J. Pendergast, C.P.G., P.E.
Group Manager – Environmental and Planning

Attachment A: Tables

Attachment B: Figure 1

Attachment C: Analytical Results and Laboratory Data Review Checklist

Attachment D: Monitoring Well Sample Logs

cc: Todd Cowles, P.E., Port of Anchorage

ATTACHMENT A

TABLES

Groundwater Elevations	TABLE 1
Laboratory Analytical Results, Groundwater Samples, September 25-26, 2013	TABLE 2
Laboratory Analytical Results, Surface Water Samples, September 26, 2013	TABLE 3

TABLE 1
GROUNDWATER ELEVATIONS

Monitoring Well ID	Date	Top of Casing Elevation (feet) ⁽¹⁾	Depth to Groundwater (feet)	Groundwater Elevation (feet)
MW2-R	9/25/13	36.87	2.25	34.62
MW4-R	9/25/13	44.07	3.91	40.16
MW15-R	9/26/13	38.02	2.17	35.85
MW22	9/26/13	84.98	2.91	82.07
MW23	9/25/13	38.75	3.68	35.07
MW25A	9/26/13	96.78	42.41	54.37
MW25B	9/26/13	93.69	38.92	54.77
MW25C	9/26/13	95.81	39.36	56.45

⁽¹⁾ Monitoring wells were surveyed on August 26, 2011. Elevations are referenced to mean lower low water, based on U.S. Coast & Geodetic Benchmark "Tidal 16."

TABLE 2
LABORATORY ANALYTICAL RESULTS
GROUNDWATER SAMPLES
SEPTEMBER 25-26, 2013

Monitoring Well ID	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	EDB (mg/L)	1,2-DCA (mg/L)
Cleanup Levels ⁽¹⁾	0.05	10.0	7.0	100.0	13.0	15.0	0.00005	0.005
MW2-R	ND	ND	ND	ND	ND	ND	ND	ND
MW2-RD ⁽²⁾	ND	ND	ND	ND	ND	ND	ND	ND
MW4-R	0.00354	ND	ND	ND	ND	2.55	ND	ND
MW15-R	0.371	ND	0.338	0.441	3.44	4.20	ND	ND
MW22	ND	ND	ND	ND	ND	ND	ND	ND
MW23	ND	ND	ND	ND	ND	0.845	ND	ND
MW25A	0.00567	ND	0.0370	0.0577	1.36	6.06	ND	ND
MW25B	0.0169	ND	0.105	0.126	2.02	10.6	ND	ND
MW25C	0.0326	0.00146	0.0659	0.195	2.11	3.43	ND	ND

⁽¹⁾ Site-specific cleanup levels for BTEX, GRO, and DRO are specified in the 2003 Record of Decision for Cleanup. EDB and 1,2-DCA cleanup levels have been specified in Table C, Groundwater Cleanup Levels (18 AAC 75.345, April 8, 2012).

⁽²⁾ Duplicate sample collected from MW-2R.

NOTE: Shaded cells indicate that analyte was detected above cleanup levels.

TABLE 3
LABORATORY ANALYTICAL RESULTS
SURFACE WATER SAMPLES
SEPTEMBER 26, 2013

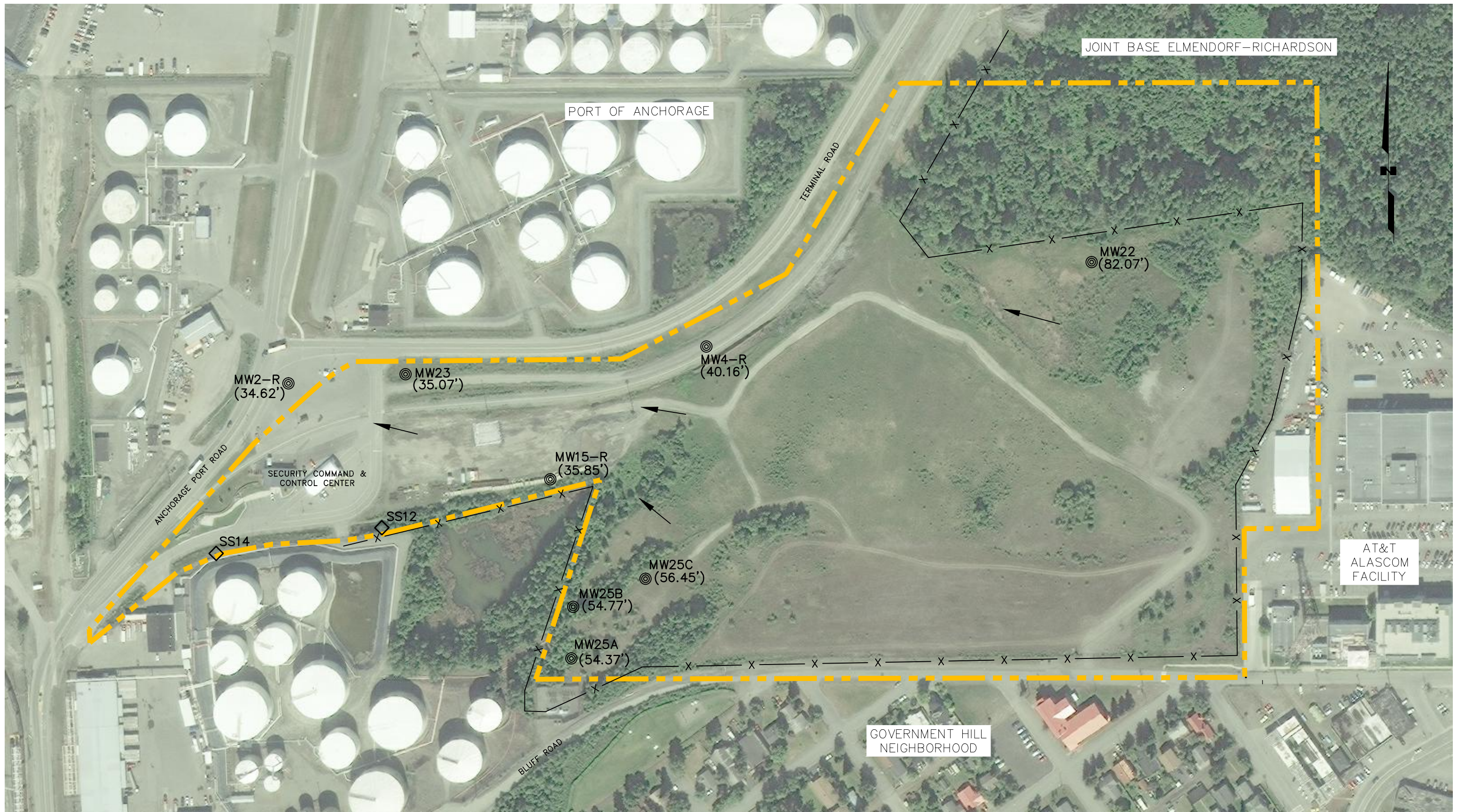
Surface Water Sample Site	TAH (mg/L)	PAH (mg/L)	TAqH (mg/L)
Cleanup Levels ⁽¹⁾	0.010	-	0.015
SS12	0.00064	ND	0.00064
SS14	0.010	0.0101	0.0196

⁽¹⁾ Site-specific cleanup levels as specified in the 2003 Record of Decision for Cleanup

⁽²⁾ Duplicate surface water sample collected at SS12

ATTACHMENT B

Groundwater Monitoring Wells and Surface Water Sample Locations **FIGURE 1**



Plotted 4/30/2014 11:08 AM by Patrick Hewlett

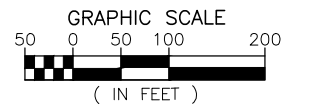
Z:\project\1771.03 MOA POA 2011 Term Year 3\Earth\Task 55 - Tract J GW Monitoring, Etc\ACAD\2013 Annual Sampling - FIG 1.dwg



- LEGEND**
- ⊙ MONITORING WELL LOCATION (MW)
 - ◇ SURFACE WATER SAMPLE LOCATION (SS)
 - X — FENCE
 - — — SITE BOUNDARY (APPROX)
 - () GROUNDWATER ELEVATION IN FEET (REFERENCED TO MEAN LOWER LOW WATER, BASED ON U.S. COAST & GEODETIC BENCHMARK "TIDAL 16")
 - ← APPROXIMATE GROUNDWATER FLOW DIRECTION

FORMER DEFENSE FUEL SUPPORT POINT – ANCHORAGE
GROUNDWATER MONITORING WELLS AND SURFACE WATER SAMPLE LOCATIONS

FIGURE 1



2010 AERIAL PHOTOGRAPHY BY AERO METRIC

ATTACHMENT C

ANALYTICAL RESULTS

SGS North America Inc., Laboratory Data Report

Laboratory Data Review Checklist



Laboratory Report of Analysis

To: R & M Consultants Inc
9101 Vanguard Dr
Anchorage, AK 99507
(907)646-9682

Report Number: 1134756

Client Project: POA DFSPA 1771.03.55

Dear Kevin Pendergast,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Steve at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Alaska Division Technical Director

Stephen Ede

2014.05.09

11:26:05 -08'00'

Steve Crupi
Project Manager
steven.crupi@sgs.com

Date

Print Date: 05/09/2014 11:23 09AM

SGS North America Inc. | 200 West Potter Drive, Anchorage, AK 99518
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Member of SGS Group

Case Narrative

SGS Client: **R & M Consultants Inc**
SGS Project: **1134756**
Project Name/Site: **POA DFSPA 1771.03.55**
Project Contact: **Kevin Pendergast**

Refer to sample receipt form for information on sample condition.

DFSPA-MW2R (1134756001) PS

8011 - EDB was analyzed by Test America of Arvada, CO.

DFSPA-MW2-RD (1134756002) PS

8011 - EDB was analyzed by Test America of Arvada, CO.

DFSPA-MW15R (1134756003) PS

8011 - EDB was analyzed by Test America of Arvada, CO.
AK102 - The pattern is consistent with a weathered gasoline.

DFSPA-MW22 (1134756004) PS

8011 - EDB was analyzed by Test America of Arvada, CO.

DFSPA-MW23 (1134756005) PS

8011 - EDB was analyzed by Test America of Arvada, CO.
AK102 - The pattern is consistent with a weathered middle distillate.

DFSPA-MW25A (1134756006) PS

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.
8011 - EDB was analyzed by Test America of Arvada, CO.
AK102 - The pattern is consistent with a weathered gasoline.

DFSPA-MW25B (1134756007) PS

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.
8011 - EDB was analyzed by Test America of Arvada, CO.
AK102 - The pattern is consistent with a weathered gasoline.

DFSPA-MW25C (1134756008) PS

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.
8011 - EDB was analyzed by Test America of Arvada, CO.
AK102 - The pattern is consistent with a weathered gasoline.

DFSPA-MW4-R (1134756009) PS

AK102 - The pattern is consistent with a weathered gasoline.
8011 - EDB was analyzed by Test America of Arvada, CO.

CCV for HBN 1487583 [VMS/13793 (1183369) CCV

8260B - CCV recovery for dichlorodifluoromethane do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

CCV for HBN 1488414 [VMS/13809 (1185015) CCV

8260B - CCV recovery for acetone, MEK, and hexachlorobutadiene do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

LCSD for HBN 1488379 [VXX/2531 (1184805) LCSD

8260B - LCS/LCSD RPD for acetone does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.

MB for HBN 1486762 [XXX/30047] (1181861) MB

Case Narrative

SGS Client: **R & M Consultants Inc**
SGS Project: **1134756**
Project Name/Site: **POA DFSPA 1771.03.55**
Project Contact: **Kevin Pendergast**

8270D SIM - Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were detected in the MB greater than half of the LOQ however less than the LOQ.

