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**FINAL SEMI-ANNUAL O&M REPORT
REMEDIAL WORK ELEMENTS II AND IV
REPORTING PERIOD JULY 1, 2012 THROUGH DECEMBER 31,
2012**

***Malta Rocket Fuel Area Site
Malta, New York***

February 21, 2013

Submitted to:

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CERTIFICATION: This document has been reviewed and is prepared in accordance with the contract documents.



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1.0 INTRODUCTION

This operations and maintenance (O&M) report documents ongoing O&M activities conducted at the Malta Rocket Fuel Area (MRFA) Site, in the Town of Malta, New York.

This report has been prepared in accordance with the following documents:

- Operations and Maintenance Manual, Remedial Work Element II, Groundwater, dated January 22, 1998 and prepared by ERM - Northeast, Inc., and Addendum No. 1, January 31, 2005.
- Operation and Maintenance Manual, Remedial Work Element IV, Institutional Controls, dated September 9, 1999, revised September 27, 1999, prepared by IT Corporation, Inc., currently Shaw.

This report covers all site activities performed at the Site, as required in each of the previously referenced documents, for the period from July 1 through December 31, 2012.

2.0 O&M OF REMEDIAL WORK ELEMENT II (Groundwater)

2.1 Sample Collection

Unfiltered groundwater samples were collected on October 23rd through the 25th, 2012 from the Early Warning Monitoring System (EWMS) in accordance with: 1) the Operations and Maintenance Manual for Remedial Work Element II - Ground Water, ERM Northeast, Inc., January 22, 1998, (O&M-GW), 2) the Five-Year Review Report, Malta Rocket Fuel Area Superfund Site, United States Environmental Protection Agency (EPA), September 24, 2004 (Five Year Review Report) including a table titled “Proposed Modifications to Groundwater and Surface Water Sampling Regimes at the Malta Rocket Fuel Area Site”, a letter from GE to the USEPA dated October 26, 2004, and 3) Addendum No. 1, Operations and Maintenance Manual, Remedial Work Element II- Groundwater, Malta Rocket Fuel Area Site, General Electric Company, January 31, 2005 (Addendum No. 1). During this reporting period EWMS samples were collected from monitoring wells DGC-3S, DGC-4S, 10S, 11D, 13S, 13D, MW-1, MW-4, M-24DR, M-25D, M-27D, M-28S and M-29D (**Figure 1**). Surface water samples were collected from locations SW-A, SW-B, SW-D, SW-E, SW-F and SW-G (**Figure 1**). A blind duplicate sample was collected from well M-27D for VOCs, chromium, and hexavalent chromium. A second blind duplicate was collected for VOCs at M-28S. Trip blanks were also analyzed. Monitoring wells MW-4 and MW-28S were sampled for hydrazine as requested by the USEPA. A blind duplicate was collected from MW-28S for hydrazine.

During this event, additional sampling was performed in accordance with the EPA letter request dated December 1, 2011 (*Modification to the Groundwater Monitoring Program*) and subsequent correspondence with General Electric Company. The following modifications were made to the existing EWMS sample event:

- Monitoring wells 10S, 13S, MW-1, MW-4, M-26S, M-26D and M-29D were added to the sample locations to collect VOC information from the full radial extent of groundwater flow. M-26S and M26D were not accessible during this event. Access discussions are ongoing between General Electric Company and Global Foundries U.S., Inc.
- Water samples were also analyzed for the Trichloroethene (TCE) breakdown product ethane. Vinyl chloride is already included in the current analysis.

- Water samples were collected from monitoring wells MW-4 and M-28S for hydrazine, 1,1-Dimethylhydrazine and Methylhydrazine. As referenced above, M-26S was not accessible during this event.
- The condition of monitoring wells M-26S and M-26D could not be assessed during this event due to the noted access limitations.

Samples from all designated sampling locations were analyzed by Columbia Analytical Services, Inc. in Rochester, New York for VOCs according to USEPA Method OLC-02.1. Samples from wells 13D, M-27D and surface water SW-B were also analyzed for unfiltered total matrix chromium following CLP procedures and unfiltered hexavalent chromium by SW-846 Method 7196 (*Test Methods for Evaluating Solid Waste*, 3rd Edition, November 1986). Monitoring wells MW-4 and MW-28S were analyzed for Hydrazine by SW-846 Method 8315A by Lancaster Laboratories in Lancaster, Pennsylvania. Results of the October 2012 semi-annual EWMS sampling event are summarized in **Table 1**. The laboratory reports are presented in **Appendix A**. The data validation reports are included in **Appendix B**. A summary of analytical results from 1987 through this reporting period for samples collected at locations currently included in the EWMS sampling program is provided in **Tables 2, 3, and 4**. In accordance with the O&M-GW, time versus concentration plots for carbon tetrachloride at monitoring well M-27D are included as **Figure 2**. **Figure 3** includes a comparison of simulated versus observed concentrations of carbon tetrachloride at monitoring well M-27D.

2.2 Chromium Analytical Results

Unfiltered total chromium was detected in monitoring wells 13D, MW-27D, and surface water location SW-B at estimated concentrations of 6.6 µg/l, 6.4 µg/l, and 1.1 µg/l, respectively. The New York State Ground Water Standard (NYSGWS) for total chromium is 50 µg/l.

Analytical results showed no detectable concentrations of hexavalent chromium at the method detection limit for all sample locations (13D, M-27D, SW-B) during the reporting period. The NYSGWS for hexavalent chromium is 50 µg/l.

2.3 VOC Analytical Results

Carbon tetrachloride was detected in monitoring wells 10S, 11D, 13S, M-24DR, M-25D, M-27D, M-29D, at concentrations of, 2.2 µg/l, 6.7 µg/l, 4.1 µg/l, 1.0 µg/l, 29 µg/l, 4.2 µg/l, , and 24 µg/l, respectively. In addition, carbon tetrachloride was detected at estimated concentrations in monitoring wells 13D, M-28S and surface water location SW-B at 0.68 µg/l, 4.1 µg/l and 0.17 µg/l respectively. All other sample locations were non-detect for carbon tetrachloride during the reporting period. The time versus concentration plot for carbon tetrachloride in well M-27D is presented in **Figure 2**. The NYSGWS for carbon tetrachloride is 5 µg/l.

Chloroform was detected at estimated concentrations in monitoring wells 10S, 11D, 13D, M-25D, M-27D, M-28S, and M-29D at concentrations of 0.39 µg/l, 0.56 µg/l, 0.13 µg/l, 1.7 µg/l, 0.33 µg/l, 0.20 µg/l, and 0.96 µg/l, respectively. The NYSGWS for chloroform is 7 µg/l. All other sample locations were non-detect for chloroform during the reporting period.

TCE was detected in monitoring wells 11D, 13S, M-24DR, M-25D, M-27D, and M-29D at concentrations of 1.9 µg/l, 2.2 µg/l, 4.2 µg/l, 67 µg/l and 5.8 µg/l, , and 23 µg/l respectively. In addition, TCE was detected at monitoring well M-28S and surface water location SW-B at estimated concentrations of 4.3 µg/l and 0.16 µg/l, respectively. The NYSGWS for TCE is 5 µg/l. TCE was not detected at the other sample locations during this reporting period. 1,1,1-Trichloroethene was detected in monitoring well M-29D at a concentration of 4.6 µg/l. 1,1-Dichloroethene was detected in M-29D at an estimated concentration of 0.31 µg/l.

2.4 Comparison of Observed VOC Concentrations to Simulation Results

Carbon tetrachloride and TCE concentrations detected during this monitoring period were compared to the results from the contaminant fate and transport modeling reported in **Appendix A** of the O&M-GW. The comparison was performed for carbon tetrachloride in monitoring well M-27D (**Figure 3**). As shown in **Figure 3**, the simulated carbon tetrachloride results are higher than the observed concentrations.

2.5 Hydrazine Analytical Results

Hydrazine was not detected at monitoring wells MW-4 and M-28

2.6 Groundwater Gauging

A total of 39 on-site and perimeter monitoring wells were gauged to determine groundwater flow direction and gradient across the site. Three additional monitoring wells (M-31D, M-34 and M-35D) could not be located and are believed damaged or completely destroyed. Groundwater elevations recorded during the October 2012 sampling event were used to determine the groundwater gradient across the site and are visually represented in **Figures 4A and 4B**

3.0 INSTITUTIONAL CONTROLS

O&M activities for remedial Work Element IV, Institutional Controls, are conducted on a semi-annual basis. Shaw conducts visual inspections of the Environmental Restriction Zone (ERZ) during each of the semi-annual groundwater sampling events. Shaw interviews each of the property owners regarding known activities being performed within the ERZ on an annual basis (Fall).

3.1 Sampling and Survey Results

From October 23 through 25, 2012, as part of the semi-annual EWMS sampling program, site conditions in the environmental restriction zone ERZ were inspected to determine if any changes or property development occurred, specifically the installation of new groundwater wells. The inspections were conducted in the following areas of the site:

- Proximate to the surface water sampling locations and monitoring well locations, as well as long the access roads and wooded paths leading to these locations
- Proximate to building 15 at the MRFA site

3.2 Interviews with Property Owners

Shaw Personnel conducted telephone interviews with the following representatives regarding the ERZ:

- Kevin Hunt representing NYSERDA was interviewed on September 17, 2012.
- Kevin King representing the Town of Malta was interviewed on September 18, 2012.
- Jon Dawes representing LFTCDC was interviewed on September 24, 2012.
- Patrick Hewlett representing Global Foundries was interviewed on January 28, 2013.

Interview logs documenting the conversation with each of the property representatives are included in **Appendix C**.

Mr. Dawes stated that he was aware of ongoing construction by Global Foundries facility. Mr. Dawes was not aware of any new groundwater usage or other actions within the ERZ.

Mr. King from the Town of Malta stated that he was not aware of any new groundwater usage, or other actions within the ERZ..

Mr. Hunt from the NYSERDA stated that he was not aware of any new groundwater usage, or other actions within the ERZ. Mr. Hunt also stated that NYSERDA had provided other interested parties the Environmental Restriction Easements and the Declaration of Restrictive Covenants.

Mr. Hewlett from Global Foundries stated that he was not aware of any new groundwater usage within the ERZ. Mr. Groseclose, also from the Global Foundries, stated that there is ongoing construction just beyond the fence line to the northwest associated with the development of the Global Foundries property. The general contractors are aware of the Environmental Restriction Easements and the Declaration of Restrictive Covenants and have a contingency plan in place if groundwater is encountered.

4.0 SUMMARY

4.1 Early Warning Monitoring System (EWMS)

The analytical results from this reporting period are summarized as follows:

- Chromium was detected in monitoring wells 13D, M-27D, and surface water location SW-B at estimated concentrations of 6.6 µg/l, 6.4 µg/l, and 1.1 µg/l, respectively. The chromium detections were below the NYSGWS of 50 µg/l.
- Hexavalent chromium was not detected at any of the sample locations.
- Carbon tetrachloride was detected in monitoring wells 10S, 11D, 13S, M-24DR, M-25D, M-27D, , M-29D, at concentrations of, 2.2 µg/l, 6.7 µg/l, 4.1 µg/l, 1.0 µg/l, 29 µg/l, 4.2 µg/l, , and 24 µg/l, respectively. All other sample locations contained either estimated concentrations or were non-detect for carbon tetrachloride during the reporting period. The NYSGWS for carbon tetrachloride is 5 µg/l.
- Chloroform detections were either estimated concentrations or were non-detect during the reporting period. The NYSGWS for chloroform is 7 µg/l.
- TCE was detected in monitoring wells 11D, 13S, M-24DR, M-25D, M-27D, and M-29D at concentrations of 1.9 µg/l, 2.2 µg/l, 4.2 µg/l, 67 µg/l and 5.8 µg/l, and 23 µg/l respectively. 1,1,1-Trichloroethene was detected in monitoring well M-29D at a concentration of 4.6 µg/l. All other sample locations contained either estimated concentrations or were non-detect for TCE, 1,1,1-Trichloroethene and 1,1-Dichloroethene during the reporting period. The NYSGWS for TCE, and 1,1,1-Trichloroethene is 5 µg/l.
- As shown in **Figure 3**, simulated concentrations of carbon tetrachloride are much higher than the observed concentrations. The NYSGWS for carbon tetrachloride is 5 µg/l.

4.2 Institutional Controls

Although several property owners reported knowledge of construction activities within the ERZ, none of the property owners have knowledge of current or potential future use of groundwater within the area of the Environmental Restriction Zone.

TABLE 1
OCTOBER 2012 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Compound	Remedial Action Objective	DGC-3S	DGC-4S	10S	11D	13S	13D	MW-1	MW-4	M-24DR	M-25D	M-27D	DUP A M-27D	M-28S	DUP B MW-28S	M-29D	Trip Blank (10/23/12)	Trip Blank (10/24/12)	SW-A	SW-B	SW-D	SW-E	SW-F	SW-G
Acetone	50	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	25.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	2.1 J	1.6 J	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Carbon Disulfide	None*	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	1.0 U	2.2	6.7	4.1	0.68 J	1.0 U	1.0 U	1.0	29	4.2	4.9	4.1 J	1.6 J	24	1.0 U	1.0 U	1.0 U	0.17 J	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	0.39 J	0.56 J	1.0 U	0.13 J	1.0 U	1.0 U	1.0 U	1.7 J	0.33 J	4.1 J	0.20 J	1.0 U	0.96 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	5	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	25.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.9	2.2	1.0 U	1.0 U	1.0 U	4.2	67	5.8	5.8	4.3 J	1.3 J	23	1.0 U	1.0 U	1.0 U	0.16 J	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	NP	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.10 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	50*	NA	NA	NA	NA	NA	6.6 J	NA	NA	NA	NA	6.4 J	2.3 J	NA	NA	NA	NA	NA	NA	1.1 J	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	10.0 U	NA	NA	NA	NA	10.0 U	10.0 U	NA	NA	NA	NA	NA	NA	10.0 U	NA	NA	NA	NA
Ethane	NP	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dimethylhydrazine	NP	NA	NA	NA	NA	NA	NA	NA	0.25 U	NA	NA	NA	NA	0.25 U	0.25 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrazine	5*	NA	NA	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylhydrazine	NP	NA	NA	NA	NA	NA	NA	NA	0.25 U	NA	NA	NA	NA	0.25 U	0.25 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Field Parameters																								
pH	--	6.67	7.26	7.77	7.98	7.62	8.01	8.08	7.96	10.91	7.75	7.75	--	7.48	--	7.9	--	--	7.94	8.1	7.93	7.92	7.55	7.59
Temperature (celsius)	--	10.97	11.13	11.76	10.42	10.62	10.68	10.83	10.84	11.45	10.91	10.52	--	11.31	--	10.69	--	--	10.71	11.46	10.44	10.39	10.04	10.14
Conductivity (umhos/cm)	--	0.092	0.216	0.337	0.313	0.437	0.320	0.219	0.134	0.381	0.409	0.418	--	0.313	--	0.374	--	--	0.335	0.409	0.557	0.506	0.338	0.321
Dissolved Oxygen (mg/L)	--	6.66	4.9	12.36	11.89	11.79	8.87	13.87	12.68	9.02	11.44	8.26	--	12.34	--	12.55	--	--	10.21	8.22	8.88	7.05	6.81	6.45
Turbidity (NTUs)	--	9.7	11.2	58.7	9.8	9.30	20.2	8.6	3.4	7.0	1.0	2.2	--	17.7	--	1.0	--	--	3.3	5.6	3.4	4.7	3.3	4.1
Depth To Water (feet)	--	14.10	7.10	33.25	27.1	30.61	34.53	39.74	24.89	34.32	26.93	31.91	--	47.55	--	42.44	--	--	--	--	--	--	--	--
Ground Water Elevation (feet)	--	198.50	196.80	293.75	290.5	296.59	292.77	299.86	300.61	286.25	285.77	285.73	--	292.75	--	289.86	--	--	--	--	--	--	--	--

- Notes:
1. All analytical concentrations are in µg/l (micrograms per liter (ppb))unless otherwise noted.
 2. Only compounds detected at one or more sampling points are listed.
 3. NA - not analyzed for.
 4. U - analyte was not detected, and value shown is the detection limit.
 5. J - estimated value due to data validation requirements or concentration less than CRQL (organics only).
 6. B - The reported value is less than the CRDL but greater than the IDL (inorganics only).
- * Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.
- ** Analytical concentrations are in mg/l (milligrams per liter (ppm))
7. D - Identifies all compounds analyzed at a secondary dilution factor.
 8. NM - Not measured due to equipment malfunction.

TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/29-7/1/1987	7/31/87	11/5/87	1/19-1/20/1988	4/18-4/19/1988	7/20-7/21/1988	10/11-10/12/88	1/19-1/20/89	4/10/89	7/12/89	8/15/1989
DGC-3S												
Benzene	0.7*	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	0.48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	<0.005 mg/L	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

DGC-4S

Carbon Disulfide	None*	--	--	--	--	--	--	--	--	--	--	--
Chromium	50*	--	--	--	--	--	--	--	--	--	--	--

13S

Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

-- = Not sampled: well installed in December, 1990.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

See RI report for additional data.

TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds DGC-3S	Remedial Action Objective	11/30/1989	5/30/90	8/28/90	12/6/90	4/8- 4/10/1991	6/12- 6/13/1991	9/23- 9/24/1991	12/26- 12/27/91	2/10- 2/11/92	6/1- 6/2/1992	9/28- 9/29/1992
Benzene	0.7*	ND	ND	ND	ND	ND	ND	0.2 J	ND	ND/NDdp	ND	ND
Carbon Disulfide	None*	ND	ND	ND	NA	8 V / 7 Vdp	4	ND	ND	ND/NDdp	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	6.1	62.2E/70.3Edp	16.2/ND*, 14.6/ND*dp	25.2/ND*	ND
Hexavalent Chromium	50*	no data	NA	NA	NA	NA	NA	NA	NA	ND/4*/ND dp	NA	NA

DGC-4S

Carbon Disulfide	None*	--	--	--	--	ND/0.5Vdp	ND	ND	ND	ND	ND	ND/ND dp
Chromium	50*	--	--	--	--	NA	NA	15.9	11.9 E	ND/ND*	ND/ND*	ND/ND dp

13S

Benzene	0.7*	NA	NA	NA	NA	2	0.7/0.6 Jdp	1	ND	ND	ND	ND
Carbon Disulfide	None*	NA	NA	NA	NA	60 D	0.6	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	NA	18/16 dp	6.4	4.4	8	24 J/24 Jdp	8	12	9	6 J	9
Chloroform	7	NA	ND	ND	ND	ND	0.8/0.9 Jdp	ND	0.4 J	0.3 J	ND	ND
Trichloroethene	5	NA	ND	ND	ND	ND	ND	0.4 J	0.9	0.6	ND	0.6
Trichlorofluoromethane	5*	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Chromium	50*	NA	NA	NA	NA	336 V	NA	269/261**	316 E/562 E**	282/498**	504/512**	179/172**
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	280	486/302**	260/310**	NA	287

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

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dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

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** = Filtered Sample.

See RI report for additional data.

TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds DGC-3S	Remedial Action Objective	11/18- 11/19/1992	3/17- 3/18/1993	5/25- 5/26/1993	8/24- 8/25/1993	11/8- 11/9/1993	2/22- 2/23/1994	5/18- 5/19/1994	8/24- 8/25/1994	11/15- 11/16/1994	5/23/1995	10/17/1995
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND V	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	0.8	ND	ND	ND V	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	33.6/ND*	18.5	4.3 B	4.7B	19.4	23.9	4.5 B	9.9 B	11.1	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DGC-4S

Carbon Disulfide	None*	4 V	ND	0.3 J	0.2J	ND	ND	ND V/ND V dp	ND	ND	ND	ND
Chromium	50*	8.6 B	48.1/ND*	ND	3.3B	ND	31.2/ND*	ND/ND dp	5.6 B	ND	NA	NA

13S

Benzene	0.7*	0.4 JV	ND	ND	ND	ND	ND/ND dp	ND	ND	ND	NA	NA
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND/ND dp	ND	ND	ND	NA	NA
Carbon Tetrachloride	5	16 V	15	10	17	18	20/9 dp	9	9	9	NA	NA
Chloroform	7	0.6 V	0.6	0.4 J	0.6	0.7	ND/ND dp	0.4 J	0.3 J	ND	NA	NA
Trichloroethene	5	1 V	2	0.6	ND	2	2/1 dp	0.8	1	0.9	NA	NA
Trichlorofluoromethane	5*	0.9 V	2	0.5	ND	2	2/1 dp	0.9	1	ND	NA	NA
Chromium	50*	585/576**	746/614**	198/609**	787/716**	572/610**	580/357** 567/357** dp	406/434**	133 V/157 V**	44.2 V/95.8 V**	140 J	52.7 J
Hexavalent Chromium	50*	493	663	460	800	560	530/540 dp	340	101	36	150	48

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D = Concentration determined from a sample dilution.

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TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	5/14/1996	10/23/1996	6/2/1997	10/14/1997	5/28/1998	10/29/1998	5/11/1999	10/26/1999	5/22/2000	10/24/2000	5/15/2001
DGC-3S												
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DGC-4S

Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

13S

Benzene	0.7*	NA	NA	1U	1U	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	None*	NA	NA	1U	1U	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	1U	8	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	1U	1U	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	44.8	46.4	90.7/90.9**	71.4	71.2	98.6 J	72.4	169	249	29.9	136
Hexavalent Chromium	50*	47	47	97	67	51	54.0 J	71.0	178	262	41	12.3

Notes:

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D = Concentration determined from a sample dilution.

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TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003	5/25/2004	11/2004	5/24/2005	10/2005	5/23/2006	10/16/2006
DGC-3S												
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DGC-4S

Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

13S

Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Chromium	50*	43.3	13.4	34.8	52.2	49.4	20.1	NA	NS	NS	NS	NS
Hexavalent Chromium	50*	43.6 J	18	3.59	45	51.5	11	11.2	NS	NS	NS	NS

Notes:

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D = Concentration determined from a sample dilution.

J = Estimated concentration.

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TABLE 2
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S
JUNE 1987 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	5/14/2007	10/16/2007	5/15/2008	10/13/2008	5/13/2009	11/11/2009	5/19/2010	10/26/2010	5/18/2011	10/25-10/26-2011	5/22-5/24-2012	10/23-10/24-2012
DGC-3S													
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20 J	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND

DGC-4S

Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND

13S

Benzene	0.7*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND
Carbon Disulfide	None*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4.1
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.8	2.2
Trichlorofluoromethane	5*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA

Notes:

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TABLE 3
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS M-27S, M-27D, M-33S, M-33I
JUNE 1992 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

	Remedial Action Objective	6/5/1992	11/11/1992	3/14/1994	5/23/1995	10/17/1995	5/14/1996	10/23/1996	6/2/1997	10/14/1997	5/28/1998	10/29/1998	5/11/1999
M-27S													
Carbon Disulfide	None*	ND	ND	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	0.85 J
Chloromethane	5	40	ND	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	8.4 B/ND**	57.4/ND**	not sampled	ND	ND	ND	ND	ND	ND	ND	3.2 BJ	0.98B
Hexavalent Chromium	50*	NA	NA	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND

M-27D

Carbon Tetrachloride	5	75/62 dp	23	not sampled	33/42 dp	56	31	28	26	22	27	26 / 27 dp	20.3 / 20.1 dp
Chloroform	7	ND	3	not sampled	4/4 dp	5	3	3	3	2	3	2 / 2 dp	1.8 / 1.8 dp
Chloromethane	5	4 J/28 dp	ND	not sampled	ND/ND dp	ND	ND	ND	ND	ND	ND	ND / ND	ND / ND dp
Trichloroethene	5											ND/ND dp	4.1/4.1 dp
Trichlorofluoromethane	5*	no data	no data	not sampled	no data	no data	no data	no data	no data	no data	no data	0.3 J / 0.3 J dp	0.92J / 0.99J dp
Chromium	50*	2.0 B/ND**	19.8/ND**	not sampled	ND/ND dp	ND	ND	ND	ND	1.2B	ND	4.6 BJ /	1.4 B /
Hexavalent Chromium	50*	NA	NA	not sampled	ND/ND dp	ND	ND	ND	ND	ND	ND	ND / ND dp	ND / ND dp

M-33S

VOCs	-	not sampled	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
------	---	-------------	-------------	----	----	----	----	----	----	----	----	----	----

M-33I

VOCs	-	not sampled	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
------	---	-------------	-------------	----	----	----	----	----	----	----	----	----	----

Notes:

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Only detected compounds are listed.

NA = Not analyzed.

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J = Estimated concentration.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

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TABLE 3
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS M-27S, M-27D, M-33S, M-33I
JUNE 1992 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Remedial Action Objective		10/26/1999	5/22/2000	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/15/2003	10/9/2003	5/25/2004	11/2004	5/24/2005	
M-27S	Carbon Disulfide	None*	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND J / ND J dp	ND	ND / 0.11 J dp	ND	NA	NA
	Chloromethane	5	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND J / ND J dp	ND	ND / ND dp	ND	NA	NA
	Chromium	50*	0.85B/0.90b dp	1.1B	1.2B	ND / ND dp	ND / ND dp	ND / ND dp	1.2 B	8.5 B	1.0 B / 1.8 B dp	83.1	2.6 B / 2.2 B dp	NA
	Hexavalent Chromium	50*	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND / ND dp	ND UJ	ND U / ND dp	ND	ND	NA
M-27D														
	Carbon Tetrachloride	5	22.3	26.7D/28.9D dp	19.2/19.8 dp	13.8	16.2	14.5	24.2 DJ	5.1 / 4.5 dp	16.6	3 / 2.7 dp	22.1	21
	Chloroform	7	1.8	ND / ND dp	1.7J / 1.3 dp	1.1	1.1	0.94J	2.4	ND / ND dp	1.0	0.53 JB / 0.55 JB dp	ND	ND
	Chloromethane	5	ND	ND / ND dp	ND / ND dp	ND	ND	ND	ND	ND ND dp	ND	ND ND dp	ND	ND
	Trichloroethene	5	10.7	12.8 / 12.1 dp	26.4 / 26.5D dp	19.4	27 D	22.7	14	2.4 / 2.2 dp	21.8 D	3.2 / 2.9 dp	22.7	18
	Trichlorofluoromethane	5*	1.4	1.9 / 1.8 dp	2.9 / 2.9 dp	2.0	2.2	1.5	0.96 J	0.21J / 0.18J dp	2.3	0.27 J / 0.29 J dp	2.3	1.3
	Chromium	50*	0.81B	2B/1.8B dp	1.2B/1.2B dp	ND	1.5 B	2 B	1.5 B	5.9B / 6.1B dp	1.2 B	22.6 / 21.3 dp	2.6 B	1.7 B
	Hexavalent Chromium	50*	ND	ND/ND dp	ND/ND dp	ND	ND	ND	ND	ND / ND dp	ND	ND / ND dp	ND	ND
M-33S														
VOCs	-	ND	ND	ND	8.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-33I														
VOCs	-	ND	ND	ND	4.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND

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TABLE 3
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS M-27S, M-27D, M-33S, M-33I
JUNE 1992 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

	Remedial Action Objective	10/2005	5/23/2006	10/16/2006	5/14/2007	10/16/2007	5/14/2008	10/13/2008	5/13/2009	11/11/2009	5/19/2010	10/26/2010	5/18/2011	10/25-10/26/2011	5/22-5/24-2012	10/23-10/24-2012
M-27S																
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Chloromethane	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS
M-27D																
Carbon Tetrachloride	5	13	22	12	15	10	11	9	7.6	5.8	4.2	6.9	8.3	6	5.2	4.2
Chloroform	7	ND	2	0.76J	2	0.7J	ND	0.6 J	0.30 J	0.31 J	ND	0.61 J	1.1	0.5J	0.53 J	0.33 J
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND	ND	ND	ND
Trichloroethene	5	24	16	21	15	14	13	11	11	10	9.3	8.2	6.7	7	7.1	5.8
Trichlorofluoromethane	5*	1.0	1 J	1.0	0.9J	0.8J	0.6J	0.3 J	0.15 J	ND	ND	ND	0.13J	ND	ND	ND
Chromium	50*	1.6 B	2.7	1.7 BJ	ND	ND	ND	0.810	0.88	ND	1.1 J	10 U	ND	1.0 J	11.1 J	6.4
Hexavalent Chromium	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.010 J	10.0 U	ND
M-33S																
VOCs	-	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
M-33I																
VOCs	-	ND	ND	ND	ND	ND	NA	ND	--	--	--	--	--	--	--	--

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J = Estimated concentration.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

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TABLE 4
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D, 13D
JUNE 1992 - OCTOBER 2012
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/1-6/2/1992	11/18- 11/19/1992	11/2004	5/24/2005	10/24/2005	5/23/2006	10/16/2006	5/14/2007	10/16/2007	5/14/2008	10/13/2008	5/13/2009	11/11/2009	5/19/2010	10/26/2010	5/18/2011	10/25-10/26/2011	5/22-5/24-2012	10/23-10/24-2012
4D																				
Acetone	50	ND	ND R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	NS	NS	NS	NS
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	NS	NS	NS	NS
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	NS	NS	NS	NS
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	NS	NS	NS	NS
11D																				
Acetone	50	ND	ND R	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8 J	NS	ND	ND	ND	ND	5.0 UJ	ND
Carbon Tetrachloride	5	ND	6	4.6	13	14	15	12	12	13	11	10	11	NS	11	7.7	8.9	7.8	8.3	6.7
Chloroform	7	ND	3	ND	4.0	3.0	4.0	3.0	3	2	ND	2	1.4	NS	1.3	0.82 J	0.96 J	0.76J	0.89 J	0.56 J
Trichloroethene	5	9J	7	ND	0.8 J	0.9J	1 J	2.0	1	1	1	2	1.6	NS	1.5	1.9	1.3	1.4	1.3	1.9
M-24D																				
Acetone	50	ND	ND R	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---
Carbon Tetrachloride	5	10	0.7	0.59 J	10	10	11	11	10	9	9	10	---	---	---	---	---	---	---	---
Chloroform	7	ND	ND	ND	0.6 J	0.5J	0.5 J	0.44 J	0.4 J	0.4 J	ND	0.3 J	---	---	---	---	---	---	---	---
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---
M-24DR																				
Acetone	50	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.1	ND	5.0 UJ	4.1 J
Carbon Tetrachloride	5	--	--	--	--	--	--	--	--	--	--	--	16	13	5.5	4.9	2.6	2.4	1.3	1.0
Chloroform	7	--	--	--	--	--	--	--	--	--	--	--	0.68 J	0.43 J	0.25 J	0.25 J	0.11J	0.12J	ND	ND
Trichloroethene	5	--	--	--	--	--	--	--	--	--	--	--	49	39	18	19	9.5	8.8	4.8	4.2
M-25D																				
Acetone	50	ND	ND R	ND	ND	ND	49 D*	25 JD	ND	ND	ND	ND	7.3 J	ND	ND	ND	ND	ND	25 JD	ND
Carbon Tetrachloride	5	48	27R	86.8 D	81 D	91	76 D*	71 D	60	65	56	52	52	40	35	34	32	32	32	29
Chloroform	7	ND	3R	8.7	8.0	9.0	8 D*	7 D	7	6	ND	4	3.8 J	3.0 J	3.0 J	3.2 J	3.2 J	2.8 J	2.4 J	1.7 J
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1J	1.0 J	0.85 J	ND
Trichloroethene	5	3J	8R	16.1	35 D	37	28 D*	22 D	31	34	52	79 D	93	79	76	73	79	66	69	67
M-29D																				
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	4.1	4.2	4.6
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23J	0.23 J	0.28 J	0.31 J
Acetone	50	ND	ND R	ND	ND	ND	16 D*	ND	ND	ND	ND	ND	4.4 J	ND	ND	ND	ND	5.0 J	5.0 UJ	ND
Carbon Tetrachloride	5	79	84	10.8	38 D	37	39 D*	33 D	32	34	33	32	30	27	28	27	27E	24	23	24
Chloroform	7	ND	14	ND	4.0	5.0	5 D*	4 D	3	3	ND	2	2.5	2.7	2.8	2.4	2.1	1.4	1.2	0.96 J
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19J	0.14 J	0.12 J	ND
Trichloroethene	5	19	24	6.0	14	13	14 D*	12 D	11	11	11	10	11	16	21	22	25E	23	24	25 E
13D																				
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1J	5.0 J	ND	1.4 J
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99J	ND	0.31 J	0.68 J
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16J	ND	ND	0.13 J
Chromium	50*	98.4	38.9 J	4.5 B	78.3	60.8 J	11	17.1	25.3	5.2B	13.2	7.3	7.1	4.0 J	3.4 J	16.1	ND	3.6 J	6.1 J	6.6 J
Hexavalent Chromium	50*	NA	NA	10 U	10 U	10 U	10 U	14.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	ND	0.010 J	ND	ND

Notes:
Units are µg/l (ppb) unless otherwise stated.
Only detected compounds are listed.
See Remedial Investigation report for additional data.
NA = Not analyzed.
ND = Not detected.
NS = Not sampled.
B = The reported value is less than the CRQL/CRDL but greater than the IDL.
dp = Duplicate sample.
E = Estimated concentration: due to interference.
R = Analysis rejected
D* = Concentration determined from a sample dilution.
J = Estimated concentration.
V = Estimated concentration: due to variance to quality control limits.
-- = Not sampled: well installed in March, 2009.
--- = Well Removed according to instruction by Environmental Protection Agency
* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.
** = Filtered Sample.

