

June 19, 2013

R&M No. 1771.02



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

RE: 2012 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) and 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. 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 2012 DFSP-A sampling activities, which were conducted on August 28-29, 2012. 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 (Figure 1). Water samples taken from the monitoring wells and surface locations were submitted to SGS North America, Inc. (SGS) for laboratory analyses on August 29, 2012.

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.

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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 (Table 1). The interpreted direction of groundwater flow is generally to the west and northwest (Figure 1).

MONITORING WELL SAMPLING AND OBSERVATIONS

In accordance with ADEC's recommendation on November 7, 2011, the 2012 groundwater monitoring event included sampling for ethylene dibromide (EDB) and 1,2-Dichloroethane (1,2-DCA) in addition to the other contaminants of concern. ADEC's *Draft Field Sampling Guidance* (May, 2010) requires these two contaminants be analyzed if leaded gasoline or aviation gasoline are product types that may have been released at a site. Sampling for EDB and 1,2-DCA was not included in either the 2003 or 2008 Long-Term Monitoring Plans. These constituents were not previously analyzed for in prior groundwater monitoring efforts and therefore could not be dismissed by ADEC as contaminants of concern at the site.

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 with deionized water. Water levels were compared with 2011 survey elevations and are presented in Table 1. No free product was encountered in the wells; however, a hydrocarbon sheen and odor was observed at MW15-R, MW25A, MW25B, and MW25C.

Each monitoring well was purged up to three well volumes – unless the well was bailed dry – utilizing a 36-inch long polyethylene bailer (diameters ranged depending on size of well). A new bailer 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 listed in Table 2 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 SGS, North Carolina)

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, and therefore no surface water was obtainable for sampling. 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 August 29, 2012. A light odor was detected at SS14 and a moderate sheen was noted at both locations.

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

Water samples were submitted to SGS on August 29, 2012. SGS is an Environmental Protection Agency (EPA) and ADEC approved laboratory. The analyte EDB was tested by SGS of Wilmington, North Carolina. Standard Chain-of-Custody procedures for laboratory samples were followed. The temperature blanks included in each of the three sample coolers registered at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ upon submittal to SGS. Laboratory analytical results were received on September 14, 2012 (Attachment C). Groundwater laboratory analytical results are presented in Table 2.

Laboratory analysis detected benzene above ADEC site-specific cleanup levels in groundwater from MW15-R at 0.321 mg/L. Other BTEX constituents were detected below cleanup levels in groundwater from MW4-R, MW15-R, MW25A, MW25B, and MW25C.

Detected levels of GRO were below the ADEC site-specific cleanup standard of 13.0 mg/L in groundwater collected from MW15-R, MW22, MW25A, MW25B, and MW25C. GRO was not detected in the remaining wells.

Detected levels of DRO were above the ADEC site-specific cleanup standard of 15.0 mg/L in groundwater collected from MW25A, MW25B, and MW25C (28.6 mg/L, 110 mg/L, and 67.4 mg/L, respectively). DRO was detected below cleanup levels in wells MW2-R, MW4-R, MW 15-R, MW22, and MW23.

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

Laboratory analysis of water from SS12 and SS14 detected TAH and TAqH below cleanup levels.

QUALITY ASSURANCE/ QUALITY CONTROL

Duplicate samples were obtained at a rate of one per day or one per ten samples. One duplicate groundwater sample was collected from MW22 on August 28, 2012 and submitted in the same manner as the regular samples; the duplicate sample was labeled DFSPA-MW22D. A duplicate surface water sample was collected at SS12 on August 29, 2012 and submitted in the same manner as the regular samples; the duplicate sample was labeled DFSPA-SS12D. Analytical results for contaminants were generally in good agreement between the normal and the duplicate groundwater samples. Analytical results between normal and duplicate surface water samples were in poor agreement. This difference is likely attributable to the variable nature of surface water grab samples and likely does not represent a laboratory analysis error.

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, MW25A, MW25B, and MW25C. Benzene levels continue to exceed cleanup levels in MW15-R at 0.321 mg/L. DRO levels in MW25A, MW25B, and MW25C are fluctuating at concentrations above cleanup levels.

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. However, analytical results from this year for SS12 and SS14 were below established cleanup levels. 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.

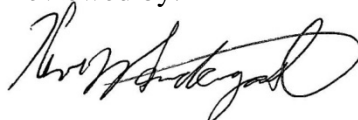
Sincerely,

R&M CONSULTANTS, INC.



Kristi M. McLean, LEED AP
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

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

ATTACHMENT A

TABLES

Groundwater Elevations	TABLE 1
Laboratory Analytical Results, Groundwater Samples, August 28-29, 2012	TABLE 2
Laboratory Analytical Results, Surface Water Samples, August 29, 2012	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	8/28/2012	36.87	3.57	33.30
MW4-R	8/28/2012	44.07	4.41	39.66
MW15-R	8/28/2012	38.02	3.23	34.79
MW22	8/28/2012	84.98	2.93	82.05
MW23	8/28/2012	38.75	3.75	35.00
MW25A	8/28/2012	96.78	44.11	52.67
MW25B	8/28/2012	93.69	41.81	51.88
MW25C	8/28/2012	95.81	41.12	54.69

⁽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
AUGUST 28-29, 2012

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	0.732	ND	ND
MW4-R	0.00325	ND	ND	ND	ND	3.43	ND	ND
MW15-R	0.321	ND	0.354	0.402	3.35	5.57	ND	ND
MW22	ND	ND	ND	ND	0.102	1.11	ND	ND
MW22D ⁽²⁾	ND	ND	ND	ND	0.108	1.63	ND	ND
MW23	ND	ND	ND	ND	ND	0.950	ND	ND
MW25A	0.00896	ND	0.0337	0.0513	1.32	28.6	ND	ND
MW25B	0.0175	ND	0.0952	0.116	1.89	110	ND	ND
MW25C	0.0277	0.00140	0.0785	0.252	1.84	67.4	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-22.

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

TABLE 3
LABORATORY ANALYTICAL RESULTS
SURFACE WATER SAMPLES
AUGUST 29, 2012

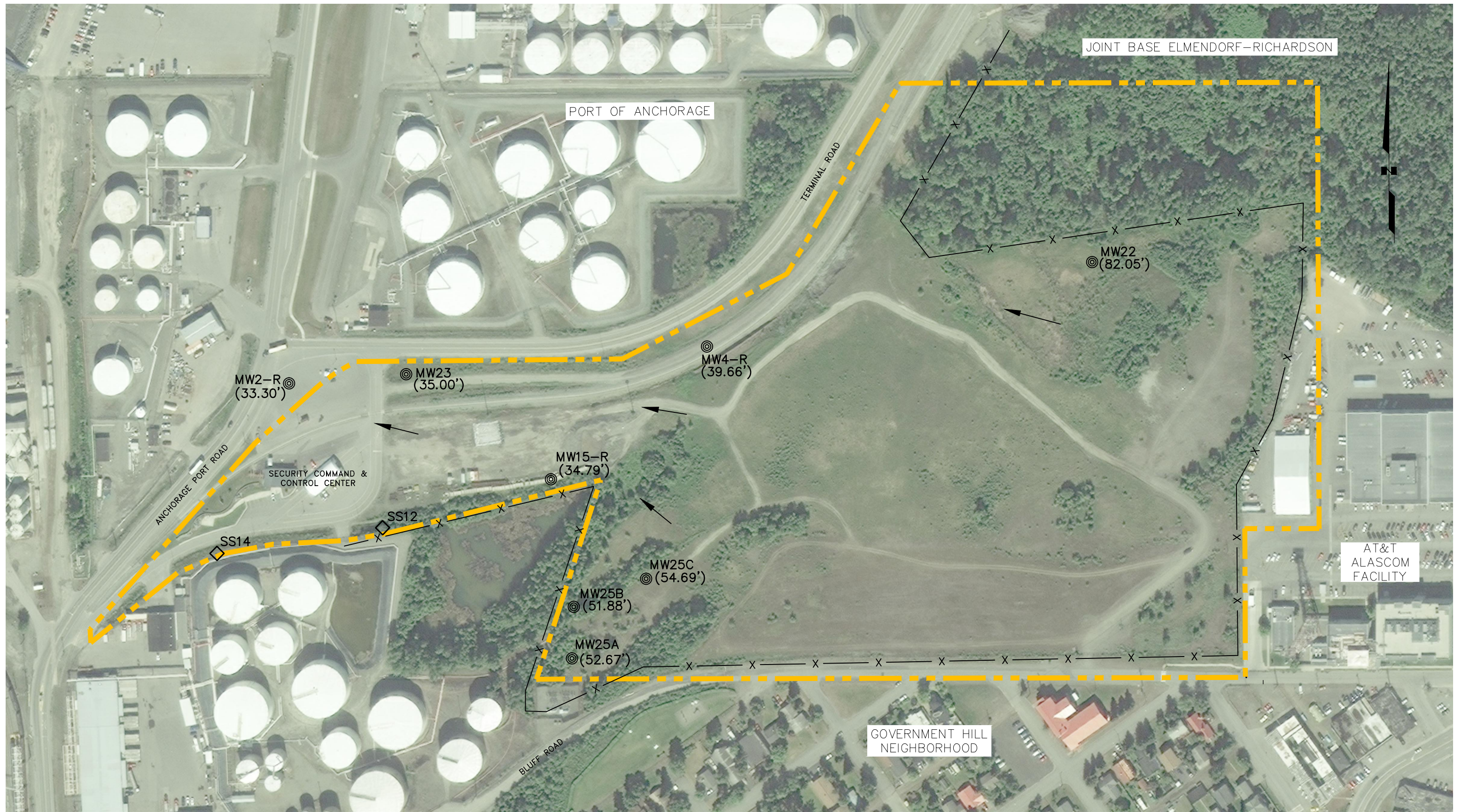
Surface Water Sample Site	TAH (mg/L)	PAH (mg/L)	TAqH (mg/L)
Cleanup Levels ⁽¹⁾	0.010	-	0.015
SS12	ND	0.0000698	0.0000698
SS12D ⁽²⁾	0.000600	0.000338	0.000938
SS14	0.00563	0.00121	0.00684

⁽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 3/4/2013 3:22 PM by Patrick Hewlett

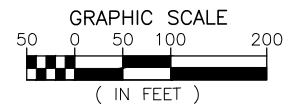
Z:\project\1771.02 MOA Port Of Anchorage 2011 Term - Contract Year 2\Earth\Task 55 - DFSP-A Groundwater Monitoring\ACAD\2012 Annual Sampling - FIG 1.dwg



- 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



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 1771.02.55 POA DFSP-A
Client: R & M Consultants Inc
SGS Work Order: 1124033

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Case Narrative

Customer: RNMCONP

R & M Consultants Inc

Project: 1124033

1771.02.55 POA DFSP-A

Refer to the sample receipt form for information on sample condition.