EDB Trip Blank (1134756013) TB

8011 - EDB was analyzed by Test America of Arvada, CO.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/09/2014 11:23:10AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
DFSPA-MW2R	1134756001	09/25/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW2-RD	1134756002	09/25/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW15R	1134756003	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW22	1134756004	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW23	1134756005	09/25/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW25A	1134756006	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW25B	1134756007	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW25C	1134756008	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-MW4-R	1134756009	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-SS12	1134756010	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
DFSPA-SS14	1134756011	09/26/2013	09/27/2013	Water (Surface, Eff., Ground)
Trip Blanks	1134756012	09/25/2013	09/27/2013	Water (Surface, Eff., Ground)
EDB Trip Blank	1134756013	09/25/2013	09/27/2013	Water (Surface, Eff., Ground)

Method

8270D SIMS (PAH)
 AK102
 AK102
 AK101
 SW8260B

Method Description

8270 PAH SIM Semi-Vol GC/MS Liq/Liq ext.
 Diesel Range Organics (W)
 DRO Low Volume (W)
 Gasoline Range Organics (W)
 Volatile Organic Compounds (W) FULL

Detectable Results Summary

Client Sample ID: **DFSPA-MW15R**

Lab Sample ID: 1134756003

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	4.20	mg/L
Gasoline Range Organics	3.44	mg/L
Benzene	371	ug/L
Ethylbenzene	338	ug/L
o-Xylene	2.96	ug/L
P & M -Xylene	438	ug/L
Toluene	8.75	ug/L

Client Sample ID: **DFSPA-MW23**

Lab Sample ID: 1134756005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.845	mg/L

Client Sample ID: **DFSPA-MW25A**

Lab Sample ID: 1134756006

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	6.06	mg/L
Gasoline Range Organics	1.36	mg/L
Benzene	5.67	ug/L
Ethylbenzene	37.0	ug/L
o-Xylene	2.32	ug/L
P & M -Xylene	55.4	ug/L

Client Sample ID: **DFSPA-MW25B**

Lab Sample ID: 1134756007

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	10.6	mg/L
Gasoline Range Organics	2.02	mg/L
Benzene	16.9	ug/L
Ethylbenzene	105	ug/L
o-Xylene	2.36	ug/L
P & M -Xylene	124	ug/L

Client Sample ID: **DFSPA-MW25C**

Lab Sample ID: 1134756008

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	3.43	mg/L
Gasoline Range Organics	2.11	mg/L
Benzene	32.6	ug/L
Ethylbenzene	65.9	ug/L
o-Xylene	1.57	ug/L
P & M -Xylene	193	ug/L
Toluene	1.46	ug/L

Client Sample ID: **DFSPA-MW4-R**

Lab Sample ID: 1134756009

Semivolatile Organic Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	2.55	mg/L
Benzene	3.54	ug/L

Client Sample ID: **DFSPA-SS12**

Lab Sample ID: 1134756010

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	0.640	ug/L

Detectable Results Summary

Client Sample ID: **DFSPA-SS14**

Lab Sample ID: 1134756011

Polynuclear Aromatics GC/MS

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	0.0649	ug/L
1,2,4-Trimethylbenzene	6.85	ug/L
1,3,5-Trimethylbenzene	3.14	ug/L
Benzene	0.500	ug/L
Ethylbenzene	1.00	ug/L
P & M -Xylene	3.89	ug/L
Xylenes (total)	4.11	ug/L

Print Date: 05/09/2014 11:23:13AM

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Member of SGS Group



Results of **DFSPA-MW2R**

Client Sample ID: **DFSPA-MW2R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756001
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.600 U	0.600	0.180	mg/L	1		10/04/13 01:08
Surrogates							
5a Androstane	80.7	50-150		%	1		10/04/13 01:08

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 01:08
Container ID: 1134756001-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW2R

Client Sample ID: **DFSPA-MW2R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756001
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/27/13 20:21
Surrogates							
4-Bromofluorobenzene	98.7	50-150		%	1		09/27/13 20:21

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 20:21
Container ID: 1134756001-B

Prep Batch: VXX25255
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW2R

Client Sample ID: **DFSPA-MW2R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756001
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 14:38
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 14:38
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 14:38
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 14:38
Benzene	0.400 U	0.400	0.120	ug/L	1		10/03/13 14:38
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 14:38
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 14:38
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 14:38
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 14:38
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 14:38
Surrogates							
1,2-Dichloroethane-D4	104	70-120		%	1		10/03/13 14:38
4-Bromofluorobenzene	107	75-120		%	1		10/03/13 14:38
Toluene-d8	94.6	85-120		%	1		10/03/13 14:38

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 14:38
Container ID: 1134756001-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM

Results of DFSPA-MW2-RD

Client Sample ID: **DFSPA-MW2-RD**
 Client Project ID: **POA DFSPA 1771.03.55**
 Lab Sample ID: 1134756002
 Lab Project ID: 1134756

Collection Date: 09/25/13 16:17
 Received Date: 09/27/13 07:30
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.600 U	0.600	0.180	mg/L	1		10/04/13 01:28
Surrogates							
5a Androstane	67.9	50-150		%	1		10/04/13 01:28

Batch Information

Analytical Batch: XFC11106
 Analytical Method: AK102
 Analyst: EAB
 Analytical Date/Time: 10/04/13 01:28
 Container ID: 1134756002-J

Prep Batch: XXX30068
 Prep Method: SW3520C
 Prep Date/Time: 10/02/13 09:50
 Prep Initial Wt./Vol.: 1000 mL
 Prep Extract Vol: 1 mL



Results of **DFSPA-MW2-RD**

Client Sample ID: **DFSPA-MW2-RD**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756002
Lab Project ID: 1134756

Collection Date: 09/25/13 16:17
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/27/13 20:39
Surrogates							
4-Bromofluorobenzene	97.7	50-150		%	1		09/27/13 20:39

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 20:39
Container ID: 1134756002-B

Prep Batch: VXX25255
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW2-RD**

Client Sample ID: **DFSPA-MW2-RD**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756002
Lab Project ID: 1134756

Collection Date: 09/25/13 16:17
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:02
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:02
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:02
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:02
Benzene	0.400 U	0.400	0.120	ug/L	1		10/03/13 15:02
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:02
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:02
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:02
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 15:02
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:02
Surrogates							
1,2-Dichloroethane-D4	108	70-120		%	1		10/03/13 15:02
4-Bromofluorobenzene	110	75-120		%	1		10/03/13 15:02
Toluene-d8	96.1	85-120		%	1		10/03/13 15:02

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 15:02
Container ID: 1134756002-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW15R**

Client Sample ID: **DFSPA-MW15R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756003
Lab Project ID: 1134756

Collection Date: 09/26/13 17:35
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	4.20		0.600	0.180	mg/L	1		10/04/13 01:49
Surrogates								
5a Androstane	77.4		50-150		%	1		10/04/13 01:49

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 01:49
Container ID: 1134756003-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM

Results of DFSPA-MW15R

Client Sample ID: **DFSPA-MW15R**
 Client Project ID: **POA DFSPA 1771.03.55**
 Lab Sample ID: 1134756003
 Lab Project ID: 1134756

Collection Date: 09/26/13 17:35
 Received Date: 09/27/13 07:30
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	3.44		1.00	0.310	mg/L	10		09/28/13 21:30
Surrogates								
4-Bromofluorobenzene	105		50-150		%	10		09/28/13 21:30

Batch Information

Analytical Batch: VFC11658
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/28/13 21:30
 Container ID: 1134756003-C

Prep Batch: VXX25259
 Prep Method: SW5030B
 Prep Date/Time: 09/28/13 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL



Results of DFSPA-MW15R

Client Sample ID: **DFSPA-MW15R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756003
Lab Project ID: 1134756

Collection Date: 09/26/13 17:35
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:25
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:25
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:25
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:25
Benzene	371	4.00	1.20	ug/L	10		10/10/13 11:05
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:25
Ethylbenzene	338	10.0	3.10	ug/L	10		10/10/13 11:05
o-Xylene	2.96	1.00	0.310	ug/L	1		10/03/13 15:25
P & M -Xylene	438	20.0	6.20	ug/L	10		10/10/13 11:05
Toluene	8.75	1.00	0.310	ug/L	1		10/03/13 15:25
Surrogates							
1,2-Dichloroethane-D4	105	70-120		%	1		10/03/13 15:25
4-Bromofluorobenzene	99.6	75-120		%	1		10/03/13 15:25
Toluene-d8	98.3	85-120		%	1		10/03/13 15:25

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 15:25
Container ID: 1134756003-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS13809
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 10/10/13 11:05
Container ID: 1134756003-F

Prep Batch: VXX25321
Prep Method: SW5030B
Prep Date/Time: 10/10/13 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW22**

Client Sample ID: **DFSPA-MW22**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756004
Lab Project ID: 1134756

Collection Date: 09/26/13 11:46
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.600 U	0.600	0.180	mg/L	1		10/04/13 02:10
Surrogates							
5a Androstane	74.8	50-150		%	1		10/04/13 02:10

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 02:10
Container ID: 1134756004-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW22

Client Sample ID: **DFSPA-MW22**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756004
Lab Project ID: 1134756

Collection Date: 09/26/13 11:46
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/27/13 22:31
Surrogates							
4-Bromofluorobenzene	93.7	50-150		%	1		09/27/13 22:31

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 22:31
Container ID: 1134756004-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW22

Client Sample ID: **DFSPA-MW22**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756004
Lab Project ID: 1134756

Collection Date: 09/26/13 11:46
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:48
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:48
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:48
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:48
Benzene	0.400 U	0.400	0.120	ug/L	1		10/03/13 15:48
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 15:48
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:48
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:48
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 15:48
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 15:48
Surrogates							
1,2-Dichloroethane-D4	97.5	70-120		%	1		10/03/13 15:48
4-Bromofluorobenzene	106	75-120		%	1		10/03/13 15:48
Toluene-d8	95.8	85-120		%	1		10/03/13 15:48

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 15:48
Container ID: 1134756004-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW23**

Client Sample ID: **DFSPA-MW23**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756005
Lab Project ID: 1134756

Collection Date: 09/25/13 17:15
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.845		0.600	0.180	mg/L	1		10/04/13 02:30
Surrogates								
5a Androstane	67.7		50-150		%	1		10/04/13 02:30

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 02:30
Container ID: 1134756005-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW23

Client Sample ID: **DFSPA-MW23**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756005
Lab Project ID: 1134756

Collection Date: 09/25/13 17:15
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/27/13 22:50
Surrogates							
4-Bromofluorobenzene	96.3	50-150		%	1		09/27/13 22:50

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 22:50
Container ID: 1134756005-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM

Results of DFSPA-MW23

Client Sample ID: **DFSPA-MW23**
 Client Project ID: **POA DFSPA 1771.03.55**
 Lab Sample ID: 1134756005
 Lab Project ID: 1134756

Collection Date: 09/25/13 17:15
 Received Date: 09/27/13 07:30
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/09/13 13:35
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/09/13 13:35
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/09/13 13:35
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/09/13 13:35
Benzene	0.400 U	0.400	0.120	ug/L	1		10/09/13 13:35
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/09/13 13:35
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/09/13 13:35
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/09/13 13:35
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/09/13 13:35
Toluene	1.00 U	1.00	0.310	ug/L	1		10/09/13 13:35
Surrogates							
1,2-Dichloroethane-D4	108	70-120		%	1		10/09/13 13:35
4-Bromofluorobenzene	98.9	75-120		%	1		10/09/13 13:35
Toluene-d8	99.2	85-120		%	1		10/09/13 13:35

Batch Information

Analytical Batch: VMS13807
 Analytical Method: SW8260B
 Analyst: HM
 Analytical Date/Time: 10/09/13 13:35
 Container ID: 1134756005-D

Prep Batch: VXX25317
 Prep Method: SW5030B
 Prep Date/Time: 10/09/13 00:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL



Results of **DFSPA-MW25A**

Client Sample ID: **DFSPA-MW25A**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756006
Lab Project ID: 1134756

Collection Date: 09/26/13 15:33
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	6.06		0.600	0.180	mg/L	1		10/04/13 02:52
Surrogates								
5a Androstane	69.1		50-150		%	1		10/04/13 02:52

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 02:52
Container ID: 1134756006-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW25A**

Client Sample ID: **DFSPA-MW25A**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756006
Lab Project ID: 1134756

Collection Date: 09/26/13 15:33
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.36		0.100	0.0310	mg/L	1		09/27/13 23:08
Surrogates								
4-Bromofluorobenzene	289	*	50-150		%	1		09/27/13 23:08

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 23:08
Container ID: 1134756006-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW25A

Client Sample ID: **DFSPA-MW25A**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756006
Lab Project ID: 1134756