Figures

DRAWING NUMBER 129926D4		APPROVED BY BN		CHECKED BY BN		DRAWN BY MJS		DESIGNED BY BN		DATE 07/25/12		OFFICE LATHAM, NY	
A		B		C		D		E		F		H	
I		J											

Legend

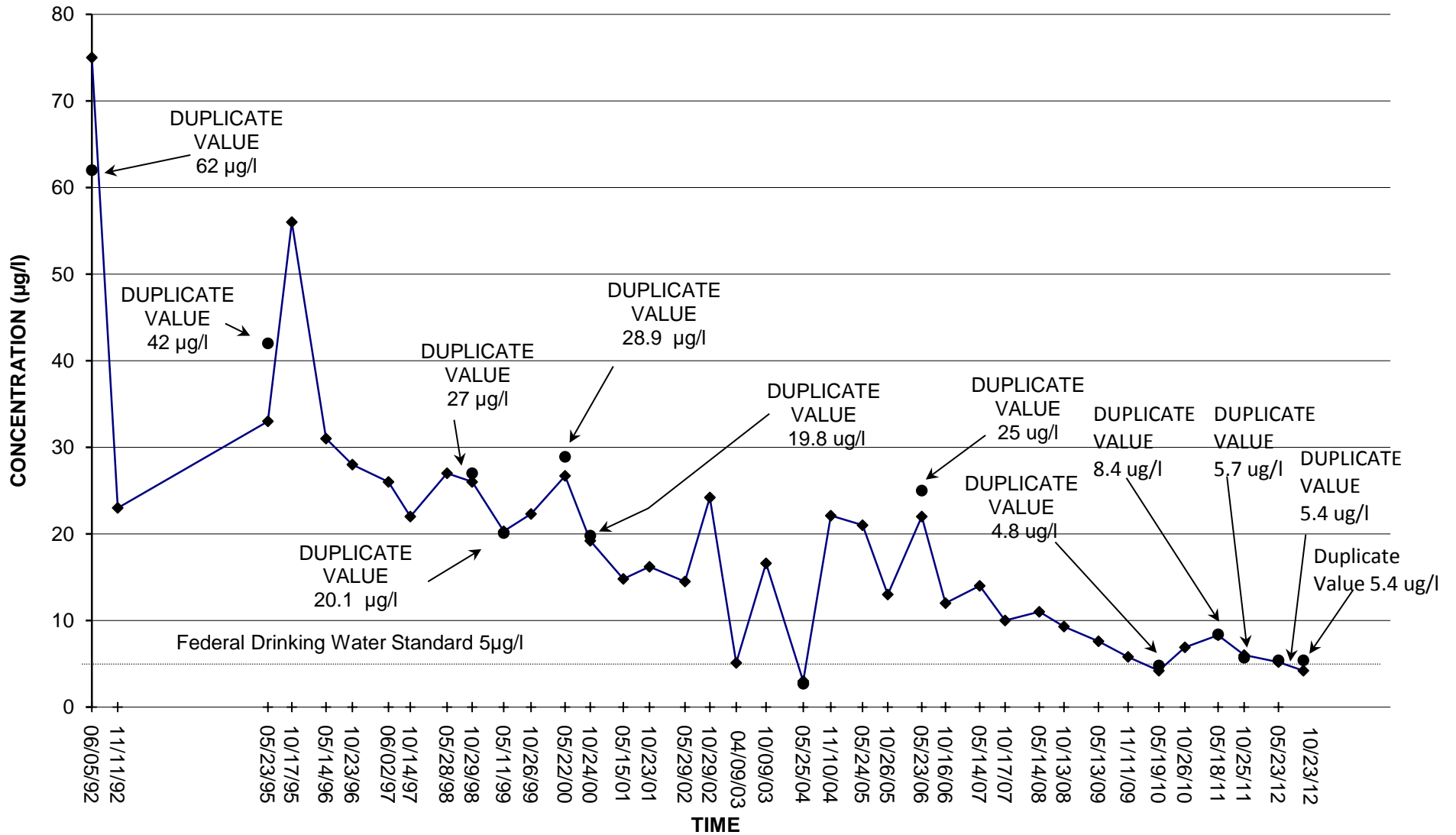
- ◆ SURFACE WATER LOCATIONS
- ◆ MONITORING WELL LOCATIONS
- APPROXIMATE LOCATION OF ENVIRONMENTAL RESTRICTION BOUNDARY

Shaw
Shaw Environmental & Infrastructure, Inc.

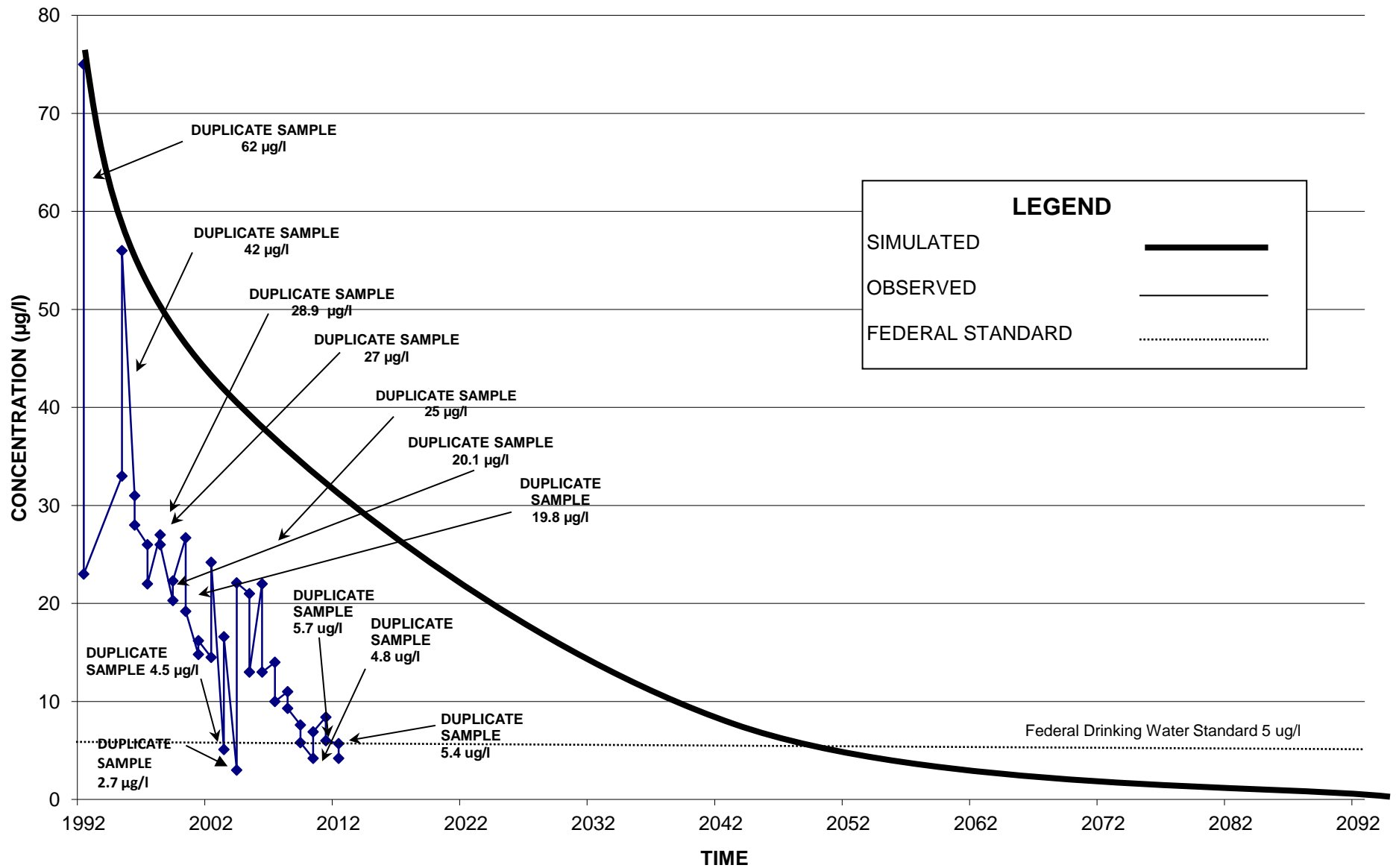
MALTA ROCKET FUEL AREA SITE
MALTA, NEW YORK

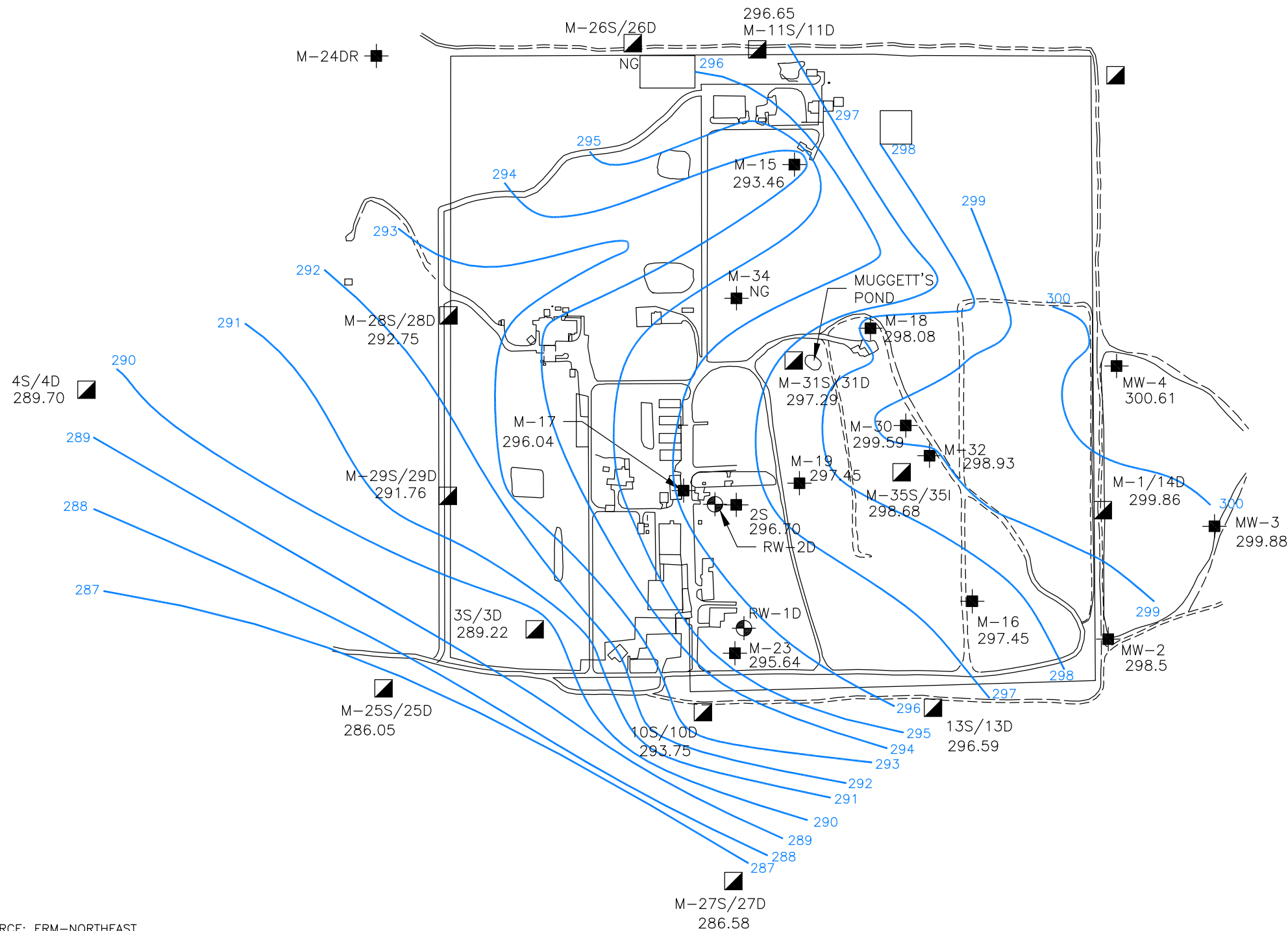
FIGURE 1
SITE LOCATION MAP

FIGURE 2
WELL M-27D CARBON TETRACHLORIDE CONCENTRATIONS

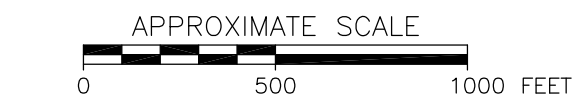


**FIGURE 3
SIMULATED VERSUS OBSERVED
CARBON TETRACHLORIDE CONCENTRATIONS
AT WELL M-27D**

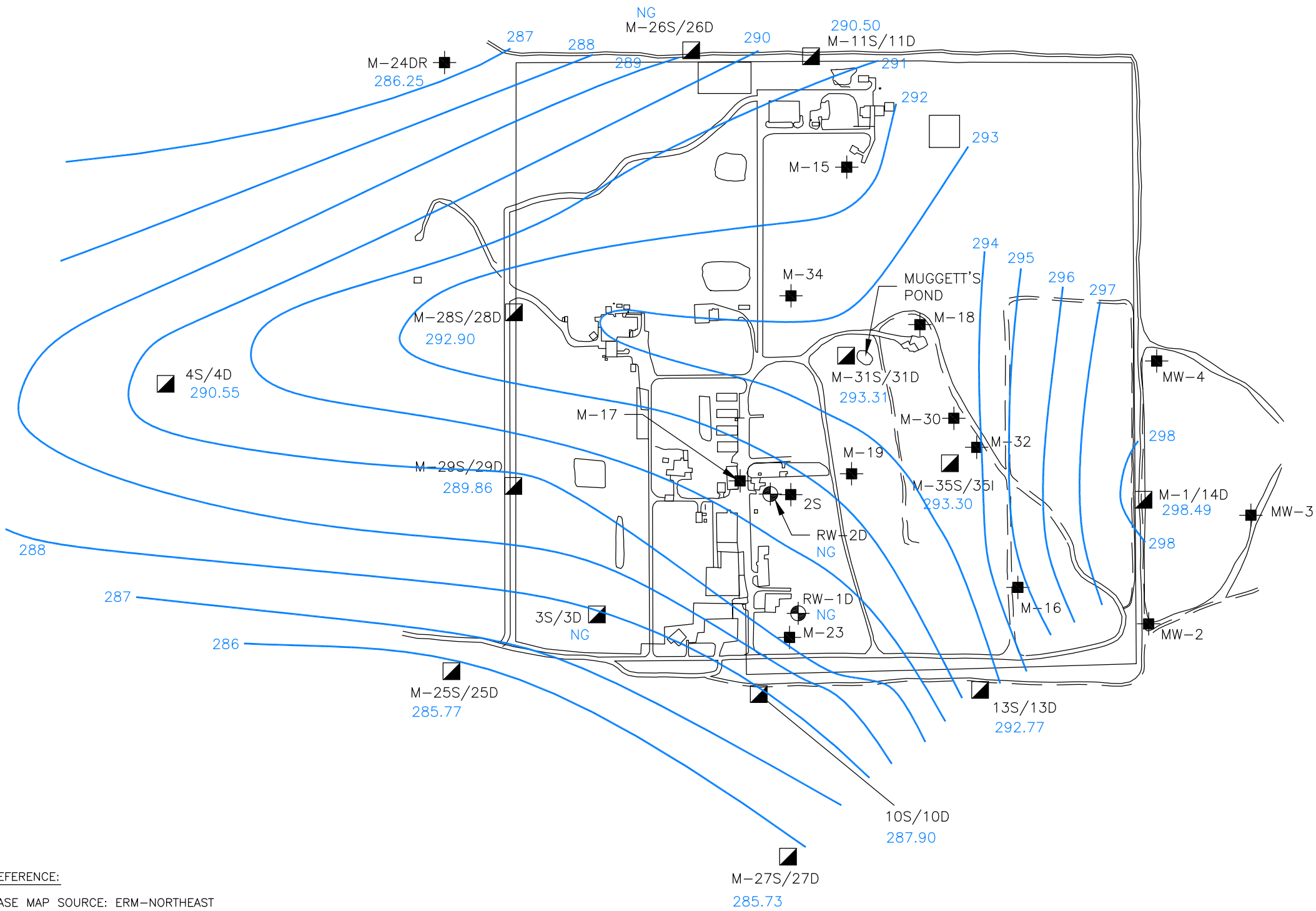




NOTE:
LOCATIONS OF RW-1D AND RW-2D ARE APPROXIMATE.



	MALTA ROCKET FUEL AREA SITE MALTA, NEW YORK
	<p>FIGURE 4A SHALLOW GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 2012</p>



MALTA ROCKET FUEL AREA SITE
MALTA, NEW YORK

FIGURE 4B
DEEP GROUNDWATER ELEVATION
CONTOUR MAP
OCTOBER 2012

Appendix A

Laboratory Data, Groundwater Samples

(October 23-24, 2012)



November 20, 2012

Mr. Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

Re: GE MRFA Project #145599.01
Service Request # R1207266

Dear Mr. Neumann:

Enclosed is the analytical data report for the above referenced facility. A total of twelve samples were received by our laboratory on October 24, 2012.


Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. The data package and summary package have been mailed to Judy Harry and the summary package only has been e-mailed to your attention. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,

COLUMBIA ANALYTICAL SERVICES


Janice M. Jaeger
Project Chemist

enc.

Page 1 of 83

cc: Ms. Judy Harry
Data Validation Services
818 SE Downing Drive
High Springs, FL 32643



ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | FAX +1 585 288 8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

Environmental 

www.caslab.com ■ www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

00001

CASE NARRATIVE

Client:	Shaw Environmental	Service Request:	R1207266
Project:	GE MRFA	Project Number:	145599.01
Sample Matrix:	Water	Date Received:	10/24/12

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Samples were collected on 10/23/12 and received at CAS on 10/24/12 at a cooler temperature of 4.5 C in good condition except as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory.

Inorganic Analysis

Samples were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was not requested on these samples.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Metals Analysis

Samples were analyzed for a site specific list of Metals by Methods 6010C.

Site specific QC was not requested on these samples.

All LCS recoveries were within limits.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Volatile Organics

Samples were analyzed for a site specific list of Volatile Organics by CLP Method OLC 2.1.

All Tuning criteria for BFB were within QC limits.

All the initial calibration criteria were met for all analytes. All Continuing Calibration Verification (CCV) standards were within 30% Difference (D) except Bromoform on the 10/31/12 CCV. All positive detections for samples associated with this CCV should be considered as estimated.

All Internal Standard Areas and surrogate standard recoveries were within QC limits.

The LCS recoveries were all acceptable.

Site specific QC was performed on M-28S as requested. All MS/MSD recoveries and RPD's were acceptable.

Various compounds for M-29D have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Method Blanks associated with these samples were free of contamination except the 10/30/12 blank had a low level detection for 1,2,3-Trichlorobenzene and the 10/31/12 blank had low level detections for 1,2,3-Trichlorobenzene and Hexachlorobutadiene. No data was affected.

No other analytical or QC problems were encountered.

RSK-175

Samples were analyzed for Ethane by Method RSK-175M.

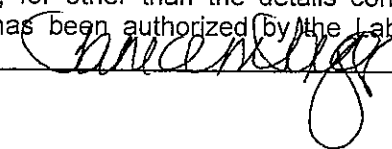
All the initial and continuing calibration criteria were met for all analytes.

The LCS recoveries were all acceptable.

Site specific QC was requested on M-28S as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 145599.01	Batch Complete: Yes	Date Revised:
Submission: R1207266	Diskette Requested: No	Date Due: 11/14/12
Client: Shaw Environmental & Infrastruct	Date: 11/6/12	Protocol: EPA
Client Rep: JJAEGER	Custody Seal: Present/Absent:	Shipping No.:
Project: GE MRFA	Chain of Custody: Present/Absent:	SDG #: M-25D

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1207266-001	M-25D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-002	M-29D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-002.R01	M-29D	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-003	M-24DR	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-004	11D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-005	M-1	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-006	MW-4	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-007	10S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-008QC	M-28S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-009	13S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-010	13D	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/23/12	10/24/12			
R1207266-011	DUPB	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-012	TRIP BLANK	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-013	COOLER BLANK	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			

1100000

Folder Comments: need extra 3 compounds, e-mail invoices to Karen and Steve

REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- * Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
- X See Case Narrative for discussion.



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID #
Connecticut ID # PH0556	Nebraska Accredited	294100 A/B
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://alsglobal.com/environmental/laboratories/rochester-environmental-lab.aspx>

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 3896

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax)

PAGE 1 OF 1

[illegible]

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservation Check Form

Project/Client Shaw Environmental Folder Number R12-7266

Cooler received on 10-24-12 by: KE COURIER: ALS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? ALS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 4.5°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10-24-12 @ 09:23

Thermometer ID: IR GUN#3 IR GUN#4 Reading From: Temp Blank Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-00A by KE on 10-24-12 at 09:30
5035 samples placed in storage location by on at

PC Secondary Review: and 10/24/12

Cooler Breakdown: Date: 10/25/12 Time: 1227 by: Alt

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO ₃	<u>X</u>		<u>BDB26123E</u>	<u>09/13</u>				
≤2	H ₂ SO ₄								
<4	NaHSO ₄								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na ₂ S ₂ O ₃	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>411100</u>	<u>09/13</u>				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 2-206-002, 082712-211,

Other Comments:

PC Secondary Review: and 11/6/12
H:\SMODOCS\Cooler Receipt 5.doc

*significant air bubbles: VOA > 5-6 mm ; WC > 1 in. diameter

00007

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0930
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 16:00

Sample Name: M-25D
 Lab Code: R1207266-001

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4054.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 5

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.50	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	0.55	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.50	
87-61-6	1,2,3-Trichlorobenzene	5.0 U	5.0	0.55	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	5.0	0.60	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	1.2	
106-93-4	1,2-Dibromoethane	5.0 U	5.0	0.75	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	0.50	
95-50-1	1,2-Dichlorobenzene	5.0 U	5.0	0.50	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	0.50	
541-73-1	1,3-Dichlorobenzene	5.0 U	5.0	0.50	
106-46-7	1,4-Dichlorobenzene	5.0 U	5.0	0.50	
78-93-3	2-Butanone (MEK)	25 U	25	5.1	
591-78-6	2-Hexanone	25 U	25	11	
108-10-1	4-Methyl-2-pentanone	25 U	25	4.8	
67-64-1	Acetone	25 U	25	5.4	
71-43-2	Benzene	5.0 U	5.0	0.50	
74-97-5	Bromochloromethane	5.0 U	5.0	0.75	
75-27-4	Bromodichloromethane	5.0 U	5.0	0.50	
75-25-2	Bromoform	5.0 U	5.0	0.75	
74-83-9	Bromomethane	5.0 U	5.0	1.2	
75-15-0	Carbon Disulfide	5.0 U	5.0	0.71	
56-23-5	Carbon Tetrachloride	29	5.0	0.50	
108-90-7	Chlorobenzene	5.0 U	5.0	0.50	
75-00-3	Chloroethane	5.0 U	5.0	0.50	
67-66-3	Chloroform	1.7 J	5.0	0.50	
74-87-3	Chloromethane	5.0 U	5.0	0.60	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	0.50	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	0.60	
124-48-1	Dibromochloromethane	5.0 U	5.0	0.50	
100-41-4	Ethylbenzene	5.0 U	5.0	0.50	
87-68-3	Hexachlorobutadiene	5.0 U	5.0	0.50	
179601-23-1	m,p-Xylenes	5.0 U	5.0	0.60	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0930
Date Received: 10/24/12
Date Analyzed: 10/30/12 16:00

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4054.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 5

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	0.70 J	5.0	0.50	
95-47-6	o-Xylene	5.0 U	5.0	0.50	
100-42-5	Styrene	5.0 U	5.0	0.50	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	0.50	
108-88-3	Toluene	5.0 U	5.0	0.50	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	0.50	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	0.50	
79-01-6	Trichloroethene (TCE)	67	5.0	0.50	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.50	
75-01-4	Vinyl Chloride	5.0 U	5.0	0.50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 16:00	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1600

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:22

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4049.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.6	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	0.31 J	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	24	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.96 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:22

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4049.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	25	E	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 13:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1322

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1010
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 18:59

Sample Name: M-29D
 Lab Code: R1207266-002
 Run Type: Dilution

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4059.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 2

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.2 D	2.0	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	2.0 U	2.0	0.20	
79-00-5	1,1,2-Trichloroethane	2.0 U	2.0	0.22	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0 U	2.0	0.20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	0.34 DJ	2.0	0.20	
87-61-6	1,2,3-Trichlorobenzene	2.0 U	2.0	0.22	
120-82-1	1,2,4-Trichlorobenzene	2.0 U	2.0	0.24	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.48	
106-93-4	1,2-Dibromoethane	2.0 U	2.0	0.30	
107-06-2	1,2-Dichloroethane	2.0 U	2.0	0.20	
95-50-1	1,2-Dichlorobenzene	2.0 U	2.0	0.20	
78-87-5	1,2-Dichloropropane	2.0 U	2.0	0.20	
541-73-1	1,3-Dichlorobenzene	2.0 U	2.0	0.20	
106-46-7	1,4-Dichlorobenzene	2.0 U	2.0	0.20	
78-93-3	2-Butanone (MEK)	10 U	10	2.1	
591-78-6	2-Hexanone	10 U	10	4.2	
108-10-1	4-Methyl-2-pentanone	10 U	10	1.9	
67-64-1	Acetone	10 U	10	2.2	
71-43-2	Benzene	2.0 U	2.0	0.20	
74-97-5	Bromochloromethane	2.0 U	2.0	0.30	
75-27-4	Bromodichloromethane	2.0 U	2.0	0.20	
75-25-2	Bromoform	2.0 U	2.0	0.30	
74-83-9	Bromomethane	2.0 U	2.0	0.46	
75-15-0	Carbon Disulfide	2.0 U	2.0	0.28	
56-23-5	Carbon Tetrachloride	22 D	2.0	0.20	
108-90-7	Chlorobenzene	2.0 U	2.0	0.20	
75-00-3	Chloroethane	2.0 U	2.0	0.20	
67-66-3	Chloroform	1.0 DJ	2.0	0.20	
74-87-3	Chloromethane	2.0 U	2.0	0.24	
156-59-2	cis-1,2-Dichloroethene	2.0 U	2.0	0.20	
10061-01-5	cis-1,3-Dichloropropene	2.0 U	2.0	0.24	
124-48-1	Dibromochloromethane	2.0 U	2.0	0.20	
100-41-4	Ethylbenzene	2.0 U	2.0	0.20	
87-68-3	Hexachlorobutadiene	2.0 U	2.0	0.20	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/30/12 18:59

Sample Name: M-29D
Lab Code: R1207266-002
Run Type: Dilution

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4059.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 2

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	0.52 DJ	2.0	0.20	
95-47-6	o-Xylene	2.0 U	2.0	0.20	
100-42-5	Styrene	2.0 U	2.0	0.20	
127-18-4	Tetrachloroethene (PCE)	2.0 U	2.0	0.20	
108-88-3	Toluene	2.0 U	2.0	0.20	
156-60-5	trans-1,2-Dichloroethene	2.0 U	2.0	0.20	
10061-02-6	trans-1,3-Dichloropropene	2.0 U	2.0	0.20	
79-01-6	Trichloroethene (TCE)	23 D	2.0	0.20	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0 U	2.0	0.20	
75-01-4	Vinyl Chloride	2.0 U	2.0	0.20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 18:59	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1859

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-29DDL
Lab Code: R1207266-002
Run Type: Dilution
Analytical Method: CLP-VOA OLC02.1

Units: µg/L
Basis: NA

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1040
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 13:53

Sample Name: M-24DR
 Lab Code: R1207266-003

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4050.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	4.1 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1040
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:53

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4050.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	4.2		1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	80-120	10/30/12 13:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1353

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1120
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 14:27

Sample Name: 11D
 Lab Code: R1207266-004

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4051.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	6.7	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.56 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1120
Date Received: 10/24/12
Date Analyzed: 10/30/12 14:27

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4051.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.9		1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 14:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1427

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1200
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 15:00

Sample Name: M-1
 Lab Code: R1207266-005

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4052.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1200
Date Received: 10/24/12
Date Analyzed: 10/30/12 15:00

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4052.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 15:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1500

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1230
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 15:28

Sample Name: MW-4
 Lab Code: R1207266-006

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4053.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.3 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1230
Date Received: 10/24/12
Date Analyzed: 10/30/12 15:28

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4053.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 15:28	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1528

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1330
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 16:36

Sample Name: 10S
 Lab Code: R1207266-007

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4055.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.9 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	2.2	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.39 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1330
Date Received: 10/24/12
Date Analyzed: 10/30/12 16:36

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4055.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 16:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1636

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1350
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 17:12

Sample Name: M-28S
 Lab Code: R1207266-008

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4056.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.6 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.1	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.20 J	1.0	0.10	
74-87-3	Chloromethane	0.85 J	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1350
Date Received: 10/24/12
Date Analyzed: 10/30/12 17:12

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4056.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	4.3	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 17:12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1712

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result Q
000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	2.09	3.2 JN

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1420
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 17:48

Sample Name: 13S
 Lab Code: R1207266-009

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4057.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.1	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1420
Date Received: 10/24/12
Date Analyzed: 10/30/12 17:48

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4057.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	2.2	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	80-120	10/30/12 17:48	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1748

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1450
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 18:24

Sample Name: 13D
 Lab Code: R1207266-010

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4058.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.4 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	0.68 J	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.13 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1450
Date Received: 10/24/12
Date Analyzed: 10/30/12 18:24

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4058.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 18:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1824

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 19:35

Sample Name: DUPB
 Lab Code: R1207266-011

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\103012\Z4060.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.6	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 19:35

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUADATA\MSVOA6\DATA\103012\Z4060.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.3	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 19:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1935

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0000
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 20:11

Sample Name: TRIP BLANK
 Lab Code: R1207266-012

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4061.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	2.1 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0000
Date Received: 10/24/12
Date Analyzed: 10/30/12 20:11

Sample Name: TRIP BLANK
Lab Code: R1207266-012

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4061.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	0.10	J	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	0.10	J	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/30/12 20:11	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 2011

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK
Lab Code: R1207266-012

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0000
 Date Received: 10/24/12
 Date Analyzed: 10/31/12 13:13

Sample Name: COOLER BLANK
 Lab Code: R1207266-013

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4071.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0000
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:13

Sample Name: COOLER BLANK
Lab Code: R1207266-013

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4071.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/31/12 13:13	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/31/12 1313

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: COOLER BLANK
Lab Code: R1207266-013

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/30/12 12:42

Sample Name: Method Blank
 Lab Code: RQ1213115-04

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4048.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	0.16 J	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 10/30/12 12:42

Sample Name: Method Blank
Lab Code: RQ1213115-04

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4048.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 12:42	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 10/30/12 1242

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: RQ1213115-04

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/31/12 12:40

Sample Name: Method Blank
 Lab Code: RQ1213170-04

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4070.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	0.23 J	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	0.13 J	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 10/31/12 12:40

Sample Name: Method Blank
Lab Code: RQ1213170-04

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4070.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	80-120	10/31/12 12:40	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 10/31/12 1240

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: RQ1213170-04

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266

Date Collected: 10/23/12

Date Received: 10/24/12

Date Analyzed: 10/30/12

Matrix Spike Summary
 Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-28S
 Lab Code: R1207266-008