1124033001 PS

DFSPA-MW23

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - Unknown hydrocarbon with several peaks is present.

1124033002 PS

DFSPA-MW2R

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - Unknown hydrocarbon with several peaks is present.

1124033003 PS

DFSPA-MW22

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - Unknown hydrocarbon with several peaks is present.

1124033004 PS

DFSPA-MW22D

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - Unknown hydrocarbon with several peaks is present.

1124033005 PS

DFSPA-MW25C

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - The pattern is consistent with a weathered middle distillate.

1124033006 PS

DFSPA-MW25B

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - The pattern is consistent with a weathered middle distillate.

1124033007 PS

DFSPA-MW25A

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - The pattern is consistent with a weathered middle distillate.

1124033008 PS

DFSPA-MW15R

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

AK102 - The pattern is consistent with a weathered gasoline.

AK102 - The pattern is consistent with a weathered middle distillate.

1124033009 PS

DFSPA-MW4R

SW 8011 - EDB was analyzed by SGS of Wilmington, NC.

AK102 - The pattern is consistent with a weathered middle distillate.

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



Report of Manual Integrations

Print Date: 9/14/2012 2:16 pm

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Method</u>	<u>Analyte</u>	<u>Reason</u>
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Anthracene	RP
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Benzo(a)Anthracene	PNF
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Benzo[a]pyrene	PNF
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Benzo[b]Fluoranthene	PNF
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Benzo[k]fluoranthene	RP
1110927	CCV for HBN 1371500 [XMS/6937]	XMS6937	8270D SIMS (F	Chrysene	RP
1124033011	DFSPA-SS12	XMS6937	8270D SIMS (F	2-Methylnaphthalene	SP
1124033011	DFSPA-SS12	XMS6937	8270D SIMS (F	Naphthalene	SP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.



Laboratory Analytical Report

Client: **R & M Consultants Inc**
9101 Vanguard Dr
Anchorage, AK 99507

Attn: **Kevin Pendergast**
T: (907)646-9682 F:(907)522-3403
kpendergast@rmconsult.com

Project: **1771.02.55 POA DFSP-A**

Workorder No.: **1124033**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Steve Crupi

steven.crupi@sgs.com
Project Manager

Contents (Bookmarked in PDF):

- Cover Page
- Glossary
- Sample Summary Forms
- Case Narrative
- Sample Results Forms
- Batch Summary Forms (by method)
- Quality Control Summary Forms (by method)
- Chain of Custody/Sample Receipt Forms
- Attachments (if applicable)

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/ISO 17025 (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
- 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., 2xDL)
- 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
- RL Reporting Limit
- 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

Print Date: 9/14/2012 2:16 pm

Client Name: R & M Consultants Inc
Project Name: 1771.02.55 POA DFSP-A
Workorder No.: 1124033

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
8270 PAH SIM Semi-Vol GC/MS Liq/Liq ext.	8270D SIMS (PAH)
Diesel Range Organics (W)	AK102
Gasoline Range Organics (W)	AK101
Volatile Organic Compounds (W) FULL	SW8260B

Sample ID Cross Reference

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
1124033001	DFSPA-MW23
1124033002	DFSPA-MW2R
1124033003	DFSPA-MW22
1124033004	DFSPA-MW22D
1124033005	DFSPA-MW25C
1124033006	DFSPA-MW25B
1124033007	DFSPA-MW25A
1124033008	DFSPA-MW15R
1124033009	DFSPA-MW4R
1124033010	DFSPA-SS14
1124033011	DFSPA-SS12
1124033012	DFSPA-SS12D
1124033013	Unpreserved Trip Blank
1124033014	Trip Blank
1124033015	Trip Blank



Detectable Results Summary

Print Date: 9/14/2012 2:16 pm

Client Sample ID: **DFSPA-MW23**

SGS Ref. #: 1124033001

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels Department		
Diesel Range Organics	0.950	mg/L

Client Sample ID: **DFSPA-MW2R**

SGS Ref. #: 1124033002

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels Department		
Diesel Range Organics	0.732	mg/L

Client Sample ID: **DFSPA-MW22**

SGS Ref. #: 1124033003

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	0.102	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	1.11	mg/L

Client Sample ID: **DFSPA-MW22D**

SGS Ref. #: 1124033004

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	0.108	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	1.63	mg/L

Client Sample ID: **DFSPA-MW25C**

SGS Ref. #: 1124033005

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	1.84	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	67.4	mg/L

Volatile Gas Chromatography/Mass Spectroscopy

Benzene	27.7	ug/L
Toluene	1.40	ug/L
Ethylbenzene	78.5	ug/L
P & M -Xylene	251	ug/L
o-Xylene	1.30	ug/L



Detectable Results Summary

Print Date: 9/14/2012 2:16 pm

Client Sample ID: **DFSPA-MW25B**

SGS Ref. #: 1124033006

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	1.89	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	110	mg/L
Volatile Gas Chromatography/Mass Spectroscopy		
Benzene	17.5	ug/L
Ethylbenzene	95.2	ug/L
P & M -Xylene	114	ug/L
o-Xylene	1.81	ug/L

Client Sample ID: **DFSPA-MW25A**

SGS Ref. #: 1124033007

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	1.32	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	28.6	mg/L
Volatile Gas Chromatography/Mass Spectroscopy		
Benzene	8.96	ug/L
Ethylbenzene	33.7	ug/L
P & M -Xylene	49.5	ug/L
o-Xylene	1.83	ug/L

Client Sample ID: **DFSPA-MW15R**

SGS Ref. #: 1124033008

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Fuels Department		
Gasoline Range Organics	3.35	mg/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	5.57	mg/L
Volatile Gas Chromatography/Mass Spectroscopy		
Benzene	321	ug/L
Ethylbenzene	354	ug/L
P & M -Xylene	402	ug/L



Detectable Results Summary

Print Date: 9/14/2012 2:16 pm

Client Sample ID: **DFSPA-MW4R**

SGS Ref. #: 1124033009

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels Department		
Diesel Range Organics	3.43	mg/L

Volatile Gas Chromatography/Mass Spectroscopy

Benzene	3.25	ug/L
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Client Sample ID: **DFSPA-SS14**

SGS Ref. #: 1124033010

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Gas Chromatography/Mass Spectroscopy		
P & M -Xylene	5.63	ug/L

Polynuclear Aromatics GC/MS

Naphthalene	0.545	ug/L
1-Methylnaphthalene	0.341	ug/L
2-Methylnaphthalene	0.321	ug/L

Client Sample ID: **DFSPA-SS12**

SGS Ref. #: 1124033011

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Polynuclear Aromatics GC/MS		
1-Methylnaphthalene	0.0698	ug/L

Client Sample ID: **DFSPA-SS12D**

SGS Ref. #: 1124033012

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Volatile Gas Chromatography/Mass Spectroscopy		
Benzene	0.600	ug/L

Polynuclear Aromatics GC/MS

Naphthalene	0.127	ug/L
1-Methylnaphthalene	0.139	ug/L
2-Methylnaphthalene	0.0719	ug/L



Client Sample ID: **DFSPA-MW23**
SGS Ref. #: 1124033001
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 10:55
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.100 U	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	102	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 00:29
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033001-A
Analyst: EAB



Client Sample ID: **DFSPA-MW23**
SGS Ref. #: 1124033001
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 10:55
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	0.950	0.625	mg/L	1	XFC10577	XXX27856	
5a Androstane <surr>	71	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 02:06
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 960 mL
Prep Extract Vol.: 1 mL
Container ID:1124033001-J
Analyst: MEM



Client Sample ID: **DFSPA-MW23**
SGS Ref. #: 1124033001
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 10:55
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	0.400 U	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13082	VXX23960	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	104	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	97.3	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	98.9	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 19:42
Dilution Factor: 1

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033001-D
Analyst: JPI



Client Sample ID: **DFSPA-MW2R**
SGS Ref. #: 1124033002
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 11:55
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.100 U	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	109	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 00:48
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033002-A
Analyst: EAB



Client Sample ID: **DFSPA-MW2R**
SGS Ref. #: 1124033002
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 11:55
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	0.732	0.600	mg/L	1	XFC10577	XXX27856	
5a Androstane <sur>	86.7	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 03:09
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033002-J
Analyst: MEM