Collection Date: 09/26/13 15:33
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 18:08
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 18:08
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 18:08
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 18:08
Benzene	5.67	0.400	0.120	ug/L	1		10/03/13 18:08
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 18:08
Ethylbenzene	37.0	1.00	0.310	ug/L	1		10/03/13 18:08
o-Xylene	2.32	1.00	0.310	ug/L	1		10/03/13 18:08
P & M -Xylene	55.4	2.00	0.620	ug/L	1		10/03/13 18:08
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 18:08
Surrogates							
1,2-Dichloroethane-D4	106	70-120		%	1		10/03/13 18:08
4-Bromofluorobenzene	103	75-120		%	1		10/03/13 18:08
Toluene-d8	95.3	85-120		%	1		10/03/13 18:08

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 18:08
Container ID: 1134756006-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW25B**

Client Sample ID: **DFSPA-MW25B**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756007
Lab Project ID: 1134756

Collection Date: 09/26/13 13:50
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.6		0.600	0.180	mg/L	1		10/04/13 03:12
Surrogates								
5a Androstane	76.9		50-150		%	1		10/04/13 03:12

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 03:12
Container ID: 1134756007-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW25B

Client Sample ID: **DFSPA-MW25B**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756007
Lab Project ID: 1134756

Collection Date: 09/26/13 13:50
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.02		0.100	0.0310	mg/L	1		09/27/13 23:27
Surrogates								
4-Bromofluorobenzene	387	*	50-150		%	1		09/27/13 23:27

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 23:27
Container ID: 1134756007-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW25B

Client Sample ID: **DFSPA-MW25B**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756007
Lab Project ID: 1134756

Collection Date: 09/26/13 13:50
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:11
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:11
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:11
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:11
Benzene	16.9	0.400	0.120	ug/L	1		10/03/13 16:11
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:11
Ethylbenzene	105	10.0	3.10	ug/L	10		10/10/13 03:16
o-Xylene	2.36	1.00	0.310	ug/L	1		10/03/13 16:11
P & M -Xylene	124	20.0	6.20	ug/L	10		10/10/13 03:16
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:11
Surrogates							
1,2-Dichloroethane-D4	99.2	70-120		%	1		10/03/13 16:11
4-Bromofluorobenzene	105	75-120		%	1		10/03/13 16:11
Toluene-d8	95.6	85-120		%	1		10/03/13 16:11

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 16:11
Container ID: 1134756007-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS13808
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 10/10/13 03:16
Container ID: 1134756007-F

Prep Batch: VXX25319
Prep Method: SW5030B
Prep Date/Time: 10/09/13 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW25C**

Client Sample ID: **DFSPA-MW25C**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756008
Lab Project ID: 1134756

Collection Date: 09/26/13 12:45
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	3.43		0.600	0.180	mg/L	1		10/04/13 03:34
Surrogates								
5a Androstane	64.6		50-150		%	1		10/04/13 03:34

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 10/04/13 03:34
Container ID: 1134756008-J

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/02/13 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW25C

Client Sample ID: **DFSPA-MW25C**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756008
Lab Project ID: 1134756

Collection Date: 09/26/13 12:45
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.11		0.100	0.0310	mg/L	1		09/27/13 23:45
Surrogates								
4-Bromofluorobenzene	264	*	50-150		%	1		09/27/13 23:45

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 23:45
Container ID: 1134756008-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW25C

Client Sample ID: **DFSPA-MW25C**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756008
Lab Project ID: 1134756

Collection Date: 09/26/13 12:45
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:35
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:35
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:35
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:35
Benzene	32.6	0.400	0.120	ug/L	1		10/03/13 16:35
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:35
Ethylbenzene	65.9	10.0	3.10	ug/L	10		10/10/13 03:32
o-Xylene	1.57	1.00	0.310	ug/L	1		10/03/13 16:35
P & M -Xylene	193	20.0	6.20	ug/L	10		10/10/13 03:32
Toluene	1.46	1.00	0.310	ug/L	1		10/03/13 16:35
Surrogates							
1,2-Dichloroethane-D4	107	70-120		%	1		10/03/13 16:35
4-Bromofluorobenzene	107	75-120		%	1		10/03/13 16:35
Toluene-d8	100	85-120		%	1		10/03/13 16:35

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 16:35
Container ID: 1134756008-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS13808
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 10/10/13 03:32
Container ID: 1134756008-E

Prep Batch: VXX25319
Prep Method: SW5030B
Prep Date/Time: 10/09/13 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW4-R**

Client Sample ID: **DFSPA-MW4-R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756009
Lab Project ID: 1134756

Collection Date: 09/26/13 09:55
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	2.55		0.600	0.180	mg/L	1		09/30/13 19:44
Surrogates								
5a Androstane	88		50-150		%	1		09/30/13 19:44

Batch Information

Analytical Batch: XFC11100
Analytical Method: AK102
Analyst: EAB
Analytical Date/Time: 09/30/13 19:44
Container ID: 1134756009-J

Prep Batch: XXX30035
Prep Method: SW3520C
Prep Date/Time: 09/27/13 18:00
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-MW4-R**

Client Sample ID: **DFSPA-MW4-R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756009
Lab Project ID: 1134756

Collection Date: 09/26/13 09:55
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/28/13 00:04
Surrogates							
4-Bromofluorobenzene	94.9	50-150		%	1		09/28/13 00:04

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/28/13 00:04
Container ID: 1134756009-B

Prep Batch: VXX25256
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-MW4-R

Client Sample ID: **DFSPA-MW4-R**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756009
Lab Project ID: 1134756

Collection Date: 09/26/13 09:55
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:58
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:58
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:58
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:58
Benzene	3.54	0.400	0.120	ug/L	1		10/03/13 16:58
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 16:58
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:58
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 16:58
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 16:58
Surrogates							
1,2-Dichloroethane-D4	101	70-120		%	1		10/03/13 16:58
4-Bromofluorobenzene	107	75-120		%	1		10/03/13 16:58
Toluene-d8	96.3	85-120		%	1		10/03/13 16:58

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 16:58
Container ID: 1134756009-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-SS12**

Client Sample ID: **DFSPA-SS12**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756010
Lab Project ID: 1134756

Collection Date: 09/26/13 18:11
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
2-Methylnaphthalene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Acenaphthene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Acenaphthylene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Anthracene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Benzo(a)Anthracene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Benzo[a]pyrene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Benzo[b]Fluoranthene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Benzo[g,h,i]perylene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Benzo[k]fluoranthene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Chrysene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Dibenzo[a,h]anthracene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Fluoranthene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Fluorene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Indeno[1,2,3-c,d] pyrene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Naphthalene	0.102 U	0.102	0.0316	ug/L	1		09/30/13 03:30
Phenanthrene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Pyrene	0.0510 U	0.0510	0.0153	ug/L	1		09/30/13 03:30
Surrogates							
2-Fluorobiphenyl	74.3	50-110		%	1		09/30/13 03:30
Terphenyl-d14	77	50-135		%	1		09/30/13 03:30

Batch Information

Analytical Batch: XMS7635
Analytical Method: 8270D SIMS (PAH)
Analyst: RTS
Analytical Date/Time: 09/30/13 03:30
Container ID: 1134756010-D

Prep Batch: XXX30047
Prep Method: SW3520C
Prep Date/Time: 09/29/13 08:50
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of DFSPA-SS12

Client Sample ID: DFSPA-SS12
Client Project ID: POA DFSPA 1771.03.55
Lab Sample ID: 1134756010
Lab Project ID: 1134756

Collection Date: 09/26/13 18:11
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-SS12**

Client Sample ID: **DFSPA-SS12**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756010
Lab Project ID: 1134756

Collection Date: 09/26/13 18:11
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.300	ug/L	1		10/03/13 17:21
Chloromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:21
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:21
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Methyl-t-butyl ether	5.00 U	5.00	1.50	ug/L	1		10/03/13 17:21
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		10/03/13 17:21
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Naphthalene	2.00 U	2.00	0.620	ug/L	1		10/03/13 17:21
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 17:21
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Styrene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Vinyl chloride	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:21
Xylenes (total)	3.00 U	3.00	0.940	ug/L	1		10/03/13 17:21
Surrogates							
1,2-Dichloroethane-D4	111	70-120		%	1		10/03/13 17:21
4-Bromofluorobenzene	97.2	75-120		%	1		10/03/13 17:21
Toluene-d8	95.2	85-120		%	1		10/03/13 17:21

Print Date: 05/09/2014 11:23:14AM

Results of DFSPA-SS12

Client Sample ID: **DFSPA-SS12**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756010
Lab Project ID: 1134756

Collection Date: 09/26/13 18:11
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 17:21
Container ID: 1134756010-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of **DFSPA-SS14**

Client Sample ID: **DFSPA-SS14**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756011
Lab Project ID: 1134756

Collection Date: 09/26/13 18:21
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0649	0.0500	0.0150	ug/L	1		09/30/13 03:44
2-Methylnaphthalene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Acenaphthene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Acenaphthylene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Anthracene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Benzo(a)Anthracene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Benzo[a]pyrene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Benzo[b]Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Benzo[g,h,i]perylene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Benzo[k]fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Chrysene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Dibenzo[a,h]anthracene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Fluorene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Naphthalene	0.100 U	0.100	0.0310	ug/L	1		09/30/13 03:44
Phenanthrene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Pyrene	0.0500 U	0.0500	0.0150	ug/L	1		09/30/13 03:44
Surrogates							
2-Fluorobiphenyl	71.2	50-110		%	1		09/30/13 03:44
Terphenyl-d14	80.7	50-135		%	1		09/30/13 03:44

Batch Information

Analytical Batch: XMS7635
Analytical Method: 8270D SIMS (PAH)
Analyst: RTS
Analytical Date/Time: 09/30/13 03:44
Container ID: 1134756011-D

Prep Batch: XXX30047
Prep Method: SW3520C
Prep Date/Time: 09/29/13 08:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/09/2014 11:23:14AM



Results of **DFSPA-SS14**

Client Sample ID: **DFSPA-SS14**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756011
Lab Project ID: 1134756

Collection Date: 09/26/13 18:21
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
1,1,2-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2,4-Trimethylbenzene	6.85	1.00	0.310	ug/L	1		10/03/13 17:45
1,2-Dibromo-3-chloropropane	2.00 U	2.00	0.620	ug/L	1		10/03/13 17:45
1,2-Dibromoethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,3,5-Trimethylbenzene	3.14	1.00	0.310	ug/L	1		10/03/13 17:45
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
1,3-Dichloropropane	0.400 U	0.400	0.120	ug/L	1		10/03/13 17:45
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		10/03/13 17:45
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		10/03/13 17:45
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		10/03/13 17:45
Benzene	0.500	0.400	0.120	ug/L	1		10/03/13 17:45
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
Bromoform	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Bromomethane	3.00 U	3.00	0.940	ug/L	1		10/03/13 17:45
Carbon disulfide	2.00 U	2.00	0.620	ug/L	1		10/03/13 17:45
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
Chloroethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45

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Results of **DFSPA-SS14**

Client Sample ID: **DFSPA-SS14**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756011
Lab Project ID: 1134756

Collection Date: 09/26/13 18:21
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.300	ug/L	1		10/03/13 17:45
Chloromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 17:45
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Ethylbenzene	1.00	1.00	0.310	ug/L	1		10/03/13 17:45
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Methyl-t-butyl ether	5.00 U	5.00	1.50	ug/L	1		10/03/13 17:45
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		10/03/13 17:45
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Naphthalene	2.00 U	2.00	0.620	ug/L	1		10/03/13 17:45
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
P & M -Xylene	3.89	2.00	0.620	ug/L	1		10/03/13 17:45
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Styrene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Vinyl chloride	1.00 U	1.00	0.310	ug/L	1		10/03/13 17:45
Xylenes (total)	4.11	3.00	0.940	ug/L	1		10/03/13 17:45
Surrogates							
1,2-Dichloroethane-D4	111	70-120		%	1		10/03/13 17:45
4-Bromofluorobenzene	97.7	75-120		%	1		10/03/13 17:45
Toluene-d8	96.6	85-120		%	1		10/03/13 17:45

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Results of DFSPA-SS14

Client Sample ID: **DFSPA-SS14**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756011
Lab Project ID: 1134756