Units: µg/L

Basis: NA

Analytical Method: CLP-VOA OLC02.1

Analyte Name	Sample Result	M-28SMS Matrix Spike RQ1213115-05			M-28SDMS Duplicate Matrix Spike RQ1213115-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,2-Trichloroethane	ND	5.40	5.00	108	5.07	5.00	101	60 - 140	6	30
1,2-Dibromoethane	ND	4.84	5.00	97	5.23	5.00	105	60 - 140	8	30
1,2-Dichloroethane	ND	5.07	5.00	101	4.86	5.00	97	60 - 140	4	30
1,2-Dichloropropane	ND	4.83	5.00	97	4.91	5.00	98	60 - 140	2	30
1,4-Dichlorobenzene	ND	4.80	5.00	96	4.72	5.00	94	60 - 140	2	30
Benzene	ND	4.94	5.00	99	4.93	5.00	99	60 - 140	<1	30
Bromoform	ND	4.85	5.00	97	5.22	5.00	104	60 - 140	7	30
Carbon Tetrachloride	4.1	9.21	5.00	101	9.53	5.00	108	60 - 140	3	30
cis-1,3-Dichloropropene	ND	4.84	5.00	97	4.75	5.00	95	60 - 140	2	30
Tetrachloroethene (PCE)	ND	5.03	5.00	101	5.00	5.00	100	60 - 140	<1	30
Trichloroethene (TCE)	4.3	8.67	5.00	87	9.00	5.00	94	60 - 140	4	30
Vinyl Chloride	ND	5.30	5.00	106	5.07	5.00	101	60 - 140	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266**Date Analyzed:** 10/30/12

Lab Control Sample Summary
Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1**Units:** µg/L**Basis:** NA**Analysis Lot:** 316079**Lab Control Sample**

RQ1213115-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,2-Trichloroethane	5.08	5.00	102	60 - 140
1,2-Dibromoethane	4.59	5.00	92	60 - 140
1,2-Dichloroethane	4.81	5.00	96	60 - 140
1,2-Dichloropropane	4.81	5.00	96	60 - 140
1,4-Dichlorobenzene	4.65	5.00	93	60 - 140
Benzene	4.74	5.00	95	60 - 140
Bromoform	4.78	5.00	96	60 - 140
Carbon Tetrachloride	4.78	5.00	96	60 - 140
cis-1,3-Dichloropropene	4.80	5.00	96	60 - 140
Tetrachloroethene (PCE)	4.77	5.00	95	60 - 140
Trichloroethene (TCE)	4.72	5.00	94	60 - 140
Vinyl Chloride	4.80	5.00	96	60 - 140

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Analyzed: 10/31/12

Lab Control Sample Summary
Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1**Units:** µg/L**Basis:** NA**Analysis Lot:** 316261**Lab Control Sample**

RQ1213170-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,2-Trichloroethane	4.87	5.00	97	60 - 140
1,2-Dibromoethane	4.97	5.00	99	60 - 140
1,2-Dichloroethane	5.24	5.00	105	60 - 140
1,2-Dichloropropane	5.14	5.00	103	60 - 140
1,4-Dichlorobenzene	5.09	5.00	102	60 - 140
Benzene	4.81	5.00	96	60 - 140
Bromoform	4.87	5.00	97	60 - 140
Carbon Tetrachloride	5.04	5.00	101	60 - 140
cis-1,3-Dichloropropene	4.68	5.00	94	60 - 140
Tetrachloroethene (PCE)	4.94	5.00	99	60 - 140
Trichloroethene (TCE)	4.82	5.00	96	60 - 140
Vinyl Chloride	4.83	5.00	97	60 - 140

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0930
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:01

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1007.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:12

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1008.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1040
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:24

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1009.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1120
Date Received: 10/24/12
Date Analyzed: 10/31/12 12:41

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1013.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1200
Date Received: 10/24/12
Date Analyzed: 10/31/12 12:56

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1014.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1230
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:06

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1015.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1330
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:17

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1016.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1350
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:28

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1017.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1420
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:40

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1018.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1450
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:50

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1019.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/31/12 14:15

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1020.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 10/31/12 09:35

Sample Name: Method Blank
Lab Code: RQ1213092-01

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1001.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: NA
Date Received: NA
Date Analyzed: 11/1/12 09:38

Sample Name: Method Blank
Lab Code: RQ1213143-01

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1001.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 11/ 1/12

Matrix Spike Summary
Dissolved Gases by GC/FID

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Analytical Method: RSK 175

Analyte Name	Sample Result	M-28SMS Matrix Spike RQ1213143-03			M-28SDMS Duplicate Matrix Spike RQ1213143-04			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Ethane	ND	56.7	52.1	109	54.8	52.1	105	72 - 139	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266**Date Analyzed:** 10/31/12

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175**Units:** µg/L**Basis:** NA**Analysis Lot:** 316282**Lab Control Sample**

RQ1213092-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	25.9	26.1	99	82 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266**Date Analyzed:** 11/ 1/12

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175**Units:** µg/L**Basis:** NA**Analysis Lot:** 316419**Lab Control Sample**

RQ1213143-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	27.5	26.1	106	82 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

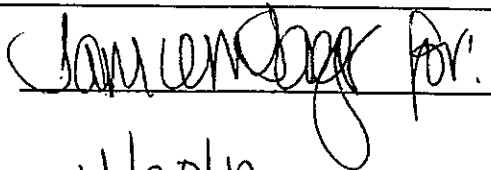
METALS
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: R1207266 SDG No.: M-25D
Lab Code: _____ Case No.: _____ SAS No.: _____
SOW No.: SW846 CLP-M

Sample ID. Lab Sample No.
13D R1207266-010

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

Comments: See Attached Case Narrative

Signature:  Name: Michael Perry
Date: 11/20/12 Title: Laboratory Director

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

13D

Contract: R1207266
Lab Code: Case No.: SAS No.: SDG NO.: M-25D
Matrix (soil/water): WATER Lab Sample ID: R1207266-010
Level (low/med): LOW Date Received: 10/24/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.6	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-3-

BLANKS

Contract: R1207266

Lab Code: Case No.: SAS No.: SDG NO.: M-25D

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank		M
		1	2	3						
Chromium	0.884 U	0.884 U	0.884 U	0.884 U				0.884 U		P

omments:

METALS

-3-

BLANKS

Contract: R1207266

Lab Code: Case No.: SAS No.: SDG NO.: M-25D

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank		
		1	C	2	C	3	C			
Chromium		0.884	U	0.884	U	0.884	U			P

Comments:

METALS

-3-

BLANKS

Contract: R1207266

Lab Code: Case No.: SAS No.: SDG NO.: M-25D

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank		
		1	2	3						
Chromium		0.884								

omments:

METALS

-7-

LABORATORY CONTROL SAMPLE

Contract: R1207266

Lab Code: Case No.: SAS No.: SDG NO.: M-25D

Solid LCS Source:

Aqueous LCS Source: CPI

Analyte	Aqueous (ug/L			Solid (mg/K				
	True	Found	%R	True	Found	C	Limits	%R
Chromium	200	193	96					

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: 13D
Lab Code: R1207266-010

Service Request: R1207266
Date Collected: 10/23/12 1450
Date Received: 10/24/12

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/24/12 12:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1207266-MB

Service Request: R1207266
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/24/12 12:42	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Analyzed: 10/24/12

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1207266-LCS					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	7196A	0.0963	0.100	96	82 - 121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



November 20, 2012

Mr. Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

Re: GE MRFA Project #145599.01
Service Request # R1207283

Dear Mr. Neumann:

Enclosed is the analytical data report for the above referenced facility. A total of eleven samples were received by our laboratory on October 25, 2012.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. The data package and summary package have been mailed to Judy Harry and the summary package only has been e-mailed to your attention. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

Page 1 of 79

cc: Ms. Judy Harry
Data Validation Services
818 SE Downing Drive
High Springs, FL 32643



ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | FAX +1 585 288 8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

CASE NARRATIVE

Client:	Shaw Environmental	Service Request:	R1207283
Project:	GE MRFA	Project Number:	145599.01
Sample Matrix:	Water	Date Received:	10/25/12

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Samples were collected on 10/24/12 and received at CAS on 10/25/12 at a cooler temperature of 3.2 C in good condition except as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory.

Inorganic Analysis

Samples were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was performed on M-27D as requested. All MS recoveries and RPD's were acceptable.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Metals Analysis

Samples were analyzed for a site specific list of Metals by Methods 6010C.

Site specific QC was performed on M-27D as requested. All MS recoveries and RPD's were acceptable.

All LCS recoveries were within limits.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Volatile Organics

Samples were analyzed for a site specific list of Volatile Organics by CLP Method OLC 2.1.

All Tuning criteria for BFB were within QC limits.

All the initial calibration criteria were met for all analytes. All Continuing Calibration Verification (CCV) standards were within 30% Difference (D) except Bromoform on the 10/31/12 CCV. All positive detections for samples associated with this CCV should be considered as estimated.

All Internal Standard Areas and surrogate standard recoveries were within QC limits.

The LCS recoveries were all acceptable.

Site specific QC was performed on M-27D as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination except the 10/31/12 blank had low level detections for 1,2,3-Trichlorobenzene and Hexachlorobutadiene. No data was affected.

No other analytical or QC problems were encountered.

RSK-175

Samples were analyzed for Ethane by Method RSK-175M.

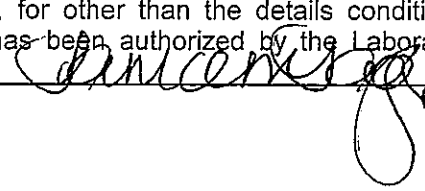
All the initial and continuing calibration criteria were met for all analytes.

The LCS recoveries were all acceptable.

Site specific QC was requested on M-27D as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 145599.01	Batch Complete: Yes	Date Revised:
Submission: R1207283	Diskette Requested: No	Date Due: 11/15/12
Client: Shaw Environmental & Infrastructure	Date: 11/6/12	Protocol: EPA
Client Rep: JJAEGGER	Custody Seal: Present/Absent:	Shipping No.:
Project: GE MRFA	Chain of Custody: Present/Absent:	SDG #: DGC-4S

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1207283-001	DGC-4S	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-002	SW-A	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-003	DGC-3S	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-004	SW-G	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-005	SW-F	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-006	SW-E	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-007	SW-D	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-008QC	M-27D	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-009	SW-B	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-010	DUP A	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-011	TRIP BLANK	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-012	COOLER BLANK	Water	CLP-VOA OLC02.1	10/24/12	10/25/12			

Folder Comments: need extra 3 compounds, e-mail invoices to Karen and Steve

REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- * Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
- X See Case Narrative for discussion.



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID #
Connecticut ID # PH0556	Nebraska Accredited	294100 A/B
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://alsglobal.com/environmental/laboratories/rochester-environmental-lab.aspx>

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Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number R12-7283

Cooler received on 10/25/12 by: PO COURIER: ALS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? ALS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 3.2 °

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/25/12 0921

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-002 by PO on 10/25/12 at 0923
5035 samples placed in storage location by on at

PC Secondary Review 10/25/12

Cooler Breakdown: Date: 10/25/12 Time: 1333 by: Alt

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO ₃	X		B01326123E	09/13				
≤2	H ₂ SO ₄								
<4	NaHSO ₄								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na ₂ S ₂ O ₃	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	411100	09/13				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 2-206-002, 082712-211

Other Comments:

PC Secondary Review: 11/6/12

H:\SMODOCS\Cooler Receipt 5.doc

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

00007

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 0930
Date Received: 10/25/12
Date Analyzed: 10/31/12 13:46

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4072.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.2 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 0930
Date Received: 10/25/12
Date Analyzed: 10/31/12 13:46

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4072.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/31/12 13:46	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1346

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1000
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 14:21

Sample Name: SW-A
 Lab Code: R1207283-002

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4073.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1000
Date Received: 10/25/12
Date Analyzed: 10/31/12 14:21

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4073.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 14:21	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1421

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1030
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 15:33

Sample Name: DGC-3S
 Lab Code: R1207283-003

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4075.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1030
Date Received: 10/25/12
Date Analyzed: 10/31/12 15:33

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4075.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 15:33	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1533

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1100
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 14:57

Sample Name: SW-G
 Lab Code: R1207283-004

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4074.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1100
Date Received: 10/25/12
Date Analyzed: 10/31/12 14:57

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUADATA\MSVOA6\DATA\103112\Z4074.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	80-120	10/31/12 14:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1457

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1130
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 16:09

Sample Name: SW-F
 Lab Code: R1207283-005

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\103112\Z4076.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1130
Date Received: 10/25/12
Date Analyzed: 10/31/12 16:09

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4076.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	80-120	10/31/12 16:09	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1609

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1145
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 16:44

Sample Name: SW-E
 Lab Code: R1207283-006

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4077.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1145
Date Received: 10/25/12
Date Analyzed: 10/31/12 16:44

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4077.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	80-120	10/31/12 16:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1644

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1230
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 17:19

Sample Name: SW-D
 Lab Code: R1207283-007

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4078.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1230
Date Received: 10/25/12
Date Analyzed: 10/31/12 17:19

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4078.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	80-120	10/31/12 17:19	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1719

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1300
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 17:48

Sample Name: M-27D
 Lab Code: R1207283-008

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4079.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.2	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.33 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12
Date Analyzed: 10/31/12 17:48

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\103112\Z4079.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	5.8		1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/31/12 17:48	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1748

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1345
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 18:24

Sample Name: SW-B
 Lab Code: R1207283-009

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4080.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	0.17 J	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12
Date Analyzed: 10/31/12 18:24

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4080.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	0.16	J	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	80-120	10/31/12 18:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1824

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 19:00

Sample Name: DUP A
 Lab Code: R1207283-010

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4081.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.9	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.41 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 19:00

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4081.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	5.8	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 19:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1900

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 19:36

Sample Name: TRIP BLANK
 Lab Code: R1207283-011

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4082.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.6 J	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 19:36

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4082.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	80-120	10/31/12 19:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1936

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 21:59

Sample Name: COOLER BLANK
 Lab Code: R1207283-012

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4086.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 21:59

Sample Name: COOLER BLANK
Lab Code: R1207283-012

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4086.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/31/12 21:59	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 2159

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: COOLER BLANK
Lab Code: R1207283-012

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/31/12 12:40

Sample Name: Method Blank
 Lab Code: RQ1213170-04

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4070.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	0.23 J	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	0.13 J	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: NA
Date Received: NA
Date Analyzed: 10/31/12 12:40

Sample Name: Method Blank
Lab Code: RQ1213170-04

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4070.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	80-120	10/31/12 12:40	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: NA
Date Received: NA
Date Analyzed: 10/31/12 1240

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: RQ1213170-04

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12
 Date Received: 10/25/12
 Date Analyzed: 10/31/12

Matrix Spike Summary
 Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-27D
 Lab Code: R1207283-008

Units: µg/L
 Basis: NA

Analytical Method: CLP-VOA OLC02.1

Analyte Name	Sample Result	M-27DMS Matrix Spike RQ1213170-05			M-27DDMS Duplicate Matrix Spike RQ1213170-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,2-Trichloroethane	ND	5.23	5.00	105	4.77	5.00	95	60 - 140	9	30
1,2-Dibromoethane	ND	5.13	5.00	103	4.90	5.00	98	60 - 140	5	30
1,2-Dichloroethane	ND	5.50	5.00	110	5.24	5.00	105	60 - 140	5	30
1,2-Dichloropropane	ND	5.10	5.00	102	4.99	5.00	100	60 - 140	2	30
1,4-Dichlorobenzene	ND	5.17	5.00	103	5.00	5.00	100	60 - 140	3	30
Benzene	ND	5.03	5.00	101	4.83	5.00	97	60 - 140	4	30
Bromoform	ND	5.32	5.00	106	5.27	5.00	105	60 - 140	<1	30
Carbon Tetrachloride	4.2	10.0	5.00	115	9.59	5.00	107	60 - 140	4	30
cis-1,3-Dichloropropene	ND	4.94	5.00	99	4.55	5.00	91	60 - 140	8	30
Tetrachloroethene (PCE)	ND	5.32	5.00	106	4.93	5.00	99	60 - 140	8	30
Trichloroethene (TCE)	5.8	11.1	5.00	106	10.7	5.00	99	60 - 140	3	30
Vinyl Chloride	ND	4.87	5.00	97	4.94	5.00	99	60 - 140	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283

Date Analyzed: 10/31/12

Lab Control Sample Summary
Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1

Units: µg/L

Basis: NA

Analysis Lot: 316261

Lab Control Sample

RQ1213170-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,2-Trichloroethane	4.87	5.00	97	60 - 140
1,2-Dibromoethane	4.97	5.00	99	60 - 140
1,2-Dichloroethane	5.24	5.00	105	60 - 140
1,2-Dichloropropane	5.14	5.00	103	60 - 140
1,4-Dichlorobenzene	5.09	5.00	102	60 - 140
Benzene	4.81	5.00	96	60 - 140
Bromoform	4.87	5.00	97	60 - 140
Carbon Tetrachloride	5.04	5.00	101	60 - 140
cis-1,3-Dichloropropene	4.68	5.00	94	60 - 140
Tetrachloroethene (PCE)	4.94	5.00	99	60 - 140
Trichloroethene (TCE)	4.82	5.00	96	60 - 140
Vinyl Chloride	4.83	5.00	97	60 - 140

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 0930
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:36

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1003.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1000
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:46

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1004.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1030
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:58

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1005.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1100
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:09

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1006.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1130
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:43

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1007.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1145
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:54

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1008.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1230
Date Received: 10/25/12
Date Analyzed: 11/1/12 12:04

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1009.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12
Date Analyzed: 11/1/12 12:55

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1013.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:10

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1014.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:20

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1015.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:32

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1016.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: NA
Date Received: NA
Date Analyzed: 11/1/12 09:38

Sample Name: Method Blank
Lab Code: RQ1213143-01

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1001.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 11/ 1/12

Matrix Spike Summary
Dissolved Gases by GC/FID

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Analytical Method: RSK 175

Analyte Name	Sample Result	M-27DMS Matrix Spike RQ1213143-05			M-27DDMS Duplicate Matrix Spike RQ1213143-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Ethane	ND	53.1	52.1	102	53.0	52.1	102	72 - 139	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283**Date Analyzed:** 11/ 1/12

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175**Units:** µg/L**Basis:** NA**Analysis Lot:** 316419**Lab Control Sample**

RQ1213143-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	27.5	26.1	106	82 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

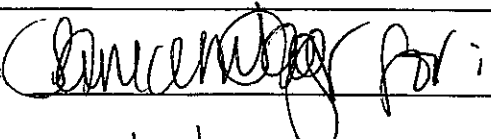
METALS
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: R1207283
Lab Code: Case No.:
SOW No.: SW846 CLP-M
SDG No.: DGC-4S
SAS No.:

Sample ID.	Lab Sample No.
M-27D	R1207283-008
M-27DD	R1207283-008D
M-27DS	R1207283-008S
SW-B	R1207283-009
DUP A	R1207283-010

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

Comments: See Attached Case Narrative

Signature:  Name: Michael Perry
Date: 11/25/12 Title: Laboratory Director

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

DUP A

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Lab Sample ID: R1207283-010

Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	2.3	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-27D

Contract: R1207283
Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S
Matrix (soil/water): WATER Lab Sample ID: R1207283-008
Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.4	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SW-B

Contract: R1207283
Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S
Matrix (soil/water): WATER Lab Sample ID: R1207283-009
Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	1.1	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-3-

BLANKS

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank		M
		1	2	3						
Chromium	0.24 U	0.24 U	0.24 U	0.24 U				0.238 U		P

omments:

METALS

-3-

BLANKS

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank			M
		1	C	2	C	3	C				
Chromium		0.24	U	0.24	U	0.48	J				P

omments:

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

M-27DS

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Chromium	75 - 125	210.00	6.41 J	200.0	102		P

Comments:

METALS
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

M-27DA

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Chromium		227.00	6.41 J	200.0	110		P

Comments:

METALS
-6-
DUPLICATES

SAMPLE NO.

M-27DD

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Chromium		6.41	J	2.56	J	86		P

Comments:

METALS

-7-

LABORATORY CONTROL SAMPLE

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Solid LCS Source:

Aqueous LCS Source: CPI

Analyte	Aqueous (ug/L			Solid (mg/K				
	True	Found	%R	True	Found	C	Limits	%R
Chromium	200	210	105					

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: M-27D
Lab Code: R1207283-008

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12

Basis: NA**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/25/12 11:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: SW-B
Lab Code: R1207283-009

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12

Basis: NA**General Chemistry Parameters**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010 U	mg/L	0.010	1	NA	10/25/12 11:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: DUP A
Lab Code: R1207283-010

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12

Basis: NA**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/25/12 11:44	*

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1207283-MB

Service Request: R1207283
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010 U	mg/L	0.010	1	NA	10/25/12 11:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/25/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: M-27D
Lab Code: R1207283-008

Units: mg/L
Basis: NA

Analyte Name	Method	MRL	Sample Result	M-27DDUP Duplicate Sample R1207283-008DUP		RPD	RPD Limit
				Result	Average		
Chromium, Hexavalent	7196A	0.010	0.010 U	0.010 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/25/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name: M-27D
Lab Code: R1207283-008

Units: mg/L
Basis: NA

Analytical Method: 7196A

M-27DMS
Matrix Spike
R1207283-008MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	ND	0.100	0.100	100	85 - 115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283**Date Analyzed:** 10/25/12

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L**Basis:** NA

Lab Control Sample

R1207283-LCS

Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	7196A	0.105	0.100	105	82 - 121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 11/14/12 13:35

Form 3C

\\flow2\Star\lms\L\lmsReps\LabControlSample.rpt

SuperSet Reference: 12-0000228738 rev 00

00079

Type I Data Package

Prepared for:

Shaw Env & Infrastructure, Inc
PO BOX 98519
Baton Rouge LA 70884

Project: MRFA
Groundwater Samples
Collected on 10/23/12

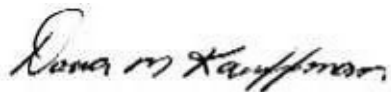
SDG# RFA02

GROUP	SAMPLE NUMBERS
1344454	6834875-6834877

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-08A-TX

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 11/20/2012

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to Environmental Client Services at (717) 656-2300.

Table of Contents for SDG# RFA02

1. Sample Reference List	1
2. Analysis Request, Field Chain-of-Custody Record	2
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Sample Reference List for SDG Number RFA02
with a Data Package Type of I
01401 - Shaw Env & Infrastructure, Inc
Project: MRFA

Lab Sample Number	Lab Sample Code	<u>Client Sample Description</u>
6834875	MRFA1	M-28S Composite Groundwater
6834876	MRFA2	MW-4 Composite Groundwater
6834877	MRFAD	DUP B Composite Groundwater

Environmental Analysis Request/Chain of Custody



Lancaster
Laboratories

For Lancaster Laboratories use only

Acct. # 1401 Group # B344454 Sample # 6834875-77

COC # 313358

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Shaw Environmental</u> Acct. #: <u>01401</u> Project Name/ #: <u>MRFA</u> PWSID #: _____ Project Manager: <u>Brian Neumann</u> P.O. #: <u>145599</u> Sampler: <u>Matt Dupay</u> Quote #: _____ Name of state where samples were collected: <u>New York</u>				4 Matrix <input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Potable Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other: _____		5 Analyses Requested Preservation Codes <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Hydrazines</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										H												Hydrazines												For Lab Use Only FSC: _____ SCR#: <u>128834</u> 6 Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
H																																									
Hydrazines																																									
2 Sample Identification				3 Grab Composite		4 Total # of Containers		5 Analyses Requested										6 Preservation Codes																							
Date Collected				Time Collected		Grab Composite		Total # of Containers		Analyses Requested										Preservation Codes																					
M-28 S				10/23/12		1350		1		Hydrazines										H=HCl T=Thiosulfate																					
MW-4				↓		1230		1		Hydrazines										N=HNO ₃ B=NaOH																					
DUP B				↓		1		1		Hydrazines										S=H ₂ SO ₄ O=Other																					
Remarks				Temperature of samples upon receipt (if requested)		Total # of Containers		Analyses Requested										Preservation Codes																							

7 Turnaround Time Requested (TAT) (please circle): <u>Standard</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): <u>Phone</u> <u>E-mail</u> Phone #: <u>518 785 2354</u> E-mail address: <u>brian.neumann@shawgrp.com</u>				Relinquished by: <u>L. Megashko</u> Relinquished by: <u>M. H. J.</u> Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Date <u>10/1/12</u> <u>10/23/12</u> _____ _____ _____		Time <u>10:36</u> <u>1700</u> _____ _____ _____		Received by: <u>M. H. J.</u> Received by: _____ Received by: _____ Received by: _____ Received by: <u>Port 4/4</u>		Date _____ _____ _____ _____ _____		Time _____ _____ _____ _____ _____	
8 Data Package Options (please circle if required) Type I (Validation/non-CLP) MA MCP CT RCP Type III (Reduced non-CLP) Type IV (CLP SOW) Type VI (Raw Data Only) TX TRRP-13				EDD Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Site-specific QC (MS/MSD/Dup) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if yes, indicate QC sample and submit triplicate sample volume)		Date <u>10/24/12</u> _____ _____ _____		Time <u>0945</u> _____ _____ _____		Received by: _____ Received by: _____ Received by: _____ Received by: _____ Received by: _____		Date _____ _____ _____ _____ _____		Time _____ _____ _____ _____ _____	

Environmental Sample Administration
Receipt Documentation Log

1344454

Client/Project: Shaw EnvironmentalShipping Container Sealed: YES NODate of Receipt: 10/24/12Custody Seal Present *: YES NOTime of Receipt: 0945* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 60Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	1396	2.1	ST	wz	y	L	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Pat hph 3972 Date/Time: 10/24/12 1125

Issued by Dept. 6042 Management

2174.06

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

10342 Hydrazines in Water

An aliquot of the sample is derivatized and directly analyzed by HPLC/MS/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8315A modified, December 1996.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Shaw Env & Infrastructure, Inc
PO BOX 98519
Baton Rouge LA 70884

October 29, 2012

Project: MRFA

Submittal Date: 10/24/2012

Group Number: 1344454

SDG: RFA02

PO Number: 145599

State of Sample Origin: NY

Client Sample DescriptionM-28S Composite Groundwater
MW-4 Composite Groundwater
DUP B Composite GroundwaterLancaster Labs (LLI) #6834875
6834876
6834877

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC
COPY TO
ELECTRONIC
COPY TO

Shaw Env & Infrastructure

Data Package Group

Attn: Brian Neumann

Respectfully Submitted,

Angela M. Miller
Specialist

(717) 556-7260

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Lancaster
Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: M-28S Composite Groundwater
MRFA

LLI Sample # WW 6834875
LLI Group # 1344454
Account # 01401

Project Name: MRFA

Collected: 10/23/2012 13:50 by MD

Shaw Env & Infrastructure, Inc

PO BOX 98519

Submitted: 10/24/2012 09:45

Baton Rouge LA 70884

Reported: 10/29/2012 16:39

MRFA1 SDG#: RFA02-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Misc. Organics	SW-846 8315A modified		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.25	0.50	1
10342	Hydrazine	302-01-2	N.D.	0.050	0.10	1
10342	Methylhydrazine	60-34-4	N.D.	0.25	0.50	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10342	Hydrazines in Water	SW-846 8315A modified	1	12299003	10/27/2012 19:57	Meng Yu	1

*=This limit was used in the evaluation of the final result



Lancaster
Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-4 Composite Groundwater
MRFA

LLI Sample # WW 6834876
LLI Group # 1344454
Account # 01401

Project Name: MRFA

Collected: 10/23/2012 12:30 by MD

Shaw Env & Infrastructure, Inc

PO BOX 98519

Submitted: 10/24/2012 09:45

Baton Rouge LA 70884

Reported: 10/29/2012 16:39

MRFA2 SDG#: RFA02-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Misc. Organics	SW-846 8315A modified		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.25	0.50	1
10342	Hydrazine	302-01-2	N.D.	0.050	0.10	1
10342	Methylhydrazine	60-34-4	N.D.	0.25	0.50	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10342	Hydrazines in Water	SW-846 8315A modified	1	12299003	10/27/2012 20:14	Meng Yu	1

*=This limit was used in the evaluation of the final result



Lancaster
Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP B Composite Groundwater
MRFA

LLI Sample # WW 6834877
LLI Group # 1344454
Account # 01401

Project Name: MRFA

Collected: 10/23/2012 by MD

Shaw Env & Infrastructure, Inc

PO BOX 98519

Submitted: 10/24/2012 09:45

Baton Rouge LA 70884

Reported: 10/29/2012 16:39

MRFAD SDG#: RFA02-03FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Misc. Organics	SW-846 8315A modified		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.25	0.50	1
10342	Hydrazine	302-01-2	N.D.	0.050	0.10	1
10342	Methylhydrazine	60-34-4	N.D.	0.25	0.50	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10342	Hydrazines in Water	SW-846 8315A modified	1	12299003	10/27/2012 20:32	Meng Yu	1

*=This limit was used in the evaluation of the final result

Hydrazines by LC/MS/MS Data

Case Narrative/Conformance Summary

Case Narrative/Conformance Summary

CLIENT: Shaw Env & Infrastructure, Inc
SDG: RFA02

Specialty Services Group

Fraction: Hydrazines by LC/MS/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
6834875	M-28S	X		1	
6834876	MW-4	X		1	
6834877	DUP B	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E = out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis



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Case Narrative/Conformance Summary

CLIENT: Shaw Env & Infrastructure, Inc
SDG: RFA02

Specialty Services Group

Fraction: Hydrazines by LC/MS/MS

LCSD = Lab Control Sample Duplicate

* = Out of Specification

Narrative Reviewed and Approved 11-7-12 by
(Date)

Grace M. Salm
Specialist

QC Summary



Lancaster
Laboratories

Quality Control Reference List
Specialty Services Group

CLIENT: Shaw Env & Infrastructure, Inc
SDG: RFA02

Fraction: Hydrazines by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
Hydrazines in Water	12299003	BLK	10/27/2012 17:40:00
		LCS	10/27/2012 18:14:00
		LCSD	10/27/2012 18:31:00
		6834875 MS	10/27/2012 18:48:00
		6834875 MSD	10/27/2012 19:06:00
		6834875	10/27/2012 19:57:00
		6834876	10/27/2012 20:14:00
		6834877	10/27/2012 20:32:00

Fraction: Hydrazines by LC/MS/MS

12299003 / BLK Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Hydrazine	10/27/12	N.D.	ug/l	0.050	0.10
Methylhydrazine	10/27/12	N.D.	ug/l	0.25	0.50
1,1-Dimethylhydrazine	10/27/12	N.D.	ug/l	0.25	0.50



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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: RFA02
Matrix: LIQUID

Specialty Services Group

Fraction: Hydrazines by LC/MS/MS

UNSPK: 6834875	Batch: 12299003 (Sample number(s): 6834875-6834877)								
MS: 6834875	Spike	Unspiked	MS	MSD	MS	MSD	%Rec		%RPD
MSD: 6834875	Added	Conc	Conc	Conc	%Rec	%Rec	Limits	%RPD	Limits
Analyte	ug/l	ug/l	ug/l	ug/l					
Hydrazine	12	N.D.	12.62	12.36	105	103	79-128	2	25
Methylhydrazine	60	N.D.	63.35	65.38	106	109	52-146	3	25
1,1-Dimethylhydrazine	60	N.D.	54.42	55.31	91	92	60-137	2	25

Results are being reported on an as received basis.