Client Sample ID: **DFSPA-MW2R**
SGS Ref. #: 1124033002
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 11:55
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	0.400 U	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13082	VXX23960	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	104	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	97.2	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	98.9	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 20:09
Dilution Factor: 1

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033002-D
Analyst: JPI



Client Sample ID: **DFSPA-MW22**
SGS Ref. #: 1124033003
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:15
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.102	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <surr>	104	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 01:06
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033003-A
Analyst: EAB



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Print Date: 9/14/2012 2:16 pm

Client Sample ID: **DFSPA-MW22**
SGS Ref. #: 1124033003
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:15
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	1.11	0.600	mg/L	1	XFC10577	XXX27856	
5a Androstane <sur>	80.9	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 03:30
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033003-J
Analyst: MEM



Client Sample ID: **DFSPA-MW22**
SGS Ref. #: 1124033003
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:15
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	0.400 U	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13082	VXX23960	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	103	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	100	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	101	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 20:37
Dilution Factor: 1

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033003-D
Analyst: JPI



Client Sample ID: **DFSPA-MW22D**
SGS Ref. #: 1124033004
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:20
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.108	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	108	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 01:24
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033004-A
Analyst: EAB



Client Sample ID: **DFSPA-MW22D**
SGS Ref. #: 1124033004
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:20
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	1.63	0.600	mg/L	1	XFC10577	XXX27856	
5a Androstane <sur>	81.1	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 03:51
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033004-J
Analyst: MEM



Client Sample ID: **DFSPA-MW22D**
SGS Ref. #: 1124033004
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 15:20
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	0.400 U	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13082	VXX23960	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	102	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	100	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	99.6	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 21:05
Dilution Factor: 1

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033004-D
Analyst: JPI



Client Sample ID: **DFSPA-MW25C**
SGS Ref. #: 1124033005
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 16:58
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1.84	1.00	mg/L	10	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	120	50-150	%	10	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/30/12 22:57
Dilution Factor: 10

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033005-A
Analyst: EAB



Client Sample ID: **DFSPA-MW25C**
SGS Ref. #: 1124033005
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 16:58
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	67.4	6.00	mg/L	10	XFC10588	XXX27856	
5a Androstane <sur>	69.7	50-150	%	10	XFC10588	XXX27856	

Batch Information

Analytical Batch: XFC10588
Analytical Method: AK102
Analysis Date/Time: 09/10/12 17:43
Dilution Factor: 10

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033005-J
Analyst: MEM



Client Sample ID: **DFSPA-MW25C**
 SGS Ref. #: 1124033005
 Project ID: 1771.02.55 POA DFSP-A
 Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 16:58
 Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Benzene	27.7	0.400	ug/L	1	VMS13088	VXX23967	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Ethylbenzene	78.5	10.0	ug/L	10	VMS13091	VXX23972	
o-Xylene	1.30	1.00	ug/L	1	VMS13088	VXX23967	
P & M -Xylene	251	20.0	ug/L	10	VMS13091	VXX23972	
Toluene	1.40	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane-D4 <surr>	120	70-120	%	1	VMS13088	VXX23967	
4-Bromofluorobenzene <surr>	101	75-120	%	1	VMS13088	VXX23967	
Toluene-d8 <surr>	97.9	85-120	%	1	VMS13088	VXX23967	

Batch Information

Analytical Batch: VMS13088	Prep Batch: VXX23967	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8260B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 09/05/12 23:06	Prep Date/Time: 09/05/12 11:15	Container ID:1124033005-B
Dilution Factor: 1		Analyst: JPI
Analytical Batch: VMS13091	Prep Batch: VXX23972	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8260B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 09/06/12 22:53	Prep Date/Time: 09/06/12 11:03	Container ID:1124033005-C
Dilution Factor: 10		Analyst: JPI



Client Sample ID: **DFSPA-MW25B**
SGS Ref. #: 1124033006
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:15
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1.89	1.00	mg/L	10	VFC11141	VXX23947	
4-Bromofluorobenzene <surr>	126	50-150	%	10	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/30/12 23:16
Dilution Factor: 10

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033006-A
Analyst: EAB



Client Sample ID: **DFSPA-MW25B**
SGS Ref. #: 1124033006
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:15
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	110	6.00	mg/L	10	XFC10588	XXX27856	
5a Androstane <sur>	67.4	50-150	%	10	XFC10588	XXX27856	

Batch Information

Analytical Batch: XFC10588
Analytical Method: AK102
Analysis Date/Time: 09/10/12 17:53
Dilution Factor: 10

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033006-J
Analyst: MEM



Client Sample ID: **DFSPA-MW25B**
SGS Ref. #: 1124033006
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:15
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	17.5	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	95.2	10.0	ug/L	10	VMS13088	VXX23967	
o-Xylene	1.81	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	114	20.0	ug/L	10	VMS13088	VXX23967	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	101	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	102	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	98	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082	Prep Batch: VXX23960	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8260B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 09/04/12 22:26	Prep Date/Time: 09/04/12 10:39	Container ID:1124033006-D
Dilution Factor: 1		Analyst: JPI

Analytical Batch: VMS13088	Prep Batch: VXX23967	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8260B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 09/05/12 20:51	Prep Date/Time: 09/05/12 11:15	Container ID:1124033006-B
Dilution Factor: 10		Analyst: JPI



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Print Date: 9/14/2012 2:16 pm

Client Sample ID: **DFSPA-MW25A**
SGS Ref. #: 1124033007
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:45
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1.32	1.00	mg/L	10	VFC11141	VXX23947	
4-Bromofluorobenzene <surr>	124	50-150	%	10	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/30/12 23:34
Dilution Factor: 10

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033007-A
Analyst: EAB



Client Sample ID: **DFSPA-MW25A**
SGS Ref. #: 1124033007
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:45
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	28.6	2.40	mg/L	4	XFC10588	XXX27856	
5a Androstane <sur>	60.6	50-150	%	4	XFC10588	XXX27856	

Batch Information

Analytical Batch: XFC10588
Analytical Method: AK102
Analysis Date/Time: 09/10/12 18:03
Dilution Factor: 4

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033007-J
Analyst: MEM



Client Sample ID: **DFSPA-MW25A**
SGS Ref. #: 1124033007
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 17:45
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Benzene	8.96	0.400	ug/L	1	VMS13088	VXX23967	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Ethylbenzene	33.7	1.00	ug/L	1	VMS13088	VXX23967	
o-Xylene	1.83	1.00	ug/L	1	VMS13088	VXX23967	
P & M -Xylene	49.5	2.00	ug/L	1	VMS13088	VXX23967	
Toluene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane-D4 <surr>	109	70-120	%	1	VMS13088	VXX23967	
4-Bromofluorobenzene <surr>	102	75-120	%	1	VMS13088	VXX23967	
Toluene-d8 <surr>	98.4	85-120	%	1	VMS13088	VXX23967	

Batch Information

Analytical Batch: VMS13088
Analytical Method: SW8260B
Analysis Date/Time: 09/05/12 23:39
Dilution Factor: 1

Prep Batch: VXX23967
Prep Method: SW5030B
Prep Date/Time: 09/05/12 11:15

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033007-B
Analyst: JPI



Client Sample ID: **DFSPA-MW15R**
SGS Ref. #: 1124033008
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 18:15
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	3.35	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	231	* 50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/30/12 23:52
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033008-A
Analyst: EAB



Client Sample ID: **DFSPA-MW15R**
SGS Ref. #: 1124033008
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 18:15
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	5.57	0.638	mg/L	1	XFC10577	XXX27856	
5a Androstane <sur>	73.4	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 05:15
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 940 mL
Prep Extract Vol.: 1 mL
Container ID:1124033008-J
Analyst: MEM



Client Sample ID: **DFSPA-MW15R**
SGS Ref. #: 1124033008
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 18:15
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	10.0 U	10.0	ug/L	10	VMS13082	VXX23960	
1,2-Dichloroethane	5.00 U	5.00	ug/L	10	VMS13082	VXX23960	
1,3-Dichlorobenzene	10.0 U	10.0	ug/L	10	VMS13082	VXX23960	
1,4-Dichlorobenzene	5.00 U	5.00	ug/L	10	VMS13082	VXX23960	
Benzene	321	4.00	ug/L	10	VMS13082	VXX23960	
Chlorobenzene	5.00 U	5.00	ug/L	10	VMS13082	VXX23960	
Ethylbenzene	354	10.0	ug/L	10	VMS13082	VXX23960	
o-Xylene	10.0 U	10.0	ug/L	10	VMS13082	VXX23960	
P & M -Xylene	402	20.0	ug/L	10	VMS13082	VXX23960	
Toluene	10.0 U	10.0	ug/L	10	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	103	70-120	%	10	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	100	75-120	%	10	VMS13082	VXX23960	
Toluene-d8 <surr>	101	85-120	%	10	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 21:32
Dilution Factor: 10

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033008-D
Analyst: JPI



Client Sample ID: **DFSPA-MW4R**
SGS Ref. #: 1124033009
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 09:05
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.100 U	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <surr>	106	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 01:43
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033009-A
Analyst: EAB



Client Sample ID: **DFSPA-MW4R**
SGS Ref. #: 1124033009
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 09:05
Receipt Date/Time: 08/29/12 11:34

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	3.43	0.600	mg/L	1	XFC10577	XXX27856	
5a Androstane <sur>	63.2	50-150	%	1	XFC10577	XXX27856	

Batch Information

Analytical Batch: XFC10577
Analytical Method: AK102
Analysis Date/Time: 09/06/12 05:36
Dilution Factor: 1