Collection Date: 09/26/13 18:21
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 17:45
Container ID: 1134756011-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of Trip Blanks

Client Sample ID: **Trip Blanks**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756012
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		09/27/13 17:15
Surrogates							
4-Bromofluorobenzene	98.3	50-150		%	1		09/27/13 17:15

Batch Information

Analytical Batch: VFC11656
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 09/27/13 17:15
Container ID: 1134756012-B

Prep Batch: VXX25255
Prep Method: SW5030B
Prep Date/Time: 09/27/13 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM



Results of Trip Blanks

Client Sample ID: Trip Blanks
Client Project ID: POA DFSPA 1771.03.55
Lab Sample ID: 1134756012
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

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Results of Trip Blanks

Client Sample ID: **Trip Blanks**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756012
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.300	ug/L	1		10/03/13 12:19
Chloromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		10/03/13 12:19
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		10/03/13 12:19
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Methyl-t-butyl ether	5.00 U	5.00	1.50	ug/L	1		10/03/13 12:19
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		10/03/13 12:19
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Naphthalene	2.00 U	2.00	0.620	ug/L	1		10/03/13 12:19
o-Xylene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		10/03/13 12:19
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Styrene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Toluene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Vinyl chloride	1.00 U	1.00	0.310	ug/L	1		10/03/13 12:19
Xylenes (total)	3.00 U	3.00	0.940	ug/L	1		10/03/13 12:19
Surrogates							
1,2-Dichloroethane-D4	109	70-120		%	1		10/03/13 12:19
4-Bromofluorobenzene	104	75-120		%	1		10/03/13 12:19
Toluene-d8	103	85-120		%	1		10/03/13 12:19

Print Date: 05/09/2014 11:23:14AM

Results of Trip Blanks

Client Sample ID: **Trip Blanks**
Client Project ID: **POA DFSPA 1771.03.55**
Lab Sample ID: 1134756012
Lab Project ID: 1134756

Collection Date: 09/25/13 15:57
Received Date: 09/27/13 07:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Analyst: SCL
Analytical Date/Time: 10/03/13 12:19
Container ID: 1134756012-A

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/03/13 06:24
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:14AM

Method Blank

Blank ID: MB for HBN 1486965 [VXX/25255]

Blank Lab ID: 1181995

QC for Samples:

1134756001, 1134756002, 1134756012

Matrix: Water (Surface, Eff., Ground)

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	92.7	50-150		%

Batch Information

Analytical Batch: VFC11656

Analytical Method: AK101

Instrument: Agilent 7890A PID/FID

Analyst: ST

Analytical Date/Time: 9/27/2013 10:44:00AM

Prep Batch: VXX25255

Prep Method: SW5030B

Prep Date/Time: 9/27/2013 8:00:00AM

Prep Initial Wt./Vol.: 5 mL

Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:18AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25255]
 Blank Spike Lab ID: 1181998
 Date Analyzed: 09/27/2013 11:40

Spike Duplicate ID: LCSD for HBN 1134756 [VXX25255]
 Spike Duplicate Lab ID: 1181999
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756001, 1134756002, 1134756012

Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.951	95	1.00	0.966	97	(60-120)	1.60	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		100	0.0500		101	(50-150)	1.70	

Batch Information

Analytical Batch: **VFC11656**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX25255**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/27/2013 08:00**
 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1486966 [VXX/25256]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1182000

QC for Samples:

1134756004, 1134756005, 1134756006, 1134756007, 1134756008, 1134756009

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	97.2	50-150		%

Batch Information

Analytical Batch: VFC11656

Analytical Method: AK101

Instrument: Agilent 7890A PID/FID

Analyst: ST

Analytical Date/Time: 9/27/2013 9:54:00PM

Prep Batch: VXX25256

Prep Method: SW5030B

Prep Date/Time: 9/27/2013 8:00:00AM

Prep Initial Wt./Vol.: 5 mL

Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:21AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25256]
 Blank Spike Lab ID: 1182003
 Date Analyzed: 09/27/2013 21:17

Spike Duplicate ID: LCSD for HBN 1134756
 [VXX25256]
 Spike Duplicate Lab ID: 1182004
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756004, 1134756005, 1134756006, 1134756007, 1134756008, 1134756009

Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.951	95	1.00	0.933	93	(60-120)	1.90	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		101	0.0500		102	(50-150)	0.45	

Batch Information

Analytical Batch: **VFC11656**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX25256**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/27/2013 08:00**
 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1486997 [VXX/25259]

Blank Lab ID: 1182175

QC for Samples:
1134756003

Matrix: Water (Surface, Eff., Ground)

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	94.4	50-150		%

Batch Information

Analytical Batch: VFC11658
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/28/2013 5:12:00PM

Prep Batch: VXX25259
Prep Method: SW5030B
Prep Date/Time: 9/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:23AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25259]
 Blank Spike Lab ID: 1182176
 Date Analyzed: 09/28/2013 19:21

Spike Duplicate ID: LCSD for HBN 1134756 [VXX25259]
 Spike Duplicate Lab ID: 1182177
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756003

Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.977	98	1.00	0.948	95	(60-120)	3.00	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		96	0.0500		97	(50-150)	1.20	

Batch Information

Analytical Batch: **VFC11658**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX25259**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/28/2013 08:00**
 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL



Method Blank

Blank ID: MB for HBN 1487581 [VXX/25283]
Blank Lab ID: 1183364

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008, 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	1.00U	2.00	0.620	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.200U	0.400	0.120	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	1.50U	3.00	0.940	ug/L
Carbon disulfide	1.00U	2.00	0.620	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1487581 [VXX/25283]
 Blank Lab ID: 1183364

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008, 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	2.50U	5.00	1.50	ug/L
Naphthalene	1.00U	2.00	0.620	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	0.940	ug/L
Surrogates				
1,2-Dichloroethane-D4	108	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	99.1	85-120		%

Method Blank

Blank ID: MB for HBN 1487581 [VXX/25283]
Blank Lab ID: 1183364

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008, 1134756009, 1134756010,
1134756011, 1134756012

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS13793
Analytical Method: SW8260B
Instrument: HP 5890 Series II MS1 VJA
Analyst: SCL
Analytical Date/Time: 10/3/2013 9:59:00AM

Prep Batch: VXX25283
Prep Method: SW5030B
Prep Date/Time: 10/3/2013 6:24:34AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:25AM

Leaching Blank

Blank ID: LB for HBN 1487415 [TCLP/7031]
 Blank Lab ID: 1182837

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008, 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1-Dichloroethene	100U	200	62.0	ug/L
1,2-Dichloroethane	50.0U	100	30.0	ug/L
1,4-Dichlorobenzene	50.0U	100	30.0	ug/L
2-Butanone (MEK)	1000U	2000	620	ug/L
Benzene	40.0U	80.0	24.0	ug/L
Carbon tetrachloride	100U	200	62.0	ug/L
Chlorobenzene	50.0U	100	30.0	ug/L
Chloroform	100U	200	60.0	ug/L
Hexachlorobutadiene	100U	200	62.0	ug/L
Tetrachloroethene	100U	200	62.0	ug/L
Trichloroethene	100U	200	62.0	ug/L
Vinyl chloride	100U	200	62.0	ug/L
Surrogates				
1,2-Dichloroethane-D4	101	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	95.2	85-120		%

Batch Information

Analytical Batch: VMS13793
 Analytical Method: SW8260B
 Instrument: HP 5890 Series II MS1 VJA
 Analyst: SCL
 Analytical Date/Time: 10/3/2013 6:55:00PM

Prep Batch: VXX25283
 Prep Method: SW5030B
 Prep Date/Time: 10/3/2013 6:24:34AM
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25283]
 Blank Spike Lab ID: 1183365
 Date Analyzed: 10/03/2013 10:22

Spike Duplicate ID: LCSD for HBN 1134756
 [VXX25283]
 Spike Duplicate Lab ID: 1183366
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008,
 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	26.2	87	30	27.3	91	(80-130)	4.30	(< 20)
1,1,1-Trichloroethane	30	33.0	110	30	31.7	106	(65-130)	4.10	(< 20)
1,1,2,2-Tetrachloroethane	30	26.4	88	30	27.8	93	(65-130)	5.10	(< 20)
1,1,2-Trichloroethane	30	24.8	83	30	25.2	84	(75-125)	1.50	(< 20)
1,1-Dichloroethane	30	34.3	114	30	36.8	123	(70-135)	7.10	(< 20)
1,1-Dichloroethene	30	31.8	106	30	32.0	107	(70-130)	0.50	(< 20)
1,1-Dichloropropene	30	30.2	101	30	29.1	97	(75-130)	3.60	(< 20)
1,2,3-Trichlorobenzene	30	28.1	94	30	28.5	95	(55-140)	1.50	(< 20)
1,2,3-Trichloropropane	30	25.6	86	30	27.5	92	(75-125)	6.80	(< 20)
1,2,4-Trichlorobenzene	30	30.2	101	30	30.2	101	(65-135)	0.00	(< 20)
1,2,4-Trimethylbenzene	30	31.9	106	30	33.8	113	(75-130)	5.90	(< 20)
1,2-Dibromo-3-chloropropane	30	25.7	86	30	24.5	82	(50-130)	4.80	(< 20)
1,2-Dibromoethane	30	24.3	81	30	24.7	82	(80-120)	1.80	(< 20)
1,2-Dichlorobenzene	30	28.6	95	30	30.4	101	(70-120)	6.20	(< 20)
1,2-Dichloroethane	30	32.5	108	30	32.3	108	(70-130)	0.71	(< 20)
1,2-Dichloropropane	30	27.4	91	30	28.0	93	(75-125)	1.90	(< 20)
1,3,5-Trimethylbenzene	30	29.4	98	30	30.7	102	(75-130)	4.20	(< 20)
1,3-Dichlorobenzene	30	30.6	102	30	31.8	106	(75-125)	3.90	(< 20)
1,3-Dichloropropane	30	24.4	81	30	25.6	85	(75-125)	5.10	(< 20)
1,4-Dichlorobenzene	30	29.8	99	30	31.5	105	(75-125)	5.60	(< 20)
2,2-Dichloropropane	30	33.2	111	30	32.9	110	(70-135)	0.85	(< 20)
2-Butanone (MEK)	90	79.0	88	90	73.2	81	(30-150)	7.60	(< 20)
2-Chlorotoluene	30	31.7	106	30	33.2	111	(75-125)	4.50	(< 20)
2-Hexanone	90	73.9	82	90	78.4	87	(55-130)	6.00	(< 20)
4-Chlorotoluene	30	32.1	107	30	33.0	110	(75-130)	3.00	(< 20)
4-Isopropyltoluene	30	29.9	100	30	31.1	104	(75-130)	3.90	(< 20)
4-Methyl-2-pentanone (MIBK)	90	73.3	82	90	75.0	83	(60-135)	2.30	(< 20)
Benzene	30	31.2	104	30	31.2	104	(80-120)	0.06	(< 20)
Bromobenzene	30	29.0	97	30	29.7	99	(75-125)	2.20	(< 20)
Bromochloromethane	30	29.0	97	30	29.8	99	(65-130)	2.70	(< 20)
Bromodichloromethane	30	32.7	109	30	32.2	107	(75-120)	1.40	(< 20)
Bromoform	30	24.1	80	30	24.6	82	(70-130)	2.20	(< 20)
Bromomethane	30	33.0	110	30	37.3	124	(30-145)	12.10	(< 20)
Carbon disulfide	45	52.0	115	45	53.1	118	(35-160)	2.20	(< 20)

Print Date: 05/09/2014 11:23:27AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25283]
 Blank Spike Lab ID: 1183365
 Date Analyzed: 10/03/2013 10:22

