FINAL
ABBREVIATED
2014 LONG-TERM MONITORING REPORT
FOR
AIR FORCE PLANT 59
JOHNSON CITY, NEW YORK

Contract Number FA8903-10-D-8596
Task Order: 0087

Project Number:
ACHQ2014701
CDRL A001C

Prepared for

Air Force Civil Engineer Center

Prepared by

HydroGeoLogic, Inc.

March 2015

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LIST OF ACRONYMS AND ABBREVIATIONS

AFCEC	Air Force Civil Engineer Center
AFP 59	Air Force Plant 59
cis-1,2-DCE	*cis*-1,2-dichloroethene
COPC	chemicals of potential concern
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
FSP	Field Sampling Plan
GEL	GEL Laboratories
HGL	HydroGeoLogic, Inc.
LTM	long-term monitoring
µg/L	micrograms per liter
MCL	maximum contaminant level
ng/L	nanograms per liter
NYSDEC	New York State Department of Environmental Conservation
PCE	tetrachloroethene
TAL	Test America Laboratory
1,1,1-TCA	1,1,1-trichloroethane
TCA	trichloroethane
TCE	trichloroethene
trans-1,2-DCE	*trans*-1,2-dichloroethene
USEPA	U.S. Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compounds

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1.0 INTRODUCTION

In 2014, HydroGeoLogic, Inc. (HGL) completed the long-term monitoring (LTM) activities at Air Force Plant 59 (AFP 59) in Johnson City, New York (Figure 1). The Air Force Civil Engineer Center (AFCEC) contracted HGL to complete the LTM activities.

The objectives of this abbreviated monitoring report are to summarize:

- The purpose, collection procedures, and results of the LTM activities; and
- The conclusions and recommendations based on the results of the LTM activities.

2.0 LONG-TERM MONITORING ACTIVITIES

2.1 PURPOSE OF THE LONG-TERM MONITORING ACTIVITIES

Based on the conclusions presented in the *Final Remedial Investigation Report* (Earth Tech, 1996) and recommendations made by the New York State Department of Environmental Conservation (NYSDEC), it was determined that volatile organic compounds (VOC) represent the only chemicals of potential concern (COPC) in the groundwater at AFP 59. The LTM objectives for this project were to sample and evaluate VOC levels in groundwater that are above current maximum contaminant level (MCL) standards.

Groundwater samples were collected using the procedures found in the AFP 59 *Final Field Sampling Plan (FSP) Addendum* (HGL, 2014a). Samples were collected from monitoring wells and analyzed at Test America Laboratory (TAL) for VOCs (U.S. Environmental Protection Agency [USEPA] Method 8260B) and 1,4-dioxane (USEPA Method 8270C). Samples collected from a Johnson City municipal well were analyzed at both TAL for VOCs (USEPA Method 8260B) and GEL Laboratories (GEL) for 1,4-dioxane (USEPA Drinking Water Method 522). LTM activities included sampling the following monitoring wells: SW1, DW1, SW3, DW3, SW4, SW7, BM-121, URS-2D, URS-2S, URS-3D, and URS-5S. The LTM additionally included sampling municipal well JC2 (before treatment). Monitoring wells SW1 and DW1 represent upgradient (background) wells, and monitoring wells SW3 and DW3 represent downgradient wells. Five monitoring wells (BM-121, URS-2D, URS-2S, URS-3D, and URS-5S) and one municipal well (JC2) are located off site, to the west and south of the site.

2.2 PROCEDURES USED FOR THE LONG-TERM MONITORING ACTIVITIES

Sampling activities followed protocols presented in the *Final Work Plan Base Long-Term Monitoring at AFP 59* (HGL, 2014b) and the *Final Field Sampling Plan Addendum* (HGL, 2014a). HGL collected groundwater samples from six on-site AFP 59 monitoring wells (SW1, DW1, SW3, DW3, SW4, and SW7); five off-site monitoring wells (BM-121, URS-2D, URS-2S, URS-3D, and URS-5S); and one municipal well (JC2) in November 2014. All of the monitoring well groundwater samples were analyzed for VOCS by USEPA Method SW8260B and 1,4-dioxane using USEPA Method SW8270C. The water sample collected from the municipal well (JC2) was analyzed for VOCS by USEPA Method SW8260B and 1,4-dioxane using USEPA Drinking Water Method 522.

All of the monitoring wells were sampled using micropurge methodology. This is a low flow-rate well purging and sampling method that induces laminar (non-turbulent) flow in the immediate vicinity of the sampling pump intake, thus drawing groundwater directly from the sampled aquifer horizontally through the monitoring well screen and into the sampling device. Purging of the monitoring wells was performed to evacuate stagnant water in the monitoring wells, thereby obtaining a sample that is representative of the aquifer. The temperature, pH, specific conductivity, and turbidity were measured and recorded on the monitoring well sampling forms during purging. The municipal well sample was collected from a sampling valve after a 5 minute purge and groundwater parameters were recorded immediately after sample collection. The field forms and calibration forms are appended as Attachment 1.

2.3 ANALYTICAL RESULTS FROM THE LONG-TERM MONITORING ACTIVITIES

The following subsections discuss the analytical results obtained from groundwater samples collected from both on-site and off-site monitoring wells. The VOCs detected in groundwater samples are illustrated on Figure 2. The analytical results for all groundwater samples collected during the November 2014 sampling event are summarized in Table 1. The laboratory report is appended as Attachment 2.

2.3.1 Shallow Zone of the Aquifer

VOCs were detected in the groundwater samples collected from on-site monitoring wells SW3, SW4, and SW7, and off-site monitoring wells URS-2S and URS-5S (refer to Figure 2). Chlorinated hydrocarbons were detected in the samples collected from the shallow zone of the aquifer in November 2014. VOCs and 1,4-dioxane were not detected in the groundwater samples collected from on-site monitoring well SW1 or off-site monitoring well, BM-121.

The following results represent the maximum concentrations of contaminants detected in the groundwater samples collected from on-site monitoring wells during the November 2014 event. SW3: trichloroethene (TCE) at 0.51 F micrograms per liter (µg/L); *cis*-1,2-dichloroethene (*cis*-1,2-DCE) at 0.31 F µg/L; and 1,1,1- trichloroethane (1,1,1-TCA) at 0.26 F µg/L. SW4: 1,1,1-TCA at 0.75 F µg/L; 1,1-dichloroethane (1,1-DCA) at 0.46 F µg/L; *cis*-1,2-DCE at 1.7 µg/L; tetrachloroethene (PCE) at 0.30 F µg/L; and TCE at 3.4 µg/L. SW7:

1,1,1-TCA at 1.9 µg/L; 1,1-DCA at 4.6 µg/L; 1,1-dichloroethene (1,1-DCE) at 0.67 F µg/L; PCE at 0.62 F µg/L; *cis*-1,2-DCE at 33 µg/L; *trans*-1,2-dichloroethene (*trans*-1,2-DCE) at 0.20 F µg/L; vinyl chloride (VC) at 0.78 F µg/L; and TCE at 7.8 µg/L. URS-2S: 1,1-DCA at 2.1 µg/L; 1,1-DCE at 0.32 F µg/L; 1,1,1-TCA at 4.1 µg/L; TCE at 3.7 µg/L; and *cis*-1,2-DCE at 1.2 µg/L. URS-5S: 1,1,1-TCA at 0.68 F µg/L; and TCE at 0.65 F µg/L.

Exceedances occurred above the New York State Groundwater Quality Standard of 5 µg/L for *cis*-1,2-DCE and TCE at well SW7. These results are highlighted on Figure 2.

During the November 2014 sampling event, 1,4-dioxane was sampled in the four on-site and two off-site shallow monitoring wells. 1,4-dioxane was detected in monitoring wells SW4, SW7, and URS-2S at concentrations of 2,500 M nanograms per liter (ng/L), 4,400 M ng/L, and 20,000 M ng/L, respectively. 1,4-dioxane was not detected in monitoring wells SW1, SW3, and BM-121.