11/6/2012 1:53:25 PM

Page 1 of 1

RFA02 0017

**SDG: RFA02
Matrix: LIQUID**
**Specialty Services Group
Fraction: Hydrazines by LC/MS/MS**

LCS LCSD Analyte	Batch: 12299003 (Sample number(s): 6834875-6834877)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Hydrazine	12	12.38	12.61	103	105	81-129	2	25
Methylhydrazine	60	66.25	62.83	110	105	71-135	5	25
1,1-Dimethylhydrazine	60	54.9	58.4	92	97	81-128	6	25

Sample Data

Fraction: Hydrazines by LC/MS/MS

10342: Hydrazines in Water Analyte Name	Default MDL	Default LOQ	Units
Hydrazine	0.050	0.10	ug/l
Methylhydrazine	0.25	0.50	ug/l
1,1-Dimethylhydrazine	0.25	0.50	ug/l

LCMSMS ANALYSIS REPORT

Component Name: Monomethylhydrazine

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
SYS(MDL)	B12299003_02	958.04	N/A	958.040	N/A	0.430370	N/A	N/A
CAL1	B12299003_03	2403.15	N/A	2403.154	0.500000	0.577687	15.54	N/A
CAL2	B12299003_04	6569.33	N/A	6569.330	1.000000	1.002394	0.24	N/A
CAL3	B12299003_05	19889.69	N/A	19889.686	2.500000	2.360292	-5.59	N/A
CAL4	B12299003_06	44979.91	N/A	44979.913	5.000000	4.918031	-1.64	N/A
CAL5	B12299003_07	230010.36	N/A	230010.359	25.000000	23.780337	-4.88	N/A
CAL6	B12299003_08	445501.80	N/A	445501.803	50.000000	45.747887	-8.50	N/A
CAL7	B12299003_09	994519.32	N/A	994519.318	100.000000	101.715630	1.72	N/A
CAL8	B12299003_10	1261163.19	N/A	1261163.194	125.000000	128.897742	3.12	N/A
Meoh	B12299003_11	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLK	B12299003_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	B12299003_13	17871.96	N/A	17871.964	2.500000	2.154603	-13.82	N/A
ICV/LCS	B12299003_14	646584.18	N/A	646584.180	N/A	66.246553	N/A	N/A
ICV/LCSD	B12299003_15	613094.16	N/A	613094.161	N/A	62.832526	N/A	N/A
MS (6834875)	B12299003_16	618162.20	N/A	618162.195	N/A	63.349170	N/A	N/A
MSD (6834875)	B12299003_17	638042.16	N/A	638042.162	N/A	65.375766	N/A	N/A
CCV2	B12299003_18	38524.54	N/A	38524.544	5.000000	4.259960	-14.80	N/A
Meoh	B12299003_19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834875 (BKG)	B12299003_20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834876	B12299003_21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834877	B12299003_22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	B12299003_23	211695.09	N/A	211695.090	25.000000	21.913249	-12.35	N/A

Meng Yu
Principal Chemist

OCT 29 2012

RT402
0021

LCMSMS ANALYSIS REPORT

Component Name: 1,1-Dimethylhydrazine

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
SYS(MDL)	B12299003_02	2209.16	N/A	2209.156	N/A	0.370406	N/A	N/A
CAL1	B12299003_03	4563.99	N/A	4563.992	0.500000	0.585177	17.04	N/A
CAL2	B12299003_04	7989.82	N/A	7989.821	1.000000	0.897629	-10.24	N/A
CAL3	B12299003_05	27001.91	N/A	27001.907	2.500000	2.631617	5.26	N/A
CAL4	B12299003_06	49459.72	N/A	49459.716	5.000000	4.679871	-6.40	N/A
CAL5	B12299003_07	252021.03	N/A	252021.034	25.000000	23.154381	-7.38	N/A
CAL6	B12299003_08	539750.83	N/A	539750.830	50.000000	49.396642	-1.21	N/A
CAL7	B12299003_09	1138716.26	N/A	1138716.264	100.000000	104.025003	4.03	N/A
CAL8	B12299003_10	1353669.14	N/A	1353669.141	125.000000	123.629680	-1.10	N/A
Meoh	B12299003_11	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLK	B12299003_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	B12299003_13	18569.25	N/A	18569.249	2.500000	1.862520	-25.50	N/A
ICV/LCS	B12299003_14	600104.37	N/A	600104.371	N/A	54.901158	N/A	N/A
ICV/LCSD	B12299003_15	638468.56	N/A	638468.558	N/A	58.400146	N/A	N/A
MS (6834875)	B12299003_16	594850.32	N/A	594850.317	N/A	54.421965	N/A	N/A
MSD (6834875)	B12299003_17	604556.61	N/A	604556.610	N/A	55.307223	N/A	N/A
CCV2	B12299003_18	53070.85	N/A	53070.854	5.000000	5.009223	0.18	N/A
Meoh	B12299003_19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834875 (BKG)	B12299003_20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834876	B12299003_21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834877	B12299003_22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	B12299003_23	270808.23	N/A	270808.233	25.000000	24.867859	-0.53	N/A

Meng Yu
Principal Chemist

OCT 29 2012

REF: 002

LCMSMS ANALYSIS REPORT

Component Name: Hydrazine

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
SYS(MDL)	B12299003_02	852.47	N/A	852.469	N/A	0.085652	N/A	N/A
CAL1	B12299003_03	2255.73	N/A	2255.735	0.100000	0.128883	28.88	N/A
CAL2	B12299003_04	3942.42	N/A	3942.418	0.200000	0.180846	-9.58	N/A
CAL3	B12299003_05	13759.44	N/A	13759.443	0.500000	0.483283	-3.34	N/A
CAL4	B12299003_06	26735.71	N/A	26735.706	1.000000	0.883049	-11.70	N/A
CAL5	B12299003_07	155056.42	N/A	155056.424	5.000000	4.836282	-3.27	N/A
CAL6	B12299003_08	307879.90	N/A	307879.896	10.000000	9.544383	-4.56	N/A
CAL7	B12299003_09	666416.42	N/A	666416.420	20.000000	20.589978	2.95	N/A
CAL8	B12299003_10	814540.30	N/A	814540.296	25.000000	25.153296	0.61	N/A
Meoh	B12299003_11	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLK	B12299003_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	B12299003_13	12559.53	N/A	12559.534	0.500000	0.446317	-10.74	N/A
ICV/LCS	B12299003_14	399903.45	N/A	399903.454	N/A	12.379394	N/A	N/A
ICV/LCSD	B12299003_15	407454.21	N/A	407454.213	N/A	12.612014	N/A	N/A
MS (6834875)	B12299003_16	407609.70	N/A	407609.699	N/A	12.616804	N/A	N/A
MSD (6834875)	B12299003_17	399130.96	N/A	399130.959	N/A	12.355595	N/A	N/A
CCV2	B12299003_18	31082.20	N/A	31082.203	1.000000	1.016953	1.70	N/A
Meoh	B12299003_19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834875 (BKG)	B12299003_20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834876	B12299003_21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6834877	B12299003_22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	B12299003_23	156163.68	N/A	156163.685	5.000000	4.870394	-2.59	N/A

Meng Yu
Principal Chemist

OCT 29 2012

Sample Name: 6834875 (BKG)

Data File: B12299003_20

Sample Type: Unknown

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Operator: Quantum

Acquisition Date: 10/27/12 07:57:43 PM

Sample ID: 6834875 (BKG)

Vial: a:16

Instrument Software Version: 2.3.0.1206 SP1

Instrument Name: TSQ

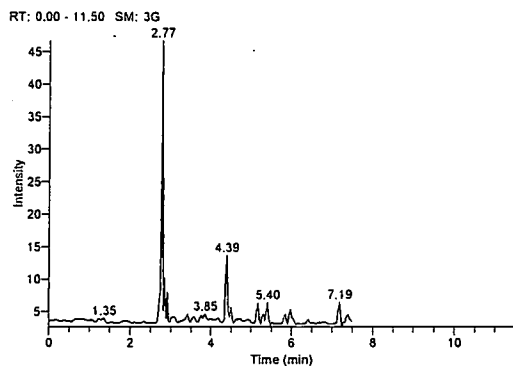
Instrument Serial Number: TQU01408

Original Data Path: C:\XCalibur\Hydrazine

Analysis\2012\Quart4

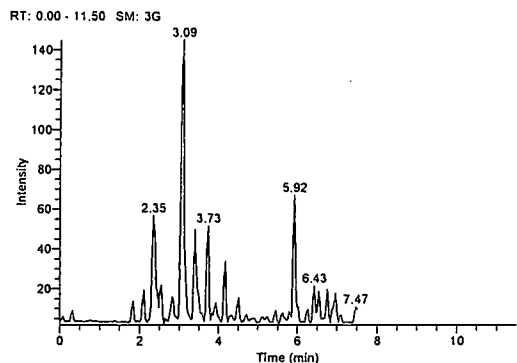
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A



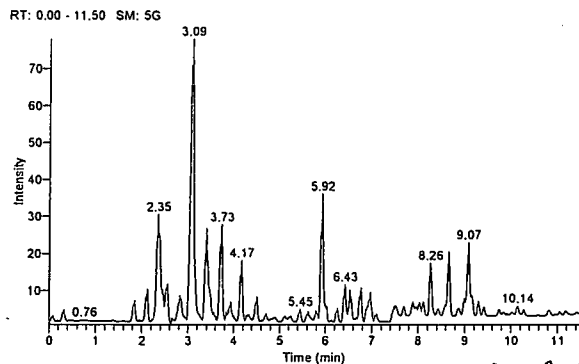
NL: 4.67E1
Base Peak m/z= 103.50-104.50 F: + c APCI
SRM ms2 135.150
(77.325-77.335, 104.135-104.145) MS
B12299003_20

There's no data available to display this graphic object.



NL: 1.45E2
Base Peak m/z= 105.50-106.50 F: + c APCI
SRM ms2 149.100
(77.325-77.335, 106.215-106.225) MS
B12299003_20

There's no data available to display this graphic object.



NL: 7.80E1
Base Peak m/z= 105.50-106.50 F: + c APCI SRM
ms2 MS
B12299003_20

There's no data available to display this graphic object.

Meng Yu
Principal Chemist

OCT 29 2012

5/10/2
10/29/12

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Monday, October 29, 2012, 10:58:49

RFA02 0024

Sample Name: 6834876

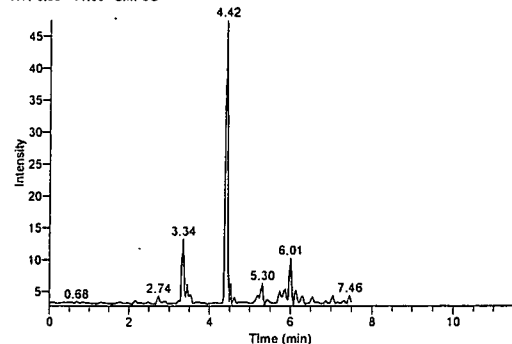
Data File: B12299003_21
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 08:14:55 PM
Sample ID: 6834876
Vial: a:17
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A

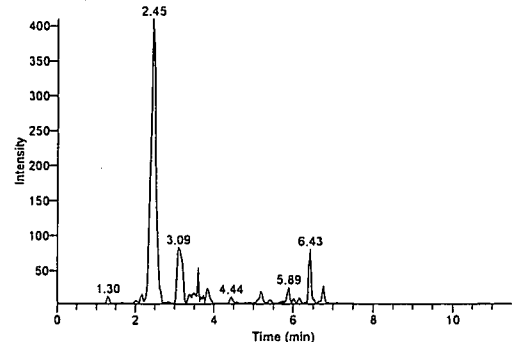
RT: 0.00 - 11.50 SM: 3G



NL: 4.75E1
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335, 104.135-104.145] MS
 B12299003_21

There's no data available to display this graphic object.

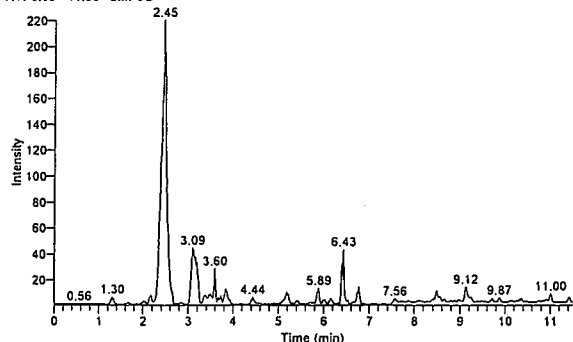
RT: 0.00 - 11.50 SM: 3G



NL: 4.10E2
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335, 106.215-106.225] MS
 B12299003_21

There's no data available to display this graphic object.

RT: 0.00 - 11.50 SM: 5G



NL: 2.21E2
 Base Peak m/z= 105.50-106.50 F: + c APCI SRM
 ms2 MS
 B12299003_21

There's no data available to display this graphic object.

Meng Yu
 Principal Chemist

OCT 29 2012

RF A02

Page 1 of 1

Monday, October 29, 2012, 10:58:49

Sample Name: 6834877

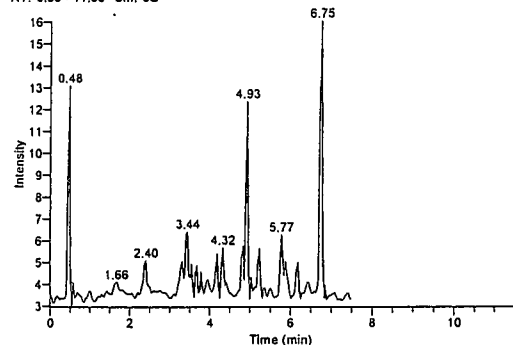
Data File: B12299003_22
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 08:32:08 PM
Sample ID: 6834877
Vial: a:18
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A

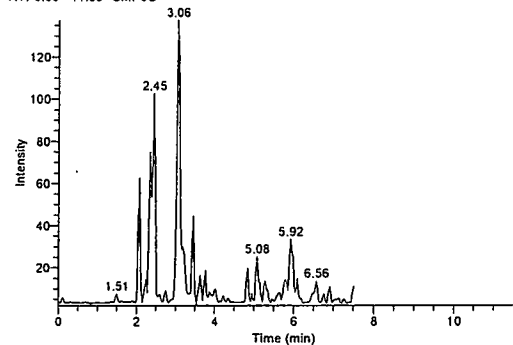
RT: 0.00 - 11.50 SM: 3G



NL: 1.61E1
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335, 104.135-104.145] MS
 B12299003_22

There's no data available to display this graphic object.

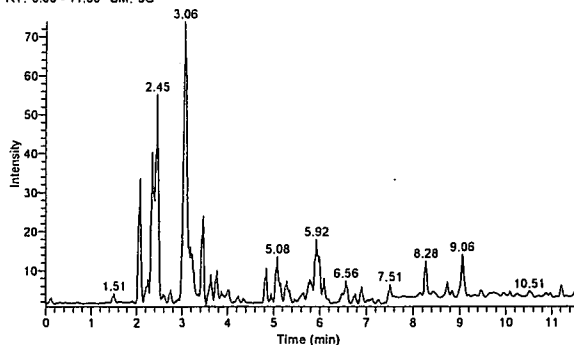
RT: 0.00 - 11.50 SM: 3G



NL: 1.37E2
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335, 106.215-106.225] MS
 B12299003_22

There's no data available to display this graphic object.

RT: 0.00 - 11.50 SM: 5G



NL: 7.39E1
 Base Peak m/z= 105.50-106.50 F: + c APCI SRM
 ms2 MS
 B12299003_22

There's no data available to display this graphic object.

Meng Yu
 Principal Chemist

OCT 29 2012

RFA02 0026

Standards Data

Sequence Table

File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
B12299003_02	SYS(MDL)	Unknown	N/A	a:33	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_03	CAL1	Std Bracket	1	A:34	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_04	CAL2	Std Bracket	2	A:35	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_05	CAL3	Std Bracket	3	A:36	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_06	CAL4	Std Bracket	4	A:37	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_07	CAL5	Std Bracket	5	A:38	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_08	CAL6	Std Bracket	6	A:39	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_09	CAL7	Std Bracket	7	A:40	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_10	CAL8	Std Bracket	8	B:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_11	Meoh	Unknown	N/A	a:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_12	BLK	Unknown	N/A	a:2	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_13	CCV1	QC	1	A:36	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_14	ICV/LCS	Unknown	N/A	a:12	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_15	ICV/LCSD	Unknown	N/A	a:13	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_16	MS (6834875)	Unknown	N/A	a:14	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_17	MSD (6834875)	Unknown	N/A	a:15	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_18	CCV2	QC	2	A:37	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_19	Meoh	Unknown	N/A	a:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_20	6834875 (BKG)	Unknown	N/A	a:16	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_21	6834876	Unknown	N/A	a:17	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_22	6834877	Unknown	N/A	a:18	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
B12299003_23	CCV3	QC	3	A:38	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2012\Quart4	C:\XCalibur\Hydrazine Analysis\Hydraz_TB	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz

Meng Yu
Principal Chemist

OCT 29 2012

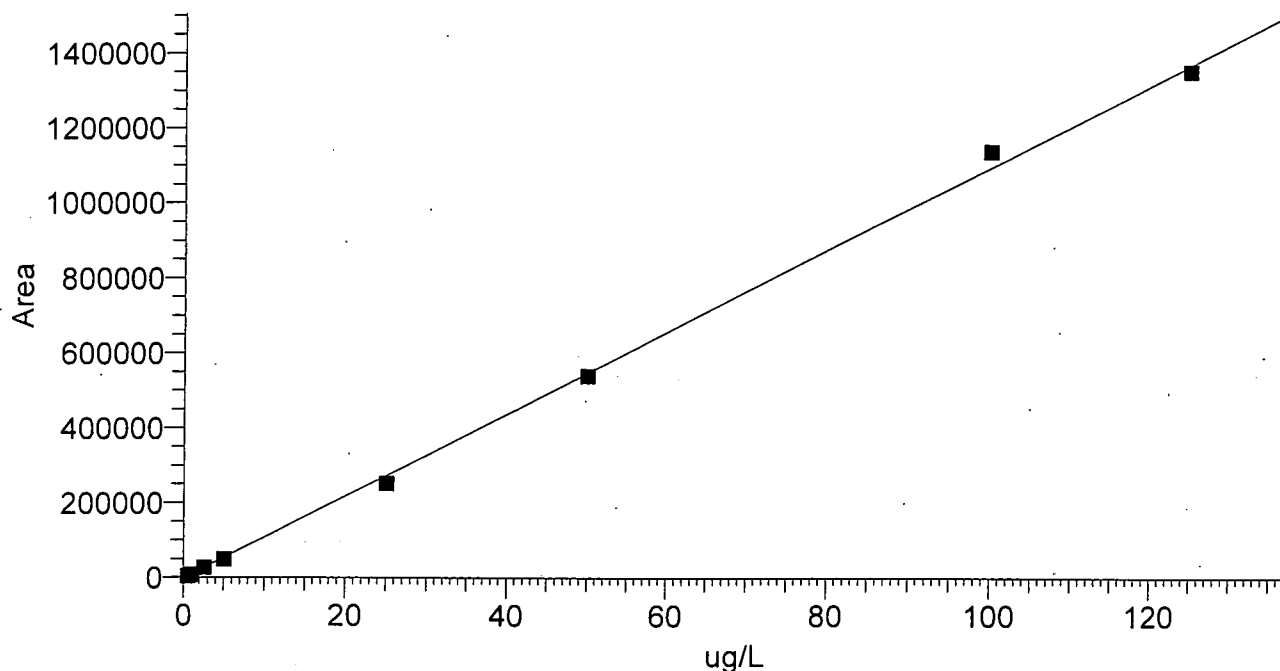
8/10/12
10/29/12

RT 4.02
00.20

Component Name:

1,1-Dimethylhydrazine

1,1-Dimethylhydrazine
Y = -1852.11+10964.4*X R^2 = 0.9987 W: 1/X



Identification Filter:	+ c APCI SRM ms2 149.10 [77.33-77.33, 106.22-106.22]	Component Name:	1,1-Dimethylhydrazine
2nd Trace Type:	N/A	1st Trace Type:	Base Peak
Mass Range 2 (m/z):	N/A	Mass Range 1 (m/z):	N/A
Base Peak(BP):	106	Wavelength Range 2 (nm):	N/A
Retention Time		Expected RT (min):	6.50000
Window (sec):	30.00000	View Width (min):	2.50000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
ICIS Smoothing Points:	3	ICIS Peak Integration	
Area Noise Factor:	5	Baseline Window:	10
ICIS Constrain Peak Width:	No	Peak Noise Factor:	10
ICIS Tailing Factor:	N/A	ICIS Peak Height (%):	N/A
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	2.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
ISTD Amount:	N/A	Internal Standard	
ISTD:		ISTD Units:	N/A
Origin:	IgnoreOrigin	Target Compounds	
Calibration Curve:	Linear	Weighting:	OneOverX
Number of Cal. Levels:	8	Response:	Area
		Target Units:	ug/L
Scan Threshold (mAU):	N/A	Number of QC Levels:	5
Limit ScanRange (nm):	N/A	Peak Purity Options	
		Peak Coverage (%):	N/A

MY2628
11/06/12
11/7/12

RFA02 0029

LCMSMS ANALYSIS REPORT

Component Cal Level Table

Calibration Levels	Amount (µg/L)
1	0.500
2	1.000
3	2.500
4	5.000
5	25.000
6	50.000
7	100.000
8	125.000

Component QC Level Table

QC Levels	Amount (µg/L)
ICV/LCS	60.000
1	2.500
2	5.000
3	25.000
4	50.000

ICV & CCV Result Table

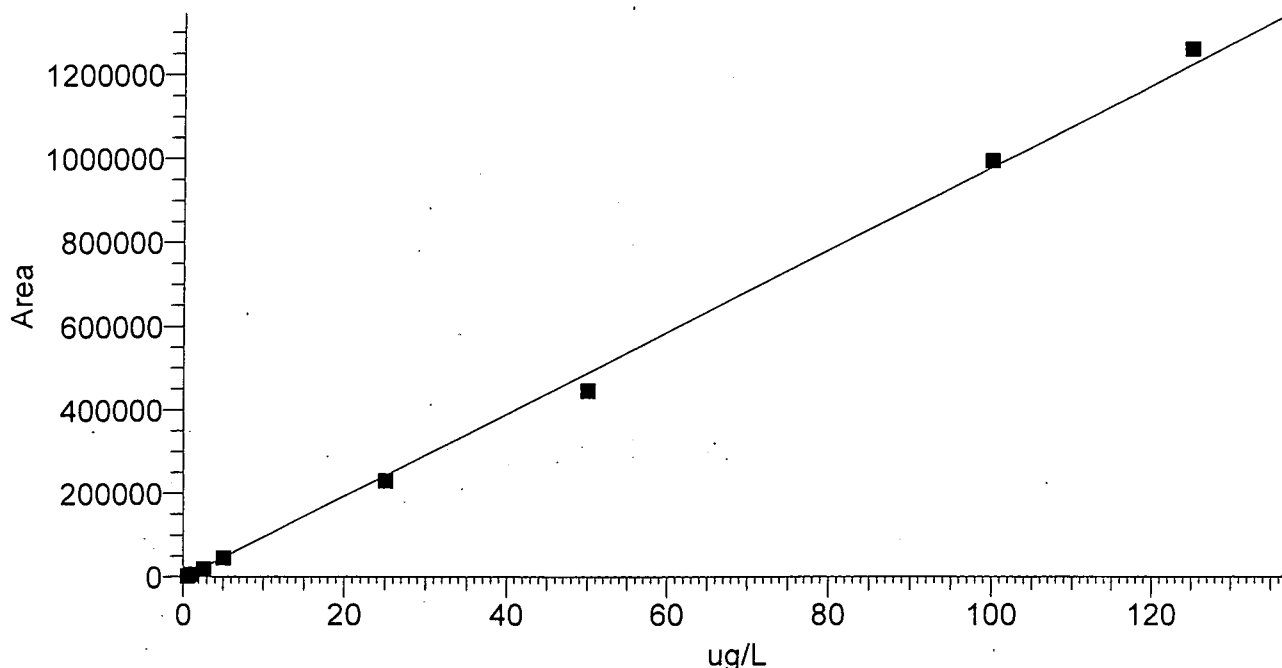
Sample ID	Data File Name	Calculated Amount (µg/L)	Area	% Diff
CAL1	B12299003_03	0.585	4563.99	17.04
CAL2	B12299003_04	0.898	7989.82	-10.24
CAL3	B12299003_05	2.632	27001.91	5.26
CAL4	B12299003_06	4.680	49459.72	-6.40
CAL5	B12299003_07	23.154	252021.03	-7.38
CAL6	B12299003_08	49.397	539750.83	-1.21
CAL7	B12299003_09	104.025	1138716.26	4.03
CAL8	B12299003_10	123.630	1353669.14	-1.10
CCV1	B12299003_13	1.863	18569.25	-25.50
ICV/LCS	B12299003_14	54.901	600104.37	-8.50
ICV/LCSD	B12299003_15	58.400	638468.56	-2.67
CCV2	B12299003_18	5.009	53070.85	0.18
CCV3	B12299003_23	24.868	270808.23	-0.53

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 11/06/12
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 11/7/12

Component Name:

Monomethylhydrazine

Monomethylhydrazine
 $Y = -3263.69 + 9809.53 \cdot X$ $R^2 = 0.9980$ W: 1/X



Identification		Component Name:	Monomethylhydrazine
Filter:	+ c APCI SRM ms2 135.15 [77.33-77.33, 104.14-104.15]	1st Trace Type:	Base Peak
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):	104	Expected RT (min):	4.30000
Retention Time		View Width (min):	2.50000
Window (sec):	30.00000	Adjust Expected RT:	No
RT Reference:	No		
Adjust Using:	N/A	Peak Detection Algorithm:	ICIS
Detection Options		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	50
Area Noise Factor:	5	Peak Noise Factor:	25
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A	ICIS Identify By:	Nearest RT
ICIS Peak Detection		ICIS Ion Ratio Confirmation:	N/A
ICIS Minimum Peak Height (S/N):	50.0	ICIS Qualifier Ion Coelution (min):	N/A
ICIS Window %:	N/A	ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A	Noise Method:	Incos
ICIS Advanced Parameters		Multiplet Resolution:	10
Minimum Peak Width:	3	Area Scan Window:	0
Area Tail Extension:	5	Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
ISTD Amount:	N/A	Internal Standard	
ISTD:		ISTD Units:	N/A
Origin:	IgnoreOrigin	Target Compounds	
Calibration Curve:	Linear	Weighting:	OneOverX
Number of Cal. Levels:	8	Response:	Area
Scan Threshold (mAU):	N/A	Target Units:	ug/L
Limit ScanRange (nm):	N/A	Number of QC Levels:	5
		Peak Purity Options	
		Peak Coverage (%):	N/A

my 2628 11/06/12

8/112
 11/7/12

RFA02 0031

LCMSMS ANALYSIS REPORT

Component Cal Level Table

Calibration Levels	Amount (µg/L)
1	0.500
2	1.000
3	2.500
4	5.000
5	25.000
6	50.000
7	100.000
8	125.000

Component QC Level Table

QC Levels	Amount (µg/L)
ICV/LCS	60.000
1	2.500
2	5.000
3	25.000
4	50.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount (µg/L)	Area	% Diff
CAL1	B12299003_03	0.578	2403.15	15.54
CAL2	B12299003_04	1.002	6569.33	0.24
CAL3	B12299003_05	2.360	19889.69	-5.59
CAL4	B12299003_06	4.918	44979.91	-1.64
CAL5	B12299003_07	23.780	230010.36	-4.88
CAL6	B12299003_08	45.748	445501.80	-8.50
CAL7	B12299003_09	101.716	994519.32	1.72
CAL8	B12299003_10	128.898	1261163.19	3.12
CCV1	B12299003_13	2.155	17871.96	-13.82
ICV/LCS	B12299003_14	66.247	646584.18	10.41
ICV/LCSD	B12299003_15	62.833	613094.16	4.72
CCV2	B12299003_18	4.260	38524.54	-14.80
CCV3	B12299003_23	21.913	211695.09	-12.35

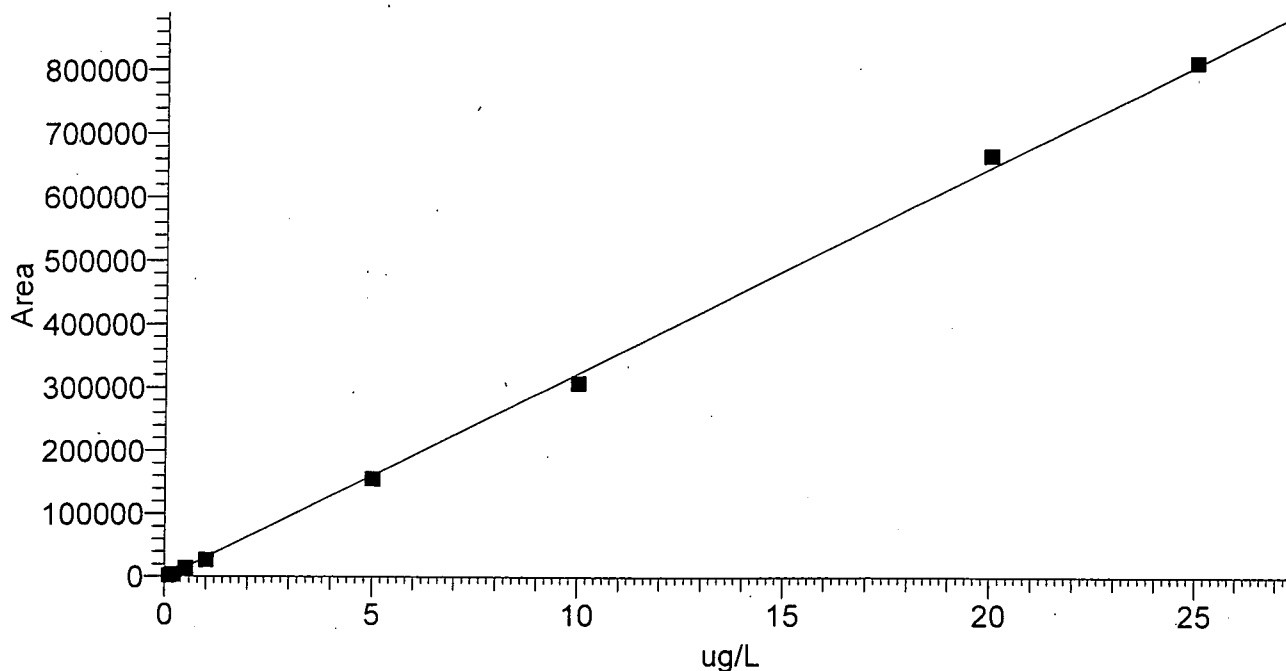
MY2628

11/06/12

✓ 11/12
11/5/12

Component Name: Hydrazine

Hydrazine
 $Y = -1927.77 + 32459.7 \cdot X$ $R^2 = 0.9988$ W: 1/X



Identification
 Filter: + c APCI SRM ms2
 2nd Trace Type: N/A
 Mass Range 2 (m/z):
 Base Peak(BP): 106
 Retention Time
 Window (sec): 30.00000
 RT Reference: No
 Adjust Using: N/A
 Detection Options

ICIS Smoothing Points: 3
 Area Noise Factor: 10
 ICIS Constrain Peak Width: Yes
 ICIS Tailing Factor: 3.0
 ICIS Peak Detection
 ICIS Minimum Peak Height (S/N): 25.0
 ICIS Window %: N/A

ICIS Forward: N/A
 ICIS Match: N/A

ICIS Advanced Parameters
 Minimum Peak Width: 3
 Area Tail Extension: 5

Component Type: Target Compound

ISTD Amount: N/A

ISTD:
 Origin: IgnoreOrigin
 Calibration Curve: Linear
 Number of Cal. Levels: 8

Scan Threshold (mAU): N/A
 Limit ScanRange (nm): N/A

Component Name: Hydrazine
 1st Trace Type: Base Peak
 Mass Range 1 (m/z):
 Wavelength Range 2 (nm): N/A

Expected RT (min): 9.10000
 View Width (min): 2.50000
 Adjust Expected RT: No

Peak Detection Algorithm: ICIS

ICIS Peak Integration
 Baseline Window: 100
 Peak Noise Factor: 25
 ICIS Peak Height (%): 0.5

ICIS Identify By: Nearest RT
 ICIS Ion Ratio Confirmation: N/A
 ICIS Qualifier Ion Coelution (min): N/A
 ICIS Spectrum Thresholds
 ICIS Reverse: N/A

Noise Method: Incos
 Multiplet Resolution: 10
 Area Scan Window: 0
 Calibration

%RSD Calculation Method: Use calculated amounts
 Internal Standard

ISTD Units: N/A
 Target Compounds

Weighting: OneOverX
 Response: Area
 Target Units: ug/L
 Number of QC Levels: 5

Peak Purity Options
 Peak Coverage (%): N/A

MY2628
 11/06/12
 8/1.2
 11/7/12

LCMSMS ANALYSIS REPORT

Component Cal Level Table

Calibration Levels	Amount (µg/L)
1	0.100
2	0.200
3	0.500
4	1.000
5	5.000
6	10.000
7	20.000
8	25.000