Spike Duplicate ID: LCSD for HBN 1134756
 [VXX25283]
 Spike Duplicate Lab ID: 1183366
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008,
 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	32.8	109	30	31.7	106	(65-140)	3.50	(< 20)
Chlorobenzene	30	27.5	92	30	28.0	93	(80-120)	1.50	(< 20)
Chloroethane	30	30.3	101	30	32.6	109	(60-135)	7.20	(< 20)
Chloroform	30	32.2	107	30	32.1	107	(65-135)	0.25	(< 20)
Chloromethane	30	33.1	110	30	34.1	114	(40-125)	2.90	(< 20)
cis-1,2-Dichloroethene	30	30.7	102	30	31.8	106	(70-125)	3.60	(< 20)
cis-1,3-Dichloropropene	30	26.9	90	30	27.3	91	(70-130)	1.30	(< 20)
Dibromochloromethane	30	24.8	83	30	25.7	86	(60-135)	3.60	(< 20)
Dibromomethane	30	27.8	93	30	28.5	95	(75-125)	2.30	(< 20)
Dichlorodifluoromethane	30	37.7	126	30	40.2	134	(30-155)	6.30	(< 20)
Ethylbenzene	30	28.2	94	30	29.0	97	(75-125)	2.80	(< 20)
Hexachlorobutadiene	30	28.5	95	30	30.7	102	(50-140)	7.60	(< 20)
Isopropylbenzene (Cumene)	30	28.9	96	30	29.6	99	(75-125)	2.40	(< 20)
Methyl-t-butyl ether	45	42.8	95	45	42.4	94	(65-125)	0.85	(< 20)
Methylene chloride	30	28.6	95	30	29.0	97	(55-140)	1.70	(< 20)
n-Butylbenzene	30	30.3	101	30	32.1	107	(70-135)	5.70	(< 20)
n-Propylbenzene	30	30.2	101	30	31.8	106	(70-130)	5.10	(< 20)
Naphthalene	30	24.6	82	30	25.3	84	(55-140)	2.60	(< 20)
o-Xylene	30	31.4	105	30	32.4	108	(80-120)	3.00	(< 20)
P & M -Xylene	60	56.0	93	60	57.2	95	(75-130)	2.00	(< 20)
sec-Butylbenzene	30	30.3	101	30	31.1	104	(70-125)	2.30	(< 20)
Styrene	30	27.4	91	30	29.1	97	(65-135)	5.90	(< 20)
tert-Butylbenzene	30	29.5	98	30	30.9	103	(70-130)	4.70	(< 20)
Tetrachloroethene	30	28.2	94	30	27.1	90	(45-150)	3.90	(< 20)
Toluene	30	29.3	98	30	30.2	101	(75-120)	2.80	(< 20)
trans-1,2-Dichloroethene	30	32.4	108	30	32.2	107	(60-140)	0.65	(< 20)
trans-1,3-Dichloropropene	30	24.5	82	30	25.3	84	(55-140)	3.10	(< 20)
Trichloroethene	30	29.8	100	30	28.9	97	(70-125)	3.10	(< 20)
Trichlorofluoromethane	30	35.0	117	30	37.0	123	(60-145)	5.40	(< 20)
Vinyl chloride	30	35.6	119	30	37.6	125	(50-145)	5.40	(< 20)
Xylenes (total)	90	87.5	97	90	89.6	100	(80-120)	2.40	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		108	30		104	(70-120)	3.90	

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25283]
 Blank Spike Lab ID: 1183365
 Date Analyzed: 10/03/2013 10:22

Spike Duplicate ID: LCSD for HBN 1134756 [VXX25283]
 Spike Duplicate Lab ID: 1183366
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756001, 1134756002, 1134756003, 1134756004, 1134756006, 1134756007, 1134756008, 1134756009, 1134756010, 1134756011, 1134756012

Results by SW8260B

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
4-Bromofluorobenzene	30		102	30		103	(75-120)	1.30	
Toluene-d8	30		95	30		97	(85-120)	2.80	

Batch Information

Analytical Batch: VMS13793
 Analytical Method: SW8260B
 Instrument: HP 5890 Series II MS1 VJA
 Analyst: SCL

Prep Batch: VXX25283
 Prep Method: SW5030B
 Prep Date/Time: 10/03/2013 06:24
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1488379 [VXX/25317]
 Blank Lab ID: 1184803

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1134756005

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,2-Dichloroethane-D4	104	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	98.9	85-120		%

Batch Information

Analytical Batch: VMS13807
 Analytical Method: SW8260B
 Instrument: VPA 780/5975 GC/MS
 Analyst: HM
 Analytical Date/Time: 10/9/2013 9:54:00AM

Prep Batch: VXX25317
 Prep Method: SW5030B
 Prep Date/Time: 10/9/2013 12:00:00AM
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25317]
 Blank Spike Lab ID: 1184804
 Date Analyzed: 10/09/2013 10:27

Spike Duplicate ID: LCSD for HBN 1134756
 [VXX25317]
 Spike Duplicate Lab ID: 1184805
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756005

Results by SW8260B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,2-Dichlorobenzene	30	31.8	106	30	34.0	113	(70-120)	6.70	(< 20)
1,2-Dichloroethane	30	30.0	100	30	31.9	106	(70-130)	6.10	(< 20)
1,3-Dichlorobenzene	30	32.6	109	30	34.9	116	(75-125)	6.70	(< 20)
1,4-Dichlorobenzene	30	33.1	110	30	35.1	117	(75-125)	6.00	(< 20)
Benzene	30	30.6	102	30	33.2	111	(80-120)	8.00	(< 20)
Chlorobenzene	30	30.8	103	30	32.9	110	(80-120)	6.40	(< 20)
Ethylbenzene	30	27.8	93	30	29.9	100	(75-125)	7.30	(< 20)
o-Xylene	30	28.8	96	30	30.6	102	(80-120)	6.20	(< 20)
P & M -Xylene	60	56.1	93	60	59.9	100	(75-130)	6.70	(< 20)
Toluene	30	30.6	102	30	32.9	110	(75-120)	7.50	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		96	30		95	(70-120)	0.35	
4-Bromofluorobenzene	30		99	30		100	(75-120)	1.00	
Toluene-d8	30		100	30		100	(85-120)	0.30	

Batch Information

Analytical Batch: **VMS13807**
 Analytical Method: **SW8260B**
 Instrument: **VPA 780/5975 GC/MS**
 Analyst: **HM**

Prep Batch: **VXX25317**
 Prep Method: **SW5030B**
 Prep Date/Time: **10/09/2013 00:00**
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1488387 [VXX/25319]

Blank Lab ID: 1184861

QC for Samples:

1134756007, 1134756008

Matrix: Water (Surface, Eff., Ground)

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Ethylbenzene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Surrogates				
1,2-Dichloroethane-D4	108	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	98.9	85-120		%

Batch Information

Analytical Batch: VMS13808
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: HM
Analytical Date/Time: 10/9/2013 8:13:00PM

Prep Batch: VXX25319
Prep Method: SW5030B
Prep Date/Time: 10/9/2013 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/09/2014 11:23:31AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25319]
 Blank Spike Lab ID: 1184862
 Date Analyzed: 10/09/2013 20:29

Spike Duplicate ID: LCSD for HBN 1134756 [VXX25319]
 Spike Duplicate Lab ID: 1184863
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756007, 1134756008

Results by SW8260B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ethylbenzene	30	29.4	98	30	27.8	93	(75-125)	5.50	(< 20)
P & M -Xylene	60	58.3	97	60	55.7	93	(75-130)	4.50	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		98	30		98	(70-120)	0.72	
4-Bromofluorobenzene	30		98	30		100	(75-120)	2.00	
Toluene-d8	30		101	30		100	(85-120)	1.40	

Batch Information

Analytical Batch: **VMS13808**
 Analytical Method: **SW8260B**
 Instrument: **VPA 780/5975 GC/MS**
 Analyst: **HM**

Prep Batch: **VXX25319**
 Prep Method: **SW5030B**
 Prep Date/Time: **10/09/2013 00:00**
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1488413 [VXX/25321]
 Blank Lab ID: 1185005

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1134756003

Results by SW8260B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Surrogates				
1,2-Dichloroethane-D4	108	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	97.9	85-120		%

Batch Information

Analytical Batch: VMS13809
 Analytical Method: SW8260B
 Instrument: VPA 780/5975 GC/MS
 Analyst: HM
 Analytical Date/Time: 10/10/2013 7:34:00AM

Prep Batch: VXX25321
 Prep Method: SW5030B
 Prep Date/Time: 10/10/2013 12:00:00AM
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [VXX25321]
 Blank Spike Lab ID: 1185006
 Date Analyzed: 10/10/2013 07:50

Spike Duplicate ID: LCSD for HBN 1134756 [VXX25321]
 Spike Duplicate Lab ID: 1185007
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756003

Results by SW8260B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	31.5	105	30	31.3	104	(80-120)	0.92	(< 20)
Ethylbenzene	30	28.6	95	30	28.6	95	(75-125)	0.07	(< 20)
P & M -Xylene	60	57.1	95	60	57.4	96	(75-130)	0.42	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		99	30		98	(70-120)	0.98	
4-Bromofluorobenzene	30		99	30		99	(75-120)	0.54	
Toluene-d8	30		99	30		100	(85-120)	0.93	

Batch Information

Analytical Batch: VMS13809
 Analytical Method: SW8260B
 Instrument: VPA 780/5975 GC/MS
 Analyst: HM

Prep Batch: VXX25321
 Prep Method: SW5030B
 Prep Date/Time: 10/10/2013 00:00
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1486517 [XXX/30035]
Blank Lab ID: 1181720

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1134756009

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane	81.7	60-120		%

Batch Information

Analytical Batch: XFC11100
Analytical Method: AK102
Instrument: HP 7890A FID SV E R
Analyst: EAB
Analytical Date/Time: 9/30/2013 4:21:00PM

Prep Batch: XXX30035
Prep Method: SW3520C
Prep Date/Time: 9/27/2013 6:00:00PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [XXX30035]
 Blank Spike Lab ID: 1181721
 Date Analyzed: 09/30/2013 16:00

Spike Duplicate ID: LCSD for HBN 1134756
 [XXX30035]
 Spike Duplicate Lab ID: 1181722
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756009

Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	19.4	97	20	19.4	97	(75-125)	0.02	(< 20)
Surrogates									
5a Androstane	0.4		91	0.4		92	(60-120)	1.60	

Batch Information

Analytical Batch: **XFC11100**
 Analytical Method: **AK102**
 Instrument: **HP 7890A FID SV E R**
 Analyst: **EAB**

Prep Batch: **XXX30035**
 Prep Method: **SW3520C**
 Prep Date/Time: **09/27/2013 18:00**
 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Method Blank

Blank ID: MB for HBN 1486762 [XXX/30047]

Blank Lab ID: 1181861

QC for Samples:

1134756010, 1134756011

Matrix: Water (Surface, Eff., Ground)

Results by 8270D SIMS (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0250U	0.0500	0.0150	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0250U	0.0500	0.0150	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0344J	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Fluorobiphenyl	68.2	50-110		%
Terphenyl-d14	90.5	50-135		%

Batch Information

Analytical Batch: XMS7635
 Analytical Method: 8270D SIMS (PAH)
 Instrument: HP 6890/5973 MS SVQA
 Analyst: RTS
 Analytical Date/Time: 9/30/2013 2:47:00AM

Prep Batch: XXX30047
 Prep Method: SW3520C
 Prep Date/Time: 9/29/2013 8:50:00AM
 Prep Initial Wt./Vol.: 1000 mL
 Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [XXX30047]
 Blank Spike Lab ID: 1181862
 Date Analyzed: 09/30/2013 03:02

Spike Duplicate ID: LCSD for HBN 1134756
 [XXX30047]
 Spike Duplicate Lab ID: 1181863
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756010, 1134756011