2.3.2 Deep Zone of the Aquifer

VOCs were detected in the groundwater samples collected from the on-site monitoring wells, DW1 and DW3, and off-site monitoring wells, URS-2D and URS-3D (refer to Figure 2). Chlorinated hydrocarbons were the only VOCs detected in the samples collected from the deep zone of the aquifer. The VOC detected in monitoring well DW1 was 1,1,1-TCA at 0.19 F µg/L. The VOCs detected in monitoring well DW3 include *cis*-1,2-DCE at 49 µg/L and 1,1-DCA at 0.32 F µg/L. The following maximum concentrations were detected in the groundwater sample collected from the off-site monitoring well URS-2D: 1,1-DCA at 0.27 F µg/L; and *cis*-1,2-DCE at 67 µg/L. Additionally, the following maximum concentrations were detected in the groundwater sample collected from the off-site monitoring well URS-3D: 1,1,1-TCA at 1.3 µg/L; TCE at 1.9 µg/L; and *cis*-1,2-DCE at 0.95 F µg/L. *Cis*-1,2-DCE exceeded the New York State Groundwater Quality Standard of 5 µg/L in on site well DW3 and off site well URS-2D. Also, 1,4-dioxane was sampled in both the on-site and off-site deep monitoring wells. 1,4-dioxane was only detected in monitoring wells DW3 at 11,000 M ng/L; URS-2D at 28,000 M ng/L; and URS-3D at 4,700 M ng/L.

2.3.3 Municipal Well

VOCs were detected in the untreated water sample collected from a sample port at municipal well JC2. Detected VOCs constituents at JC2 included: 1,1,1-TCA at 0.24 F µg/L; TCE at 0.33 F µg/L; and *cis*-1,2-DCE at 0.23 F µg/L. 1,4-dioxane was detected at 0.739 F µg/L in water sampled from JC2.

2.4 TREND ANALYSIS

Table 2 presents concentrations of the most commonly detected chlorinated hydrocarbons in groundwater at AFP 59 over time. Only monitoring wells that were sampled as part of the groundwater monitoring program are included in the table.

In the groundwater samples collected from the shallow monitoring wells during the November 2014 sampling event, concentrations of the chlorinated hydrocarbons in monitoring well SW3 remained relatively constant (TCE), decreased slightly (*cis*-1,2-DCE), or increased from a non-detection to a detection (1,1,1-TCA) when compared to the previous sampling event in October 2013. The concentrations of *cis*-1,2-DCE and 1,1,1-TCA increased from the October 2013 sampling event; however, the concentrations detected in November 2014 were below the New York State Groundwater Effluent Limitations Class GA of 5 µg/L for each VOC compound.

The concentrations of the chlorinated hydrocarbons in monitoring well SW4 remained relatively constant, with only moderate variation in TCE concentrations when compared to the October 2013 sampling event. TCE concentrations decreased from 6.6 µg/L in October 2013 to 3.4 µg/L in November 2014. Additional decreases in concentrations during the November 2014 sampling event include: *cis*-1,2-DCE (2.6 µg/L to 1.7 µg/L); TCE (6.6 µg/L to 3.4 µg/L); and trichloroethane (TCA) (1.8 µg/L to 0.75 F µg/L). As compared to the October 2013 sampling event, the concentration of 1,1-DCE increased slightly during the November sampling event (0.26 F µg/L to 0.46 F µg/L).

Concentrations of chlorinated compounds at SW7 generally showed an increase during the November 2014 sampling event relative to the October 2013 sampling event. The concentrations of *trans*-1,2-DCE (ND to 0.20 F µg/L); 1,1-DCA (ND to 4.6 µg/L); *cis*-1,2-DCE (7 µg/L to 33 µg/L); TCE (2.5 µg/L to 7.8 µg/L); VC (ND to 0.78 F µg/L); and TCA (ND to 1.9 µg/L) each increased based on the November 2014 sampling event. Concentrations of 1,1-DCE remained relatively constant based on a comparison of the November 2014 (0.67 F µg/L) and October 2013 (0.93 F µg/L) analytical data sets.

The groundwater sample collected during the November 2014 sampling event from deep monitoring well DW3, revealed chlorinated hydrocarbons to be below detection limits (TCA, TCE, and *trans*-1,2-DCE) or showed very minor increases (1,1-DCA) or decreases (1,1-DCE, VC, and *cis*-1,2-DCE). The groundwater sample collected in November 2014 at deep monitoring well DW1 indicated a detection of TCA (0.19 F µg/L), the first detection of a VOCs compound at this location since November 2010. VOCs were not detected in the groundwater sample collected from shallow monitoring well SW1. These results are consistent with previous sampling events.

Detectable concentrations of *cis*-1,2-DCE (67 µg/L) and 1,1-DCA (0.27 F µg/L) were found in the groundwater sample collected from off site deep monitoring well URS-2D in November 2014. The *cis*-1,2-DCE result for the November 2014 sampling event (67 µg/L) indicated an increase relative to the October 2013 sampling event (62 µg/L). The 1,1-DCA analytical result in November 2014 (0.27 F µg/L) was similar to the analytical result from October 2013 (0.21 F µg/L). A concentration decrease occurred for *trans*-1,2-DCE from a minor detection in October 2013 (0.17 F µg/L) to a non-detection in November 2014.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Concentrations of *cis*-1,2-DCE continued to exceed the New York State Groundwater Quality Standard of 5 µg/L in shallow monitoring well SW7. Additionally, the concentration of TCE at well SW7 exceeded the New York State Groundwater Quality Standard of 5 µg/L during the November 2014 sampling event. Groundwater concentrations detected in off-site shallow monitoring wells URS-2S and URS-5S did not exceed the New York State Groundwater Quality Standard of 5 µg/L for chlorinated compounds.

Concentrations of *cis*-1,2-DCE exceeded the New York State Groundwater Quality Standard of 5 µg/L in the deeper portion of the aquifer. Monitoring well DW3, located on the AFP 59 boundary downgradient of the suspected source, and monitoring well URS-2D, located at a downgradient, off-site location, exceeded the New York State Groundwater Quality Standard for *cis*-1,2-DCE during the November 2014 groundwater sampling event.

Analytical results from water samples collected from municipal well JC2 revealed all contaminants to be below New York State Groundwater Quality Standards.

Based on the results of the LTM activities, groundwater exceeding the New York State Groundwater Quality Standards is migrating off AFP 59 property in the deep monitoring wells. Additional groundwater monitoring is recommended to monitor the migration of contaminants off site.

4.0 REFERENCES

Earth Tech, 1996. *Installation Restoration Program - Final Remedial Investigation Report, Air Force Plant 59*.

HydroGeoLogic, Inc. (HGL), 2014a. *Final Field Sampling Plan Addendum, Basewide Long-Term Monitoring at Air Force Plant 59, Johnson City, New York*. December.

HGL, 2014b. *Final Work Plan, Basewide Long-Term Monitoring at Air Force Plant 59, Johnson City, New York*. December.