Component QC Level Table

QC Levels	Amount (µg/L)
ICV/LCS	12.000
1	0.500
2	1.000
3	5.000
4	10.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount (µg/L)	Area	% Diff
CAL1	B12299003_03	0.129	2255.73	28.88
CAL2	B12299003_04	0.181	3942.42	-9.58
CAL3	B12299003_05	0.483	13759.44	-3.34
CAL4	B12299003_06	0.883	26735.71	-11.70
CAL5	B12299003_07	4.836	155056.42	-3.27
CAL6	B12299003_08	9.544	307879.90	-4.56
CAL7	B12299003_09	20.590	666416.42	2.95
CAL8	B12299003_10	25.153	814540.30	0.61
CCV1	B12299003_13	0.446	12559.53	-10.74
ICV/LCS	B12299003_14	12.379	399903.45	3.16
ICV/LCSD	B12299003_15	12.612	407454.21	5.10
CCV2	B12299003_18	1.017	31082.20	1.70
CCV3	B12299003_23	4.870	156163.68	-2.59

MY2628

11/06/12

8/1/12
11/10/12

Sample Name: SYS(MDL)

Data File: B12299003_02

Sample Type: Unknown

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Operator:

Quantum

Acquisition Date:

10/27/12 02:49:19 PM

Sample ID:

SYS(MDL)

Vial:

a:33

Instrument Software Version:

2.3.0.1206 SP1

Instrument Name:

TSQ

Instrument Serial Number:

TQ001408

Original Data Path:

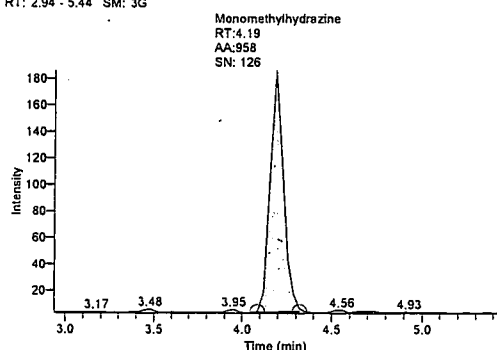
C:\XCalibur\Hydrazine

Analysis\2012\Quart4

Quan Peak Table

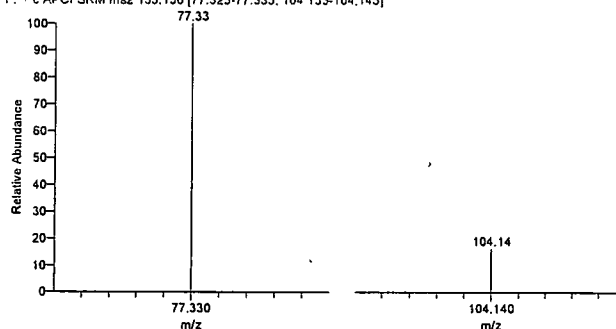
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	0.430	ug/L	958.040	4.19
1,1-Dimethylhydrazine	0.370	ug/L	2209.156	6.39
Hydrazine	0.086	ug/L	852.469	9.04

RT: 2.94 - 5.44 SM: 3G

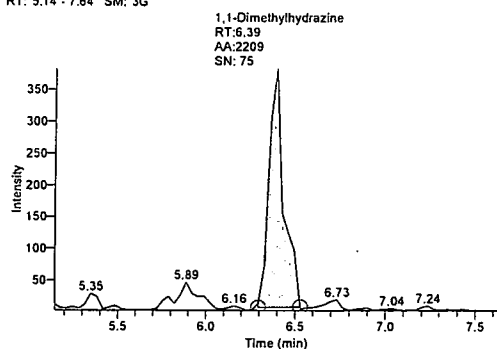


NL: 1.86E2
Base Peak m/z= 103.50-104.50 F: + c APCI
SRM ms2 135.150
[77.325-77.335,
104.135-104.145] MS ICIS
B12299003_02

B12299003_02 #249 RT: 4.19 AV: 1 NL: 1.18E3
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

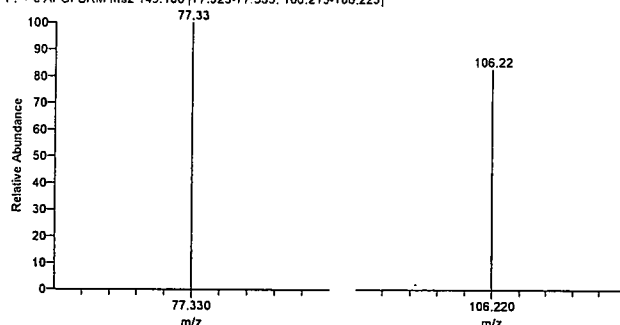


RT: 5.14 - 7.64 SM: 3G

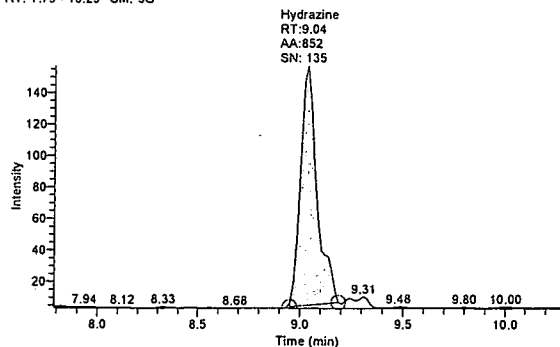


NL: 3.83E2
Base Peak m/z= 105.50-106.50 F: + c APCI
SRM ms2 149.100
[77.325-77.335,
106.215-106.225] MS ICIS
B12299003_02

B12299003_02 #380 RT: 6.39 AV: 1 NL: 4.82E2
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

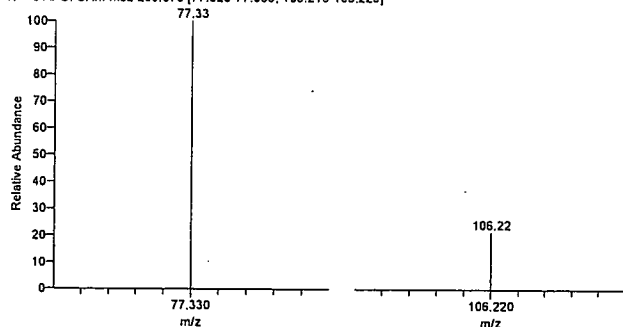


RT: 7.79 - 10.29 SM: 5G



NL: 1.57E2
Base Peak m/z= 105.50-106.50 F: +
c APCI SRM ms2
MS ICIS
B12299003_02

B12299003_02 #536 RT: 9.04 AV: 1 NL: 8.05E2
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



Meng Yu
Principal Chemist

OCT 29 2012

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Monday, October 29, 2012, 10:58:42

RFA02 0035

Sample Name: CAL1

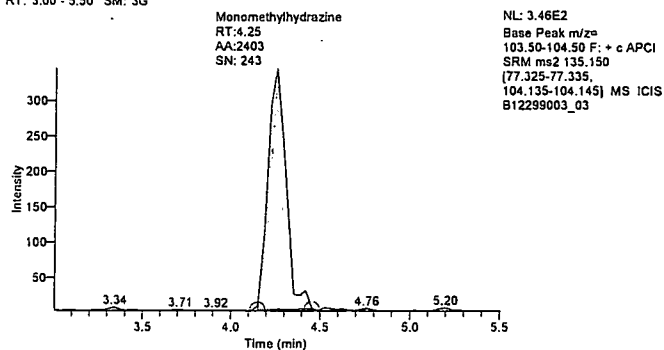
Data File: B12299003_03
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 03:06:31 PM
Sample ID: CAL1
Vial: A:34
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

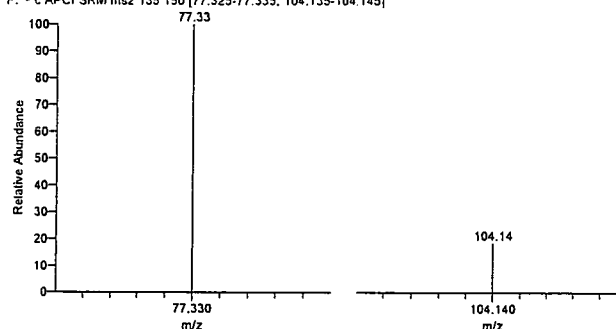
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	0.578	ug/L	2403.154	4.25
1,1-Dimethylhydrazine	0.585	ug/L	4563.992	6.46
Hydrazine	0.129	ug/L	2255.735	9.12

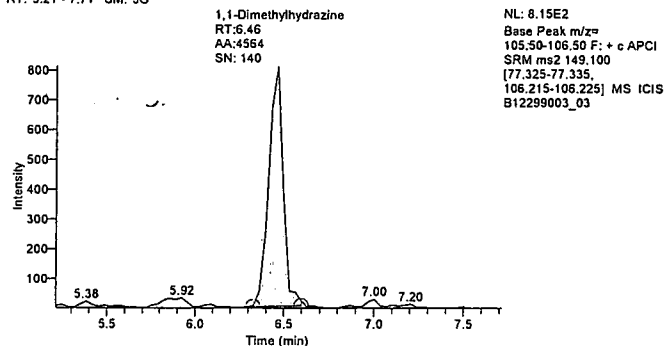
RT: 3.00 - 5.50 SM: 3G



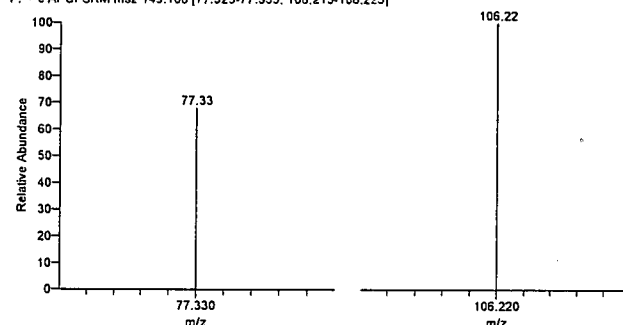
B12299003_03 #253 RT: 4.25 AV: 1 NL: 1.90E3
F: + c APCI SRM ms2 135 150 [77.325-77.335, 104.135-104.145]



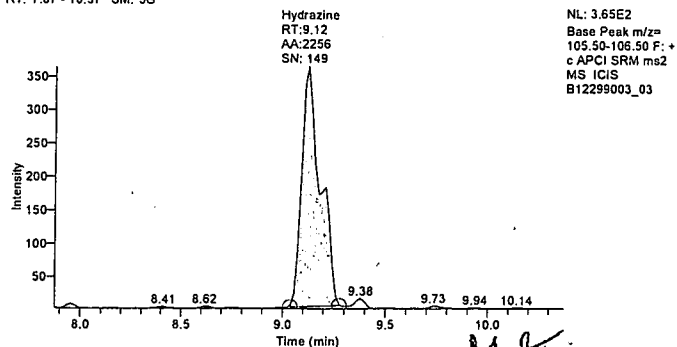
RT: 5.21 - 7.71 SM: 3G



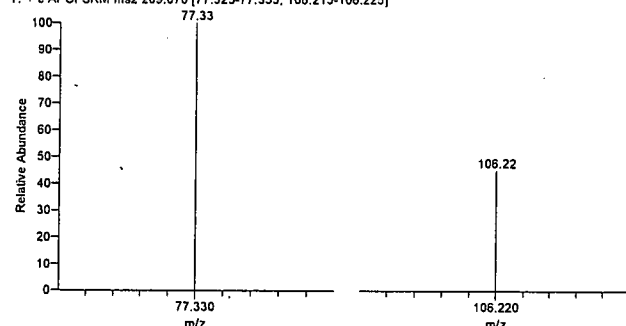
B12299003_03 #384 RT: 6.46 AV: 1 NL: 8.43E2
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.87 - 10.37 SM: 5G



B12299003_03 #541 RT: 9.12 AV: 1 NL: 8.95E2
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0036

Sample Name: CAL2

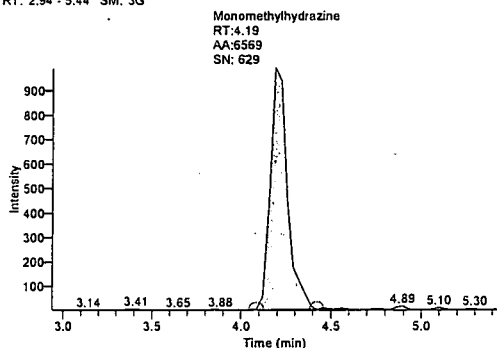
Data File: B12299003_04
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 03:23:48 PM
Sample ID: CAL2
Vial: A:35
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

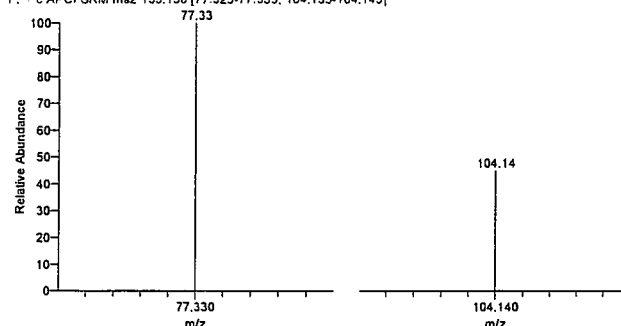
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	1.002	ug/L	6569.330	4.19
1,1-Dimethylhydrazine	0.898	ug/L	7989.821	6.40
Hydrazine	0.181	ug/L	3942.418	9.06

RT: 2.94 - 5.44 SM: 3G

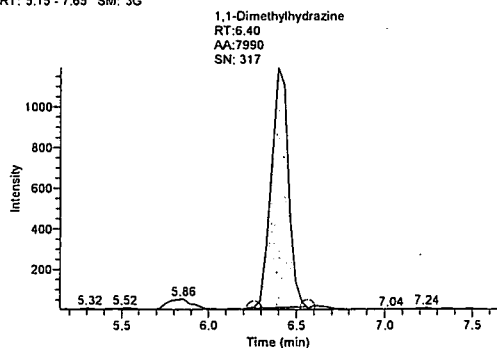


NL: 9.94E2
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_04

B12299003_04 #249 RT: 4.19 AV: 1 NL: 2.27E3
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

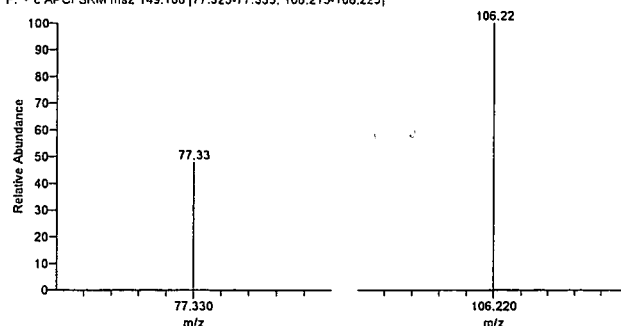


RT: 5.15 - 7.65 SM: 3G

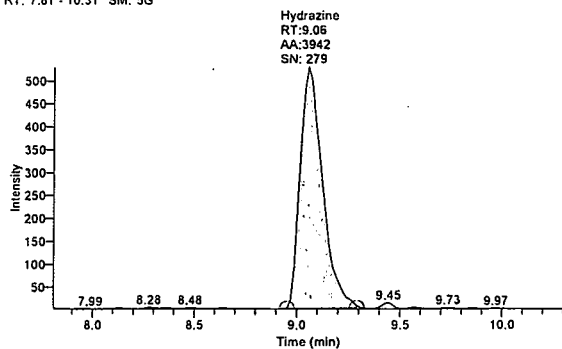


NL: 1.19E3
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_04

B12299003_04 #380 RT: 6.40 AV: 1 NL: 1.22E3
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

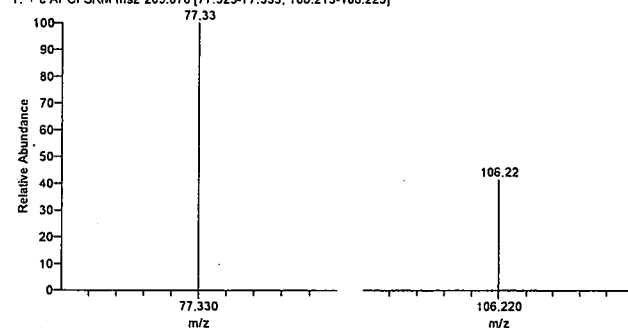


RT: 7.81 - 10.31 SM: 5G



NL: 5.30E2
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_04

B12299003_04 #537 RT: 9.06 AV: 1 NL: 1.36E3
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0037

Sample Name: CAL3

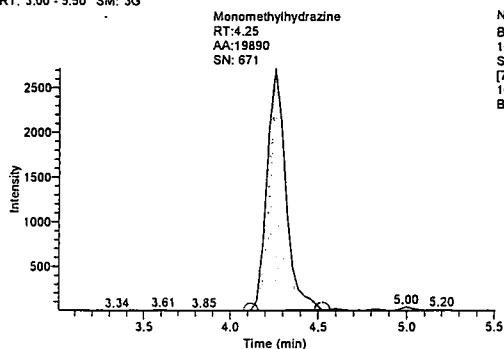
Data File: B12299003_05
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 03:41:03 PM
Sample ID: CAL3
Vial: A:36
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

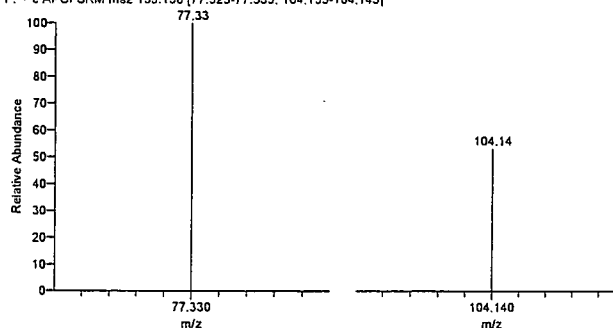
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	2.360	ug/L	19889.686	4.25
1,1-Dimethylhydrazine	2.632	ug/L	27001.907	6.46
Hydrazine	0.483	ug/L	13759.443	9.12

RT: 3.00 - 5.50 SM: 3G

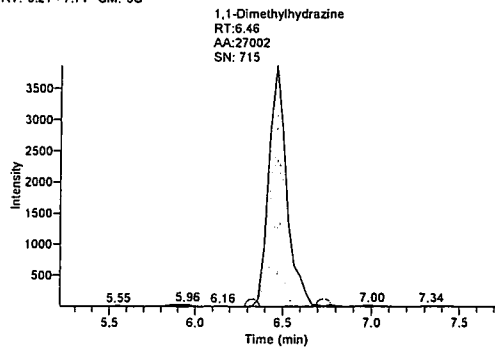


NL: 2.72E3
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_05

B12299003_05 #253 RT: 4.25 AV: 1 NL: 5.24E3
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

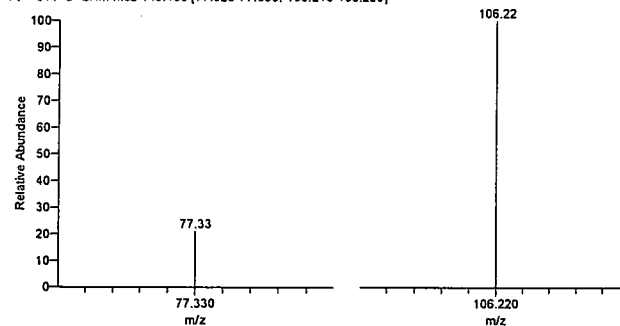


RT: 5.21 - 7.71 SM: 3G

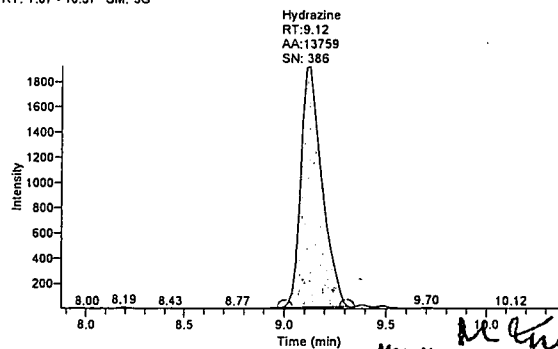


NL: 3.87E3
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_05

B12299003_05 #384 RT: 6.46 AV: 1 NL: 3.97E3
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

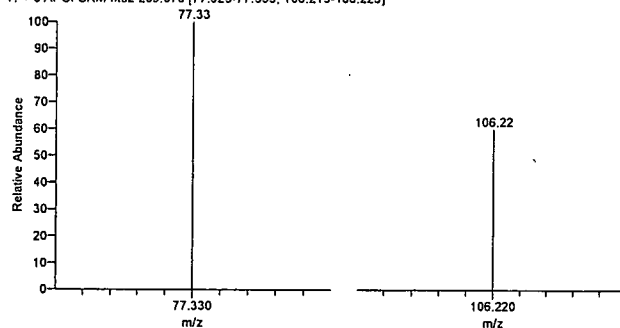


RT: 7.87 - 10.37 SM: 5G



NL: 1.92E3
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_05

B12299003_05 #541 RT: 9.12 AV: 1 NL: 3.37E3
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0036

Sample Name: CAL4

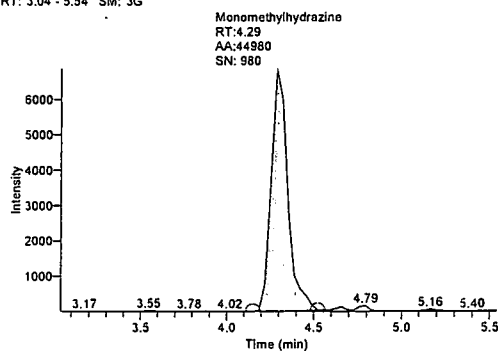
Data File: B12299003_06
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 03:58:14 PM
Sample ID: CAL4
Vial: A:37
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

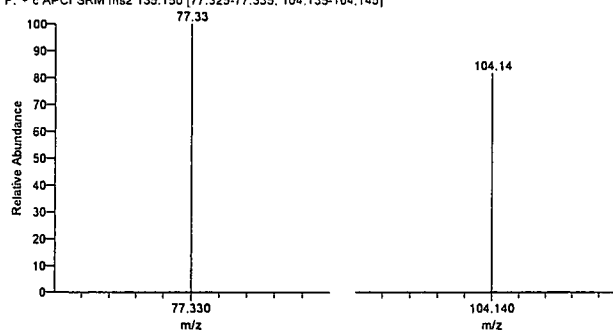
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	4.918	ug/L	44979.913	4.29
1,1-Dimethylhydrazine	4.680	ug/L	49459.716	6.46
Hydrazine	0.883	ug/L	26735.706	9.11

RT: 3.04 - 5.54 SM: 3G

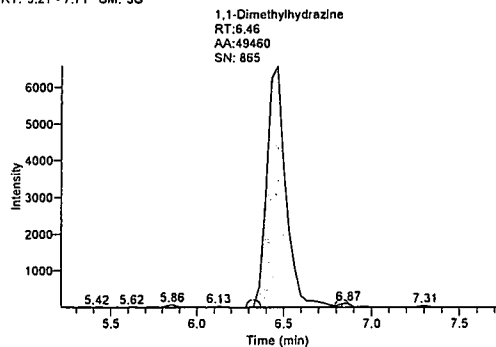


NL: 6.87E3
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_06

B12299003_06 #255 RT: 4.29 AV: 1 NL: 8.65E3
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

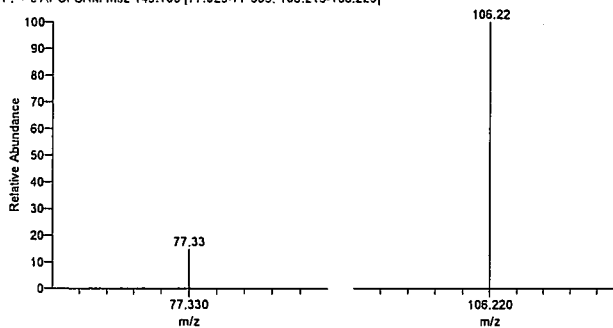


RT: 5.21 - 7.71 SM: 3G

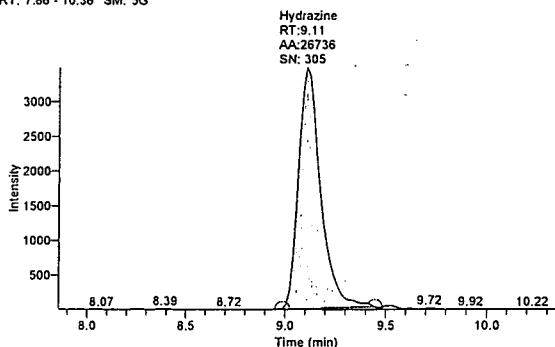


NL: 6.59E3
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_06

B12299003_06 #384 RT: 6.46 AV: 1 NL: 6.73E3
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

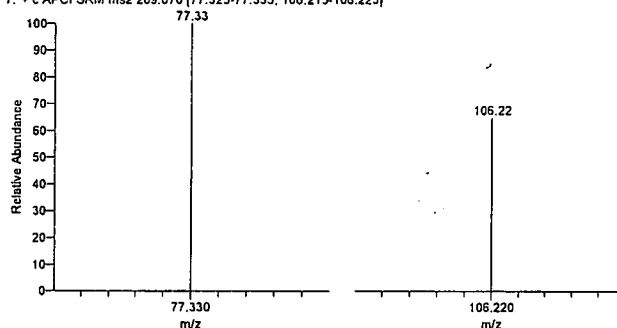


RT: 7.86 - 10.36 SM: 5G



NL: 3.50E3
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_06

B12299003_06 #540 RT: 9.11 AV: 1 NL: 5.66E3
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0039

Sample Name: CAL5

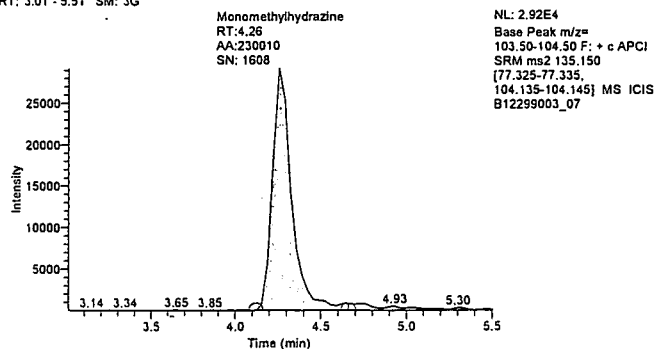
Data File: B12299003_07
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 04:14:27 PM
Sample ID: CAL5
Vial: A:38
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

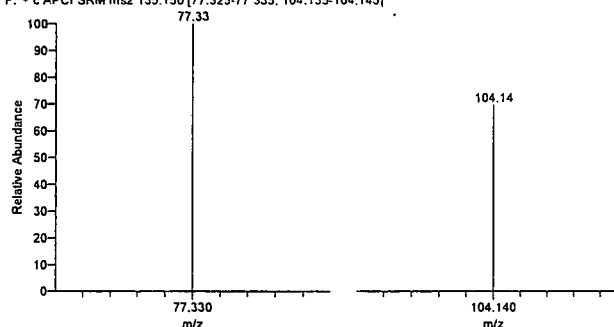
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	23.780	ug/L	230010.359	4.26
1,1-Dimethylhydrazine	23.154	ug/L	252021.034	6.46
Hydrazine	4.836	ug/L	155056.424	9.16

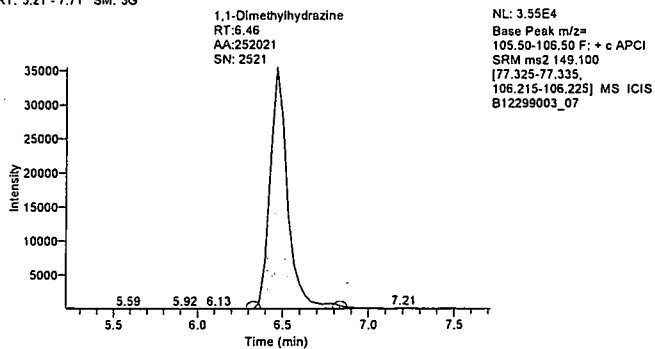
RT: 3.01 - 5.51 SM: 3G



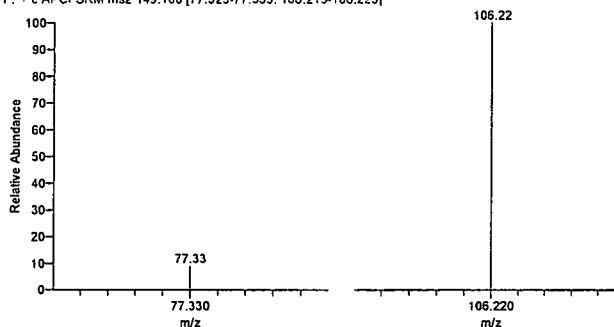
B12299003_07 #253 RT: 4.26 AV: 1 NL: 4.30E4
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]



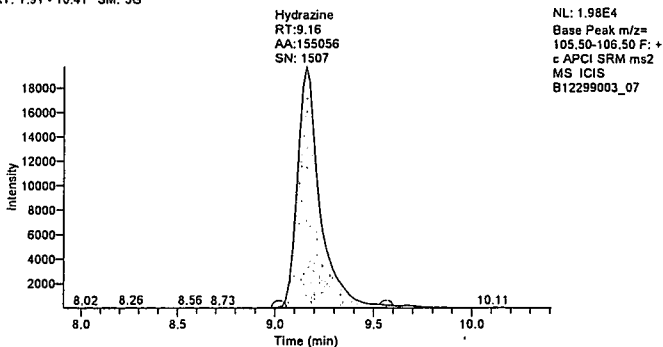
RT: 5.21 - 7.71 SM: 3G



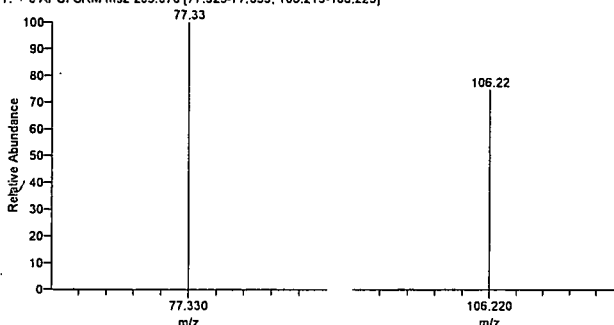
B12299003_07 #384 RT: 6.46 AV: 1 NL: 3.65E4
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.91 - 10.41 SM: 5G



B12299003_07 #543 RT: 9.16 AV: 1 NL: 2.81E4
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RF402 0040

Sample Name: CAL6

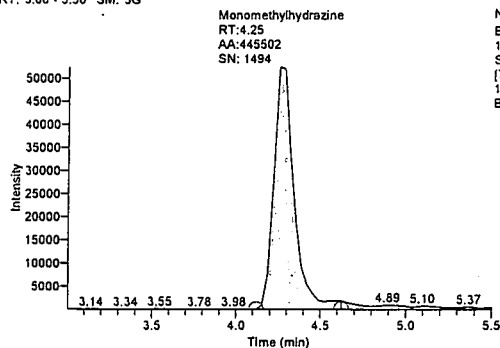
Data File: B12299003_08
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 04:31:25 PM
Sample ID: CAL6
Vial: A:39
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
Analysis\2012\Quart4

Quan Peak Table

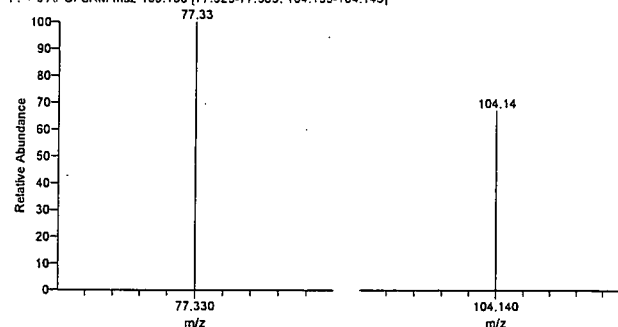
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	45.748	ug/L	445501.803	4.25
1,1-Dimethylhydrazine	49.397	ug/L	539750.830	6.46
Hydrazine	9.544	ug/L	307879.896	9.16