Results by 8270D SIMS (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	0.5	0.344	69	0.5	0.364	73	(47-107)	5.60	(< 30)
2-Methylnaphthalene	0.5	0.332	66	0.5	0.337	68	(45-105)	1.70	(< 30)
Acenaphthene	0.5	0.321	64	0.5	0.334	67	(45-110)	4.00	(< 30)
Acenaphthylene	0.5	0.339	68	0.5	0.342	68	(50-105)	0.91	(< 30)
Anthracene	0.5	0.385	77	0.5	0.360	72	(55-110)	6.70	(< 30)
Benzo(a)Anthracene	0.5	0.393	79	0.5	0.389	78	(55-110)	0.98	(< 30)
Benzo[a]pyrene	0.5	0.371	74	0.5	0.379	76	(55-110)	2.20	(< 30)
Benzo[b]Fluoranthene	0.5	0.368	74	0.5	0.377	75	(45-120)	2.40	(< 30)
Benzo[g,h,i]perylene	0.5	0.373	75	0.5	0.368	74	(40-125)	1.40	(< 30)
Benzo[k]fluoranthene	0.5	0.404	81	0.5	0.408	82	(45-125)	0.98	(< 30)
Chrysene	0.5	0.426	85	0.5	0.445	89	(55-110)	4.50	(< 30)
Dibenzo[a,h]anthracene	0.5	0.374	75	0.5	0.380	76	(40-125)	1.40	(< 30)
Fluoranthene	0.5	0.422	84	0.5	0.431	86	(55-115)	2.20	(< 30)
Fluorene	0.5	0.345	69	0.5	0.353	71	(50-110)	2.10	(< 30)
Indeno[1,2,3-c,d] pyrene	0.5	0.376	75	0.5	0.383	77	(45-125)	1.90	(< 30)
Naphthalene	0.5	0.355	71	0.5	0.350	70	(40-100)	1.30	(< 30)
Phenanthrene	0.5	0.355	71	0.5	0.332	66	(50-115)	6.60	(< 30)
Pyrene	0.5	0.402	81	0.5	0.410	82	(50-130)	1.90	(< 30)
Surrogates									
2-Fluorobiphenyl	0.5		68	0.5		68	(50-110)	0.23	
Terphenyl-d14	0.5		83	0.5		83	(50-135)	0.52	

Batch Information

Analytical Batch: XMS7635
 Analytical Method: 8270D SIMS (PAH)
 Instrument: HP 6890/5973 MS SVQA
 Analyst: RTS

Prep Batch: XXX30047
 Prep Method: SW3520C
 Prep Date/Time: 09/29/2013 08:50
 Spike Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL

Method Blank

Blank ID: MB for HBN 1487380 [XXX/30068]
Blank Lab ID: 1182698

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1134756001, 1134756002, 1134756003, 1134756004, 1134756005, 1134756006, 1134756007, 1134756008

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane	82.9	60-120		%

Batch Information

Analytical Batch: XFC11106
Analytical Method: AK102
Instrument: HP 7890A FID SV E R
Analyst: EAB
Analytical Date/Time: 10/4/2013 12:06:00AM

Prep Batch: XXX30068
Prep Method: SW3520C
Prep Date/Time: 10/2/2013 9:50:00AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1134756 [XXX30068]
 Blank Spike Lab ID: 1182699
 Date Analyzed: 10/04/2013 00:26

Spike Duplicate ID: LCSD for HBN 1134756 [XXX30068]
 Spike Duplicate Lab ID: 1182700
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1134756001, 1134756002, 1134756003, 1134756004, 1134756005, 1134756006, 1134756007, 1134756008

Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	5	4.63	93	5	4.43	89	(75-125)	4.40	(< 20)
Surrogates									
5a Androstane	0.1		82	0.1		76	(60-120)	8.00	

Batch Information

Analytical Batch: **XFC11106**
 Analytical Method: **AK102**
 Instrument: **HP 7890A FID SV E R**
 Analyst: **EAB**

Prep Batch: **XXX30068**
 Prep Method: **SW3520C**
 Prep Date/Time: **10/02/2013 09:50**
 Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

ANALYTICAL REPORT

Job Number: 280-47365-1
Job Description: SGS AK - 1134756

For:
SGS North America, Inc
200 W. Potter Drive
Anchorage, AK 99518
Attention: Mr. Forest Taylor



Approved for release.
Betsy A Sara
Project Manager II
5/9/2014 12:28 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
05/09/2014
Revision: 1

cc: Ms. Julie Shumway

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
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CASE NARRATIVE

Client: SGS North America, Inc

Project: SGS AK - 1134756

Report Number: 280-47365-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

The samples were received on 10/02/2013; the samples arrived in good condition and on ice. The temperature of the cooler at receipt was 2.5 C.

The sample TB EBD arrived in hydrochloric acid preserved VOA vials. All other samples were unpreserved. The client was notified on 10/3/2013. The client instructed the laboratory to analyze all samples.

Holding Times

All holding times were met.

Method Blanks

All Method Blank recoveries were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The Method 8011 MS/MSD performed on a sample from another client exhibited a surrogate recovery of 1,2-Dibromopropane outside control limits. Because the corresponding Matrix Spike and Matrix Spike Duplicate target compound recoveries, Laboratory Control Sample, and Method Blank sample were within control limits, this anomaly is considered to be due to matrix interference and no corrective action was taken.

All other MS and MSD recoveries were within established control limits.

Organics

Per information from the client, the samples in this submission were not from a chlorinated source, and therefore sodium thiosulfate preservation was unnecessary.

Report Revision

This submission was revised to modify the preservation information in this case narrative per the client's request.

EXECUTIVE SUMMARY - Detections

Client: SGS North America, Inc

Job Number: 280-47365-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
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No Detections

METHOD SUMMARY

Client: SGS North America, Inc

Job Number: 280-47365-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
EDB, DBCP, and 1,2,3-TCP (GC)	TAL DEN	SW846 8011	
Microextraction	TAL DEN		SW846 8011

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: SGS North America, Inc

Job Number: 280-47365-1

Method	Analyst	Analyst ID
SW846 8011	Byl, Amelia M	AMB1
SW846 8011	Smith, Matthew P	MPS

SAMPLE SUMMARY

Client: SGS North America, Inc

Job Number: 280-47365-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-47365-1	DFSPA-MW2-R	Water	09/25/2013 1557	10/02/2013 1000
280-47365-2	DFSPA-MW2-RD	Water	09/25/2013 1617	10/02/2013 1000
280-47365-3	DFSPA-MW15-R	Water	09/26/2013 1735	10/02/2013 1000
280-47365-4	DFSPA-MW22	Water	09/26/2013 1146	10/02/2013 1000
280-47365-5	DFSPA-MW23	Water	09/26/2013 1715	10/02/2013 1000
280-47365-6	DFSPA-MW25A	Water	09/26/2013 1533	10/02/2013 1000
280-47365-7	DFSPA-MW25B	Water	09/26/2013 1350	10/02/2013 1000
280-47365-8	DFSPA-MW25C	Water	09/26/2013 1245	10/02/2013 1000
280-47365-9	DFSPA-MW4-R	Water	09/26/2013 0955	10/02/2013 1000
280-47365-10	TB EDB	Water	09/25/2013 1500	10/02/2013 1000

SAMPLE RESULTS

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW2-R

Lab Sample ID: 280-47365-1

Date Sampled: 09/25/2013 1557

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194443	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194309	Initial Weight/Volume:	34.6 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/04/2013 0640			Injection Volume:	3 uL
Prep Date:	10/03/2013 1547			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0037	0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	101		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW2-RD

Lab Sample ID: 280-47365-2

Date Sampled: 09/25/2013 1617

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194443	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194309	Initial Weight/Volume:	34.1 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/04/2013 0700			Injection Volume:	3 uL
Prep Date:	10/03/2013 1547			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	97		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW15-R

Lab Sample ID: 280-47365-3

Date Sampled: 09/26/2013 1735

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.1 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0712			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	121		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW22

Lab Sample ID: 280-47365-4

Date Sampled: 09/26/2013 1146

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.1 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0733			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	105		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW23

Lab Sample ID: 280-47365-5

Date Sampled: 09/26/2013 1715

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.1 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0753			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	111		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW25A

Lab Sample ID: 280-47365-6

Date Sampled: 09/26/2013 1533

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.1 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0814			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	127		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW25B

Lab Sample ID: 280-47365-7

Date Sampled: 09/26/2013 1350

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.6 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0835			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0037	0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	114		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW25C

Lab Sample ID: 280-47365-8

Date Sampled: 09/26/2013 1245

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	34.4 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0855			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	111		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: DFSPA-MW4-R

Lab Sample ID: 280-47365-9

Date Sampled: 09/26/2013 0955

Client Matrix: Water

Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194823	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194813	Initial Weight/Volume:	33.7 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/08/2013 0937			Injection Volume:	3 uL
Prep Date:	10/07/2013 1805			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	102		70 - 130

Analytical Data

Client: SGS North America, Inc

Job Number: 280-47365-1

Client Sample ID: TB EDB

Lab Sample ID: 280-47365-10
Client Matrix: Water

Date Sampled: 09/25/2013 1500
Date Received: 10/02/2013 1000

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Analysis Method:	8011	Analysis Batch:	280-194443	Instrument ID:	SGC_E
Prep Method:	8011	Prep Batch:	280-194309	Initial Weight/Volume:	34.4 mL
Dilution:	1.0			Final Weight/Volume:	35 mL
Analysis Date:	10/04/2013 0720			Injection Volume:	3 uL
Prep Date:	10/03/2013 1547			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.0038	0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dibromopropane	94		70 - 130

DATA REPORTING QUALIFIERS

Client: SGS North America, Inc

Job Number: 280-47365-1

Lab Section	Qualifier	Description
GC Semi VOA	X	Surrogate is outside control limits

QUALITY CONTROL RESULTS

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-194309					
LCS 280-194309/3-A	Lab Control Sample	T	Water	8011	
LCSD 280-194309/4-A	Lab Control Sample Duplicate	T	Water	8011	
MB 280-194309/2-A	Method Blank	T	Water	8011	
280-47306-H-1-A MS	Matrix Spike	T	Water	8011	
280-47306-I-1-A MSD	Matrix Spike Duplicate	T	Water	8011	
280-47365-1	DFSPA-MW2-R	T	Water	8011	
280-47365-2	DFSPA-MW2-RD	T	Water	8011	
280-47365-10	TB EDB	T	Water	8011	
Analysis Batch:280-194443					
LCS 280-194309/3-A	Lab Control Sample	T	Water	8011	280-194309
LCSD 280-194309/4-A	Lab Control Sample Duplicate	T	Water	8011	280-194309
MB 280-194309/2-A	Method Blank	T	Water	8011	280-194309
280-47306-H-1-A MS	Matrix Spike	T	Water	8011	280-194309
280-47306-I-1-A MSD	Matrix Spike Duplicate	T	Water	8011	280-194309
280-47365-1	DFSPA-MW2-R	T	Water	8011	280-194309
280-47365-2	DFSPA-MW2-RD	T	Water	8011	280-194309
280-47365-10	TB EDB	T	Water	8011	280-194309
Prep Batch: 280-194813					
LCS 280-194813/2-A	Lab Control Sample	T	Water	8011	
LCSD 280-194813/3-A	Lab Control Sample Duplicate	T	Water	8011	
MB 280-194813/5-A	Method Blank	T	Water	8011	
280-47365-3	DFSPA-MW15-R	T	Water	8011	
280-47365-4	DFSPA-MW22	T	Water	8011	
280-47365-5	DFSPA-MW23	T	Water	8011	
280-47365-6	DFSPA-MW25A	T	Water	8011	
280-47365-7	DFSPA-MW25B	T	Water	8011	
280-47365-8	DFSPA-MW25C	T	Water	8011	
280-47365-9	DFSPA-MW4-R	T	Water	8011	
280-47482-B-1-A MS	Matrix Spike	T	Water	8011	
280-47482-G-1-A MSD	Matrix Spike Duplicate	T	Water	8011	

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:280-194823					
LCS 280-194813/2-A	Lab Control Sample	T	Water	8011	280-194813
LCSD 280-194813/3-A	Lab Control Sample Duplicate	T	Water	8011	280-194813
MB 280-194813/5-A	Method Blank	T	Water	8011	280-194813
280-47365-3	DFSPA-MW15-R	T	Water	8011	280-194813
280-47365-4	DFSPA-MW22	T	Water	8011	280-194813
280-47365-5	DFSPA-MW23	T	Water	8011	280-194813
280-47365-6	DFSPA-MW25A	T	Water	8011	280-194813
280-47365-7	DFSPA-MW25B	T	Water	8011	280-194813
280-47365-8	DFSPA-MW25C	T	Water	8011	280-194813
280-47365-9	DFSPA-MW4-R	T	Water	8011	280-194813
280-47482-B-1-A MS	Matrix Spike	T	Water	8011	280-194813
280-47482-G-1-A MSD	Matrix Spike Duplicate	T	Water	8011	280-194813