Prep Batch: XXX27856
Prep Method: SW3520C
Prep Date/Time: 08/31/12 06:45

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033009-J
Analyst: MEM



Client Sample ID: **DFSPA-MW4R**
SGS Ref. #: 1124033009
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 09:05
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13087	VXX23964	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13087	VXX23964	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13087	VXX23964	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13087	VXX23964	
Benzene	3.25	0.400	ug/L	1	VMS13087	VXX23964	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13087	VXX23964	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13087	VXX23964	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13087	VXX23964	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13087	VXX23964	
Toluene	1.00 U	1.00	ug/L	1	VMS13087	VXX23964	
1,2-Dichloroethane-D4 <surr>	104	70-120	%	1	VMS13087	VXX23964	
4-Bromofluorobenzene <surr>	98.8	75-120	%	1	VMS13087	VXX23964	
Toluene-d8 <surr>	99.7	85-120	%	1	VMS13087	VXX23964	

Batch Information

Analytical Batch: VMS13087
Analytical Method: SW8260B
Analysis Date/Time: 09/05/12 22:15
Dilution Factor: 1

Prep Batch: VXX23964
Prep Method: SW5030B
Prep Date/Time: 09/05/12 10:57

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033009-D
Analyst: JPI



Client Sample ID: **DFSPA-SS14**
SGS Ref. #: 1124033010
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:10
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Benzene	0.400 U	0.400	ug/L	1	VMS13088	VXX23967	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
P & M -Xylene	5.63	2.00	ug/L	1	VMS13088	VXX23967	
Toluene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane-D4 <surr>	113	70-120	%	1	VMS13088	VXX23967	
4-Bromofluorobenzene <surr>	100	75-120	%	1	VMS13088	VXX23967	
Toluene-d8 <surr>	101	85-120	%	1	VMS13088	VXX23967	

Batch Information

Analytical Batch: VMS13088
Analytical Method: SW8260B
Analysis Date/Time: 09/05/12 21:24
Dilution Factor: 1

Prep Batch: VXX23967
Prep Method: SW5030B
Prep Date/Time: 09/05/12 11:15

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033010-A
Analyst: JPI



Client Sample ID: **DFSPA-SS14**
SGS Ref. #: 1124033010
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:10
Receipt Date/Time: 08/29/12 11:34

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1-Methylnaphthalene	0.341	0.0538	ug/L	1	XMS6937	XXX27844	
2-Methylnaphthalene	0.321	0.0538	ug/L	1	XMS6937	XXX27844	
Acenaphthene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Acenaphthylene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Anthracene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Benzo(a)Anthracene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Benzo[a]pyrene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Benzo[b]Fluoranthene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Benzo[g,h,i]perylene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Benzo[k]fluoranthene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Chrysene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Dibenzo[a,h]anthracene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Fluoranthene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Fluorene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Indeno[1,2,3-c,d] pyrene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Naphthalene	0.545	0.108	ug/L	1	XMS6937	XXX27844	
Phenanthrene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
Pyrene	0.0538 U	0.0538	ug/L	1	XMS6937	XXX27844	
2-Fluorobiphenyl <surr>	75.5	50-110	%	1	XMS6937	XXX27844	
Terphenyl-d14 <surr>	96.5	50-135	%	1	XMS6937	XXX27844	

Batch Information

Analytical Batch: XMS6937
Analytical Method: 8270D SIMS (PAH)
Analysis Date/Time: 08/30/12 19:44
Dilution Factor: 1

Prep Batch: XXX27844
Prep Method: SW3520C
Prep Date/Time: 08/30/12 06:30

Initial Prep Wt./Vol.: 930 mL
Prep Extract Vol.: 1 mL
Container ID:1124033010-D
Analyst: JDH



Client Sample ID: **DFSPA-SS12**
SGS Ref. #: 1124033011
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:30
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Benzene	0.400 U	0.400	ug/L	1	VMS13088	VXX23967	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13088	VXX23967	
Toluene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane-D4 <surr>	118	70-120	%	1	VMS13088	VXX23967	
4-Bromofluorobenzene <surr>	102	75-120	%	1	VMS13088	VXX23967	
Toluene-d8 <surr>	103	85-120	%	1	VMS13088	VXX23967	

Batch Information

Analytical Batch: VMS13088
Analytical Method: SW8260B
Analysis Date/Time: 09/05/12 21:58
Dilution Factor: 1

Prep Batch: VXX23967
Prep Method: SW5030B
Prep Date/Time: 09/05/12 11:15

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033011-A
Analyst: JPI



Client Sample ID: **DFSPA-SS12**
SGS Ref. #: 1124033011
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:30
Receipt Date/Time: 08/29/12 11:34

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1-Methylnaphthalene	0.0698	0.0500	ug/L	1	XMS6937	XXX27844	
2-Methylnaphthalene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Acenaphthene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Acenaphthylene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Anthracene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Chrysene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Fluoranthene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Fluorene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Naphthalene	0.100 U	0.100	ug/L	1	XMS6937	XXX27844	
Phenanthrene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
Pyrene	0.0500 U	0.0500	ug/L	1	XMS6937	XXX27844	
2-Fluorobiphenyl <surr>	76.3	50-110	%	1	XMS6937	XXX27844	
Terphenyl-d14 <surr>	79.4	50-135	%	1	XMS6937	XXX27844	

Batch Information

Analytical Batch: XMS6937
Analytical Method: 8270D SIMS (PAH)
Analysis Date/Time: 08/30/12 19:59
Dilution Factor: 1

Prep Batch: XXX27844
Prep Method: SW3520C
Prep Date/Time: 08/30/12 06:30

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1124033011-D
Analyst: JDH



Client Sample ID: **DFSPA-SS12D**
SGS Ref. #: 1124033012
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:35
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Benzene	0.600	0.400	ug/L	1	VMS13088	VXX23967	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13088	VXX23967	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13088	VXX23967	
Toluene	1.00 U	1.00	ug/L	1	VMS13088	VXX23967	
1,2-Dichloroethane-D4 <surr>	115	70-120	%	1	VMS13088	VXX23967	
4-Bromofluorobenzene <surr>	103	75-120	%	1	VMS13088	VXX23967	
Toluene-d8 <surr>	98.8	85-120	%	1	VMS13088	VXX23967	

Batch Information

Analytical Batch: VMS13088
Analytical Method: SW8260B
Analysis Date/Time: 09/05/12 22:32
Dilution Factor: 1

Prep Batch: VXX23967
Prep Method: SW5030B
Prep Date/Time: 09/05/12 11:15

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033012-A
Analyst: JPI



Client Sample ID: **DFSPA-SS12D**
SGS Ref. #: 1124033012
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 10:35
Receipt Date/Time: 08/29/12 11:34

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1-Methylnaphthalene	0.139	0.0532	ug/L	1	XMS6937	XXX27844	
2-Methylnaphthalene	0.0719	0.0532	ug/L	1	XMS6937	XXX27844	
Acenaphthene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Acenaphthylene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Anthracene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Benzo(a)Anthracene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Benzo[a]pyrene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Benzo[b]Fluoranthene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Benzo[g,h,i]perylene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Benzo[k]fluoranthene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Chrysene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Dibenzo[a,h]anthracene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Fluoranthene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Fluorene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Indeno[1,2,3-c,d] pyrene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Naphthalene	0.127	0.106	ug/L	1	XMS6937	XXX27844	
Phenanthrene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
Pyrene	0.0532 U	0.0532	ug/L	1	XMS6937	XXX27844	
2-Fluorobiphenyl <surr>	68.5	50-110	%	1	XMS6937	XXX27844	
Terphenyl-d14 <surr>	91	50-135	%	1	XMS6937	XXX27844	

Batch Information

Analytical Batch: XMS6937
Analytical Method: 8270D SIMS (PAH)
Analysis Date/Time: 08/30/12 20:15
Dilution Factor: 1

Prep Batch: XXX27844
Prep Method: SW3520C
Prep Date/Time: 08/30/12 06:30

Initial Prep Wt./Vol.: 940 mL
Prep Extract Vol.: 1 mL
Container ID:1124033012-D
Analyst: JDH



Client Sample ID: **Trip Blank**
SGS Ref. #: 1124033014
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/28/12 10:55
Receipt Date/Time: 08/29/12 11:34

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.100 U	0.100	mg/L	1	VFC11141	VXX23947	
4-Bromofluorobenzene <sur>	107	50-150	%	1	VFC11141	VXX23947	

Batch Information

Analytical Batch: VFC11141
Analytical Method: AK101
Analysis Date/Time: 08/31/12 02:19
Dilution Factor: 1

Prep Batch: VXX23947
Prep Method: SW5030B
Prep Date/Time: 08/30/12 08:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033014-A
Analyst: EAB



Client Sample ID: **Trip Blank**
SGS Ref. #: 1124033015
Project ID: 1771.02.55 POA DFSP-A
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 08/29/12 09:05
Receipt Date/Time: 08/29/12 11:34

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Benzene	0.400 U	0.400	ug/L	1	VMS13082	VXX23960	
Chlorobenzene	0.500 U	0.500	ug/L	1	VMS13082	VXX23960	
Ethylbenzene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
o-Xylene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
P & M -Xylene	2.00 U	2.00	ug/L	1	VMS13082	VXX23960	
Toluene	1.00 U	1.00	ug/L	1	VMS13082	VXX23960	
1,2-Dichloroethane-D4 <surr>	103	70-120	%	1	VMS13082	VXX23960	
4-Bromofluorobenzene <surr>	95.4	75-120	%	1	VMS13082	VXX23960	
Toluene-d8 <surr>	99.4	85-120	%	1	VMS13082	VXX23960	