RT: 3.00 - 5.50 SM: 3G

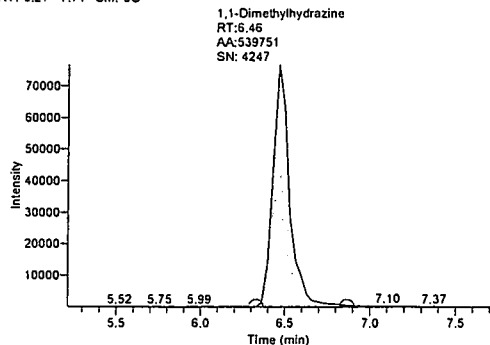


NL: 5.25E4
Base Peak m/z =
103.50-104.50 F: + c APCI
SRM ms2 135.150
[77.325-77.335,
104.135-104.145] MS ICIS
B12299003_08

B12299003_08 #253 RT: 4.25 AV: 1 NL: 8.03E4
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

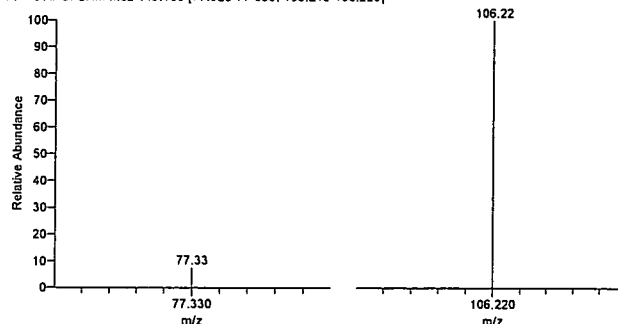


RT: 5.21 - 7.71 SM: 3G

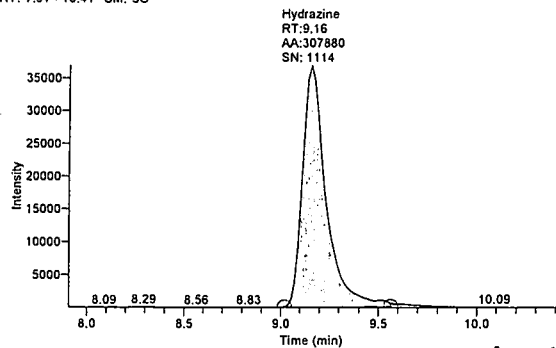


NL: 7.68E4
Base Peak m/z =
105.50-106.50 F: + c APCI
SRM ms2 149.100
[77.325-77.335,
106.215-106.225] MS ICIS
B12299003_08

B12299003_08 #384 RT: 6.46 AV: 1 NL: 7.89E4
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

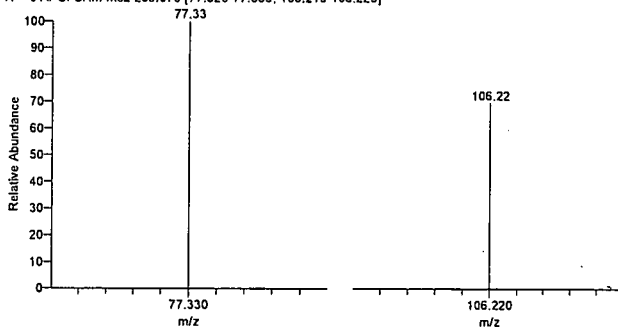


RT: 7.91 - 10.41 SM: 5G



NL: 3.69E4
Base Peak m/z =
105.50-106.50 F: +
c APCI SRM ms2
MS ICIS
B12299003_08

B12299003_08 #543 RT: 9.16 AV: 1 NL: 5.53E4
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0041

Sample Name: CAL7

Data File: B12299003_09

Sample Type: Std Bracket

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Operator: Quantum

Acquisition Date:

10/27/12 04:48:38 PM

Sample ID:

CAL7

Vial:

A:40

Instrument Software Version:

2.3.0.1206 SP1

Instrument Name:

TSQ

Instrument Serial Number:

TQU01408

Original Data Path:

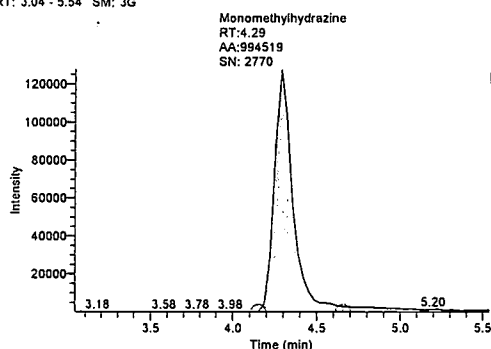
C:\XCalibur\Hydrazine

Analysis\2012\Quart4

Quan Peak Table

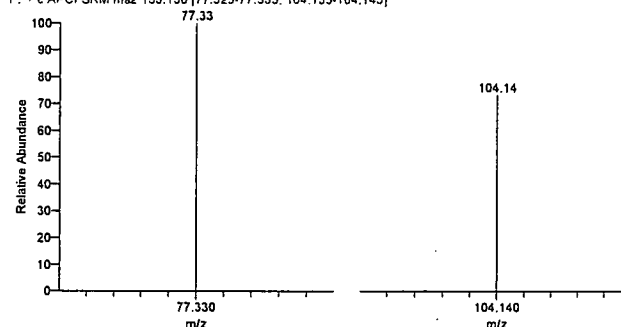
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	101.716	ug/L	994519.318	4.29
1,1-Dimethylhydrazine	104.025	ug/L	1138716.264	6.50
Hydrazine	20.590	ug/L	666416.420	9.16

RT: 3.04 - 5.54 SM: 3G

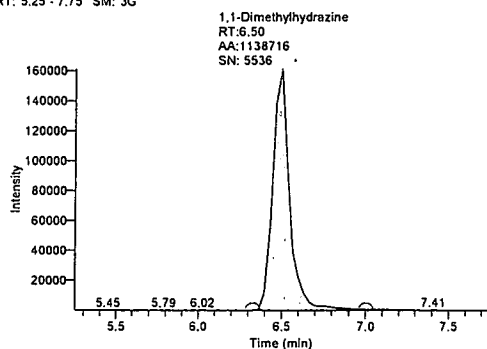


NL: 1.28E5
Base Peak m/z= 103.50-104.50 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145] MS ICIS B12299003_09

B12299003_09 #255 RT: 4.29 AV: 1 NL: 1.79E5
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

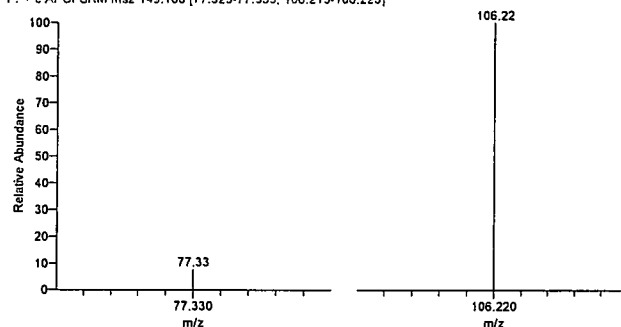


RT: 5.25 - 7.75 SM: 3G

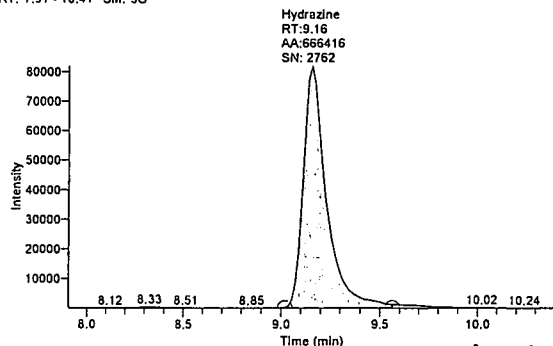


NL: 1.62E5
Base Peak m/z= 105.50-106.50 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225] MS ICIS B12299003_09

B12299003_09 #386 RT: 6.50 AV: 1 NL: 1.66E5
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

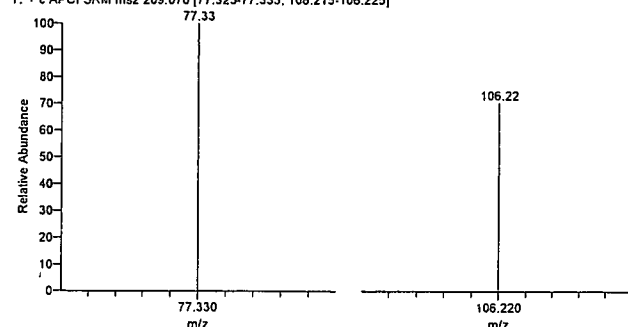


RT: 7.91 - 10.41 SM: 5G



NL: 8.22E4
Base Peak m/z= 105.50-106.50 F: + c APCI SRM ms2 MS ICIS B12299003_09

B12299003_09 #543 RT: 9.16 AV: 1 NL: 1.23E5
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0042

Sample Name: CAL8

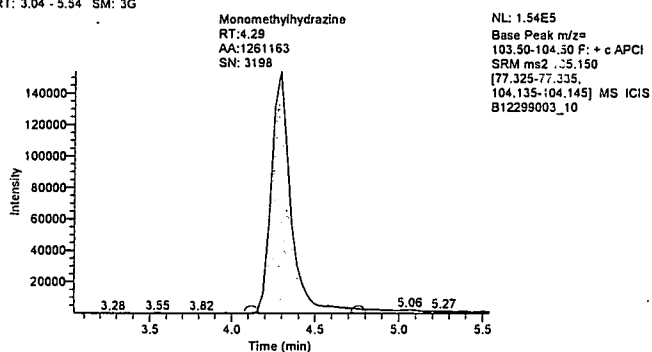
Data File: B12299003_10
Sample Type: Std Bracket
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 05:05:52 PM
Sample ID: CAL8
Vial: B:1
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

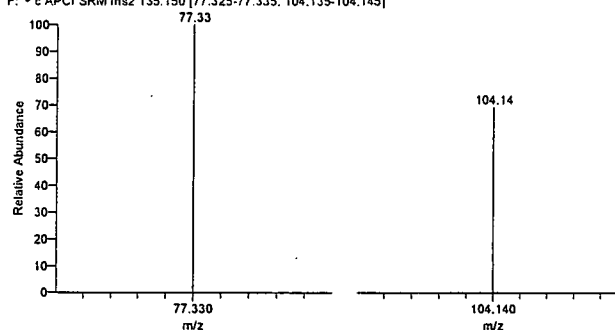
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	128.898	ug/L	1261163.194	4.29
1,1-Dimethylhydrazine	123.630	ug/L	1353669.141	6.50
Hydrazine	25.153	ug/L	814540.296	9.16

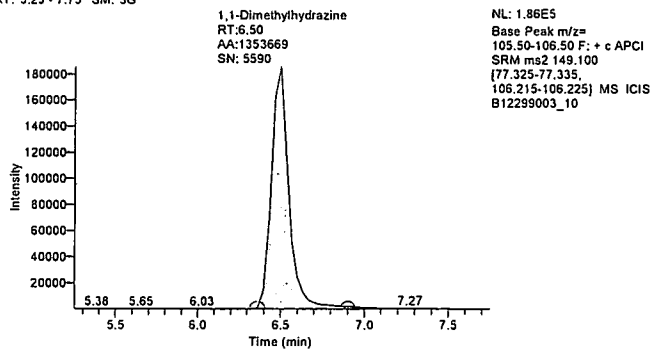
RT: 3.04 - 5.54 SM: 3G



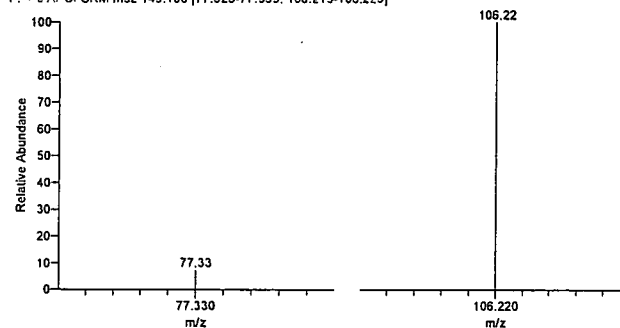
B12299003_10 #255 RT: 4.29 AV: 1 NL: 2.27E5
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]



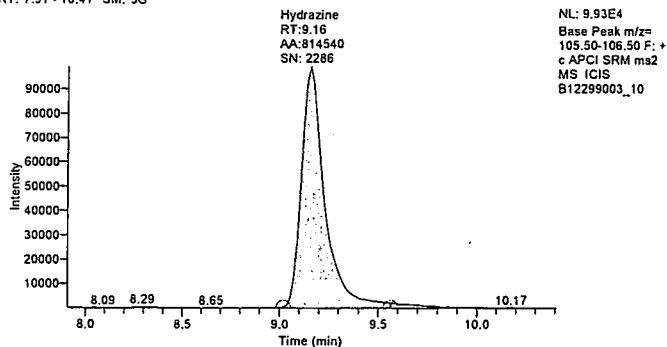
RT: 5.25 - 7.75 SM: 3G



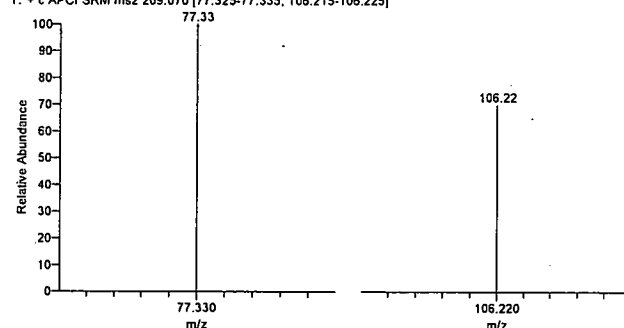
B12299003_10 #386 RT: 6.50 AV: 1 NL: 1.90E5
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.91 - 10.41 SM: 5G



B12299003_10 #543 RT: 9.16 AV: 1 NL: 1.49E5
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RF A02 0043

Sample Name: Meoh

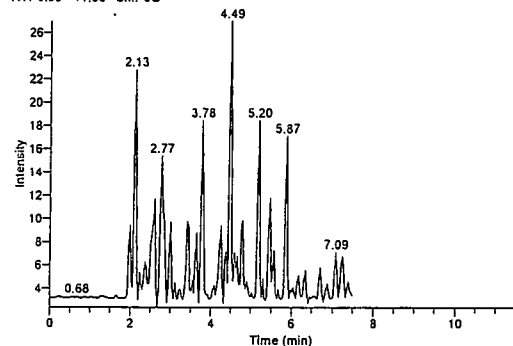
Data File: B12299003_11
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 05:23:02 PM
Sample ID: Meoh
Vial: a:1
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A

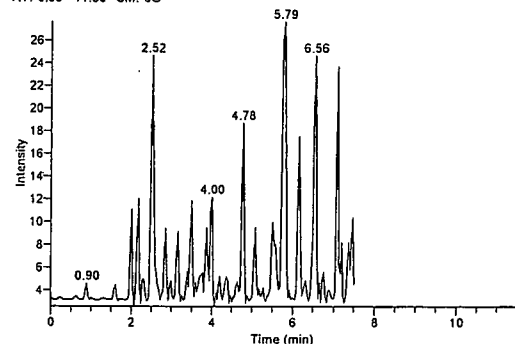
RT: 0.00 - 11.50 SM: 3G



NL: 2.70E1
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335, 104.135-104.145] MS
 B12299003_11

There's no data available to display this graphic object.

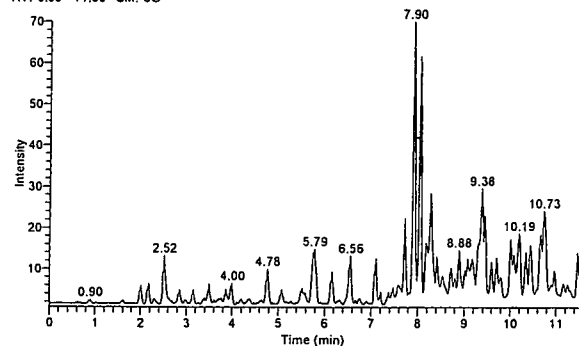
RT: 0.00 - 11.50 SM: 3G



NL: 2.77E1
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335, 106.215-106.225] MS
 B12299003_11

There's no data available to display this graphic object.

RT: 0.00 - 11.50 SM: 5G



NL: 7.01E1
 Base Peak m/z= 105.50-106.50 F: + c APCI SRM
 ms2 MS
 B12299003_11

There's no data available to display this graphic object.

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RF A02 0044

Sample Name: CCV1

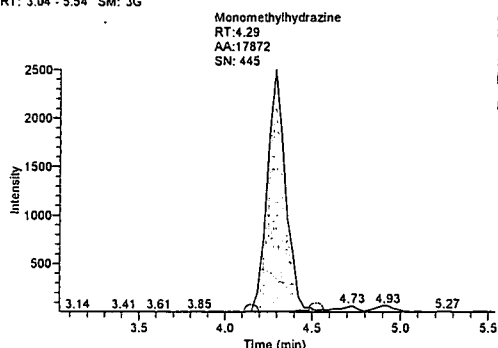
Data File: B12299003_13
Sample Type: QC
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
Analysis\Hydraz_TB
Quantum

Acquisition Date: 10/27/12 05:57:24 PM
Sample ID: CCV1
Vial: A:36
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
Analysis\2012\Quart4

Quan Peak Table

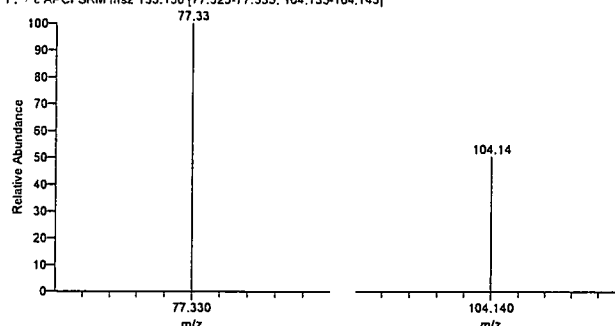
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	2.155	ug/L	17871.964	4.29
1,1-Dimethylhydrazine	1.863	ug/L	18569.249	6.50
Hydrazine	0.446	ug/L	12559.534	9.19

RT: 3.04 - 5.54 SM: 3G

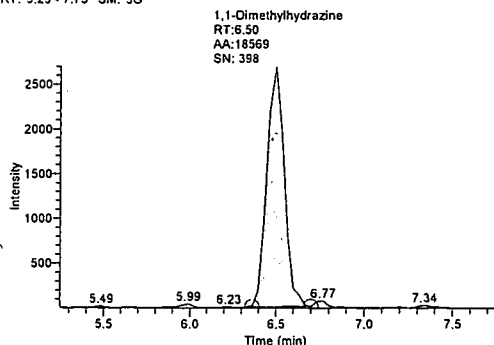


NL: 2.51E3
Base Peak m/z= 103.50-104.50 F: + c APCI
SRM ms2 135.150
[77.325-77.335,
104.135-104.145] MS ICIS
B12299003_13

B12299003_13 #255 RT: 4.29 AV: 1 NL: 5.10E3
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

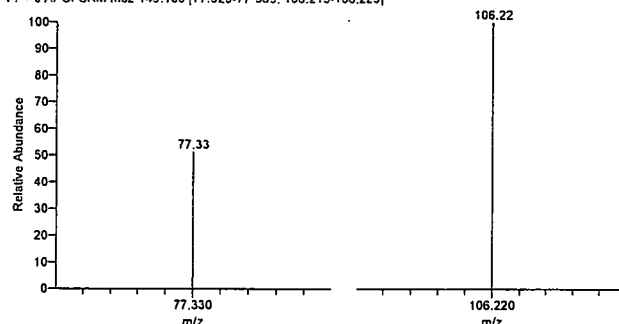


RT: 5.25 - 7.75 SM: 3G

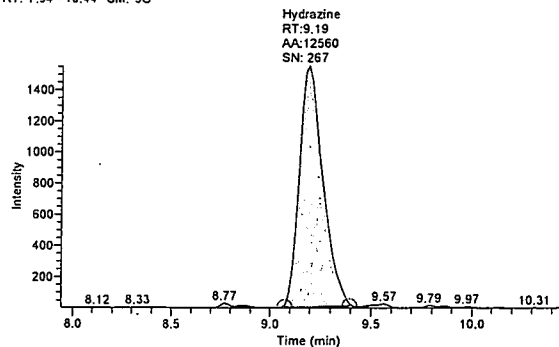


NL: 2.70E3
Base Peak m/z= 105.50-106.50 F: + c APCI
SRM ms2 149.100
[77.325-77.335,
106.215-106.225] MS ICIS
B12299003_13

B12299003_13 #386 RT: 6.50 AV: 1 NL: 2.76E3
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

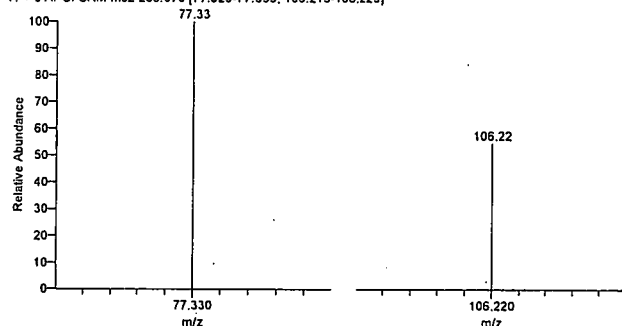


RT: 7.94 - 10.44 SM: 5G



NL: 1.56E3
Base Peak m/z= 105.50-106.50 F: +
c APCI SRM ms2
MS ICIS
B12299003_13

B12299003_13 #545 RT: 9.19 AV: 1 NL: 2.92E3
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0045

Sample Name: ICV/LCS

Data File: B12299003_14

Sample Type: Unknown

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Quantum

Acquisition Date: 10/27/12 06:14:38 PM

Sample ID: ICV/LCS

Vial: a:12

Instrument Software Version: 2.3.0.1206 SP1

Instrument Name: TSQ

Instrument Serial Number: TQU01408

Original Data Path: C:\XCalibur\Hydrazine

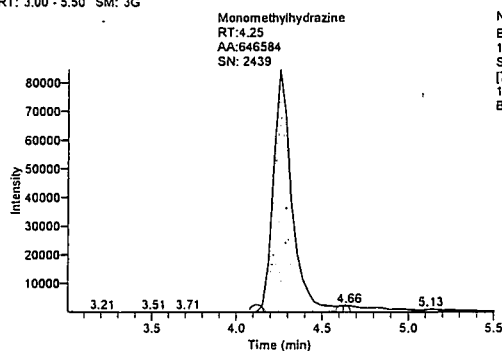
Analysis\2012\Quart4

Operator:

Quan Peak Table

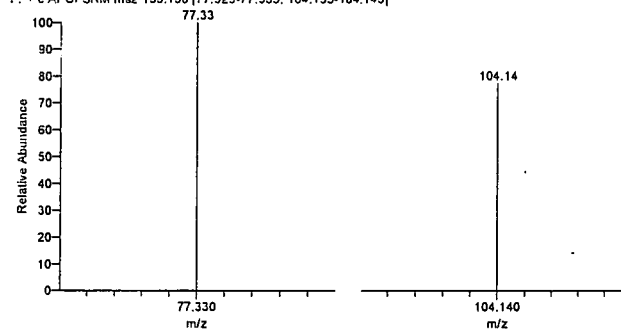
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	66.247	ug/L	646584.180	4.25
1,1-Dimethylhydrazine	54.901	ug/L	600104.371	6.46
Hydrazine	12.379	ug/L	399903.454	9.14

RT: 3.00 - 5.50 SM: 3G

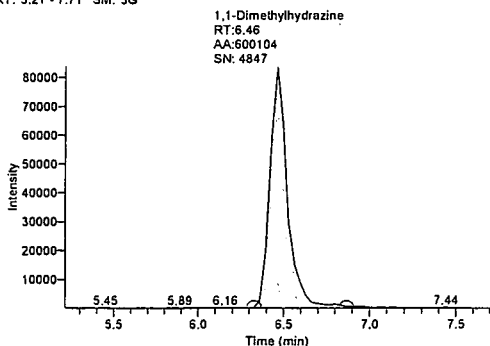


NL: 8.47E4
Base Peak m/z= 103.50-104.50 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145] MS ICIS B12299003_14

B12299003_14 #253 RT: 4.25 AV: 1 NL: 1.12E5
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

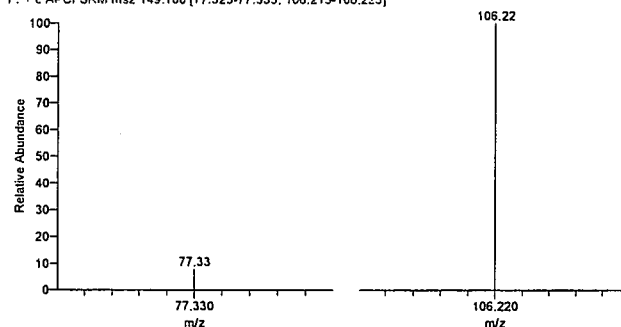


RT: 5.21 - 7.71 SM: 3G

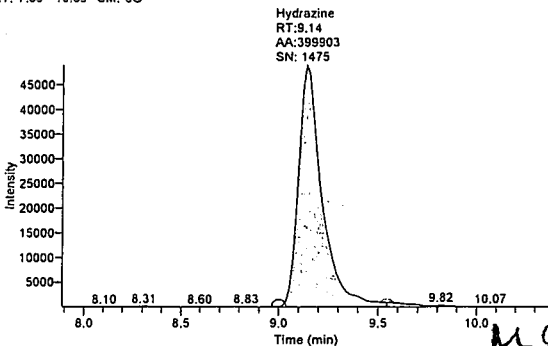


NL: 8.39E4
Base Peak m/z= 105.50-106.50 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225] MS ICIS B12299003_14

B12299003_14 #384 RT: 6.46 AV: 1 NL: 8.61E4
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

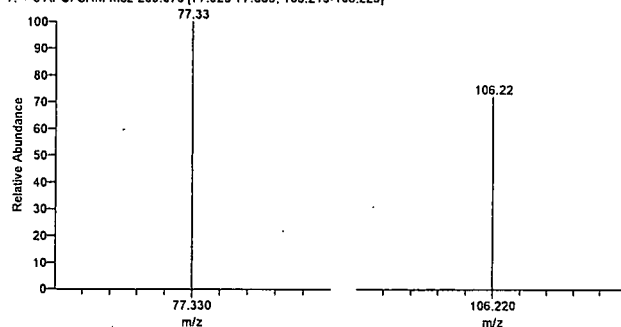


RT: 7.89 - 10.39 SM: 5G



NL: 4.90E4
Base Peak m/z= 105.50-106.50 F: + c APCI SRM ms2 MS ICIS B12299003_14

B12299003_14 #542 RT: 9.14 AV: 1 NL: 7.19E4
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0046

Sample Name: ICV/LCSD

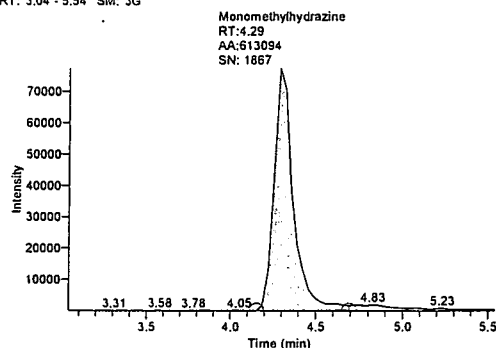
Data File: B12299003_15
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 06:31:48 PM
Sample ID: ICV/LCSD
Vial: a:13
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

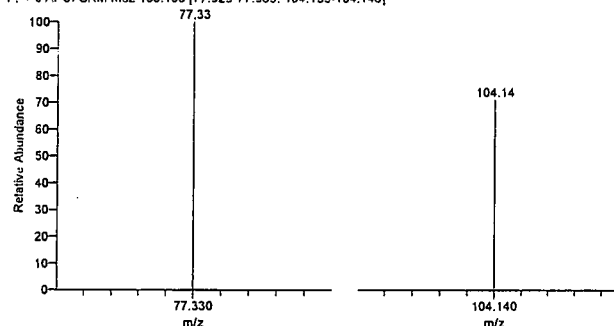
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	62.833	ug/L	613094.161	4.29
1,1-Dimethylhydrazine	58.400	ug/L	638468.558	6.50
Hydrazine	12.612	ug/L	407454.213	9.23

RT: 3.04 - 5.54 SM: 3G

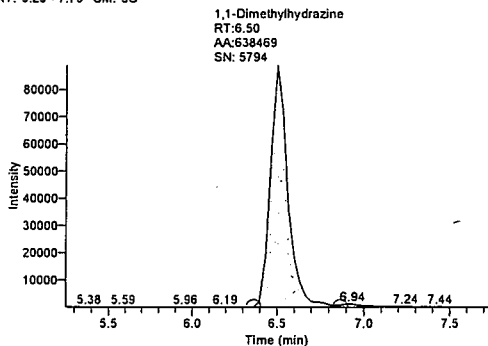


NL: 7.73E4
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_15

B12299003_15 #255 RT: 4.29 AV: 1 NL: 1.11E5
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

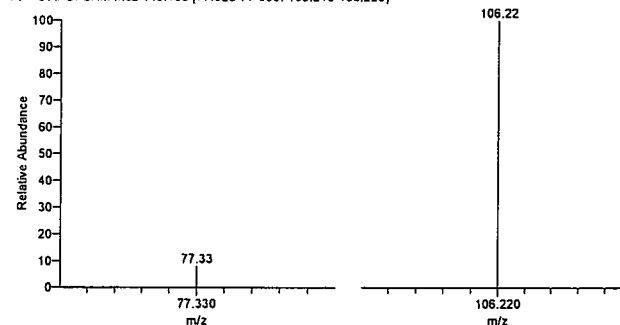


RT: 5.25 - 7.75 SM: 3G

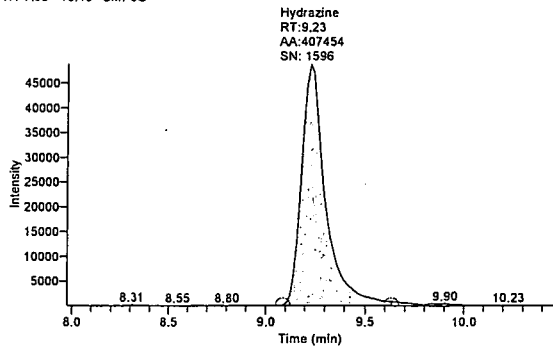


NL: 8.91E4
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_15

B12299003_15 #366 RT: 6.50 AV: 1 NL: 9.14E4
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

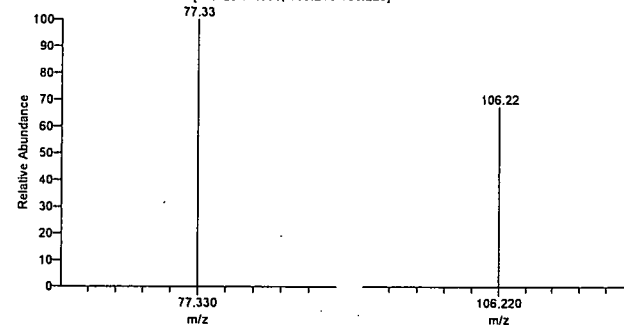


RT: 7.98 - 10.48 SM: 5G



NL: 4.90E4
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_15

B12299003_15 #547 RT: 9.23 AV: 1 NL: 7.61E4
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0047

Sample Name: CCV2

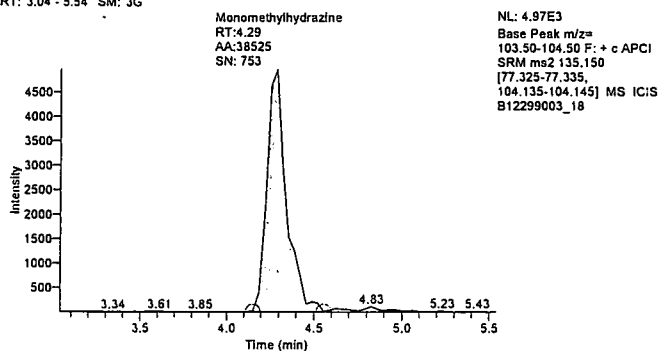
Data File: B12299003_18
Sample Type: QC
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 07:23:23 PM
Sample ID: CCV2
Vial: A:37
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