Report Basis

T = Total

Client: SGS North America, Inc

Job Number: 280-47365-1

Surrogate Recovery Report

8011 EDB, DBCP, and 1,2,3-TCP (GC)

Client Matrix: Water

Lab Sample ID	Client Sample ID	12DBP1 %Rec
280-47365-1	DFSPA-MW2-R	101
280-47365-2	DFSPA-MW2-RD	97
280-47365-3	DFSPA-MW15-R	121
280-47365-4	DFSPA-MW22	105
280-47365-5	DFSPA-MW23	111
280-47365-6	DFSPA-MW25A	127
280-47365-7	DFSPA-MW25B	114
280-47365-8	DFSPA-MW25C	111
280-47365-9	DFSPA-MW4-R	102
280-47365-10	TB EDB	94
MB 280-194309/2-A		107
MB 280-194813/5-A		106
LCS 280-194309/3-A		109
LCS 280-194813/2-A		97
LCSD 280-194309/4-A		104
LCSD 280-194813/3-A		98
280-47306-H-1-A MS		144X
280-47482-B-1-A MS		92
280-47306-I-1-A MSD		122
280-47482-G-1-A MSD		104

Surrogate	Acceptance Limits
12DBP = 1,2-Dibromopropane	70-130

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

Method Blank - Batch: 280-194309

**Method: 8011
Preparation: 8011**

Lab Sample ID: MB 280-194309/2-A
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/03/2013 2255
Prep Date: 10/03/2013 1547
Leach Date: N/A

Analysis Batch: 280-194443
Prep Batch: 280-194309
Leach Batch: N/A
Units: ug/L

Instrument ID: SGC_E
Lab File ID: 012F1201.D
Initial Weight/Volume: 35 mL
Final Weight/Volume: 35 mL
Injection Volume: 3 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
1,2-Dibromoethane	ND		0.0037	0.020
Surrogate	% Rec		Acceptance Limits	
1,2-Dibromopropane	107		70 - 130	

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-194309**

**Method: 8011
Preparation: 8011**

LCS Lab Sample ID: LCS 280-194309/3-A
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/03/2013 2315
Prep Date: 10/03/2013 1547
Leach Date: N/A

Analysis Batch: 280-194443
Prep Batch: 280-194309
Leach Batch: N/A
Units: ug/L

Instrument ID: SGC_E
Lab File ID: 013F1301.D
Initial Weight/Volume: 35 mL
Final Weight/Volume: 35 mL
Injection Volume: 3 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-194309/4-A
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/03/2013 2336
Prep Date: 10/03/2013 1547
Leach Date: N/A

Analysis Batch: 280-194443
Prep Batch: 280-194309
Leach Batch: N/A
Units: ug/L

Instrument ID: SGC_E
Lab File ID: 014F1401.D
Initial Weight/Volume: 35 mL
Final Weight/Volume: 35 mL
Injection Volume: 3 uL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,2-Dibromoethane	103	100	70 - 130	3	10		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
1,2-Dibromopropane	109		104	70 - 130			

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-194309**

**Method: 8011
Preparation: 8011**

MS Lab Sample ID: 280-47306-H-1-A MS
Client Matrix: Water
Dilution: 10
Analysis Date: 10/04/2013 0258
Prep Date: 10/03/2013 1547
Leach Date: N/A

Analysis Batch: 280-194443
Prep Batch: 280-194309
Leach Batch: N/A

Instrument ID: SGC_E
Lab File ID: 024F2401.D
Initial Weight/Volume: 34.3 mL
Final Weight/Volume: 35 mL
Injection Volume: 3 uL
Column ID: PRIMARY

MSD Lab Sample ID: 280-47306-I-1-A MSD
Client Matrix: Water
Dilution: 10
Analysis Date: 10/04/2013 0318
Prep Date: 10/03/2013 1547
Leach Date: N/A

Analysis Batch: 280-194443
Prep Batch: 280-194309
Leach Batch: N/A

Instrument ID: SGC_E
Lab File ID: 025F2501.D
Initial Weight/Volume: 34.6 mL
Final Weight/Volume: 35 mL
Injection Volume: 3 uL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,2-Dibromoethane	117	89	70 - 130	8	10		
Surrogate		MS % Rec				Acceptance Limits	
1,2-Dibromopropane		144	X	122		70 - 130	

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

Method Blank - Batch: 280-194813

**Method: 8011
Preparation: 8011**

Lab Sample ID: MB 280-194813/5-A	Analysis Batch: 280-194823	Instrument ID: SGC_E
Client Matrix: Water	Prep Batch: 280-194813	Lab File ID: 1007E030.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 35 mL
Analysis Date: 10/08/2013 0307	Units: ug/L	Final Weight/Volume: 35 mL
Prep Date: 10/07/2013 1805		Injection Volume: 3 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
1,2-Dibromoethane	ND		0.0037	0.020
Surrogate	% Rec		Acceptance Limits	
1,2-Dibromopropane	106		70 - 130	

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-194813**

**Method: 8011
Preparation: 8011**

LCS Lab Sample ID: LCS 280-194813/2-A	Analysis Batch: 280-194823	Instrument ID: SGC_E
Client Matrix: Water	Prep Batch: 280-194813	Lab File ID: 1007E027.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 35 mL
Analysis Date: 10/08/2013 0206	Units: ug/L	Final Weight/Volume: 35 mL
Prep Date: 10/07/2013 1805		Injection Volume: 3 uL
Leach Date: N/A		Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-194813/3-A	Analysis Batch: 280-194823	Instrument ID: SGC_E
Client Matrix: Water	Prep Batch: 280-194813	Lab File ID: 1007E028.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 35 mL
Analysis Date: 10/08/2013 0227	Units: ug/L	Final Weight/Volume: 35 mL
Prep Date: 10/07/2013 1805		Injection Volume: 3 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,2-Dibromoethane	92	92	70 - 130	0	10		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
1,2-Dibromopropane	97	98		70 - 130			

Quality Control Results

Client: SGS North America, Inc

Job Number: 280-47365-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-194813**

**Method: 8011
Preparation: 8011**

MS Lab Sample ID: 280-47482-B-1-A MS	Analysis Batch: 280-194823	Instrument ID: SGC_E
Client Matrix: Water	Prep Batch: 280-194813	Lab File ID: 1007E036.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 34.6 mL
Analysis Date: 10/08/2013 0510		Final Weight/Volume: 35 mL
Prep Date: 10/07/2013 1805		Injection Volume: 3 uL
Leach Date: N/A		Column ID: PRIMARY

MSD Lab Sample ID: 280-47482-G-1-A MSD	Analysis Batch: 280-194823	Instrument ID: SGC_E
Client Matrix: Water	Prep Batch: 280-194813	Lab File ID: 1007E038.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 34.7 mL
Analysis Date: 10/08/2013 0550		Final Weight/Volume: 35 mL
Prep Date: 10/07/2013 1805		Injection Volume: 3 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,2-Dibromoethane	88	96	70 - 130	8	10		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
1,2-Dibromopropane		92	104			70 - 130	



280-47365 Chain of

SGS North America Inc. CHAIN OF CUSTODY RECORD

25 (R)
10/2/13 JO

- Locations Nationwide
- Alaska
 - Maryland
 - New Jersey
 - New York
 - North Carolina
 - Indiana
 - West Virginia
 - Kentucky
- www.us.sgs.com

1 CLIENT: SGS - AK		SGS Reference: TA CO		Page 1 of 1	
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments:	
PROJECT NAME: 1134756		PROJECT/ PWSID/ PERMIT#: Julie Shumway		E-MAIL: Julie.Shumway@sgs.com	
REPORTS TO: Julie Shumway		QUOTE #: 1134756		P.O. #:	
INVOICE TO:		DATE mm/dd/yy		TIME HH:MM	
RESERVED for lab use		SAMPLE IDENTIFICATION		MATRIX/ MATRIX	
DFSPA-MW2-R		09/25/13		1557	
DFSPA-MW2-RD		09/25/13		1617	
DFSPA-MW15-R		09/26/13		1735	
DFSPA-MW22		09/26/13		1146	
DFSPA-MW23		09/26/13		1715	
DFSPA-MW25A		09/26/13		1533	
DFSPA-MW25B		09/26/13		1350	
DFSPA-MW25C		09/26/13		1245	
DFSPA-MW4-R		09/26/13		955	
TB EDB		09/25/13		1500	
5 Relinquished By: (1) <i>Julie Shumway</i>		Date 10/01/13		Time 0735	
Relinquished By: (2)		Date		Time	
Relinquished By: (3)		Date		Time	
Relinquished By: (4)		Date		Time	
3 Presently Used:		TYPE		MS	
C O N T A I N E R S		C = COMP		MSD	
G = GRAB		Iluili		MS	
I = Incremental		Soils		MSD	
S = Soils		Soils		MSD	
3		GRAB		1134756001	
3		GRAB		1134756002	
3		GRAB		1134756003	
3		GRAB		1134756004	
3		GRAB		1134756005	
3		GRAB		1134756006	
3		GRAB		1134756007	
3		GRAB		1134756008	
3		GRAB		1134756009	
3		GRAB		1134756013	
4 DOD Project? YES NO		Cooler ID:		Data Deliverable Requirements:	
Requested Turnaround Time and/or Special Instructions:		Temp Blank °C: or Ambient []		Chain of Custody Seal: (Circle)	
Requested Turnaround Time and/or Special Instructions:		Temp Blank °C: or Ambient []		INTACT BROKEN ABSENT	
Requested Turnaround Time and/or Special Instructions:		Temp Blank °C: or Ambient []		(See attached Sample Receipt Form)	

http://www.sgs.com/terms_and_conditions.htm

[] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

Login Sample Receipt Checklist

Client: SGS North America, Inc

Job Number: 280-47365-1

Login Number: 47365
List Number: 1
Creator: Roman, Alex F

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Laboratory Data Review Checklist

Completed by:	Kristi McLean		
Title:	Environmental Specialist	Date:	Apr 30, 2014
CS Report Name:	POA-DFSPA (2013 Annual Sampling Report)	Report Date:	Oct 14, 2013
Consultant Firm:	R&M Consultants, Inc.		
Laboratory Name:	SGS North America, Inc.	Laboratory Report Number:	1134756
ADEC File Number:	2102.38.021	ADEC RecKey Number:	198821X111901

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No NA (Please explain.) Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No NA (Please explain) Comments:

All laboratory analyses were conducted by SGS (Anchorage) and TestAmerica of Arvada, Colorado.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No NA (Please explain) Comments:

b. Correct analyses requested?

Yes No NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes No NA (Please explain) Comments:

Cooler 1 = 3.1 C; Cooler 2 = 4.7 C; Cooler 3 (samples shipped to TestAmerica) = 2.5 C

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No NA (Please explain) Comments:

HCl was added to DRO/RRO sample collected from MW4R to bring pH into compliance.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No NA (Please explain) Comments:

Refer to sample receipt form (page 72 and 75 of analytical report). All samples were received in good condition.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No NA (Please explain) Comments:

There were no discrepancies.

e. Data quality or usability affected? (Please explain)

Comments:

Data quality or usability was not affected; samples were in compliance prior to analysis.

4. Case Narrative

a. Present and understandable?

Yes No NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No NA (Please explain) Comments:

QC failures were identified but did not affect data quality or usability

c. Were all corrective actions documented?

Yes No NA (Please explain) Comments:

No corrective actions were necessary

d. What is the effect on data quality/usability according to the case narrative?

Comments:

QC failures resulted in results that were biased high. Data was not affected as samples with QC failures were below cleanup levels.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No NA (Please explain)

Comments:

b. All applicable holding times met?

Yes No NA (Please explain)

Comments:

c. All soils reported on a dry weight basis?

Yes No NA (Please explain)

Comments:

Soil analysis was not performed.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

NA

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No NA (Please explain)

Comments:

ii. All method blank results less than PQL?

Yes No NA (Please explain)

Comments:

iii. If above PQL, what samples are affected?