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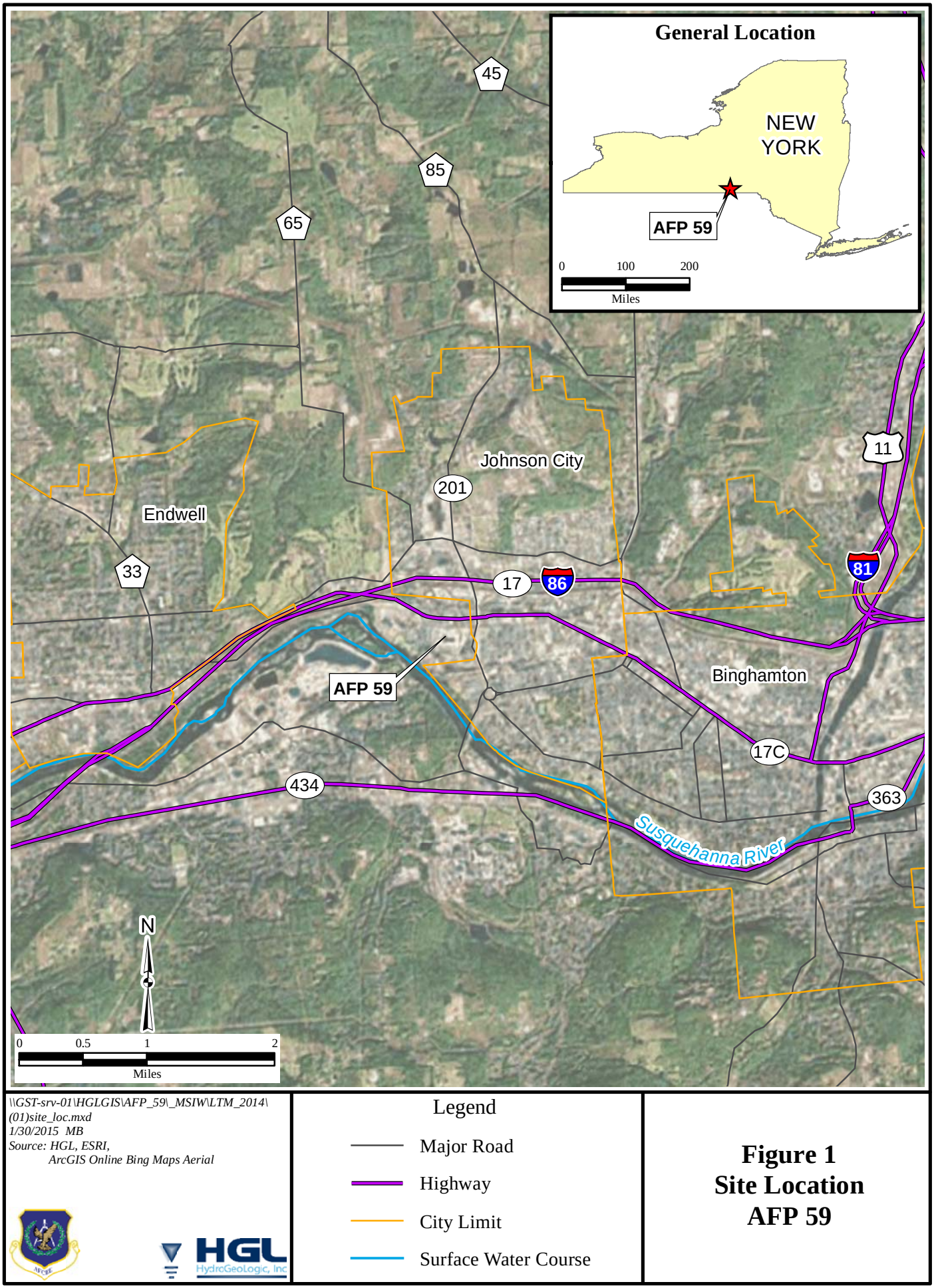
FIGURES



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Source: HGL, ESRI, ArcGIS Online Bing Maps Aerial

Legend

- Major Road
- Highway
- City Limit
- Surface Water Course

Figure 1
Site Location
AFP 59

Figure 2
Groundwater Sampling Results October 2013 and November 2014 On-site and Off-site Monitoring Wells

Monitoring Well URS-5S	Concentration (µg/L)	
Analyte	08-Oct-13	18-Nov-14
1,1,1-Trichloroethane	0.50 F	0.68 F
Trichloroethene	0.63 F	0.65 F

Monitoring Well BM-121	Concentration (µg/L)	
Analyte	08-Oct-13	17-Nov-14
All Analytes	ND	ND

Monitoring Well DW1	Concentration (µg/L)	
Analyte	09-Oct-13	19-Nov-14
1,1,1-Trichloroethane	ND	0.19 F

Monitoring Well SW1	Concentration (µg/L)	
Analyte	09-Oct-13	19-Nov-14
All Analytes	All VOCs ND	All VOCs ND

Monitoring Well URS-2S	Concentration (µg/L)	
Analyte	08-Oct-13	18-Nov-14
1,1,1-Trichloroethane	1.6	4.1
1,1-Dichloroethane	1.1	2.1
1,1-Dichloroethene	ND	0.32 F
cis-1,2-Dichloroethene	1.2	1.2
Trichloroethene	2.3	3.7
1,4-Dioxane	1.8 F	20 M

Monitoring Well SW7	Concentration (µg/L)	
Analyte	9-Oct-13	19-Nov-14
1,1,1-Trichloroethane	1.2	1.9
1,1-Dichloroethane	0.93 F	4.6
1,1-Dichloroethene	ND	0.67 F
cis-1,2-Dichloroethene	**7**	**33**
Tetrachloroethene	0.27 F	0.62 F
trans-1,2-Dichloroethene	ND	0.20 F
Trichloroethene	2.5	**7.8**
Vinyl Chloride	ND	0.78 F
1,4-Dioxane	0.43 F	4.4 M

Monitoring Well SW3	Concentration (µg/L)	
Analyte	09-Oct-13	18-Nov-14
1,1,1-Trichloroethane	ND	0.26 F
cis-1,2-Dichloroethene	1	0.31 F
Trichloroethene	0.70 F	0.51 F

Monitoring Well URS-3D	Concentration (µg/L)	
Analyte	07-Oct-13	17-Nov-14
1,1,1-Trichloroethane	0.99 F	1.3
cis-1,2-Dichloroethene	0.90 F	0.95 F
Trichloroethene	1.7	1.9
1,4-Dioxane	1.8 F	4.7 M

Monitoring Well DW3	Concentration (µg/L)	
Analyte	09-Oct-13	19-Nov-14
1,1-Dichloroethane	0.32 F	0.32 F
cis-1,2-Dichloroethene	**57**	**49**
Vinyl Chloride	0.18 F	ND
1,4-Dioxane	2.7	11 M

Monitoring Well SW4	Concentration (µg/L)	
Analyte	10-Oct-13	20-Nov-14
1,1,1-Trichloroethane	1.8	0.75 F
1,1-Dichloroethane	0.77 F	0.46 F
1,1-Dichloroethene	0.26 F	ND
cis-1,2-Dichloroethene	2.6	1.7
Tetrachloroethene	0.39 F	0.30 F
Trichloroethene	**6.6**	3.4
Acetone	ND	97
1,4-Dioxane	0.81 F	2.5 M

Municipal Well JC3	Concentration (µg/L)
Analyte	02-Aug-12
1,1,1-Trichloroethane	0.56
cis-1,2-Dichloroethene	0.26 F
Trichloroethene	0.92
1,4-Dioxane	0.898

Municipal Well JC2	Concentration (µg/L)	
Analyte	10-Oct-13	20-Nov-14
1,1,1-Trichloroethane	0.36 F	0.24 F
Trichloroethene	0.48 F	0.33 F
cis-1,2-Dichloroethene	0.29 F	0.23 F
Acetone	ND	2.9 F
1,4-Dioxane	ND	0.739 F

Monitoring Well URS-2D	Concentration (µg/L)	
Analyte	08-Oct-13	18-Nov-14
1,1-Dichloroethane	0.21 F	0.27 F
cis-1,2-Dichloroethene	**62**	**67**
trans-1,2-Dichloroethene	0.17 F	ND
Vinyl Chloride	ND	ND
1,4-Dioxane	7.4	28 M

Legend

- AFP 59 Monitoring Well
- Off-site Monitoring Well
- URS-9S — Monitoring Well Identification
- Surface Water Course
- Air Force Plant 59

Notes:

35.3 M =Shaded values indicate a New York State (NYS) groundwater effluent Class GA exceedance.
J=The analyte was posively detected but the quantitation is an estimation
F= The analyte was positively identified but the associated numerical value is below the reporting limit.
M=Matrix Effect. The analyte concentration was estimated due to matrix effect and therefore estimated.
ND=Analyte not detected above laboratory method detection limits.
NS=Monitoring well "Not Sampled" during event.
VOC=volatile organic compound
µg/L=microgram per liter

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Source: HGL, ESRI, AECOM, ArcGIS Online Imagery