Batch Information

Analytical Batch: VMS13082
Analytical Method: SW8260B
Analysis Date/Time: 09/04/12 15:10
Dilution Factor: 1

Prep Batch: VXX23960
Prep Method: SW5030B
Prep Date/Time: 09/04/12 10:39

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1124033015-A
Analyst: JPI



SGS Ref.# 1110635 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch XXX27844
Method SW3520C
Date 08/30/2012

QC results affect the following production samples:
 1124033010, 1124033011, 1124033012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
<u>Polynuclear Aromatics GC/MS</u>					
1-Methylnaphthalene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
2-Methylnaphthalene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Acenaphthene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Acenaphthylene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Anthracene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Benzo(a)Anthracene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Benzo[a]pyrene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Benzo[b]Fluoranthene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Benzo[g,h,i]perylene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Benzo[k]fluoranthene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Chrysene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Dibenzo[a,h]anthracene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Fluoranthene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Fluorene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Indeno[1,2,3-c,d] pyrene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Naphthalene	0.0620 U	0.100	0.0310	ug/L	08/30/12
Phenanthrene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Pyrene	0.0300 U	0.0500	0.0150	ug/L	08/30/12
Surrogates					
2-Fluorobiphenyl <surr>	82.8	50-110		%	08/30/12
Terphenyl-d14 <surr>	90	50-135		%	08/30/12
Batch	XMS6937				
Method	8270D SIMS (PAH)				
Instrument	HP 6890/5973 MS SVQA				



SGS Ref.# 1111142 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch XXX27856
Method SW3520C
Date 08/31/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033005, 1124033006, 1124033007, 1124033008, 1124033009

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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Semivolatile Organic Fuels Department

Diesel Range Organics 0.360 U 0.600 0.180 mg/L 09/04/12

Surrogates

5a Androstane <surr> 87.2 60-120 % 09/04/12

Batch XFC10573
Method AK102
Instrument HP 7890A FID SV E F



SGS Ref.# 1111177 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23947
Method SW5030B
Date 08/30/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033005, 1124033006, 1124033007, 1124033008, 1124033009,
1124033014

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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Volatile Fuels Department

Gasoline Range Organics	0.0620 U	0.100	0.0310	mg/L	08/30/12
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Surrogates

4-Bromofluorobenzene <surr>	106	50-150		%	08/30/12
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Batch VFC11141
Method AK101
Instrument Agilent 7890A PID/FID



SGS Ref.# 1111875 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23960
Method SW5030B
Date 09/04/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033006, 1124033008, 1124033015

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/04/12
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	09/04/12
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/04/12
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	09/04/12
Benzene	0.240 U	0.400	0.120	ug/L	09/04/12
Chlorobenzene	0.300 U	0.500	0.150	ug/L	09/04/12
Ethylbenzene	0.620 U	1.00	0.310	ug/L	09/04/12
o-Xylene	0.620 U	1.00	0.310	ug/L	09/04/12
P & M -Xylene	1.24 U	2.00	0.620	ug/L	09/04/12
Toluene	0.620 U	1.00	0.310	ug/L	09/04/12

Surrogates

1,2-Dichloroethane-D4 <surr>	101	70-120		%	09/04/12
4-Bromofluorobenzene <surr>	96.6	75-120		%	09/04/12
Toluene-d8 <surr>	99.7	85-120		%	09/04/12

Batch VMS13082
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1112353 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23964
Method SW5030B
Date 09/05/2012

QC results affect the following production samples:
1124033009

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>					
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/05/12
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	09/05/12
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/05/12
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	09/05/12
Benzene	0.240 U	0.400	0.120	ug/L	09/05/12
Chlorobenzene	0.300 U	0.500	0.150	ug/L	09/05/12
Ethylbenzene	0.620 U	1.00	0.310	ug/L	09/05/12
o-Xylene	0.620 U	1.00	0.310	ug/L	09/05/12
P & M -Xylene	1.24 U	2.00	0.620	ug/L	09/05/12
Toluene	0.620 U	1.00	0.310	ug/L	09/05/12
Surrogates					
1,2-Dichloroethane-D4 <surr>	103	70-120		%	09/05/12
4-Bromofluorobenzene <surr>	98.4	75-120		%	09/05/12
Toluene-d8 <surr>	98.9	85-120		%	09/05/12
Batch	VMS13087				
Method	SW8260B				
Instrument	HP 5890 Series II MS1 VJA				



SGS Ref.# 1112391 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23967
Method SW5030B
Date 09/05/2012

QC results affect the following production samples:

1124033005, 1124033006, 1124033007, 1124033010, 1124033011, 1124033012

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/05/12
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	09/05/12
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	09/05/12
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	09/05/12
Benzene	0.240 U	0.400	0.120	ug/L	09/05/12
Chlorobenzene	0.300 U	0.500	0.150	ug/L	09/05/12
Ethylbenzene	0.620 U	1.00	0.310	ug/L	09/05/12
o-Xylene	0.620 U	1.00	0.310	ug/L	09/05/12
P & M -Xylene	1.24 U	2.00	0.620	ug/L	09/05/12
Toluene	0.620 U	1.00	0.310	ug/L	09/05/12

Surrogates

1,2-Dichloroethane-D4 <surr>	116	70-120		%	09/05/12
4-Bromofluorobenzene <surr>	102	75-120		%	09/05/12
Toluene-d8 <surr>	101	85-120		%	09/05/12

Batch VMS13088
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1112686 Method Blank
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23972
Method SW5030B
Date 09/06/2012

QC results affect the following production samples:

1124033005

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Ethylbenzene	0.620 U	1.00	0.310	ug/L	09/06/12
P & M -Xylene	1.24 U	2.00	0.620	ug/L	09/06/12

Surrogates

1,2-Dichloroethane-D4 <surr>	120	70-120		%	09/06/12
4-Bromofluorobenzene <surr>	104	75-120		%	09/06/12
Toluene-d8 <surr>	99.6	85-120		%	09/06/12

Batch VMS13091
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1110636 Lab Control Sample
 1110637 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch XXX27844
Method SW3520C
Date 08/30/2012

QC results affect the following production samples:
 1124033010, 1124033011, 1124033012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Polynuclear Aromatics GC/MS</u>								
1-Methylnaphthalene	LCS	0.416	83	(47-107)			0.5 ug/L	08/30/2012
	LCSD	0.357	71		15	(< 30)	0.5 ug/L	08/30/2012
2-Methylnaphthalene	LCS	0.360	72	(45-105)			0.5 ug/L	08/30/2012
	LCSD	0.327	65		10	(< 30)	0.5 ug/L	08/30/2012
Acenaphthene	LCS	0.382	77	(45-110)			0.5 ug/L	08/30/2012
	LCSD	0.345	69		10	(< 30)	0.5 ug/L	08/30/2012
Acenaphthylene	LCS	0.385	77	(50-105)			0.5 ug/L	08/30/2012
	LCSD	0.336	67		14	(< 30)	0.5 ug/L	08/30/2012
Anthracene	LCS	0.441	88	(55-110)			0.5 ug/L	08/30/2012
	LCSD	0.393	79		11	(< 30)	0.5 ug/L	08/30/2012
Benzo(a)Anthracene	LCS	0.471	94	(55-110)			0.5 ug/L	08/30/2012
	LCSD	0.400	80		16	(< 30)	0.5 ug/L	08/30/2012
Benzo[a]pyrene	LCS	0.403	81	(55-110)			0.5 ug/L	08/30/2012
	LCSD	0.351	70		14	(< 30)	0.5 ug/L	08/30/2012
Benzo[b]Fluoranthene	LCS	0.422	85	(45-120)			0.5 ug/L	08/30/2012
	LCSD	0.361	72		16	(< 30)	0.5 ug/L	08/30/2012
Benzo[g,h,i]perylene	LCS	0.366	73	(40-125)			0.5 ug/L	08/30/2012
	LCSD	0.324	65		12	(< 30)	0.5 ug/L	08/30/2012
Benzo[k]fluoranthene	LCS	0.469	94	(45-125)			0.5 ug/L	08/30/2012
	LCSD	0.422	84		11	(< 30)	0.5 ug/L	08/30/2012
Chrysene	LCS	0.518	104	(55-110)			0.5 ug/L	08/30/2012
	LCSD	0.466	93		11	(< 30)	0.5 ug/L	08/30/2012
Dibenzo[a,h]anthracene	LCS	0.378	76	(40-125)			0.5 ug/L	08/30/2012
	LCSD	0.334	67		12	(< 30)	0.5 ug/L	08/30/2012
Fluoranthene	LCS	0.556	111	(55-115)			0.5 ug/L	08/30/2012
	LCSD	0.495	99		12	(< 30)	0.5 ug/L	08/30/2012



SGS Ref.# 1110636 Lab Control Sample
 1110637 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch XXX27844
Method SW3520C
Date 08/30/2012

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS							
Fluorene	LCS	0.410	82	(50-110)		0.5 ug/L	08/30/2012
	LCSD	0.357	72		14 (< 30)	0.5 ug/L	08/30/2012
Indeno[1,2,3-c,d] pyrene	LCS	0.395	79	(45-125)		0.5 ug/L	08/30/2012
	LCSD	0.338	68		16 (< 30)	0.5 ug/L	08/30/2012
Naphthalene	LCS	0.372	74	(40-100)		0.5 ug/L	08/30/2012
	LCSD	0.329	66		12 (< 30)	0.5 ug/L	08/30/2012
Phenanthrene	LCS	0.412	82	(50-115)		0.5 ug/L	08/30/2012
	LCSD	0.366	73		12 (< 30)	0.5 ug/L	08/30/2012
Pyrene	LCS	0.533	107	(50-130)		0.5 ug/L	08/30/2012
	LCSD	0.465	93		14 (< 30)	0.5 ug/L	08/30/2012
Surrogates							
2-Fluorobiphenyl <surr>	LCS		82	(50-110)			08/30/2012
	LCSD		73		12		08/30/2012
Terphenyl-d14 <surr>	LCS		114	(50-135)			08/30/2012
	LCSD		97		16		08/30/2012