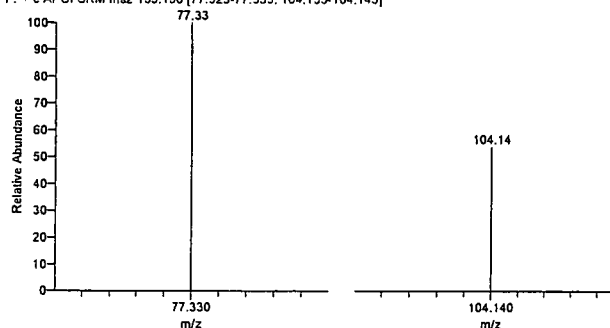
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	4.260	ug/L	38524.544	4.29
1,1-Dimethylhydrazine	5.009	ug/L	53070.854	6.46
Hydrazine	1.017	ug/L	31082.203	9.17

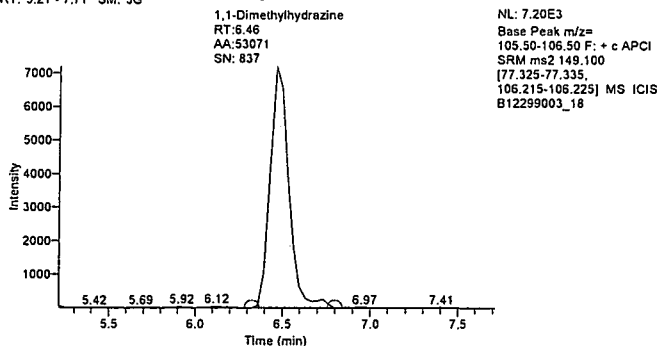
RT: 3.04 - 5.54 SM: 3G



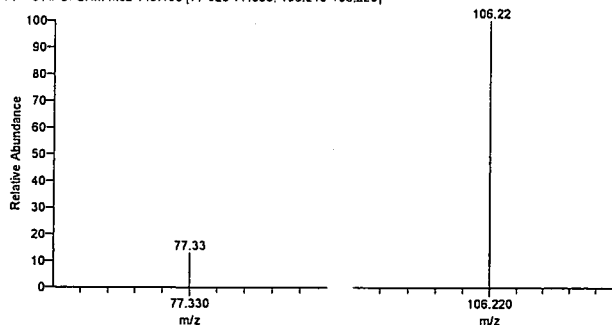
B12299003_18 #255 RT: 4.29 AV: 1 NL: 9.42E3
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]



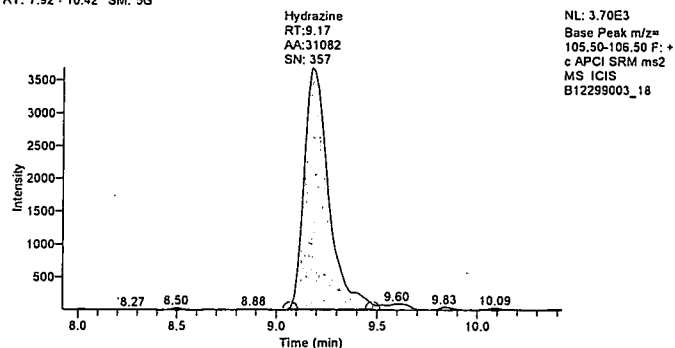
RT: 5.21 - 7.71 SM: 3G



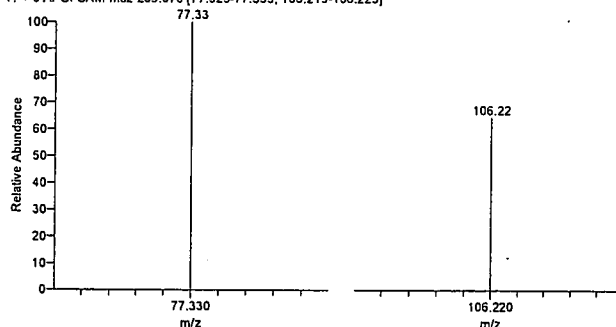
B12299003_18 #384 RT: 6.46 AV: 1 NL: 7.38E3
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.92 - 10.42 SM: 5G



B12299003_18 #544 RT: 9.17 AV: 1 NL: 6.00E3
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0046

Sample Name: CCV3

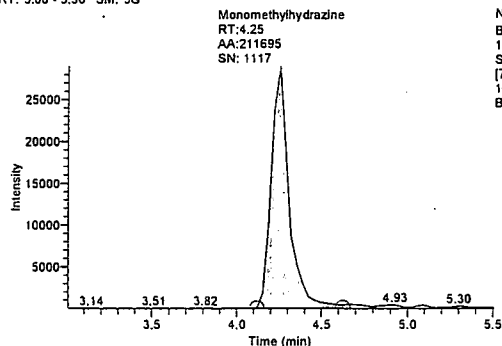
Data File: B12299003_23
Sample Type: QC
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 08:49:24 PM
Sample ID: CCV3
Vial: A:38
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

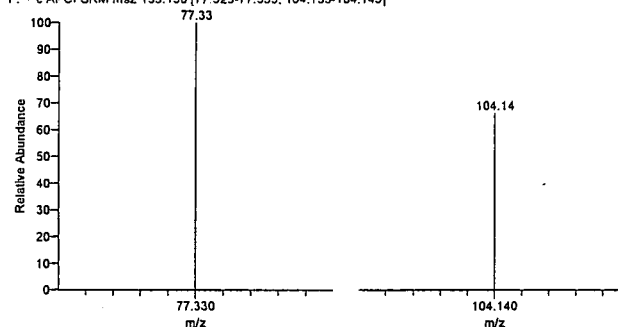
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	21.913	ug/L	211695.090	4.25
1,1-Dimethylhydrazine	24.868	ug/L	270808.233	6.43
Hydrazine	4.870	ug/L	156163.685	9.07

RT: 3.00 - 5.50 SM: 3G

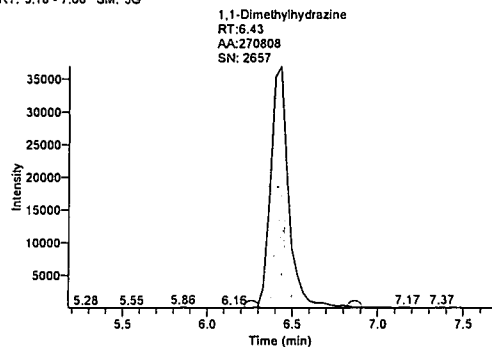


NL: 2.90E4
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_23

B12299003_23 #253 RT: 4.25 AV: 1 NL: 4.48E4
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

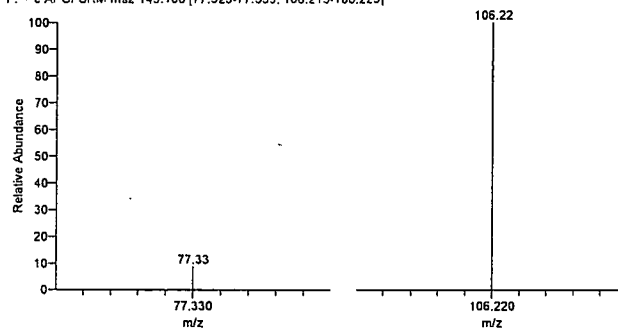


RT: 5.18 - 7.68 SM: 3G

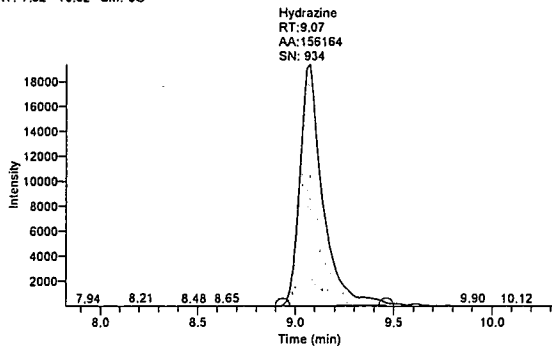


NL: 3.70E4
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_23

B12299003_23 #382 RT: 6.43 AV: 1 NL: 3.78E4
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

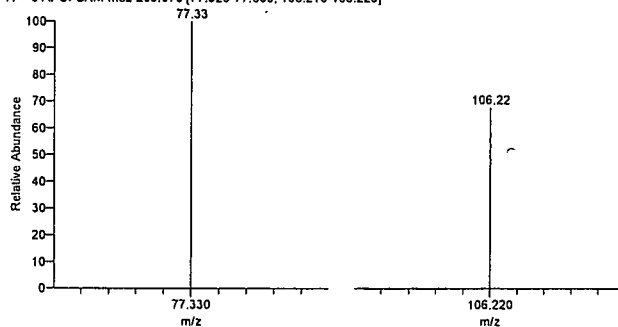


RT: 7.82 - 10.32 SM: 5G



NL: 1.94E4
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_23

B12299003_23 #538 RT: 9.07 AV: 1 NL: 3.02E4
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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RFA02 0049

Raw QC Data

Sample Name: BLK

Data File: B12299003_12

Sample Type: Unknown

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Operator: Quantum

Acquisition Date: 10/27/12 05:40:12 PM

Sample ID: BLK

Vial: a:2

Instrument Software Version: 2.3.0.1206 SP1

Instrument Name: TSQ

Instrument Serial Number: TQU01408

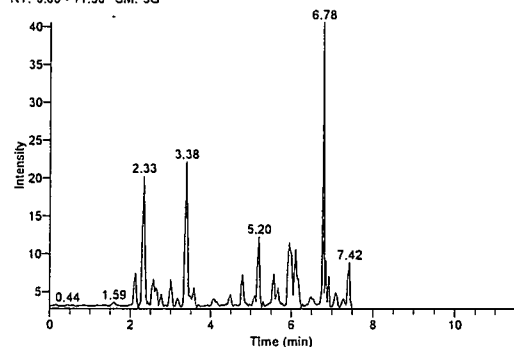
Original Data Path: C:\XCalibur\Hydrazine

Analysis\2012\Quart4

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A

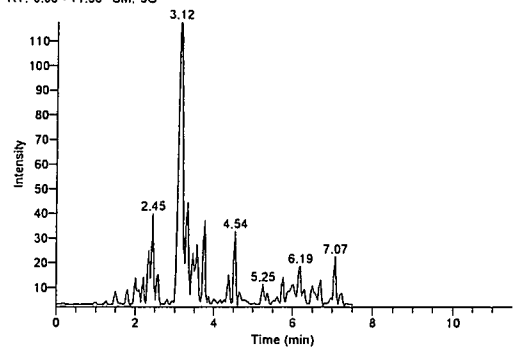
RT: 0.00 - 11.50 SM: 3G



NL: 4.05E1
Base Peak m/z=
103.50-104.50 F: + c APCI
SRM ms2 135.150
[77.325-77.335,
104.135-104.145] MS
B12299003_12

There's no data available to display this graphic object.

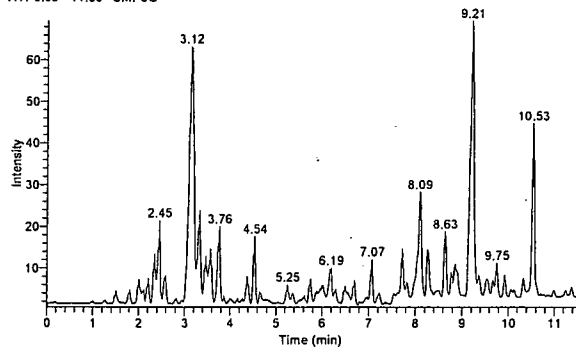
RT: 0.00 - 11.50 SM: 3G



NL: 1.18E2
Base Peak m/z=
105.50-106.50 F: + c APCI
SRM ms2 149.100
[77.325-77.335,
106.215-106.225] MS
B12299003_12

There's no data available to display this graphic object.

RT: 0.00 - 11.50 SM: 5G



NL: 6.94E1
Base Peak m/z=
105.50-106.50 F:
+ c APCI SRM
ms2 MS
B12299003_12

There's no data available to display this graphic object.

Meng Yu
Principal Chemist

OCT 28 2012

RF 402 0051

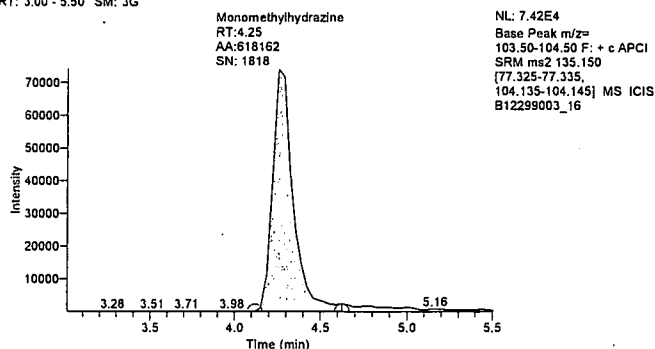
Sample Name: MS (6834875)
Data File: B12299003_16
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 06:48:58 PM
Sample ID: MS (6834875)
Vial: a:14
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
Analysis\2012\Quart4

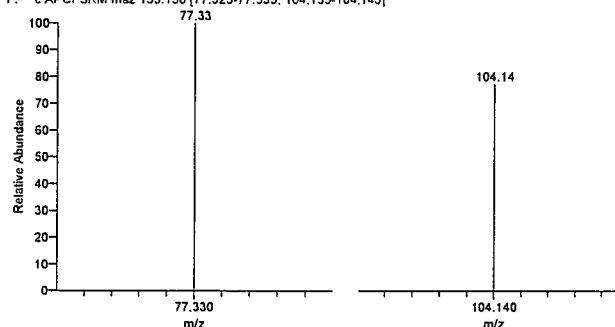
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	63.349	ug/L	618162.195	4.25
1,1-Dimethylhydrazine	54.422	ug/L	594850.317	6.46
Hydrazine	12.617	ug/L	407609.699	9.16

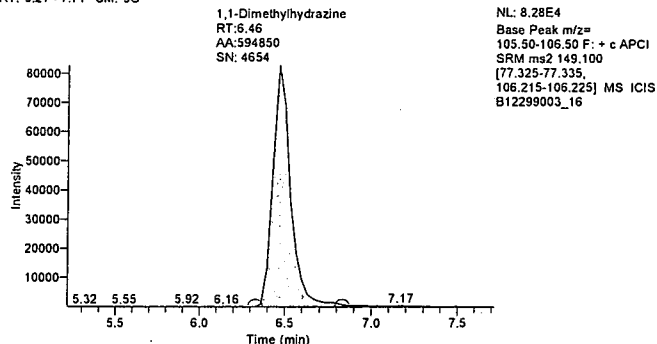
RT: 3.00 - 5.50 SM: 3G



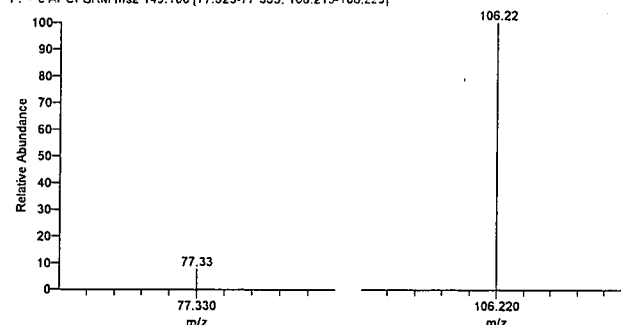
B12299003_16 #253 RT: 4.25 AV: 1 NL: 9.82E4
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]



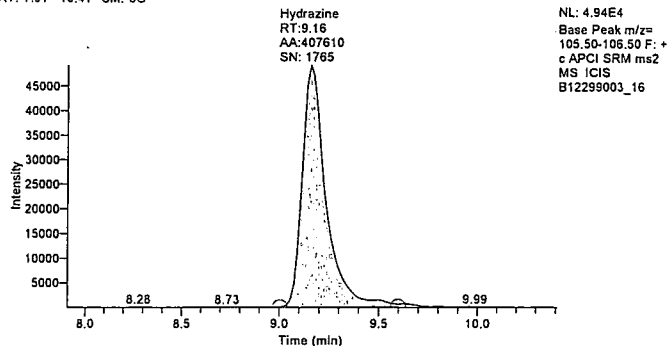
RT: 5.21 - 7.71 SM: 3G



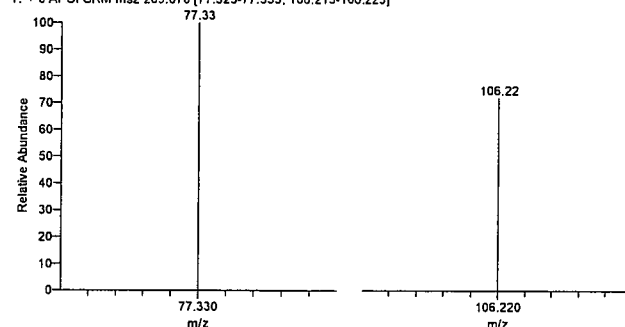
B12299003_16 #384 RT: 6.46 AV: 1 NL: 8.50E4
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.91 - 10.41 SM: 5G



B12299003_16 #543 RT: 9.16 AV: 1 NL: 7.20E4
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



Meng Yu
Principal Chemist

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Monday, October 29, 2012, 10:58:46

RF402 0052

Sample Name: MSD (6834875)

Data File: B12299003_17

Sample Type: Unknown

Run Time(min): 11.49

Injection Volume(μl): 5.00

Dilution Factor: 1.00

Instrument Model: TSQ Quantum Access

Instrument Method: C:\XCalibur\Hydrazine

Analysis\Hydraz_TB

Operator: Quantum

Acquisition Date: 10/27/12 07:06:09 PM

Sample ID: MSD (6834875)

Vial: a:15

Instrument Software Version: 2.3.0.1206 SP1

Instrument Name: TSQ

Instrument Serial Number: TQU01408

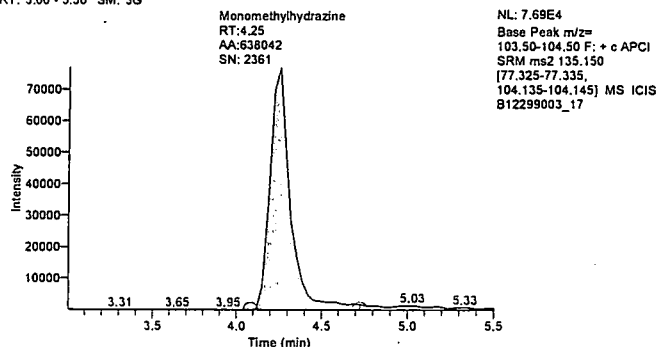
Original Data Path: C:\XCalibur\Hydrazine

Analysis\2012\Quart4

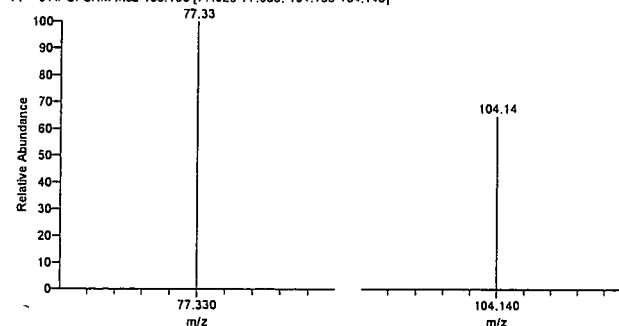
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	65.376	ug/L	638042.162	4.25
1,1-Dimethylhydrazine	55.307	ug/L	604556.610	6.46
Hydrazine	12.356	ug/L	399130.959	9.11

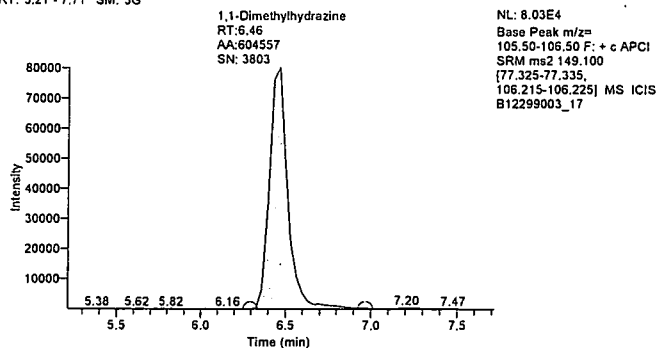
RT: 3.00 - 5.50 SM: 3G



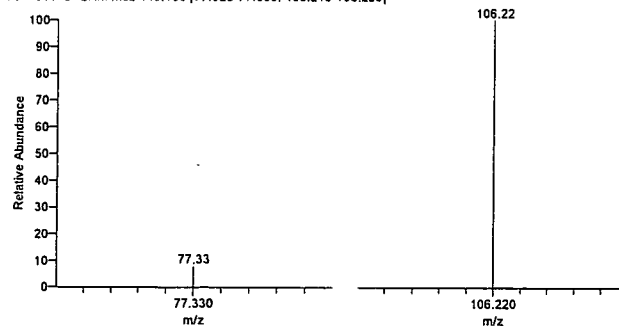
B12299003_17 #253 RT: 4.25 AV: 1 NL: 1.21E5
F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]



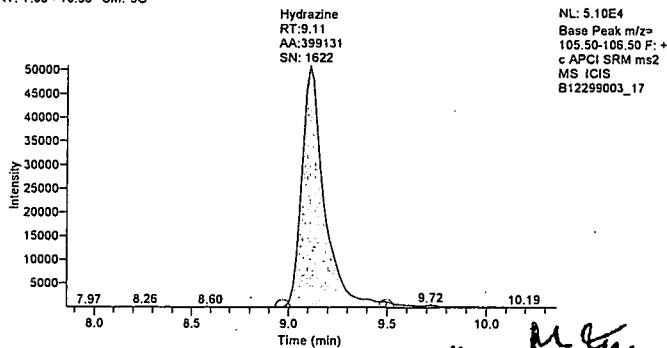
RT: 5.21 - 7.71 SM: 3G



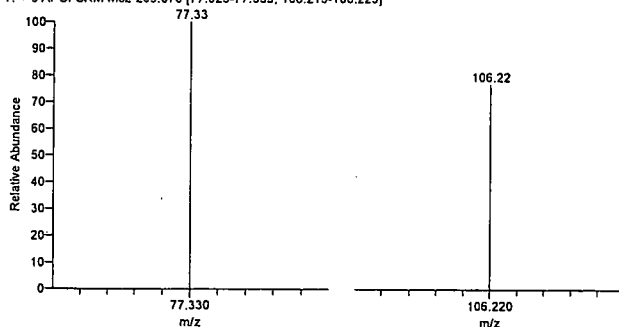
B12299003_17 #384 RT: 6.46 AV: 1 NL: 8.20E4
F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]



RT: 7.86 - 10.36 SM: 5G



B12299003_17 #540 RT: 9.11 AV: 1 NL: 7.07E4
T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



Meng Yu
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Monday, October 29, 2012, 10:58:47

RFA02 0053

Sample Name: ICV/LCS

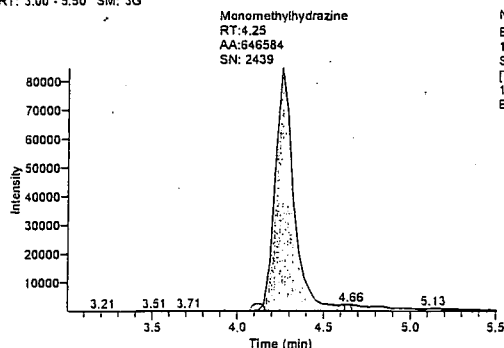
Data File: B12299003_14
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
 Analysis\Hydraz_TB
Operator: Quantum

Acquisition Date: 10/27/12 06:14:38 PM
Sample ID: ICV/LCS
Vial: a:12
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
 Analysis\2012\Quart4

Quan Peak Table

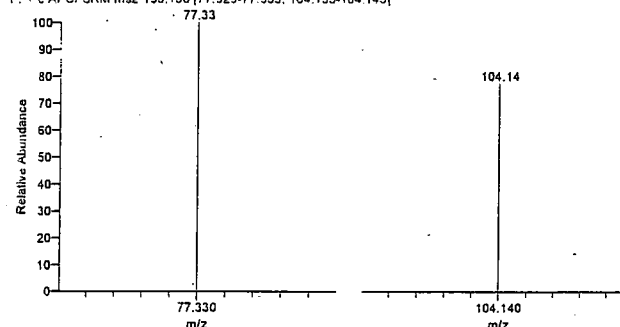
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	66.247	ug/L	646584.180	4.25
1,1-Dimethylhydrazine	54.901	ug/L	600104.371	6.46
Hydrazine	12.379	ug/L	399903.454	9.14

RT: 3.00 - 5.50 SM: 3G

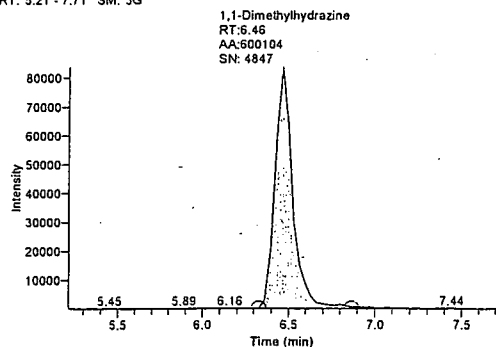


NL: 8.47E4
 Base Peak m/z= 103.50-104.50 F: + c APCI
 SRM ms2 135.150
 [77.325-77.335,
 104.135-104.145] MS ICIS
 B12299003_14

B12299003_14 #253 RT: 4.25 AV: 1 NL: 1.12E5
 F: + c APCI SRM ms2 135.150 [77.325-77.335, 104.135-104.145]

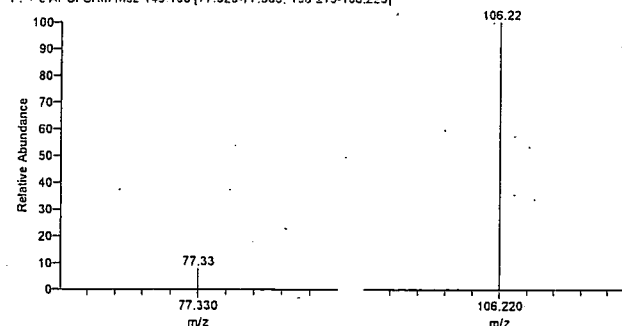


RT: 5.21 - 7.71 SM: 3G

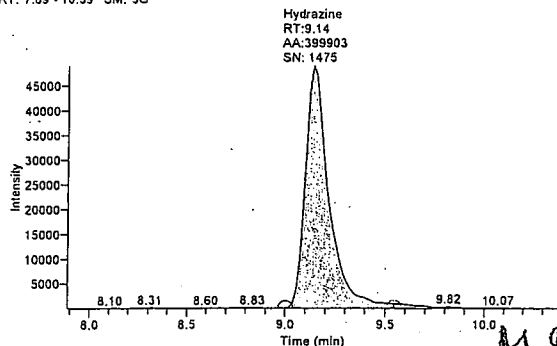


NL: 8.39E4
 Base Peak m/z= 105.50-106.50 F: + c APCI
 SRM ms2 149.100
 [77.325-77.335,
 106.215-106.225] MS ICIS
 B12299003_14

B12299003_14 #384 RT: 6.46 AV: 1 NL: 8.61E4
 F: + c APCI SRM ms2 149.100 [77.325-77.335, 106.215-106.225]

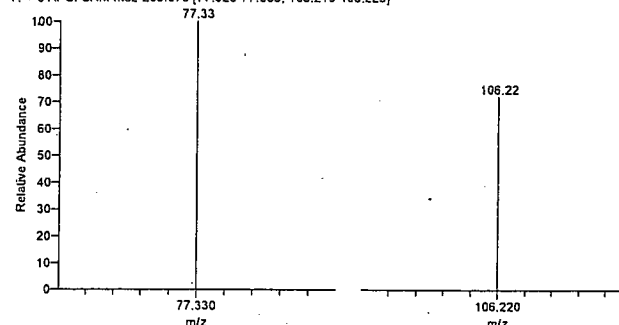


RT: 7.89 - 10.39 SM: 5G



NL: 4.90E4
 Base Peak m/z= 105.50-106.50 F: +
 c APCI SRM ms2
 MS ICIS
 B12299003_14

B12299003_14 #542 RT: 9.14 AV: 1 NL: 7.19E4
 T: + c APCI SRM ms2 209.070 [77.325-77.335, 106.215-106.225]



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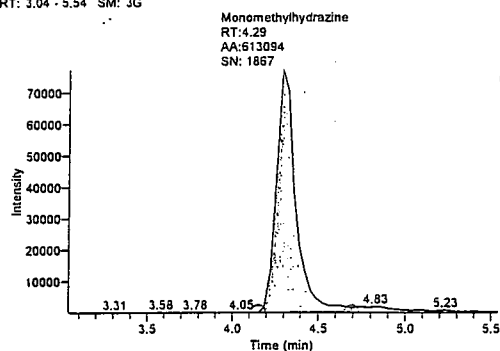
Sample Name: ICV/LCSD
Data File: B12299003_15
Sample Type: Unknown
Run Time(min): 11.49
Injection Volume(μl): 5.00
Dilution Factor: 1.00
Instrument Model: TSQ Quantum Access
Instrument Method: C:\XCalibur\Hydrazine
Operator: Quantum

Acquisition Date: 10/27/12 06:31:48 PM
Sample ID: ICV/LCSD
Vial: a:13
Instrument Software Version: 2.3.0.1206 SP1
Instrument Name: TSQ
Instrument Serial Number: TQU01408
Original Data Path: C:\XCalibur\Hydrazine
Analysis\Hydraz_TB
Analysis\2012\Quart4

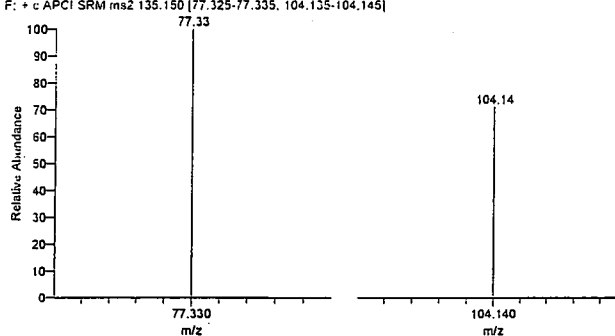
Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	62.833	ug/L	613094.161	4.29
1,1-Dimethylhydrazine	58.400	ug/L	638468.558	6.50
Hydrazine	12.612	ug/L	407454.213	9.23

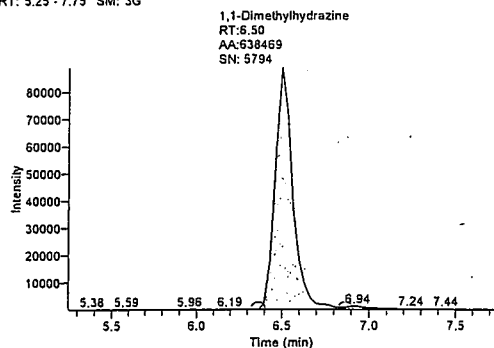
RT: 3.04 - 5.54 SM: 3G



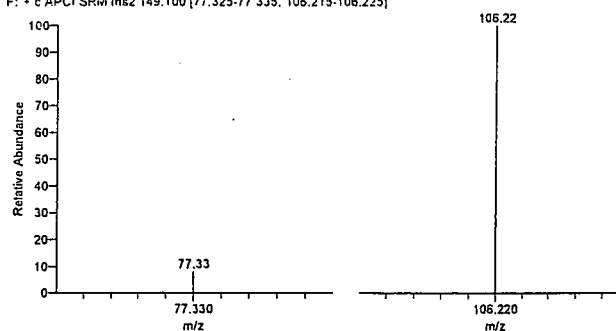
B12299003_15 #255 RT: 4.29 AV: 1 NL: 1.11E5
F: + c APCI SRM ms2 135.150 (77.325-77.335, 104.135-104.145)



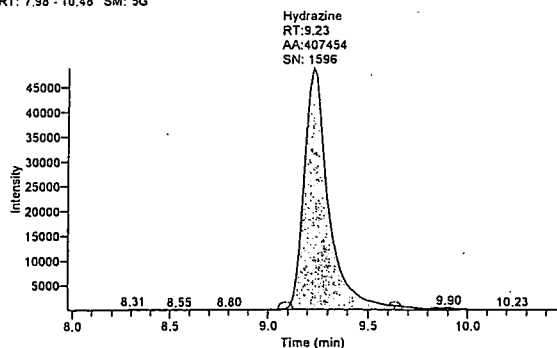
RT: 5.25 - 7.75 SM: 3G



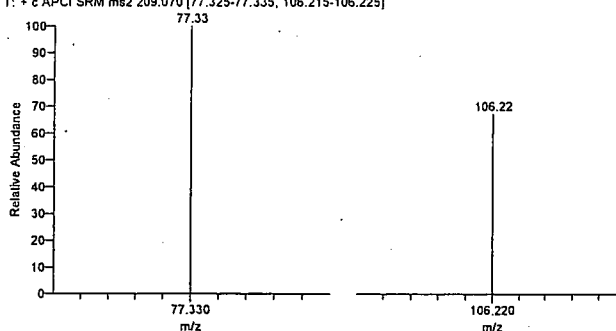
B12299003_15 #386 RT: 6.50 AV: 1 NL: 9.14E4
F: + c APCI SRM ms2 149.100 (77.325-77.335, 106.215-106.225)



RT: 7.98 - 10.48 SM: 5G



B12299003_15 #547 RT: 9.23 AV: 1 NL: 7.61E4
T: + c APCI SRM ms2 209.070 (77.325-77.335, 106.215-106.225)



Meng Yu
Principal Chemist

8/1/12
10/29/12

OCT 29 2012

RFA02 0055

Preparation Logs

12299003

Dept: 37		Prep Analysis: 00000		Hydrazines in Water							
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
6834875MSD	MRFA1MSMS	1.0	NA	NA	157493-3F	0.01	1.5			145a	
6834875MS	MRFA1MS	1.0				0.01	1.5			145a	
BLANKA	BLK299003	1.0			NA	NA	1.5			NA	
LCSA	OPR299003	1.0			157493-3F	0.01	1.5			NA	
LCSDA		1.0				0.01	1.5			NA	

Solvent Used	Lot No.
1% Benzal	157498-4B
0.2M pH5 buf	157498-1C

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Prio
1 6834875	MRFA1	1.0	NA	NA	1.5			145a		10342	11/05/2012	N
2 6834876	MRFA2	1.0			1.5			145a		10342	11/05/2012	N
3 6834877	MRFAD	1.0			1.5			145a		10342	11/05/2012	N

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	12299003
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Documented temps are NIST corrected.