HydroGeoLogic, Inc

TABLES

Table 1
Summary of Detected VOCs
November 2014

Method	Analyte	NYS GW Effluent Limitations Class GA	Units	59DW1WG1 11/19/2014 280-62916-6	59DW3WG1 11/19/2014 280-62916-8	59JC2WG1 11/20/2014 280-62916-17	59SW1WG1 11/19/2014 280-62916-7	59SW3WG1 11/18/2014 280-62916-9	59BM121WG1 11/17/2014 280-62916-2	59SW7WG1 11/19/2014 280-62916-10	59URS2DWG1 11/18/2014 280-62916-3	59URS2SWG1 11/18/2014 280-62916-4
VOLATILES by Method 8260B	Methylene chloride	5	µg/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
	1,1-Dichloroethane	5	µg/L	0.16 U	0.32 F	0.16 U	0.16 U	0.16 U	0.16 U	4.6	0.27 F	2.1
	Chloroform	7	µg/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
	Tetrachloroethene	5	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.62 F	0.20 U	0.20 U
	1,1,1-Trichloroethane	5	µg/L	0.19 F	0.16 U	0.24 F	0.16 U	0.26 F	0.16 U	1.9	0.16 U	4.1
	1,1-Dichloropropene	5	µg/L	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
	1,1,2,2-Tetrachloroethane	5	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
	Toluene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
	Vinyl chloride	2	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.78 F	0.10 U	0.10 U
	1,1-Dichloroethene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.67 F	0.14 U	0.32 F
	trans-1,2-Dichloroethene	5	µg/L	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.20 F	0.15 U	0.15 U
	Trichloroethene	5	µg/L	0.16 U	0.16 U	0.33 F	0.16 U	0.51 F	0.16 U	**7.8**	0.16 U	3.7
	o-Xylene	5	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
	cis-1,2-Dichloroethene	5	µg/L	0.15 U	**49**	0.23 F	0.15 U	0.31 F	0.15 U	**33**	**67**	1.2
	Acetone	NS	µg/L	1.9 U	1.9 U	2.9 F	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
	Bromochloromethane	5	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
	n-Butylbenzene	5	µg/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
	sec-Butylbenzene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
	p-Isopropyltoluene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
	Naphthalene	10	µg/L	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
	n-Propylbenzene	5	µg/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
	1,3,5-Trimethylbenzene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
	1,2,4-Trimethylbenzene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
SEMI-VOLATILES by Method 8270C	1,4-Dioxane	NS	ng/l	0.084 U	11 M	0.739 F	0.083 U	0.083 U	0.082 U	4.4 M	28 M	20 M
FIELD PARAMETERS	Temperature, Initial	NS	° Celsius	10.3	11.04	-	11.5	13.2	10.01	11.81	10.93	11.06
	Temperature, Final		° Celsius	10.5	11.37	10.98	11.57	13.54	10.42	11.83	11.24	11.26
	pH		Std units	7.2	7.61	6.84	7.41	7.02	7.69	7.56	6.9	6.56
	Specific Conductance		mS/cm	1.806	1.478	1.030	1.752	1.392	0.668	1.375	1.417	1.190
	ORP		mV	182.2	-18.9	190.8	144.7	105.1	-157.3	75.6	-39.2	25.1
	Dissolved Oxygen		mg/L	2.8	0.52	3.46	0.61	1.69	0.45	0.73	0.55	0.50
	Turbidity		NTU	3.4	7.7	0.7	4.0	0.7	17.1	7.1	23.6	39.5

Notes:

NA - Not Applicable

NS - No Standard

F - The analyte was positively identified but the associated numerical value is below the reporting limit (RL).

<2.5	- Non-Detect
6.5	- NYS GW Effluent; Class GA exceedances

Bolded numbers are detections

Table 1
Summary of Detected VOCs
November 2014

Method	Analyte	NYS GW Effluent Limitations Class GA	Units	59URS3DWG1 11/17/2014 280-62916-1	59URS5SWG1 11/18/2014 280-62916-5	59EB112014 11/20/2014 280-62196-15EB	TB111714 11/17/2014 280-62196-16TB	59DUP01WG1 11/20/2014 280-62916-12FD	59DUP02WG1 11/19/2014 280-62916-13FD	59AB112014 11/20/2014 280-62196-14FB	59SW4WG1 11/20/2014 280-62916-11
VOLATILES by Method 8260B	Methylene chloride	5	µg/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	-	0.32 U	0.32 U
	1,1-Dichloroethane	5	µg/L	0.16 U	0.16 U	0.16 U	0.16 U	0.50 F	-	0.16 U	0.46 F
	Chloroform	7	µg/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	-	0.16 U	0.16 U
	Tetrachloroethene	5	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.32 F	-	0.20 U	0.30 F
	1,1,1-Trichloroethane	5	µg/L	1.3	0.68 F	0.16 U	0.16 U	0.81 F	-	0.16 U	0.75 F
	1,1-Dichloropropene	5	µg/L	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-	0.15 U	0.15 U
	1,1,2,2-Tetrachloroethane	5	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	-	0.20 U	0.20 U
	Toluene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	-	0.17 U	0.17 U
	Vinyl chloride	2	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	-	0.10 U	0.10 U
	1,1-Dichloroethene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-	0.14 U	0.14 U
	trans-1,2-Dichloroethene	5	µg/L	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-	0.15 U	0.15 U
	Trichloroethene	5	µg/L	1.9	0.65 F	0.16 U	0.16 U	3.6	-	0.16 U	3.4
	o-Xylene	5	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	-	0.19 U	0.19 U
	cis-1,2-Dichloroethene	5	µg/L	0.95 F	0.15 U	0.15 U	0.15 U	1.9	-	0.15 U	1.7
	Acetone	NS	µg/L	1.9 U	1.9 U	4.9 F	1.9 U	110	-	5.1 J	97
	Bromochloromethane	5	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	-	0.10 U	0.10 U
	n-Butylbenzene	5	µg/L	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	-	0.32 U	0.32 U
	sec-Butylbenzene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	-	0.17 U	0.17 U
	p-Isopropyltoluene	5	µg/L	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	-	0.17 U	0.17 U
	Naphthalene	10	µg/L	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	-	0.22 U	0.22 U
	n-Propylbenzene	5	µg/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	-	0.16 U	0.16 U
	1,3,5-Trimethylbenzene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-	0.14 U	0.14 U
	1,2,4-Trimethylbenzene	5	µg/L	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-	0.14 U	0.14 U
SEMI-VOLATILES by Method 8270C	1,4-Dioxane	NS	ng/l	4.7 M	0.083 U	0.083 U		2.2 M	9.8 M		2.5 M
FIELD PARAMETERS	Temperature, Initial	NS	° Celsius	10.12	9.29						11.54
	Temperature, Final		° Celsius	10.14	9.94						11.89
	pH		Std units	6.78	7.09						7.36
	Specific Conductance		mS/cm	1.430	1.408						1.519
	ORP		mV	69.0	90.7						151.3
	Dissolved Oxygen		mg/L	2.40	1.98						3.36
	Turbidity		NTU	OVERRANGE	26.4						3.4

Notes:

NA - Not Applicable

NS - No Standard

F - The analyte was positively identified but the associated numerical

<2.5 - Non-Detect

6.5 - NYS GW Effluent; Class GA exceedances

Bolded numbers are detections

Table 2
Trend Analysis of VOCs in Groundwater

Well ID	Date Sampled	Concentrations of Analyte in Groundwater µg/L						
		TCA	TCE	VC	1,1-DCE	*trans* - 1,2 DCE	1,1-DCA	*cis* - 1,2 DCE
SW1	Sep-86	–	–	–	–	–	–	–
	Jan-92	0.5	–	–	–	–	–	–
	Dec-94	–	–	–	–	–	–	–
	Nov-99	–	–	–	–	–	–	–
	May-00	–	–	–	–	–	–	–
	Nov-00	–	–	–	–	–	–	–
	May-01	–	–	–	–	–	–	–
	Nov-01	0.11 J	–	–	–	–	–	–
	May-02	–	–	–	–	–	–	–
	Nov-02	–	–	–	–	–	–	–
	May-03	–	–	–	–	–	–	–
	Nov-03	–	–	–	–	–	–	–
	Jun-04	–	–	–	–	–	–	–
	Nov-04	–	–	–	–	–	–	–
	Oct-05	–	–	–	–	–	–	–
	Jun-08	–	–	–	–	–	–	–
	Nov-08	NS	NS	NS	NS	NS	NS	NS
	Nov-09	–	–	–	–	–	–	–
	Nov-10	0.11	–	–	–	–	–	–
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	–	–	–	–	–	–	–
	Oct-13	–	–	–	–	–	–	–
	Nov-14	–	–	–	–	–	–	–
DW1	Jan-92	0.6	–	–	–	–	–	–
	Dec-94	–	–	–	–	–	–	1.8
	Nov-99	–	–	–	–	–	–	–
	May-00	–	–	–	–	–	–	–
	Nov-00	–	–	–	–	–	–	–
	May-01	–	–	–	–	–	–	–
	Nov-01	–	–	–	–	–	–	–
	May-02	–	–	–	–	–	–	–
	Nov-02	–	–	–	–	–	–	–
	May-03	–	–	–	–	–	–	–
	Nov-03	–	–	–	–	–	–	–
	Jun-04	–	–	–	–	–	–	–
	Nov-04	–	–	–	–	–	–	–
	Oct-05	–	–	–	–	–	–	–
	Jun-08	–	–	–	–	–	–	–
	Nov-08	NS	NS	NS	NS	NS	NS	NS
	Nov-09	–	–	–	–	–	–	–
	Nov-10	0.18	–	–	–	–	–	–