Batch XMS6937
Method 8270D SIMS (PAH)
Instrument HP 6890/5973 MS SVQA



SGS Ref.# 1111143 Lab Control Sample
 1111144 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch XXX27856
Method SW3520C
Date 08/31/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033005, 1124033006, 1124033007, 1124033008, 1124033009

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department							
Diesel Range Organics	LCS	4.63	(75-125)	4	(< 20)	5 mg/L	09/04/2012
	LCSD	4.46					89
Surrogates							
5a Androstane <surr>	LCS		(60-120)	4			09/04/2012
	LCSD						81
Batch	XFC10573						
Method	AK102						
Instrument	HP 7890A FID SV E F						



SGS Ref.# 1111178 Lab Control Sample
1111179 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23947
Method SW5030B
Date 08/30/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033005, 1124033006, 1124033007, 1124033008, 1124033009, 1124033014

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Fuels Department

Gasoline Range Organics	LCS	1.03	103	(60-120)		1.00 mg/L	08/30/2012
	LCSD	0.998	100		3	(< 20)	1.00 mg/L 08/30/2012

Surrogates

4-Bromofluorobenzene <surr>	LCS		105	(50-150)			08/30/2012
	LCSD		107		2		08/30/2012

Batch VFC11141
Method AK101
Instrument Agilent 7890A PID/FID



SGS Ref.# 1111876 Lab Control Sample
1111877 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23960
Method SW5030B
Date 09/04/2012

QC results affect the following production samples:

1124033001, 1124033002, 1124033003, 1124033004, 1124033006, 1124033008, 1124033015

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 1111876 Lab Control Sample
 1111877 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23960
Method SW5030B
Date 09/04/2012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>								
1,2-Dichlorobenzene	LCS	29.2	97	(70-120)			30 ug/L	09/04/2012
	LCSD	28.8	96		2	(< 20)	30 ug/L	09/04/2012
1,2-Dichloroethane	LCS	29.1	97	(70-130)			30 ug/L	09/04/2012
	LCSD	27.6	92		6	(< 20)	30 ug/L	09/04/2012
1,3-Dichlorobenzene	LCS	30.2	101	(75-125)			30 ug/L	09/04/2012
	LCSD	29.3	98		3	(< 20)	30 ug/L	09/04/2012
1,4-Dichlorobenzene	LCS	30.1	100	(75-125)			30 ug/L	09/04/2012
	LCSD	29.5	98		2	(< 20)	30 ug/L	09/04/2012
Benzene	LCS	30.1	100	(80-120)			30 ug/L	09/04/2012
	LCSD	28.0	93		7	(< 20)	30 ug/L	09/04/2012
Chlorobenzene	LCS	30.2	101	(80-120)			30 ug/L	09/04/2012
	LCSD	29.4	98		3	(< 20)	30 ug/L	09/04/2012
Ethylbenzene	LCS	30.8	103	(75-125)			30 ug/L	09/04/2012
	LCSD	30.3	101		1	(< 20)	30 ug/L	09/04/2012
o-Xylene	LCS	30.8	103	(80-120)			30 ug/L	09/04/2012
	LCSD	30.0	100		3	(< 20)	30 ug/L	09/04/2012
P & M -Xylene	LCS	60.3	100	(75-130)			60 ug/L	09/04/2012
	LCSD	58.6	98		3	(< 20)	60 ug/L	09/04/2012
Toluene	LCS	29.7	99	(75-120)			30 ug/L	09/04/2012
	LCSD	28.7	96		4	(< 20)	30 ug/L	09/04/2012
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		99	(70-120)				09/04/2012
	LCSD		97		3			09/04/2012
4-Bromofluorobenzene <surr>	LCS		98	(75-120)				09/04/2012
	LCSD		98		1			09/04/2012
Toluene-d8 <surr>	LCS		99	(85-120)				09/04/2012
	LCSD		100		1			09/04/2012



SGS Ref.# 1111876 Lab Control Sample
1111877 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23960
Method SW5030B
Date 09/04/2012

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatiles Gas Chromatography/Mass Spectroscopy

Batch VMS13082
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1112354 Lab Control Sample
1112355 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23964
Method SW5030B
Date 09/05/2012

QC results affect the following production samples:

1124033009

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 1112354 Lab Control Sample
 1112355 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23964
Method SW5030B
Date 09/05/2012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>								
1,2-Dichlorobenzene	LCS	29.5	98	(70-120)			30 ug/L	09/05/2012
	LCSD	29.3	98		1	(< 20)	30 ug/L	09/05/2012
1,2-Dichloroethane	LCS	30.2	101	(70-130)			30 ug/L	09/05/2012
	LCSD	29.3	98		3	(< 20)	30 ug/L	09/05/2012
1,3-Dichlorobenzene	LCS	29.9	100	(75-125)			30 ug/L	09/05/2012
	LCSD	30.1	100		1	(< 20)	30 ug/L	09/05/2012
1,4-Dichlorobenzene	LCS	30.1	100	(75-125)			30 ug/L	09/05/2012
	LCSD	30.1	100		0	(< 20)	30 ug/L	09/05/2012
Benzene	LCS	29.8	99	(80-120)			30 ug/L	09/05/2012
	LCSD	29.0	97		3	(< 20)	30 ug/L	09/05/2012
Chlorobenzene	LCS	29.5	99	(80-120)			30 ug/L	09/05/2012
	LCSD	29.1	97		1	(< 20)	30 ug/L	09/05/2012
Ethylbenzene	LCS	30.3	101	(75-125)			30 ug/L	09/05/2012
	LCSD	29.6	99		2	(< 20)	30 ug/L	09/05/2012
o-Xylene	LCS	30.4	101	(80-120)			30 ug/L	09/05/2012
	LCSD	29.8	99		2	(< 20)	30 ug/L	09/05/2012
P & M -Xylene	LCS	59.4	99	(75-130)			60 ug/L	09/05/2012
	LCSD	57.5	96		3	(< 20)	60 ug/L	09/05/2012
Toluene	LCS	28.8	96	(75-120)			30 ug/L	09/05/2012
	LCSD	28.2	94		2	(< 20)	30 ug/L	09/05/2012
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		101	(70-120)				09/05/2012
	LCSD		102		1			09/05/2012
4-Bromofluorobenzene <surr>	LCS		98	(75-120)				09/05/2012
	LCSD		99		1			09/05/2012
Toluene-d8 <surr>	LCS		100	(85-120)				09/05/2012
	LCSD		99		1			09/05/2012



SGS Ref.# 1112354 Lab Control Sample
1112355 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23964
Method SW5030B
Date 09/05/2012

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS13087
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1112392 Lab Control Sample
1112393 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23967
Method SW5030B
Date 09/05/2012

QC results affect the following production samples:

1124033005, 1124033006, 1124033007, 1124033010, 1124033011, 1124033012

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 1112392 Lab Control Sample
 1112393 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23967
Method SW5030B
Date 09/05/2012

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>								
1,2-Dichlorobenzene	LCS	29.2	98	(70-120)			30 ug/L	09/05/2012
	LCSD	29.3	98		0	(< 20)	30 ug/L	09/05/2012
1,2-Dichloroethane	LCS	32.4	108	(70-130)			30 ug/L	09/05/2012
	LCSD	33.2	111		3	(< 20)	30 ug/L	09/05/2012
1,3-Dichlorobenzene	LCS	29.4	98	(75-125)			30 ug/L	09/05/2012
	LCSD	28.7	96		2	(< 20)	30 ug/L	09/05/2012
1,4-Dichlorobenzene	LCS	30.1	100	(75-125)			30 ug/L	09/05/2012
	LCSD	29.0	97		4	(< 20)	30 ug/L	09/05/2012
Benzene	LCS	28.1	94	(80-120)			30 ug/L	09/05/2012
	LCSD	27.2	91		3	(< 20)	30 ug/L	09/05/2012
Chlorobenzene	LCS	28.7	96	(80-120)			30 ug/L	09/05/2012
	LCSD	28.4	95		1	(< 20)	30 ug/L	09/05/2012
Ethylbenzene	LCS	28.5	95	(75-125)			30 ug/L	09/05/2012
	LCSD	28.0	93		2	(< 20)	30 ug/L	09/05/2012
o-Xylene	LCS	29.0	97	(80-120)			30 ug/L	09/05/2012
	LCSD	28.4	95		2	(< 20)	30 ug/L	09/05/2012
P & M -Xylene	LCS	56.9	95	(75-130)			60 ug/L	09/05/2012
	LCSD	55.9	93		2	(< 20)	60 ug/L	09/05/2012
Toluene	LCS	28.0	93	(75-120)			30 ug/L	09/05/2012
	LCSD	27.4	91		2	(< 20)	30 ug/L	09/05/2012
<u>Surrogates</u>								
1,2-Dichloroethane-D4 <surr>	LCS		119	(70-120)				09/05/2012
	LCSD		119		0			09/05/2012
4-Bromofluorobenzene <surr>	LCS		101	(75-120)				09/05/2012
	LCSD		97		4			09/05/2012
Toluene-d8 <surr>	LCS		100	(85-120)				09/05/2012
	LCSD		101		1			09/05/2012