Appendix B

Data Validation Report

Data Validation Services

120 Cobble Creek Road P.O. Box 208

North Creek, NY 12853

Phone 518-251-4429

Facsimile 518-251-4428

January 2, 2013

Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

RE: Validation of GE MRFA Malta Site Data Packages
CAS Sub Nos. R1207266 and R1207283

Dear Mr. Neumann:

Review has been completed for the data package generated by Columbia Analytical Services (CAS) that pertains to groundwater samples collected 10/23/12 at the GE Malta Site. Nineteen samples, two field duplicates, cooler blanks, and trip blanks were processed for site-specific low level volatiles and ethane. Three of those samples and one field duplicate were also analyzed for total and hexavalent chromium. Methodologies utilized include those of the USEPA OLC02.1, EPA CLP ILM, RSK 175, and USEPA SW846 method 7196.

Data validation was performed with guidance from the USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review and the USEPA Region 2 SOPs HW-2 and HW-6, with consideration for the specific methodologies. The following items were reviewed:

- * Data Completeness
- * Custody Documentation
- * Holding Times
- * Surrogate and Internal Standard Recoveries
- * Matrix Spike Recoveries/Duplicate Correlations
- * Field Duplicate Correlations
- * Preparation/Calibration Blanks
- * Control Spike/Laboratory Control Samples
- * Instrumental Tunes
- * Calibration/Low Level Standards
- * Instrument IDLs
- * ICP Serial Dilutions
- * Method Compliance
- * Sample Result Verification

The items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with protocol requirements.

In summary, sample processing was conducted primarily with compliance to protocol requirements and with adherence to quality criteria. Sample results are usable either as reported, or with minor qualification, including edit to non-detection. This is discussed in the following analytical sections.

Copies of laboratory identification summaries and the laboratory case narratives are attached to this text, and should be reviewed in conjunction with this report. Laboratory sample results forms are also submitted, reflecting the qualifiers in red ink.

Low Level Volatile Analyses

Detected results for acetone in the project samples are considered external contamination, as indicated by presence in the associated trip blanks. Those detections have been edited to reflect non-detection. Detected results for methylene chloride in samples reported in R2107266 are similarly edited to non-detection due to presence in the associated trip blank.

Results for analytes initially reported with the "E" flag have been derived from the dilution analyses of those samples.

Matrix spikes of M-27D and M-28S show recoveries and duplicate correlations within the laboratory acceptance ranges and validation guidelines for the twelve analytes evaluated.

Volatile blind field duplicate correlations for M-27D are well within validation guidelines. The blind duplicate evaluation for M-28S shows outlying correlations for carbon tetrachloride and trichloroethene (both $>\pm\text{CRDL}$). Results for those two compounds in that parent sample and its duplicate DUPB have been qualified as estimated in value.

1,2-Dibromo-3-chloropropane, acetone and 2-butanone exhibit low relative response factors (RRFs) (inherent with the methodology) in all of the project calibration standards. The usability of those data is evidenced by spike recoveries, instrument sensitivity, and calibration standard responses, but the reporting limits and detected values for those compounds in the samples and trip/cooler blanks should be considered estimated ("UJ" or "J" qualifiers), possibly biased low.

The other calibration standard responses are acceptable, with the following exceptions, results for which are qualified as estimated in the indicated samples:

- 1,2-dibromo-3-chloropropane and bromoform (28%D and 32%D) in the samples reported in SDG R2107283 and the cooler blank reported in SDG R2107266
- carbon disulfide and bromoform (28%D and 32%D) in the samples and trip blank reported in SDG R2107266

Holding times were met, and surrogate and internal standard responses are within required limits.

M-25D was analyzed at initial dilution due to target analyte concentrations. This resulted in elevated reporting limits for analytes not detected in those samples.

Ethane Analyses

Instrument performance was compliant, holding times were met, and blanks show no contamination.

Matrix spikes and duplicates of M-27D and M-28S show recoveries and correlations within laboratory acceptance ranges.

The blind field duplicate evaluation of M-28S shows an acceptable correlation.

Total Chromium Analyses

-The matrix spike/lab duplicate accuracy and precision determinations were performed on M-27D, and show recovery and duplicate correlation within recommended limits.

The field duplicate evaluation for M-27D also produced a good correlation.

The serial dilution evaluations of M-27D and 13D are not applicable due to low sample concentrations.

Instrument performance was acceptable. Reported results are substantiated by the raw data, and generated in compliance with required protocols. Quality control parameter results meet validation requirements.

Hexavalent Chromium Analyses

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to the procedure. All were found to be acceptable unless noted below.

Matrix spike/laboratory duplicate accuracy and precision determinations were performed on M27D, and show recoveries and duplicate correlation within laboratory acceptance ranges.

The field duplicate correlation for M-27D was within validation guidelines.

Reported results are substantiated by the raw data, and generated in compliance with required protocols. Holding times were met, and blanks show no contamination.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,


Judy Harry

VALIDATION DATA QUALIFIER DEFINITIONS

- U** The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J** The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- UJ** The analyte was not detected. The associated reported quantitation limit is an estimate and may be inaccurate or imprecise.
- NJ** The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R** The data are unusable. The analyte may or may not be present.
- EMPC** The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

**CLIENT and LABORATORY SAMPLE IDs
and CASE NARRATIVES**

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 145599.01	Batch Complete: Yes	Date Revised:
Submission: R1207266	Diskette Requested: No	Date Due: 11/14/12
Client: Shaw Environmental & Infrastructure	Date: 11/6/12	Protocol: EPA
Client Rep: JJAEGGER	Custody Seal: Present/Absent:	Shipping No.:
Project: GE MRFA	Chain of Custody: Present/Absent:	SDG #: M-25D

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1207266-001	M-25D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-002	M-29D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-002.R01	M-29D	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-003	M-24DR	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-004	11D	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-005	M-1	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-006	MW-4	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-007	10S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-008QC	M-28S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-009	13S	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-010	13D	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/23/12	10/24/12			
R1207266-011	DUPB	Water	RSK 175, CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-012	TRIP BLANK	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			
R1207266-013	COOLER BLANK	Water	CLP-VOA OLC02.1	10/23/12	10/24/12			

110000

Folder Comments: need extra 3 compounds, e-mail invoices to Karen and Steve

Printed 11/6/12 8:07

CLP Batching Form

Page 1

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 145599.01	Batch Complete: Yes	Date Revised:
Submission: R1207283	Diskette Requested: No	Date Due: 11/15/12
Client: Shaw Environmental & Infrastruct	Date: 11/6/12	Protocol: EPA
Client Rep: JJAEGER	Custody Seal: Present/Absent:	Shipping No.:
Project: GE MRFA	Chain of Custody: Present/Absent:	SDG #: DGC-4S

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1207283-001	DGC-4S	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-002	SW-A	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-003	DGC-3S	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-004	SW-G	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-005	SW-F	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-006	SW-E	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-007	SW-D	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-008QC	M-27D	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-009	SW-B	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-010	DUP A	Water	7196A, RSK 175, CLP-VOA OLC02.1, 6010C	10/24/12	10/25/12			
R1207283-011	TRIP BLANK	Water	RSK 175, CLP-VOA OLC02.1	10/24/12	10/25/12			
R1207283-012	COOLER BLANK	Water	CLP-VOA OLC02.1	10/24/12	10/25/12			

100000

Folder Comments: need extra 3 compounds, e-mail invoices to Karen and Steve

CASE NARRATIVE

Client:	Shaw Environmental	Service Request:	R1207266
Project:	GE MRFA	Project Number:	145599.01
Sample Matrix:	Water	Date Received:	10/24/12

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Samples were collected on 10/23/12 and received at CAS on 10/24/12 at a cooler temperature of 4.5 C in good condition except as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory.

Inorganic Analysis

Samples were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was not requested on these samples.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Metals Analysis

Samples were analyzed for a site specific list of Metals by Methods 6010C.

Site specific QC was not requested on these samples.

All LCS recoveries were within limits.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Volatile Organics

Samples were analyzed for a site specific list of Volatile Organics by CLP Method OLC 2.1.

All Tuning criteria for BFB were within QC limits.

All the initial calibration criteria were met for all analytes. All Continuing Calibration Verification (CCV) standards were within 30% Difference (D) except Bromoform on the 10/31/12 CCV. All positive detections for samples associated with this CCV should be considered as estimated.

All Internal Standard Areas and surrogate standard recoveries were within QC limits.

The LCS recoveries were all acceptable.

Site specific QC was performed on M-28S as requested. All MS/MSD recoveries and RPD's were acceptable.

Various compounds for M-29D have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Method Blanks associated with these samples were free of contamination except the 10/30/12 blank had a low level detection for 1,2,3-Trichlorobenzene and the 10/31/12 blank had low level detections for 1,2,3-Trichlorobenzene and Hexachlorobutadiene. No data was affected.

No other analytical or QC problems were encountered.

RSK-175

Samples were analyzed for Ethane by Method RSK-175M.

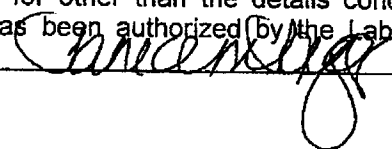
All the initial and continuing calibration criteria were met for all analytes.

The LCS recoveries were all acceptable.

Site specific QC was requested on M-28S as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

CASE NARRATIVE

Client:	Shaw Environmental	Service Request:	R1207283
Project:	GE MRFA	Project Number:	145599.01
Sample Matrix:	Water	Date Received:	10/25/12

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Samples were collected on 10/24/12 and received at CAS on 10/25/12 at a cooler temperature of 3.2 C in good condition except as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory.

Inorganic Analysis

Samples were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was performed on M-27D as requested. All MS recoveries and RPD's were acceptable.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Metals Analysis

Samples were analyzed for a site specific list of Metals by Methods 6010C.

Site specific QC was performed on M-27D as requested. All MS recoveries and RPD's were acceptable.

All LCS recoveries were within limits.

The Method Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

Volatile Organics

Samples were analyzed for a site specific list of Volatile Organics by CLP Method OLC 2.1.

All Tuning criteria for BFB were within QC limits.

All the initial calibration criteria were met for all analytes. All Continuing Calibration Verification (CCV) standards were within 30% Difference (D) except Bromoform on the 10/31/12 CCV. All positive detections for samples associated with this CCV should be considered as estimated.

All Internal Standard Areas and surrogate standard recoveries were within QC limits.

The LCS recoveries were all acceptable.

Site specific QC was performed on M-27D as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination except the 10/31/12 blank had low level detections for 1,2,3-Trichlorobenzene and Hexachlorobutadiene. No data was affected.

No other analytical or QC problems were encountered.

RSK-175

Samples were analyzed for Ethane by Method RSK-175M.

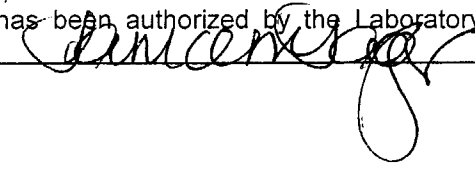
All the initial and continuing calibration criteria were met for all analytes.

The LCS recoveries were all acceptable.

Site specific QC was requested on M-27D as requested. All MS/MSD recoveries and RPD's were acceptable.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

QUALIFIED SAMPLE RESULTS FORMS

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0930
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 16:00

Sample Name: M-25D
 Lab Code: R1207266-001

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4054.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 5

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.50	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	0.55	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.50	
87-61-6	1,2,3-Trichlorobenzene	5.0 U	5.0	0.55	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	5.0	0.60	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	5.0 U <i>UJ</i>	5.0	1.2	
106-93-4	1,2-Dibromoethane	5.0 U	5.0	0.75	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	0.50	
95-50-1	1,2-Dichlorobenzene	5.0 U	5.0	0.50	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	0.50	
541-73-1	1,3-Dichlorobenzene	5.0 U	5.0	0.50	
106-46-7	1,4-Dichlorobenzene	5.0 U	5.0	0.50	
78-93-3	2-Butanone (MEK)	25 U <i>UJ</i>	25	5.1	
591-78-6	2-Hexanone	25 U	25	11	
108-10-1	4-Methyl-2-pentanone	25 U	25	4.8	
67-64-1	Acetone	25 U <i>UJ</i>	25	5.4	
71-43-2	Benzene	5.0 U	5.0	0.50	
74-97-5	Bromochloromethane	5.0 U	5.0	0.75	
75-27-4	Bromodichloromethane	5.0 U	5.0	0.50	
75-25-2	Bromoform	5.0 U <i>UJ</i>	5.0	0.75	
74-83-9	Bromomethane	5.0 U	5.0	1.2	
75-15-0	Carbon Disulfide	5.0 U <i>UJ</i>	5.0	0.71	
56-23-5	Carbon Tetrachloride	29	5.0	0.50	
108-90-7	Chlorobenzene	5.0 U	5.0	0.50	
75-00-3	Chloroethane	5.0 U	5.0	0.50	
67-66-3	Chloroform	1.7 J	5.0	0.50	
74-87-3	Chloromethane	5.0 U	5.0	0.60	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	0.50	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	0.60	
124-48-1	Dibromochloromethane	5.0 U	5.0	0.50	
100-41-4	Ethylbenzene	5.0 U	5.0	0.50	
87-68-3	Hexachlorobutadiene	5.0 U	5.0	0.50	
179601-23-1	m,p-Xylenes	5.0 U	5.0	0.60	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0930
Date Received: 10/24/12
Date Analyzed: 10/30/12 16:00

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUADATA\MSVOA6\DATA\103012\Z4054.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 5

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	0.70 5.0 U	5.0	0.50	
95-47-6	o-Xylene	5.0 U	5.0	0.50	
100-42-5	Styrene	5.0 U	5.0	0.50	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	0.50	
108-88-3	Toluene	5.0 U	5.0	0.50	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	0.50	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	0.50	
79-01-6	Trichloroethene (TCE)	67	5.0	0.50	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.50	
75-01-4	Vinyl Chloride	5.0 U	5.0	0.50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 16:00	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1600

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1010
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 13:22

Sample Name: M-29D
 Lab Code: R1207266-002

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4049.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.6	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	0.31 J	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U UJ	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U UJ	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U UJ	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U UJ	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U UJ	1.0	0.14	
56-23-5	Carbon Tetrachloride	24	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.96 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:22

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4049.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	25-E 23	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 13:22	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1322

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1040
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:53

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4050.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	4.1 5.0 <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1040
Date Received: 10/24/12
Date Analyzed: 10/30/12 13:53

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4050.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	4.2		1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	80-120	10/30/12 13:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1353

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1120
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 14:27

Sample Name: 11D
 Lab Code: R1207266-004

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4051.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	6.7	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.56 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1120
Date Received: 10/24/12
Date Analyzed: 10/30/12 14:27

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4051.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.9		1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 14:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1427

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1200
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 15:00

Sample Name: M-1
 Lab Code: R1207266-005

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4052.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1200
Date Received: 10/24/12
Date Analyzed: 10/30/12 15:00

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4052.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 15:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1500

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1230
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 15:28

Sample Name: MW-4
 Lab Code: R1207266-006

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4053.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.3 5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1230
Date Received: 10/24/12
Date Analyzed: 10/30/12 15:28

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4053.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	80-120	10/30/12 15:28	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1528

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1330
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 16:36

Sample Name: 10S
 Lab Code: R1207266-007

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4055.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.0 5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	2.2	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.39 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1330
Date Received: 10/24/12
Date Analyzed: 10/30/12 16:36

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4055.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 16:36	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1636

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1350
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 17:12

Sample Name: M-28S
 Lab Code: R1207266-008

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4056.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.6 5.0 <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.1 <i>J</i>	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.20 J	1.0	0.10	
74-87-3	Chloromethane	0.85 J	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1350
Date Received: 10/24/12
Date Analyzed: 10/30/12 17:12

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4056.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	4.3	J	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/30/12 17:12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1712

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	2.09	3.2	JN

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1420
Date Received: 10/24/12
Date Analyzed: 10/30/12 17:48

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4057.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 <i>UUJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 <i>UUJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.1	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1420
Date Received: 10/24/12
Date Analyzed: 10/30/12 17:48

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4057.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	2.2	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	80-120	10/30/12 17:48	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1748

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 1450
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 18:24

Sample Name: 13D
 Lab Code: R1207266-010

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4058.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>US</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>US</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.4 5.0 <i>US</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>US</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>US</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	0.68 J	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.13 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1450
Date Received: 10/24/12
Date Analyzed: 10/30/12 18:24

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4058.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 18:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1824

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 19:35

Sample Name: DUPB
 Lab Code: R1207266-011

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4060.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.6 <i>J</i>	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 19:35

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4060.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.3	J	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/30/12 19:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 1935

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0000
 Date Received: 10/24/12
 Date Analyzed: 10/30/12 20:11

Sample Name: TRIP BLANK
 Lab Code: R1207266-012

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4061.D\

Analysis Lot: 316079
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	2.1 J <i>J</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U <i>UJ</i>	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0000
Date Received: 10/24/12
Date Analyzed: 10/30/12 20:11

Sample Name: TRIP BLANK
Lab Code: R1207266-012

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103012\Z4061.D\

Analysis Lot: 316079
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	0.10 J	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	0.10 J	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/30/12 20:11	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/30/12 2011

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK
Lab Code: R1207266-012

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207266
 Date Collected: 10/23/12 0000
 Date Received: 10/24/12
 Date Analyzed: 10/31/12 13:13

Sample Name: COOLER BLANK
 Lab Code: R1207266-013

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4071.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0000
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:13

Sample Name: COOLER BLANK
Lab Code: R1207266-013

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4071.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	80-120	10/31/12 13:13	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/31/12 1313

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: COOLER BLANK
Lab Code: R1207266-013

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 0930
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:01

Sample Name: M-25D
Lab Code: R1207266-001

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1007.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1010
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:12

Sample Name: M-29D
Lab Code: R1207266-002

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1008.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1040
Date Received: 10/24/12
Date Analyzed: 10/31/12 11:24

Sample Name: M-24DR
Lab Code: R1207266-003

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1009.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1120
Date Received: 10/24/12
Date Analyzed: 10/31/12 12:41

Sample Name: 11D
Lab Code: R1207266-004

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1013.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1200
Date Received: 10/24/12
Date Analyzed: 10/31/12 12:56

Sample Name: M-1
Lab Code: R1207266-005

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1014.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1230
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:06

Sample Name: MW-4
Lab Code: R1207266-006

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1015.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1330
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:17

Sample Name: 10S
Lab Code: R1207266-007

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1016.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1350
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:28

Sample Name: M-28S
Lab Code: R1207266-008

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1017.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1420
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:40

Sample Name: 13S
Lab Code: R1207266-009

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1018.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12 1450
Date Received: 10/24/12
Date Analyzed: 10/31/12 13:50

Sample Name: 13D
Lab Code: R1207266-010

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1019.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207266
Date Collected: 10/23/12
Date Received: 10/24/12
Date Analyzed: 10/31/12 14:15

Sample Name: DUPB
Lab Code: R1207266-011

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1020.run

Analysis Lot: 316282
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

13D

Contract: R1207266

Lab Code: Case No.: SAS No.: SDG NO.: M-25D

Matrix (soil/water): WATER Lab Sample ID: R1207266-010

Level (low/med): LOW Date Received: 10/24/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.6	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1207266-MB

Service Request: R1207266**Date Collected:** NA**Date Received:** NA**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/24/12 12:42	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 0930
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 13:46

Sample Name: DGC-4S
 Lab Code: R1207283-001

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4072.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>45</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>45</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.2 5.0 <i>45</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>45</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 0930
Date Received: 10/25/12
Date Analyzed: 10/31/12 13:46

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4072.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	80-120	10/31/12 13:46	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1346

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1000
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 14:21

Sample Name: SW-A
 Lab Code: R1207283-002

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4073.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1000
Date Received: 10/25/12
Date Analyzed: 10/31/12 14:21

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4073.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 14:21	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1421

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1030
Date Received: 10/25/12
Date Analyzed: 10/31/12 15:33

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4075.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1030
Date Received: 10/25/12
Date Analyzed: 10/31/12 15:33

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4075.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 15:33	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1533

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1100
Date Received: 10/25/12
Date Analyzed: 10/31/12 14:57

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4074.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>us</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>us</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>us</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>us</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1100
Date Received: 10/25/12
Date Analyzed: 10/31/12 14:57

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4074.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	80-120	10/31/12 14:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1457

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1130
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 16:09

Sample Name: SW-F
 Lab Code: R1207283-005

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4076.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1130
Date Received: 10/25/12
Date Analyzed: 10/31/12 16:09

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUADATA\MSVOA6\DATA\103112\Z4076.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	80-120	10/31/12 16:09	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1609

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1145
Date Received: 10/25/12
Date Analyzed: 10/31/12 16:44

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4077.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>us</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>us</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>us</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>us</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1145
Date Received: 10/25/12
Date Analyzed: 10/31/12 16:44

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4077.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed Q
4-Bromofluorobenzene	103	80-120	10/31/12 16:44

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1644

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1230
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 17:19

Sample Name: SW-D
 Lab Code: R1207283-007

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4078.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1230
Date Received: 10/25/12
Date Analyzed: 10/31/12 17:19

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4078.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	80-120	10/31/12 17:19	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1719

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1300
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 17:48

Sample Name: M-27D
 Lab Code: R1207283-008

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4079.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.2	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.33 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12
Date Analyzed: 10/31/12 17:48

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4079.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	5.8	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/31/12 17:48	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1748

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12 1345
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 18:24

Sample Name: SW-B
 Lab Code: R1207283-009

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4080.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U UJ	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U UJ	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U UJ	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U UJ	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	0.17 J	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12
Date Analyzed: 10/31/12 18:24

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4080.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	0.16	J	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	80-120	10/31/12 18:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1824

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 19:00

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4081.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>us</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>us</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>us</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>us</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	4.9	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	0.41 J	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 19:00

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4081.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0 U	1.0	0.10	
95-47-6	o-Xylene	1.0 U	1.0	0.10	
100-42-5	Styrene	1.0 U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.10	
108-88-3	Toluene	1.0 U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	5.8	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	80-120	10/31/12 19:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1900

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
 Project: GE MRFA/145599.01
 Sample Matrix: Water

Service Request: R1207283
 Date Collected: 10/24/12
 Date Received: 10/25/12
 Date Analyzed: 10/31/12 19:36

Sample Name: TRIP BLANK
 Lab Code: R1207283-011

Units: µg/L
 Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4082.D\

Analysis Lot: 316261
 Instrument Name: R-MS-06
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	1.6 J <i>J</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 19:36

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4082.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	80-120	10/31/12 19:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 1936

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 21:59

Sample Name: COOLER BLANK
Lab Code: R1207283-012

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4086.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.10	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.11	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.10	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	1.0	0.11	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	1.0	0.12	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	1.0 U <i>UJ</i>	1.0	0.24	
106-93-4	1,2-Dibromoethane	1.0 U	1.0	0.15	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.10	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.10	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.10	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.10	
78-93-3	2-Butanone (MEK)	5.0 U <i>UJ</i>	5.0	1.1	
591-78-6	2-Hexanone	5.0 U	5.0	2.1	
108-10-1	4-Methyl-2-pentanone	5.0 U	5.0	0.95	
67-64-1	Acetone	5.0 U <i>UJ</i>	5.0	1.1	
71-43-2	Benzene	1.0 U	1.0	0.10	
74-97-5	Bromochloromethane	1.0 U	1.0	0.15	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.10	
75-25-2	Bromoform	1.0 U <i>UJ</i>	1.0	0.15	
74-83-9	Bromomethane	1.0 U	1.0	0.23	
75-15-0	Carbon Disulfide	1.0 U	1.0	0.14	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.10	
108-90-7	Chlorobenzene	1.0 U	1.0	0.10	
75-00-3	Chloroethane	1.0 U	1.0	0.10	
67-66-3	Chloroform	1.0 U	1.0	0.10	
74-87-3	Chloromethane	1.0 U	1.0	0.12	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.10	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.12	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.10	
100-41-4	Ethylbenzene	1.0 U	1.0	0.10	
87-68-3	Hexachlorobutadiene	1.0 U	1.0	0.10	
179601-23-1	m,p-Xylenes	1.0 U	1.0	0.12	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 21:59

Sample Name: COOLER BLANK
Lab Code: R1207283-012

Units: µg/L
Basis: NA

Low Level Water Volatile Organic Compounds by GC/MS

Analytical Method: CLP-VOA OLC02.1
Data File Name: I:\ACQUDATA\MSVOA6\DATA\103112\Z4086.D\

Analysis Lot: 316261
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
75-09-2	Dichloromethane (Methylene Chloride)	1.0	U	1.0	0.10	
95-47-6	o-Xylene	1.0	U	1.0	0.10	
100-42-5	Styrene	1.0	U	1.0	0.10	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.10	
108-88-3	Toluene	1.0	U	1.0	0.10	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.10	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.10	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.10	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	80-120	10/31/12 21:59	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 10/31/12 2159

Tentatively Identified Compounds (TIC)
Low Level Water Volatile Organic Compounds by GC/MS

Sample Name: COOLER BLANK
Lab Code: R1207283-012

Units: µg/L
Basis: NA

Analytical Method: CLP-VOA OLC02.1

CAS #	Analyte Name	RT	Result	Q
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No Tentatively Identified Compounds Detected.

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 0930
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:36

Sample Name: DGC-4S
Lab Code: R1207283-001

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1003.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1000
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:46

Sample Name: SW-A
Lab Code: R1207283-002

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1004.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1030
Date Received: 10/25/12
Date Analyzed: 11/1/12 10:58

Sample Name: DGC-3S
Lab Code: R1207283-003

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1005.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1100
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:09

Sample Name: SW-G
Lab Code: R1207283-004

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1006.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1130
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:43

Sample Name: SW-F
Lab Code: R1207283-005

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1007.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1145
Date Received: 10/25/12
Date Analyzed: 11/1/12 11:54

Sample Name: SW-E
Lab Code: R1207283-006

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1008.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1230
Date Received: 10/25/12
Date Analyzed: 11/1/12 12:04

Sample Name: SW-D
Lab Code: R1207283-007

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1009.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12
Date Analyzed: 11/1/12 12:55

Sample Name: M-27D
Lab Code: R1207283-008

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1013.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:10

Sample Name: SW-B
Lab Code: R1207283-009

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1014.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:20

Sample Name: DUP A
Lab Code: R1207283-010

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1015.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12
Date Analyzed: 11/1/12 13:32

Sample Name: TRIP BLANK
Lab Code: R1207283-011

Units: µg/L
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175
Data File Name: 1016.run

Analysis Lot: 316419
Instrument Name: R-GC-02
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

DUP A

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Lab Sample ID: R1207283-010

Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	2.3	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-27D

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Lab Sample ID: R1207283-008

Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.4	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SW-B

Contract: R1207283

Lab Code: Case No.: SAS No.: SDG NO.: DGC-4S

Matrix (soil/water): WATER Lab Sample ID: R1207283-009

Level (low/med): LOW Date Received: 10/25/2012

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	1.1	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: M-27D
Lab Code: R1207283-008

Service Request: R1207283
Date Collected: 10/24/12 1300
Date Received: 10/25/12

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/25/12 11:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: SW-B
Lab Code: R1207283-009

Service Request: R1207283
Date Collected: 10/24/12 1345
Date Received: 10/25/12

Basis: NA**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/25/12 11:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: GE MRFA/145599.01
Sample Matrix: Water
Sample Name: DUP A
Lab Code: R1207283-010

Service Request: R1207283
Date Collected: 10/24/12
Date Received: 10/25/12

Basis: NA**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7196A	0.010	U	mg/L	0.010	1	NA	10/25/12 11:44	*

Appendix C

Telephone Interview Logs

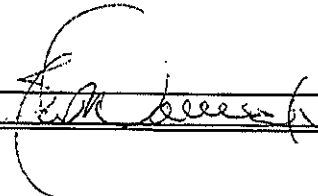
Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Property Owner Interviewed: New York State Energy Research and Development Authority	New York State Energy Research and Developmental Authority	
Date of Interview:	Agency/Property Owner Representative:	Kevin Hunt
Interview Questions:	Representative Response:	
Do you have any knowledge of current or potential future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No, not groundwater.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	No	
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes	
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	Yes, but not sure. I will check to see if we have and if so, who that may be.	
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No	
Interview completed by: MJD	Interviewer Signature/Date:	Matthew Dupay 9/17/12

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Property Owner Interviewed: Town of Malta	Town of Malta, New York State
Date of Interview:	Agency/Property Owner Representative: Kevin King
Interview Questions:	Representative Response:
Do you have any knowledge of current or potential future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No.
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	There has been talk between The Luther Forest Technology Campus and the Town of Malta. I cannot recall exactly what the proposal was.
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	The town of Malta recently sold a parcel of land at the corner of Stone Brick Rd. and 100 Acre Blvd to National Grid.
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No Kevin provided the name and number of the Building Planner for the Town Malta → Anthony Tozzi (518) 899-2685
Interview completed by: MJD	Interviewer Signature/Date: Matthew Dupay 9/18/12

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Property Owner Interviewed: Luther Forest Technology Campus Economic Development Corporation	Luther Forest Techonology Campus Economic Development Corporation
Date of Interview:	Agency/Property Owner Representative: Jon Dawes
Interview Questions:	Representative Response:
Do you have any knowledge of current or potential future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	The GLOBALFOUNDRIES land clearing activities and site construction A development area within the zone might be sold off to another party for them to develop.
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	Yes, Development Area 18 approximately 32 acres were transferred to the Town of Malta. Deed date 10/26/06 and recorded 1/24/07 as instrument 2007003113. GLOBALFOUNDRIES deed date 6/10/09 recorded 6/12/09 as Instrument No. 2009020320 LFTC will continue to notify each party as the land is transferred
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No
Interview completed by:	Interviewer Signature/Date:  9-29-12

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Property Owner Interviewed: Global Foundries	Global Foundries
Date of Interview: 1/28/2013	Agency/Property Owner Representative: James Fedorchak
Interview Questions:	Representative Response: Patrick Hewlett
Do you have any knowledge of current or potential future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	Site is currently being developed and additional buildings constructed. No exposure or work within groundwater.
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Notification of and written approval by EPA prior to disturbance or contact with groundwater.
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	No
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No
Interview completed by: BN	Interviewer Signature/Date: Brian Neumann 1/28/13