Table 2
Trend Analysis of VOCs in Groundwater (continued)

Well ID	Date Sampled	Concentrations of Analyte in Groundwater µg/L						
		TCA	TCE	VC	1,1-DCE	*trans* - 1,2 DCE	1,1-DCA	*cis* - 1,2 DCE
DW1 (cont.)	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	–	–	–	–	–	–	–
	Oct-13	–	–	–	–	–	–	–
	Nov-14	0.19 F	–	–	–	–	–	–
SW3	Sep-86	–	**6**	–	–	–	–	–
	Jan-92	**12**	**9**	–	–	–	**5**	–
	Dec-94	0.5	1.8	–	–	–	–	–
	Dec-95	0.86	2.8	–	–	–	–	0.44
	Jul-97	–	1	–	–	–	–	–
	Nov-98	0.22	0.81	–	–	–	–	0.1
	Apr-99	0.51	0.71	–	–	–	–	0.17
	Nov-99	0.29	0.9	–	–	–	–	0.39
	May-00	0.69	1	–	–	–	0.55	1.29
	Nov-00	0.43	0.9	–	–	–	–	0.22
	May-01	0.46	0.8	–	–	–	0.32	1.29
	Nov-01	0.32 J	0.5 J	–	–	–	–	–
	May-02	0.42 J	0.8 J	–	–	–	0.46 J	–
	May-03	0.584 J	0.893 J	–	–	–	0.302 J	1.37 J
	Nov-03	0.398 J	0.856 J	–	–	–	–	0.511 J
	Jun-04	0.9 J	0.94 J	–	–	–	0.95 J	3.7
	Nov-04	0.52 J	1	0.26 J	–	–	0.38 J	1.5
	Oct-05	0.47 J	0.86 J	–	–	–	–	0.55 J
	Jun-08	0.661 J	1.31	–	–	–	0.403 J	1.45
	Nov-08	0.345 J	0.759 J	–	–	–	–	–
	Nov-09	0.367 J	0.62 J	–	–	–	–	0.539 J
	Nov-10	0.41	0.59	–	–	–	–	0.17
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	–	0.51	–	–	–	–	0.28 F
	Oct-13	–	0.70 F	–	–	–	–	1
	Nov-14	0.26 F	0.51 F	–	–	–	–	0.31 F
DW3	Jan-92	0.3	–	–	–	–	0.3	–
	Dec-94	–	–	0.28	–	–	0.26	**36**
	Dec-95	–	–	–	–	–	–	**5.2**
	Apr-97	–	–	–	–	–	–	**41**
	Jul-97	–	–	–	–	–	–	**49**
	Nov-98	–	–	–	–	–	0.34	**66**
	Apr-99	–	–	0.28	0.11	–	0.35	**67**
	Nov-99	–	–	–	–	–	–	–
	May-00	–	–	–	–	0.25	0.16	**24.98**
	Nov-00	–	–	–	–	–	–	**16.85**
	May-01	–	–	–	–	–	–	**13.29**
	Nov-01	–	–	–	–	–	–	**13.58**
	May-02	–	–	–	–	–	0.1 J	**21.08**

Table 2
Trend Analysis of VOCs in Groundwater (continued)

Well ID	Date Sampled	Concentrations of Analyte in Groundwater µg/L						
		TCA	TCE	VC	1,1-DCE	*trans* - 1,2 DCE	1,1-DCA	*cis* - 1,2 DCE
DW3 (cont.)	May-03	–	–	–	–	–	–	–
	Nov-03	–	–	–	–	–	–	1.18 J
	Jun-04	–	–	–	–	–	–	1.3
	Nov-04	–	–	–	–	–	–	2.1
	Oct-05	–	–	–	–	–	–	3
	Jun-08	–	–	–	–	–	–	**73.1**
	Nov-08	–	–	–	–	–	0.41 J	**67.3**
	Nov-09	–	–	–	–	–	0.369 J	**64.3**
	Nov-10	–	–	–	–	–	–	**8.4**
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	–	–	–	–	–	0.32 F	**56**
	Oct-13	–	–	0.18 F	0.32 F	–	–	**57**
	Nov-14	–	–	–	–	–	0.32 F	**49**
SW4	Jan-92	2	**97**	–	0.3	–	0.6	–
	Dec-94	**20**	**370**	–	2.1		**8.5**	**19**
	Dec-95	**34**	**1200**	–	4.9	2.1	**6.9**	**34**
	Apr-97	–	–	–	–	–	**7.1**	**71**
	Jul-97	**23**	**290**	–	–	–	–	**15**
	Nov-98	**8**	**46**	0.42	0.82	–	**9**	**10**
	Apr-99	1.9	**9.53**	–	–	–	0.87	1.85
	Nov-99	2.13	**9.5**	–	0.18	–	**7.7**	**7.15**
	May-00	2.88	**8**	0.11	0.21	0.49	1.67	4.3
	Nov-00	1.14	**15.2**	1.49	0.29	–	**15.25**	**11.18**
	May-01	3.35	**34**	–	0.36	0.38	1.3	3.19
	Nov-01	0.88	**5.7**	0.43 J	0.12 J	–	**7.18**	**5.27**
	May-02	2.54	**21.63**	–	0.34 J	–	0.79 J	2.07
	May-03	3.05 J	**9.09 J**	–	–	–	1.44 J	3.36 J
	Nov-03	2.03	4.63	–	–	–	0.93	1.93
	Jun-04	2.8	**41**	–	0.57 J	0.11	1.3	3.3
	Nov-04	3.1	**56**	–	0.88 J	0.19 J	1.4	4.1
	Oct-05	2.2	**43**	–	1		1.7	**6.3**
	Jun-08	2.98	**17.8**	–	0.751 J	0.364 J	1.51	4.35
	Nov-08	0.513 J	**12.7**	–	–	–	0.825 J	3.38
	Nov-09	1.38	**11.1**	–	–	–	0.536 J	1.85
	Nov-10	1.6	**48**	–	0.64	–	1.1	3.2
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	0.66	**11**	–	–	–	0.64 F	2.3
	Oct-13	1.8	**6.6**	–	0.26 F	–	–	2.6
	Nov-14	0.75 F	3.4	–	0.46 F	–	–	1.7

Table 2
Trend Analysis of VOCs in Groundwater (continued)