Comments:

NA

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

No samples were affected or flagged

v. Data quality or usability affected? (Please explain) Comments:

NA

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No NA (Please explain) Comments:

No metals/inorganics analysis was performed

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

NA; All %R and RPD were within acceptable limits

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

Samples were not affected.

vii. Data quality or usability affected? (Please explain) Comments:

NA: Data quality/usability was not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No NA (Please explain) Comments:

BFB surrogate recoveries biased high (AK101) for MW25A, MW25B, and MW25C.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

There are no data flags

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

Biased high due to matrix interference. Data or usability were not affected; results below cleanup levels.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes No NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes No NA (Please explain.) Comments:

Not noted on COC but referenced on Sample Receipt Form (page 68 of SGS report). Trip blanks were present in the only cooler containing VOA samples.

iii. All results less than PQL?

Yes No NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

NA

v. Data quality or usability affected? (Please explain.)

Comments:

NA: Data quality/usability was not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No NA (Please explain)

Comments:

ii. Submitted blind to lab?

Yes No NA (Please explain.)

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$RPD (\%) = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain)

Comments:

Both duplicate and original samples were all non-detect for analytes.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Yes No NA (Please explain)

Comments:

Data quality/usability was not affected; duplicate was in exact agreement with original sample.

f. Decontamination or Equipment Blank (if applicable)

Yes No NA (Please explain)

Comments:

Most sampling equipment was disposable. A decontamination blank was not taken for the alconox wash water.

i. All results less than PQL?

Yes No NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? (Please explain.)

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No NA (Please explain)

Comments:

No data flags/qualifiers were identified in the laboratory report.

Reset Form

ATTACHMENT D

FIELD NOTES AND SAMPLE LOGS

"Rite in the Rain"
ALL-WEATHER WRITING PAPER



Name Kristi Mclean
RiM Consultants
Address 9101 Vanguard Drive
Anchorage 99507
Phone 907.522.1707

Project POA - DFSP - A
well sampling / decommissioning
drum characterization

2011, 2012, 2013

"Rite in the Rain" - a unique all-weather writing surface created to shed water and to enhance the written image. Makes it possible to write sharp, legible field data in any kind of weather.

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J. L. DARLING CORPORATION
TACOMA, WA 98424-1017 USA
www.RiteintheRain.com

9/25/13

POA DFSPA GW Sampling

Weather: cloudy, light winds
light rain; temp ~ 45°-50°F

Sampling Method - Humane
pump w/ tetlon lined tubing

9/26/13

POA DFSPA continued

Weather: same as previous day
temps ~ 50°F / light rain

completed MW/Surface water
sampling @ approx 6:30P

*Refer to Monitoring Well
Sampling Logs for details *

MW2-R

MONITORING WELL
SAMPLING LOG

Page 1 of 10

DATE: 9/25/13

JOB NUMBER: 1771-0355

LOCATION: POA-DFSPA

TIME STARTED: 0315

TIME COMPLETED: 429

Purge start 3:25
3:50

SAMPLING DATA

Measuring Point Flush
Measuring Point Stickup —
Measuring Point Elevation 36.87

Depth to Water Below MP 2.25 Water Level Elevation 34.62
Depth of Well Below MP 13.4 Water Column in Well 11.15
Diameter of Casing 4" Gallons/FT 0.65275
Gallons in Well 7.3
Gallons Pumped Bailed ~22

FIELD DATA

Evaluation Method: GRO/DRO/VOC/EDB
Sampling Method: Submersible pump
Sample ID Number: DFSPA - MW 2-R
DFSPA - MW - 2RO (duplicate)

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

Sample 357 MW 2-R

Dupe @ 4:17 MW 2-RD

NO ORO2/NO SIBBN IN PURGE WATER

MONITORING WELL
SAMPLING LOG

MW4-R

Page 2 of 10

DATE: 9/25/13

JOB NUMBER: 1771.03.55

LOCATION: PDA - DFSPA

TIME STARTED: 12:45

TIME COMPLETED: 10:05a (9/26/13)

Purging start: 12:54
Stop 1:45

SAMPLING DATA

Measuring Point top of casing
Measuring Point Stickup 30"
Measuring Point Elevation 44.07

Depth to Water Below MP 3.91 Water Level Elevation ~~85~~ 40.66
Depth of Well Below MP 12.41 Water Column in Well ~~0.6~~ 8.5
Diameter of Casing 4" Gallons/FT 0.65275
Gallons in Well 5.5
Gallons Pumped Bailed purged dry
@ 9.5 gallons

FIELD DATA

Evaluation Method: GRO/DRO/VOL/EDB
Sampling Method: Submersible pump
Sample ID Number: DFSPA-MW4-R

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

NO ODOM / SHTBN IN
PURGE WATER

sampled 9:55 9/26/13
- allowed well to recharge

- WATER SLIGHTLY AERATED

MW15R

MONITORING WELL
SAMPLING LOG

Page 3 of 10

DATE: 9/26/13

JOB NUMBER: 1771-03.55

LOCATION: POA-DFSPA

TIME STARTED: 4:40

TIME COMPLETED: 5:46

Purge start 5:01
Purge stop 5:29

SAMPLING DATA

Measuring Point top of casing
Measuring Point Stickup 23.5"
Measuring Point Elevation 38.02

Depth to Water Below MP 2.17 Water Level Elevation 35.85
Depth of Well Below MP 11.09 Water Column in Well 8.92
Diameter of Casing 4" Gallons/FT 0.65275
Gallons Pumped Bailed 18 Gallons in Well 5.8

FIELD DATA

Evaluation Method: GRO/DRO/VOC/EDB
Sampling Method: Submersible pump
Sample ID Number: DFSPA MW-15R

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

5 STRONG JOINTS ^{heavy} IN PURCHASER

11-91 4

sample time 5:35 - Area around well cleaned & veg protected by plastic culvert

MW22

MONITORING WELL
SAMPLING LOG

Page 4 of 10

DATE: 9/26/13
LOCATION: POA DFSPA
TIME STARTED: 10:55
TIME COMPLETED: 12:10

JOB NUMBER: 1771.03.55

SAMPLING DATA

Measuring Point top of casing purge start 11:16
Measuring Point Stickup 40" stop 11:33
Measuring Point Elevation 84.98

Depth to Water Below MP 2.91 Water Level Elevation 82.07
Depth of Well Below MP 12.11 Water Column in Well ~~0.16319~~ 9.2
Diameter of Casing 2' Gallons/FT 0.16319
Gallons in Well 1.5
Gallons Pumped Bailed <5

FIELD DATA

Evaluation Method: DRO/GRO/VOC/ERB
Sampling Method: submersible pump
Sample ID Number: DFSPA-MW22

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

Sample time 11:46

No odor/shen noted in purge water

MONITORING WELL
SAMPLING LOG

MW 23

Page 5 of 10

DATE: 9/25/13

JOB NUMBER: 1771.03.55

LOCATION: POA-DFSPA

TIME STARTED: 2:10

TIME COMPLETED: 5:40 (allowed well to recharge)

purge start 2:41

purge stop 3:10

SAMPLING DATA

Measuring Point top of casing
Measuring Point Stickup 49"
Measuring Point Elevation 38.75'

Depth to Water Below MP 3.68 Water Level Elevation 35.07
Depth of Well Below MP 9.49 Water Column in Well 5.81
Diameter of Casing 2" Gallons/FT 0.16319
Gallons in Well 0.95
Gallons Pumped Bailed 383

FIELD DATA

Evaluation Method: DRO/GRO/VOL/EDB
Sampling Method: submersible pump
Sample ID Number: DFSPA-MW 23

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

sample 515

- NO odor/sheen in purge water
- turbid water
- standing water within well casing

25A

MONITORING WELL
SAMPLING LOG

Page 6 of 10

DATE: 9/26/13

JOB NUMBER: 1771.03.55

LOCATION: DFSPA POA

TIME STARTED: 2:15

TIME COMPLETED: 3:45

Purge start

SAMPLING DATA

Measuring Point top of well
Measuring Point Stickup 28"
Measuring Point Elevation 96.78

2:40
3:13
Purge stop

Depth to Water Below MP 42.41

Water Level Elevation 56.37

Depth of Well Below MP 50.29

Water Column in Well 7.88

Diameter of Casing 2"

Gallons/FT 0.16319

Gallons in Well 1.3

Gallons Pumped Bailed 5

FIELD DATA

Evaluation Method: *submersible pump*

Sampling Method: *DRD/BRO/VOC/EDB*

Sample ID Number: *DFSPA-MW 25A*

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

Strong odor/heavy sheen in purge water

11-91 4

Sample time 3:33

25B

MONITORING WELL
SAMPLING LOG

Page 7 of 10

DATE: 9/26/13

JOB NUMBER: 1771.03.55

LOCATION: POA OFSPA

TIME STARTED: 1:05

TIME COMPLETED: 2:10

SAMPLING DATA

Measuring Point top of casing
Measuring Point Stickup 31"
Measuring Point Elevation 93.69

Purge start 1:32
Purge stop 1:48

Depth to Water Below MP 38.92

Water Level Elevation 54.77

Depth of Well Below MP 47.69

Water Column in Well 8.77

Diameter of Casing 2"

Gallons/FT 0.16319

Gallons in Well 1.43

Gallons Pumped Bailed ~5

FIELD DATA

Evaluation Method: ORO/GRO/VOC/EOB

Sampling Method: submersible pump

Sample ID Number: DFSPA MW 2513

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

Sample 1:50

Strong odor/heavy sheen
in purge water

250

MONITORING WELL
SAMPLING LOG

Page 8 of 10

DATE: 9/26/13

JOB NUMBER: 1771.03.55

LOCATION: ^{POA} DFSPA

TIME STARTED: 12:15

TIME COMPLETED: 12:55

SAMPLING DATA

Measuring Point

top of casing

purge start 12:22

Measuring Point Stickup

27"

stop 12:34

Measuring Point Elevation

95.81

~~12:45~~

Depth to Water Below MP 39.36

Water Level Elevation 56.45

Depth of Well Below MP 43.30

Water Column in Well 3.94

Diameter of Casing 2"

Gallons/FT 0.16319

Gallons in Well .64

Gallons Pumped Bailed 2

FIELD DATA

Evaluation Method: DRO/6RO/EDB/VOL

Sampling Method: submersible pump

Sample ID Number: DFSPA-MW 25C

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375	2" = 0.16319	3" = 0.36717	4" = 0.65275
1-1/2" = 0.09179	2-1/2" = 0.25498	3-1/2" = 0.49977	6" = 1.46870

11-91 4

Sample time 12:45

• moderate odor /shem noted in purge water

MONITORING WELL
SAMPLING LOG

SS12

Page 10 of 10

DATE: 9/26/13

JOB NUMBER: 1771-0355

LOCATION: POA DFSPA

TIME STARTED: 6:00

TIME COMPLETED: 6:15

SAMPLING DATA

Sampled @ 6:11

Measuring Point

Measuring Point Stickup

Measuring Point Elevation

~~Depth to Water Below MP _____~~

~~Water Level Elevation _____~~

~~Depth of Well Below MP _____~~

~~Water Column in Well _____~~

~~Diameter of Casing _____~~

~~Gallons/FT _____~~

~~Gallons in Well _____~~

Gallons Pumped Bailed _____

FIELD DATA

Evaluation Method: BTEX/PAH

Sampling Method: surface water grab sample

Sample ID Number: DFSPA - SS12

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

No odor
moderate stream

Area cleared of vegetation - ditch exposed

MONITORING WELL
SAMPLING LOG

SS14

Page 9 of 10

DATE: 9/26/13

JOB NUMBER: 1771.03.55

LOCATION: POA OFSPA

TIME STARTED: 615

TIME COMPLETED: 025

SAMPLING DATA

Measuring Point
Measuring Point Stickup
Measuring Point Elevation

~~_____

_____~~

Sampled @ 6:21

~~Depth to Water Below MP _____ Water Level Elevation _____
Depth of Well Below MP _____ Water Column in Well _____
Diameter of Casing _____ Gallons/FT _____
Gallons in Well _____
Gallons Pumped Bailed _____~~

FIELD DATA

Evaluation Method: BTEX/PAH

Sampling Method: surface water grab sample

Sample ID Number: OFSPA-SS14

WELL CASING VOLUMES (GAL/FT)

1-1/4" = 0.06375 2" = 0.16319 3" = 0.36717 4" = 0.65275
1-1/2" = 0.09179 2-1/2" = 0.25498 3-1/2" = 0.49977 6" = 1.46870

11-91 4

light odor
moderate shear