SGS Ref.# 1112392 Lab Control Sample
1112393 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23967
Method SW5030B
Date 09/05/2012

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatiles Gas Chromatography/Mass Spectroscopy

Batch VMS13088
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 1112687 Lab Control Sample
 1112688 Lab Control Sample Duplicate
Client Name R & M Consultants Inc
Project Name/# 1771.02.55 POA DFSP-A
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/14/2012 14:16
Prep Batch VXX23972
Method SW5030B
Date 09/06/2012

QC results affect the following production samples:

1124033005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>							
Ethylbenzene	LCS	28.5	95	(75-125)		30 ug/L	09/06/2012
	LCSD	27.7	92		3	(< 20)	30 ug/L 09/06/2012
P & M -Xylene	LCS	56.7	95	(75-130)		60 ug/L	09/06/2012
	LCSD	54.5	91		4	(< 20)	60 ug/L 09/06/2012
Surrogates							
1,2-Dichloroethane-D4 <surr>	LCS		116	(70-120)			09/06/2012
	LCSD		122 *		5		09/06/2012
4-Bromofluorobenzene <surr>	LCS		102	(75-120)			09/06/2012
	LCSD		100		3		09/06/2012
Toluene-d8 <surr>	LCS		100	(85-120)			09/06/2012
	LCSD		98		3		09/06/2012

Batch VMS13091
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



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1 CLIENT: **R&M Consultants**

CONTACT: **Kristi McLean** PHONE NO: **646.9689**

PROJECT NAME: **POA DFSP-A** PROJECT/PWSID/PERMIT#: **1771.02.55**

REPORTS TO: **Kristi McLean** E-MAIL: **kmclean@rmconsult.com**

INVOICE TO: **K. McLean / R&M** QUOTE #: P.O. #:

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis. Page 1 of 2

2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	#	CONTAINER	Preservative	Used:	TYPE	C = COMP	G = GRAB	MI = Multi Incremental Soils	REMARKS/LOC ID
	① A-K DFSPA-MW23	8/28/12	10:55	Aqu	11		HCl	3	GRO/AK101				
	② A-K DFSPA-MW2R	8/28/12	11:55	Aqu	11		HCl		DRO/AK102				
	③ A-K DFSPA-MW22	8/28/12	15:15	Aqu	11		NONE		E08/EPA 8011				
	④ A-K DFSPA-MW22D	8/28/12	15:20	Aqu	11		HCl		VOC/BTEX/TAH 12.0 CA (EPA 8210)				
	⑤ A-K DFSPA-MW25C	8/28/12	16:58	Aqu	11		NONE		PAH SIM EPA 8270				
	⑥ A-K DFSPA-MW25B	8/28/12	17:15	Aqu	11								
	⑦ A-K DFSPA-MW25A	8/28/12	17:45	Aqu	11								
	⑧ A-K DFSPA-MW15R	8/28/12	18:15	Aqu	11								
	⑨ A-K DFSPA-MW4R	8/29/12	09:05	Aqu	11								
	⑩ A-E DFSPA-SS14	8/29/12	10:10	Aqu	5								

5

Relinquished By: (1) <i>[Signature]</i>	Date 8/29/12	Time 11:34	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4) <i>[Signature]</i>	Date 8/29/12	Time 11:34	Received For Laboratory By:

4

DOD Project? YES NO

Cooler ID: _____

Data Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

Temp Blank °C: **1 @ 5.2 # 202**
2 @ 5.7 # 703
or Ambient [] **# 11**

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

(See attached Sample Receipt Form) (See attached Sample Receipt Form)

SGS-00082 (6/12)

[] 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

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- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming

1 CLIENT: R & M Consultants

CONTACT: Kristi McLean PHONE NO: 646.9689

PROJECT NAME: POA DEFSP-A PROJECT/PWSID/PERMIT#: 1771.02.55

REPORTS TO: K. McLean E-MAIL: kmclean@rmconsult.com

INVOICE TO: Same QUOTE #: P.O. #:

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis. Page 2 of 2

2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	#	Preservative Used:	REMARKS/LOC ID
	11A-E DEFPA-SS12	8/29/12	10:30	Aq4	5	HCl	
	12A-E DEFPA-SS12D	8/29/12	10:35	Aq4	5	HCl	
	13A-C Unpres. TB						
	14A-C TB						
	15A-C TB						

5

Relinquished By: (1)	Date	Time	Received By:
<i>[Signature]</i>	8/29/12	11:34	<i>[Signature]</i>
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
	8/29/12	11:34	<i>[Signature]</i>

4

DOD Project? YES NO Data Deliverable Requirements:

Cooler ID: _____

Requested Turnaround Time and-or Special Instructions:

Temp Blank °C: _____ Chain of Custody Seal: (Circle)

or Ambient [] INTACT BROKEN ABSENT

(See attached Sample Receipt Form) (See attached Sample Receipt Form)



SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were custody seals intact? Note # & location, if applicable. COC accompanied samples?	Yes No <u>N/A</u> Yes No <u>N/A</u>	
Temperature blank compliant* (i.e., 0-6°C after correction factor)? <i>* Note: Exemption permitted for chilled samples collected less than 8 hours ago.</i> Cooler ID: <u>1</u> @ <u>5.2</u> w/ Therm.ID: <u>202</u> Cooler ID: <u>2</u> @ <u>5.7</u> w/ Therm.ID: <u>203</u> Cooler ID: <u>3</u> @ <u>4.9</u> w/ Therm.ID: <u>11</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all sample containers ice free?	Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u>	
Delivery method (specify all that apply): USPS Alert Courier Road Runner AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other: → For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?	Client Note ABN/tracking # See Attached or <u>N/A</u> Yes No <u>N/A</u>	
→ For samples received with payment, note amount (\$) and cash / check / CC (circle one) or note: → For samples received in FBKS, ANCH staff will verify all criteria are reviewed.		SRF Initiated by: <u>SC</u> <u>N/A</u>
Were samples received within hold time? <i>Note: Refer to form F-083 "Sample Guide" for hold time information.</i> Do samples match COC* (i.e., sample IDs, dates/times collected)? <i>* Note: Exemption permitted if times differ <1hr; in which case, use times on COC.</i> Were analyses requested unambiguous?	Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u>	
Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	Yes No <u>N/A</u> Yes No <u>N/A</u>	
Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB?	Yes No <u>N/A</u> Yes No <u>N/A</u>	
Were proper containers (type/mass/volume/preservative*) used? <i>* Note: Exemption permitted for waters to be analyzed for metals.</i> Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes No <u>N/A</u> Yes No <u>N/A</u>	• Trip blanks all came in one cooler w/ VOAs for samples ①-⑧
For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No <u>N/A</u>	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No <u>N/A</u> Yes No <u>N/A</u>	sample ⑨ J-K non-compliant. HCl added LW09: 0463-005-02
For RUSH/SHORT Hold Time or site-specific QC (e.g., BMS/BMSD/BDUP) samples, were the COC & bottles flagged (e.g., stickers) accordingly? For RUSH/SHORT HT, was email sent?	Yes No <u>N/A</u> Yes No <u>N/A</u>	<u>SC</u> 8/29/12
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No <u>N/A</u>	SRF Completed by: <u>SC</u> PM = _____
Was PEER REVIEW of sample numbering/labeling completed?	Yes No <u>N/A</u>	Peer Reviewed by: _____ N/A
Additional notes (if applicable):		

Note to Client: Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.

Laboratory Report of Analysis

To: Julie Shumway
SGS ENVIRONMENTAL - AK
200 W. Potter Dr.
Anchorage, AK 99518
US

Report Number: **31202780**

Client Project: **1124033**

Dear Julie Shumway,

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 thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara A. Hager at (910) 350-1903. 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.

Barbara A. Hager

Date

ANALYTICAL PERSPECTIVES IS NOW PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Estimated Concentration.
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1 Mis-identified peak

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
DFSPA-MW23	31202780001	08/28/2012 10:55	08/31/2012 09:30	Water
DFSPA-MW2R	31202780002	08/28/2012 11:55	08/31/2012 09:30	Water
DFSPA-MW22	31202780003	08/28/2012 15:15	08/31/2012 09:30	Water
DFSPA-MW22D	31202780004	08/28/2012 15:20	08/31/2012 09:30	Water
DFSPA-MW25C	31202780005	08/28/2012 16:58	08/31/2012 09:30	Water
DFSPA-MW25B	31202780006	08/28/2012 17:15	08/31/2012 09:30	Water
DFSPA-MW25A	31202780007	08/28/2012 17:45	08/31/2012 09:30	Water
DFSPA-MW15R	31202780008	08/28/2012 18:15	08/31/2012 09:30	Water
DFSPA-MW4R	31202780009	08/29/2012 09:05	08/31/2012 09:30	Water
Trip Blank	31202780010	08/28/2012 10:55	08/31/2012 09:30	Water

Detectable Results Summary

*** No Detectable Results ***

Results of DFSPA-MW23

Client Sample ID: **DFSPA-MW23**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780001-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 10:55
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0183	ug/L	1	09/5/2012 13:54
Surrogates						
4-Bromofluorobenzene	102		53.0-141	%	1	09/5/2012 13:54

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **38.17 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW2R

Client Sample ID: **DFSPA-MW2R**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780002-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 11:55
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0177	ug/L	1	09/5/2012 14:06
Surrogates						
4-Bromofluorobenzene	112		53.0-141	%	1	09/5/2012 14:06

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.53 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW22