Well ID	Date Sampled	Concentrations of Analyte in Groundwater µg/L						
		TCA	TCE	VC	1,1-DCE	*trans* - 1,2 DCE	1,1-DCA	*cis* - 1,2 DCE
SW7	Dec-94	4.6	**56**	**6.2**	1	0.3	**33**	**150**
	Dec-95	2.2	**43**	**6.8**	0.8		**20**	**130**
	Jul-97	–	**17.8**	–	–	–	–	2
	Nov-98	2.5	**12.7**	**3.4**	0.65	0.28	**12**	**82**
	Apr-99	1.23	**15**	–	–	–	1.46	**5.25**
	Nov-99	1.01	**7.9**	–	0.19	–	3.38	**18.8**
	May-00	0.67	4	–	–	0.12	0.71	2.43
	Nov-00	0.91	**11**	0.52	0.15	–	3.48	**16.06**
	May-01	1.18	3.95	–	–	–	0.47	1.46
	Nov-01	0.8 J	**5.7**	0.85 J	0.19 J	0.13 J	3.02	**25.89**
	May-02	0.87 J	1.5	–	–	–	0.47 J	2.79
	May-03	1.5 J	3.8	–	–	–	0.409 J	1.43 J
	Nov-03	0.674 J	1.9	–	–	–	0.509	2.76
	Jun-04	1	1	–	–	–	0.3 J	1.1
	Nov-04	1.5	2.1	0.47 J	0.25 J	–	1.5 J	**10 J**
	Oct-05	0.73 J	3.1	–	–	–	1.4	**12**
	Jun-08	2.5	2.94	–	–	–	1.59	**6.34**
	Nov-08	1.88	**8.15**	1.21 M	–	0.302 J	**5.04**	**35.3 M**
	Nov-09	1.24	2.42	–	–	–	0.905 J	5.21
	Nov-10	1	2.4	1	0.21	0.096	0.58	4.3
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Aug-12	2	**9.9**	1.2	0.65	0.21 F	**6.5**	**44**
	Oct-13	–	2.5	–	0.93 F	–	–	**7**
	Nov-14	1.9	**7.8**	0.78 F	0.67 F	0.20 F	4.6	**33**
URS-2D	Jun-08	–	–	0.354 J	–	–	0.339 J	**71.9**
	Nov-09	–	–	0.364 J	–	–	0.244 J	**72.7**
	Nov-10	–	–	0.22 J	–	0.11 J	0.23 J	**69**
	CY2011	NA	NA	NA	NA	NA	NA	NA
	Jul-12	–	–	0.22 J	–	–	0.27 J	**71**
	Oct-13	–	–	–	–	0.17 F	0.21 F	**62**
	Nov-14	–	–	–	–	–	0.27 F	**67**

Notes:

ND: Analyte not detected above laboratory method detection limits

NS: Monitoring well "Not Sampled" during event

NA: Analytical data "Not Available" due to extensive flood event at site and surrounding area in CY2011.

Groundwater sampling not conducted in CY2011.

J: The analyte was positively detected, but the quantitaion is an estimation

F: The analyte was positively identified but the associated numerical value is below the reporting limit (RL).

M: Matrix Effect. The analyte concentration was estimated due to matrix effect and therefore estimated

Bolded numbers are exceedances

ATTACHMENT 1

FIELD FORMS

TestAmerica Albany
25 Kraft Road
Albany, NY 12205

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MIKE JACKSON	Lab PM:	Carrier Tracking No(s):	COC No: 180-20699-5165.1
Client Contact: Mr. ~~Mike Jackson~~ MJ PETER DACYK	Phone: 518-265-2204	E-Mail:		Page: Page 1 of 2
Company: HydroGeoLogic Inc				Job #:

Address: Northway 10 Executive Park 313 Ushers Rd.	Due Date Requested:	Analysis Requested
City: Ballston Lake	TAT Requested (days): Standard TAT per QAPP/Contract	
State, Zip: NY, 12019	PO #:	
Phone: 518-877-0390	WO #:	
Email: mjackson@hgl.com	Project #: AF7087	
Project Name: Air Force Plant 59	SSOW#:	
Site: AFP59 JOHNSON CITY, NY		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs 8260B	1,4-Dioxane (8270C)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
59URS3DWG1	11-17-14	1445	G	W	N		X	X		
59BM12IWG1	↓	1650					X	X		
59URS2DWG1	11-18-14	1050					X	X		
59URS2SWG1		1249					X	X		
59URS5SWG1		1550					X	X		
59URS5SWG1-MS						Y	X	X		
59URS5SWG1-MSD	↓	↓				Y	X	X		
59DW1WG1	11-19-14	0941					X	X		
59SW1WG1		1116					X	X		
59DW3WG1	↓	1413					X	X		
59SW3WG1	11-18-14	1830	↓	↓	↓		X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael D. Jackson	11-20-14 1700	HGL		11-20-14 17:00	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Albany
25 Kraft Road
Albany, NY 12205

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MIKE JACKSON	Lab PM:	Carrier Tracking No(s):	COC No: 180-20699-5165.2
Client Contact: MJ Mr. ~~Mike Jackson~~ PETER DACYK	Phone: 518-265-2204	E-Mail:		Page: Page 2 of 2 MJ
Company: HydroGeoLogic Inc				Job #:
Address: Northway 10 Executive Park 313 Ushers Rd.	Due Date Requested:			
City: Ballston Lake	TAT Requested (days): STANDARD TAT per QAPP/ CONTRACT			
State, Zip: NY, 12019				
Phone: 518-877-0390	PO #:			
Email: mjackson@hgl.com	WO #:			
Project Name: Air Force Plant 59	Project #: AF7087			
Site: AFP59 JOHNSON CITY, NY	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs 8260B	1,4-Dioxane (8270C)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
59SW7WG1	11-19-14	1607	G	W	N		X	X		
59SW4WG1	11-20-14	1124					X	X		
~~59JC2WG1~~							X	X		
59DUP01WG1	11-20-14	0938					X	X		
59DUP02WG1	11-19-14	0903					X	X		1,4-Dioxane only for DUP02
59AB112014	11-20-14	1105					X			
59EB112014	↓	1240					X	X		
TB111714	11-17-14	0900	↓	↓	↓		X			
59JC2WG1	11-20-14	0905	↓	↓	↓		X			
		11-20-14								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
MICHAEL D. JACKSON	11-20-14 1700	HGL		11-20-14 1700	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Page: 1 of 1
Project #: AF7087
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: HGL Phone #: 518-877-0310
Project/Site Name: AFP59 Fax #: 518-953-0026
Address: JOHNSON CITY, NEW YORK
Collected by: MIKE JACKSON Send Results To: PETE DACEY

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test): SB	1,4-Dioxane Method 522	<-- Preservative Type (6)
59JC2WG1	11-20-14	0905	N	N	DW			2	X		PRES = Sodium Bisulfate

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4 PER QAPP for PROJECT

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards* NONE KNOWN

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature] MICHAEL D. JACKSON HGL	11-20-14	1800	1		
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: VALERIE DAVIS
Method of Shipment: FedEx Date Shipped: 11-20-14
Airbill #: 8065 0569 9199
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank
SB = Sodium Bisulfite

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: _____ C

15 X 14 X 10

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8065 0569 9199

Form ID No. 0200

Sender's C

1 From *Please print and press hard.*

Date 11-20-14 Sender's FedEx Account Number 2661-0156-2

Sender's Name MICHAEL JACKSON Phone (518) 877-0390

Company HGL

Address 313 USHERS ROAD Dept./Floor/Suite/Room

City BALLSTON LAKE State NY ZIP 12019

2 Your Internal Billing Reference First 24 characters will appear on invoice. AF7087.04.01

3 To

Recipient's Name ATTN: VALERIE DAVIS Phone (843) 556-8171

Company GEL LABORATORIES LLC

Address 2040 SAVAGE ROAD Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City CHARLESTON State SC ZIP 29407

☐ HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Easy new Peel-and-Stick airbill. No pouch needed.
Apply airbill directly to your package. See directions on back.

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 15
For packages over 150 lbs., use
FedEx Express Freight US

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient address, someone at a neighbo address may sign for delivery. residential deliveries only. *Fee*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☒ Third Party ☐ Credit Card ☐ Cash/

FedEx Acct. No. / Credit Card No. 129909129 Exp. Date

Total Packages	Total Weight	Total Declared Value†
1	23 lbs.	$ ____ .00

†Our liability is limited to US$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59BM121WG1

DATE: 11-17-14 TIME: 1650

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB X COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st	COLOR:	
2nd	ODOR:	
	OTHER:	

pH _____ Temperature _____(C) Dissolved Oxygen _____(mg/L) Specific Conductivity _____(umhos/cm)
Iron _____(mg/L) Oxidation/Reduction Potential _____(mv) Turbidity_____ (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 39°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) MS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER:

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59SW1WG1 DATE: 11-19-14 TIME: 1116

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.41 Temperature 11.57 (C) Dissolved Oxygen 0.61 (mg/L) Specific Conductivity 1.752 ~~(mmhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 144.7 (mv) Turbidity 4.0 (NTU)

GENERAL INFORMATION

WEATHER: (SUN/CLEAR) X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 18°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) MJ OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59DW1WG1

DATE: 11-19-14 TIME: 0941

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.20 Temperature 10.50 (C) Dissolved Oxygen 2.80 (mg/L) Specific Conductivity 1.806 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 182.2 (mv) Turbidity 3.4 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 17°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) ~~X~~ OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HGL HydroGeoLogic, Inc

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59DW3WG1

DATE: 11-19-14 TIME: 1413

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): 59DUP02WG2

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.61 Temperature 11.37 (C) Dissolved Oxygen 0.53 (mg/L) Specific Conductivity 1.478 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential -18.9 (mv) Turbidity 7.7 (NTU)

GENERAL INFORMATION

WEATHER: (SUN/CLEAR) X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 27°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) ~~3~~ 2 OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59SW3WG1

DATE: 11-18-14 TIME: 1830

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB X COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.02 Temperature 13.54 (C) Dissolved Oxygen 1.69 (mg/L) Specific Conductivity 1.392 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 105.1 (mv) Turbidity 0.7 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 21°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) 3, mS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59SW4WG1

DATE: 11-20-14 TIME: 1124

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): 59DUP01WG1

AMBIENT BLANK (AB): 59AB112014

EQUIPMENT BLANK (EB): 59EB112014

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 3.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.36 Temperature 11.89 (C) Dissolved Oxygen 3.36 (mg/L) Specific Conductivity 1.519 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 151.3 (mv) Turbidity 3.4 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 32°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) ½ MJ OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE JACKSON OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59SW7WG1

DATE: 11-19-14 TIME: 1607

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.56 Temperature 11.83 (C) Dissolved Oxygen 0.73 (mg/L) Specific Conductivity 1.375 (~~mhos/cm~~) mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 75.6 (mv) Turbidity 7.1 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 27°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) TMS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59URS2SGW1

DATE: 11-18-14 TIME: 1249

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 6.56 Temperature 11.26 (C) Dissolved Oxygen 0.50 (mg/L) Specific Conductivity 1.19 ~~(mmhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 25.1 (mv) Turbidity 39.5 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 20°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) 2 MS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59URS2DWG1

DATE: 11-18-14 TIME: 1050

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 6.90 Temperature 11.24 (C) Dissolved Oxygen 0.55 (mg/L) Specific Conductivity 1.417 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential -39.2 (mv) Turbidity 23.6 (NTU)

GENERAL INFORMATION

WEATHER: (SUN/CLEAR) X OVERCAST/RAIN _____ WIND DIRECTION _____ AMBIENT TEMPERATURE 18°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) ~~X~~ MS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE JACKSON OBSERVER: —

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59URS3DWG1

DATE: 11-17-14 TIME: 1445

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR: ORANGISH	
2nd	ODOR:	
	OTHER:	

pH 6.78 Temperature 10.14 (C) Dissolved Oxygen 2.40 (mg/L) Specific Conductivity 1.430 (~~umhos/cm~~) mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 69.0 (mv) Turbidity OVERRANGE (NTU) (>1000)

GENERAL INFORMATION

WEATHER: SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 39°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) ½ MS OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE JACKSON OBSERVER: —

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION:	AFP59	PROJECT NAME:	AFP59 2014 GWS
SITE:	AFP59	PROJECT NO:	AF7087

SAMPLE INFORMATION

SAMPLE ID: 59URS5SWG1

DATE: 11-18-14 TIME: 1550

MATRIX TYPE: WG

SAMPLING METHOD: BP

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB X COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): 59URSWG1-MS

MATRIX SPIKE DUP (SD): 59URSWG1-MSD

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs 8260B
1L Amber	2	Cool to 4C	8270C	1,4 Dioxane

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st 0.0	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 7.69 Temperature 9.94 (C) Dissolved Oxygen 1.98 (mg/L) Specific Conductivity 1.408 ~~(umhos/cm)~~ mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 90.7 (mv) Turbidity 26.4 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR X OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 25°

SHIPMENT VIA: FEDEX _____ HAND DELIVER X COURIER (TAL) X OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO

COMMENTS:

SAMPLER: MIKE JACKSON OBSERVER: —

MATRIX TYPE CODES

DC=DRILL CUTTINGS	SL=SLUDGE
WG=GROUND WATER	SO=SOIL
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER
SE=SEDIMENT	SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER	G=GRAB
BP=BLADDER PUMP	HA=HAND AUGER
PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

FIELD SAMPLING REPORT

LOCATION: AFP59 PROJECT NAME: AFP59 2014 GWS

SITE: AFP59 PROJECT NO: AF7087

SAMPLE INFORMATION

SAMPLE ID 59JC2WG1 DATE: 11-20-14 TIME: 0905

MATRIX TYPE: WG

SAMPLING METHOD: G

LOT CONTROL #: ___ ___ ___ ___

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG. DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB111714

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS	
40 mL VOA	3	Cool to 4C HCl ph<2	SW8260B	VOCs	TEST AMERICA
1L Amber	2	Cool to 4C	~~8270C~~ EPA METHOD 522	1,4 Dioxane	GEL

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st N/A	COLOR:	
2nd	ODOR:	
	OTHER:	

pH 6.84 Temperature 10.98 (C) Dissolved Oxygen 3.46 (mg/L) Specific Conductivity 1,030 (~~umhos/cm~~) mS/cm

Iron — (mg/L) Oxidation/Reduction Potential 190.8 (mv) Turbidity 0.7 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION _____ AMBIENT TEMPERATURE 32°

SHIPMENT VIA: FEDEX _____ HAND DELIVER _____ COURIER (TAL) x OTHER _____

SHIPPED TO: Test America Laboratory Denver, CO, GEL LABORATORY

COMMENTS: collect from sample port (GARDEN HOSE TYPE VALVE)

SAMPLER: MIKE Jackson OBSERVER: —

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	PP=PERISTALIC PUMP	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HGL HydroGeoLogic, Inc

STATIC GROUNDWATER ELEVATION LOG

Project Name: AFP59 2014 Groundwater Sampling Event

Project No.: AF7087

Water Level Indicator ID#: Pine Env. Water Level Indicator (2547) **PID Meter ID#:** MiniRAE 2000

Well Identification	Date	Time	Static Depth to Water (from TOC)	Depth to Product (from TOC)	PID Reading	Comments
DW-1	11-17-14	1032	17.74		0.0	4-inch
SW-1		1034	17.76		0.0	2-inch
SW-4		1035	13.36		3.0	
SW-7		1049	19.16		0.0	2-inch
SW-3		1113	18.56		0.0	2-inch
DW-3		1115	15.8		0.0	4-inch
URS-~~2D~~ 2S		0927	31.25		0.0	Normal 4/L" BOLTS. SOUTH of ~~2S~~ 2D
URS-~~2S~~, 2D		0924	31.19		0.0	CHRYSLER KEY NORTH of ~~2D~~ 2S
URS-3D		0850	30.33		0.0	
URS-5S		0944	22.74		0.0	
BM-121		1001	26.27		0.0	

2D has CHRYSLER BOLT TYPE

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: BM-121	Location: AFP59
Sampler(s): Mike Jackson	Project Name: AFP59 2014 GWS
Well Depth: 56.25	Project #: AF7087 Date: 11-17-14 Time: 1550
DTW (ft): 26.25 DTP Top (ft): 50.8	Courier: ___FedEx ___UPS (X) Hand _X TAL Pickup
MP Ht. Above/Below Ground Surface: 3.2	Sampling Method : BP
Condition of Bottom of Well: soft	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (- 56.04)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Overcast, light rain, 39°
Well Diameter (in): 6	
Placement of Pump Inlet (ft): 51	

Field Parameters

+/-0.1 (pH) +/-0.5 (Temp.) +/-3% (Cond.) +/-10 (ORP) +/-10 (Turb.)

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm) mS/cm	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1618	26.39	0.2	1.0	7.80	10.01	0.666	-153.8	1.01	21.3	
1623	26.39	0.2	2.0	7.73	10.17	0.666	-141.8	0.73	17.7	
1628	26.39	0.2	3.0	7.72	10.27	0.667	-144.2	0.61	17.6	
1633	26.39	0.2	4.0	7.72	10.28	0.667	-145.8	0.51	17.8	
1638	26.39	0.2	5.0	7.71	10.31	0.668	-154.3	0.51	17.1	
1643	26.39	0.2	6.0	7.70	10.34	0.668	-155.0	0.45	17.2	
1648	26.39	0.2	7.0	7.69	10.42	0.668	-157.3	0.45	17.1	
1650 sample										

Observations

Color: (Clear) Other (describe): 26.15 Post pump DTW

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: #11077 (QED sample pro pump 1.75-inch), YSI 556 (#06M1025AH)
QED 3020 compressor (#02249), MP-10 controller QED (#01295?)
WLI 100-ft (# 002547), Max Everstart Battery (93).