Client Sample ID: **DFSPA-MW22**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780003-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 15:15
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0181	ug/L	1	09/5/2012 14:19
Surrogates						
4-Bromofluorobenzene	84.3		53.0-141	%	1	09/5/2012 14:19

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **38.65 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW22D

Client Sample ID: **DFSPA-MW22D**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780004-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 15:20
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0178	ug/L	1	09/5/2012 14:30
Surrogates						
4-Bromofluorobenzene	104		53.0-141	%	1	09/5/2012 14:30

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.37 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW25C

Client Sample ID: **DFSPA-MW25C**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780005-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 16:58
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0179	ug/L	1	09/5/2012 14:42
Surrogates						
4-Bromofluorobenzene	103		53.0-141	%	1	09/5/2012 14:42

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.08 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW25B

Client Sample ID: **DFSPA-MW25B**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780006-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 17:15
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0179	ug/L	1	09/5/2012 14:54
Surrogates						
4-Bromofluorobenzene	94.4		53.0-141	%	1	09/5/2012 14:54

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.1 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW25A

Client Sample ID: **DFSPA-MW25A**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780007-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 17:45
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0177	ug/L	1	09/5/2012 15:06
Surrogates						
4-Bromofluorobenzene	89.9		53.0-141	%	1	09/5/2012 15:06

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.49 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW15R

Client Sample ID: **DFSPA-MW15R**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780008-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 18:15
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0180	ug/L	1	09/5/2012 15:42
Surrogates						
4-Bromofluorobenzene	97.6		53.0-141	%	1	09/5/2012 15:42

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **38.97 mL**
 Prep Extract Vol: **2 mL**

Results of DFSPA-MW4R

Client Sample ID: **DFSPA-MW4R**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780009-A
 Lab Project ID: 31202780

Collection Date: 08/29/2012 09:05
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0176	ug/L	1	09/5/2012 15:54
Surrogates						
4-Bromofluorobenzene	59.6		53.0-141	%	1	09/5/2012 15:54

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.81 mL**
 Prep Extract Vol: **2 mL**

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **1124033**
 Lab Sample ID: 31202780010-A
 Lab Project ID: 31202780

Collection Date: 08/28/2012 10:55
 Received Date: 08/31/2012 09:30
 Matrix: Water

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2-Dibromoethane	ND		0.0179	ug/L	1	09/5/2012 16:06
Surrogates						
4-Bromofluorobenzene	101		53.0-141	%	1	09/5/2012 16:06

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Prep Initial Wt./Vol.: **39.14 mL**
 Prep Extract Vol: **2 mL**

Batch Summary

Analytical Method: SW-846 8011

Prep Method: SW-846 8011

Prep Batch: XXX3007

Prep Date: 09/05/2012 11:21

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 28307 [XXX/3007]	88115	09/05/2012 11:20	XGC2503	ECD4	DTF
MB for HBN 28307 [XXX/3007]	88115	09/05/2012 11:31	XGC2503	ECD4	DTF
LCS for HBN 28307 [XXX/3007]	88116	09/05/2012 11:43	XGC2503	ECD4	DTF
LCSD for HBN 28307 [XXX/3007]	88117	09/05/2012 11:43	XGC2503	ECD4	DTF
LCSD for HBN 28307 [XXX/3007]	88117	09/05/2012 11:55	XGC2503	ECD4	DTF
P3-082812(87795MS)	88120	09/05/2012 12:31	XGC2503	ECD4	DTF
P3-082812(87795MS)	88120	09/05/2012 12:43	XGC2503	ECD4	DTF
P10-082812(87796DUP)	88121	09/05/2012 12:55	XGC2503	ECD4	DTF
DFSPA-MW23	31202780001	09/05/2012 13:54	XGC2503	ECD4	DTF
DFSPA-MW2R	31202780002	09/05/2012 14:06	XGC2503	ECD4	DTF
DFSPA-MW22	31202780003	09/05/2012 14:19	XGC2503	ECD4	DTF
DFSPA-MW22D	31202780004	09/05/2012 14:30	XGC2503	ECD4	DTF
DFSPA-MW25C	31202780005	09/05/2012 14:42	XGC2503	ECD4	DTF
DFSPA-MW25B	31202780006	09/05/2012 14:54	XGC2503	ECD4	DTF
DFSPA-MW25A	31202780007	09/05/2012 15:06	XGC2503	ECD4	DTF
DFSPA-MW15R	31202780008	09/05/2012 15:42	XGC2503	ECD4	DTF
DFSPA-MW4R	31202780009	09/05/2012 15:54	XGC2503	ECD4	DTF
Trip Blank	31202780010	09/05/2012 16:06	XGC2503	ECD4	DTF

Method Blank

Blank ID: MB for HBN 28307 [XXX/3007]

Matrix: Water

Blank Lab ID: 88115

QC for Samples:

31202780001, 31202780002, 31202780003, 31202780004, 31202780005, 31202780006, 31202780007,
31202780008, 31202780009, 31202780010

Results by SW-846 8011

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
1,2-Dibromoethane	ND		0.0175	ug/L	1
Surrogates					
4-Bromofluorobenzene	98.2		53.0-141	%	1

Batch Information

Analytical Batch: XGC2503

Prep Batch: XXX3007

Analytical Method: SW-846 8011

Prep Method: SW-846 8011

Instrument: ECD4

Prep Date/Time: 9/5/2012 11:21:36AM

Analyst: DTF

Prep Initial Wt./Vol.: 40 mL

Prep Extract Vol: 2 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 28307 [XXX/3007]
 Blank Spike Lab ID: 88116
 Date Analyzed: 09/05/2012 11:43

Spike Duplicate ID: LCSD for HBN 28307 [XXX/3007]
 Spike Duplicate Lab ID: 88117
 Date Analyzed: 09/05/2012 11:55
 Matrix: Water

QC for Samples: 31202780001, 31202780002, 31202780003, 31202780004, 31202780005, 31202780006,
 31202780007, 31202780008, 31202780009, 31202780010

Results by SW-846 8011

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,2-Dibromoethane	1.00	0.873	87	1.00	0.907	91	70.0-130	3.8	30.00
Surrogates									
4-Bromofluorobenzene			87.6			95.8	53.0-141		

Batch Information

Analytical Batch: **XGC2503**
 Analytical Method: **SW-846 8011**
 Instrument: **ECD4**
 Analyst: **DTF**

Prep Batch: **XXX3007**
 Prep Method: **SW-846 8011**
 Prep Date/Time: **09/05/2012 11:21**
 Spike Init Wt./Vol.: **35 mL** Extract Vol: **2 mL**
 Dupe Init Wt./Vol.: **35 mL** Extract Vol: **2 mL**



SGS Environmental Services Inc. CHAIN OF CUSTODY RECORD

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

CLIENT: SGS - AK
 CONTACT: Julie Shumway
 PHONE NO: 907-562-2343

PROJECT: 1124033
 REPORTS TO: Julie Shumway
 E-MAIL: julie_shumway@sgs.com

INVOICE T
 QUOTE
 P.O. #: 1124033

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	Preserv Used	MI = Multi Incremental Samples	REMARKS/ LOC ID
	DFSPA - MW23	08/28/12	1055	W	3	GRA	891	1124033001
	DFSPA - MW2R	08/28/12	1155	W	3	GRA		1124033002
	DFSPA - MW22	08/28/12	1515	W	3	GRA		1124033003
	DFSPA - MW22D	08/28/12	1520	W	3	GRA		1124033004
	DFSPA - MW25C	08/28/12	1658	W	3	GRA		1124033005
	DFSPA - MW25B	08/28/12	1715	W	3	GRA		1124033006
	DFSPA - MW25A	08/28/12	1745	W	3	GRA		1124033007
	DFSPA - MW15R	08/28/12	1815	W	3	GRA		1124033008
	DFSPA - MW4R	08/29/12	905	W	3	GRA		1124033009
	Trip Blank	08/28/12	1055	W	3	GRA		1124033013

SGS Reference: SGS NC
 31202780

page 1 of 1

Special Deliverable Requirements:
Level II report + DV

DOD Project? YES NO
 Cooler ID

Requested Turnaround Time and/or Special Instructions:

Samples Received Cold? YES NO
 Cooler (TB)
 Temperature °C: 3.6°C

Chain of Custody Seal: (Circle)
 INTACT BROKEN ABSENT

Received By: [Signature]
 Date: 8/30/2012
 Time: 1000

Received By: [Signature]
 Date: 8/31/12
 Time: 0920

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F016_SGS_COC_electronic.xls
 rev 09/12/2008

Laboratory Data Review Checklist

Completed by:	Kristi McLean		
Title:	Environmental Specialist	Date:	Jun 19, 2013
CS Report Name:	POA-DFSPA (2012 Annual Sampling Report)	Report Date:	Sep 14, 2012
Consultant Firm:	R&M Consultants, Inc.		
Laboratory Name:	SGS North America, Inc.	Laboratory Report Number:	1124033
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 North Carolina locations).

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 ($4^{\circ} \pm 2^{\circ} \text{C}$)?

Yes No NA (Please explain) Comments:

Cooler 1 = 5.2 degrees; Cooler 2 = 5.7 degrees; Cooler 3 = 4.9

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 samples from MW4R to bring them 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 68 of SGS 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:

One QC failure was identified but did not affect data quality or usability

c. Were all corrective actions documented?

Yes No NA (Please explain) Comments:

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

Comments:

QC failure occurred in sample with results that were significantly above 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

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 MW15R

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)

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain)

Comments:

PAH, TAH, and TAqH exceeded 30%

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 is not affected; surface water grab samples can reflect variable concentrations.

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