Signed/Sampler(s): [signature]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: DW-1	Location: AFP59
Sampler(s): MIKE JANKOU	Project Name: AFP59 2014 GWS 11-19-14
Well Depth: 62.60	Project #: AF7087 Date: ~~0-0-00~~ Time: 0845
DTW (ft): 17.75 DTP Top (ft):	Courier: ___FedEx ___UPS (X) Hand _X_~~TAL Pickup~~
MP Ht. Above/Below Ground Surface: 2.62 PVC	Sampling Method : BP
Condition of Bottom of Well: FIRM	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (52 - 62)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 4	17°, MODERATE WIND, SUNNY/CLEAR
Placement of Pump Inlet (ft): 54	

Field Parameters

Time	Depth to Water (ft)	Flow Rate ~~(L/m)~~	Total Volume (L)	pH	Temp. (C)	Cond. ~~(umhos/cm)~~ mS/cm	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
	+/-0.1	+/-0.5		+/-3%	+/-10				+/-10	
0909	17.76	0.28	0.50	6.99	10.30	1.557	203.9	4.03	7.1	
0914	17.76	0.28	1.90	6.99	10.33	1.736	203.7	3.29	5.4	
0919	17.76	0.28	3.30	7.07	10.46	1.781	197.2	2.99	~~4.2~~	4.2
0924	17.76	0.28	4.70	7.12	10.48	1.792	194.1	2.92	4.2	
0929	17.76	0.28	6.10	7.16	10.49	1.801	189.0	2.87	4.1	
0934	17.76	0.28	7.50	7.18	10.50	1.803	186.0	2.84	3.7	
0939	17.76	0.28	8.90	7.20	10.50	1.806	182.2	2.80	3.4	
0941	COLLECT		SAMPLES							

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: #10883 (QED SAMPLE PRO 1.75-inch pump)
YSI 556 MPS (06M1025AH), HACH 2100P (# 007293)
QED MP10 CONTROLLER (# D12594), WLI 100' (002547)
EVERSTART MARINE BATTERY, QED 3020 COMPRESSOR (# 02249)
PROTECTIVE CASE = 2.85 ft AGS

Signed/Sampler(s): [signature]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SW-1	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 28.55	Project #: AF7087 Date: 11-19-14 Time: 1020
DTW (ft): 17.74 DTP Top (ft):	Courier: ___FedEx ___UPS (X) Hand X TAL Pickup
MP Ht. (Above/Below Ground Surface): 2.42	Sampling Method : BP
Condition of Bottom of Well:	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (15.74 - 25.74)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	MS 78°, moderate wind, sunny/clear
Placement of Pump Inlet (ft): 23.5	18 37%

Field Parameters

	+/-0.1		+/-0.5	+/-3%	+/-10		+/-10	
Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. ~~(umhos/cm)~~ mS/cm	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1044	17.74	0.25	0.5	7.54	11.50	1.738	150.7	1.32	11.5	
1049	17.74	0.25	1.75	7.50	11.46	1.746	148.4	0.90	8.5	
1054	17.74	0.25	3.00	7.43	11.47	1.752	151.4	0.73	6.9	
1059	17.74	0.25	4.25	7.42	11.45	1.755	151.3	0.67	6.1	
1104	17.74	0.25	5.50	7.41	11.54	1.752	149.0	0.63	5.4	
1109	17.74	0.25	6.75	7.38	11.57	1.753	146.9	0.62	4.9	
1114	17.74	0.25	8.00	7.41	11.57	1.752	144.7	0.61	4.0	
1116	Collect	SAMPLES								

Observations

DTW = 17.72 TOC post-purge install

Color: Clear Other (describe):

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes: #1077 (QED SAMPLE PRO 1.75-inch pump)

YSI 556 MPS (06M1025 AH), HACH 2100P (#007293)

QED MP10 controller (#012594), WLI 100' (002547)

EVERSTART MARINE BATTERY, QED 3020 compressor (#02249)

PROTECTIVE CASE = 2.91 FT AGS (BLACK TOP)

Signed/Sampler(s):

DUP02 (1,4-Dioxane only)

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: DW-3	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 85.40 TOC	Project #: AF7087 Date: 11-19-14 Time: 1315
DTW (ft): 15.73 DTP Top (ft):	Courier: ___FedEx ___UPS (X) Hand X TAL Pickup
MP Ht. Above/Below Ground Surface: -0.41	Sampling Method : BP
Condition of Bottom of Well: SOFT	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (67.58 - 87.58)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): ~~8~~ 4	27°, SUNNY/CLEAR, MODERATE WIND
Placement of Pump Inlet (ft): 79	

Field Parameters

Time	Depth to Water (ft) +/-0.1	Flow Rate (L/m)	Total Volume (L)	pH +/-0.5	Temp. (C) +/-3%	Cond. (~~umhos/cm~~) mS/cm +/-10	ORP (mv)	DO (mg/L)	Turb. (NTU) +/-10	Type, Size, and Amount of Sediment Discharged
1341	15.73	0.25	0.50	7.76	11.04	1.409	18.1	2.06	24.5	
1346	15.73	0.25	1.75	7.68	11.34	1.471	-4.2	0.94	18.4	
1351	15.73	0.25	3.00	7.66	11.39	1.475	-5.3	0.82	17.4	
1356	15.73	0.25	4.25	7.62	11.50	1.475	-8.1	0.71	14.3	
1401	15.73	0.25	6.00	7.61	11.48	1.475	-13.6	0.65	12.4	
1406	15.73	0.25	7.25	7.61	11.43	1.475	-16.2	0.59	12.0	
1411	15.73	0.25	9.00	7.61	11.37	1.478	-18.9	0.52	7.7	
1413	Collect	Sample								

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

DUP-01 @ 0903

Notes: # 10483 (QED SAMPLE PRO 1.75-INCH PUMP)
YSI 556 MPS (06M1025AH), HACH 2100P (# 007293)
QED MP10 CONTROLLER (#012594), WLI 100' (002547)
EVERSTART MARINE BATTERY, QED 3020 COMPRESSOR (#02249)
(GRAY MUD DROP END (1") DUP-1 DTW READING COLLECTED)

Signed/Sampler(s): Mike D. Jr

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SW-3	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 29,84	Project #: AF7087 Date: 11-18-14 Time: 1715
DTW (ft): 18,49 DTP Top (ft): 24.3	Courier: ___FedEx ___UPS (X) Hand ~~X TAL Pickup~~
MP Ht. Above/Below Ground Surface: ~~1.17~~ 0.87 BGS	Sampling Method : BP
Condition of Bottom of Well: FILL 0.87	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (17.68 - 28.68)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 21° clear, calm
Well Diameter (in): ~~8~~ 2	
Placement of Pump Inlet (ft): 24.5	

Field Parameters

Time	Depth to Water (ft) +/-0.1	Flow Rate (L/m)	Total Volume (L)	pH +/-0.5	Temp. (C)	Cond. (~~umhos/cm~~) MS/cm +/-3%	ORP (mv) +/-10	DO (mg/L)	Turb. (NTU) +/-10	Type, Size, and Amount of Sediment Discharged
1748	18,50	0,3	0.5	7.11	13,20	1.371	111.4	2,38	3,8	
1753	18,50	0,3	2.0	7,20	13,44	1,384	107.3	1,96	2,0	
1758	18.50	0,3	3.5	7,27	13,47	1.390	90.6	1,84	1.2	
1803	18,50	0,3	5.0	7,31	13,46	1,390	95.4	1,78	1.1	
1808	18,50	0.3	6.5	7.33	13,48	1,391	99.3	1,74	0.9	
1813	18,50	0,3	8.0	7,22	13,49	1,391	102.3	1,71	0.8	
1818	18,50	0.3	9.5	7,08	13,53	1,391	103.7	1,70	0.7	
MT 1820	collect		samples							MT
1823	18,50	0.3	11.0	7,05	13,54	1,392	104.4	1,69	0,7	
1828	18,50	0,3	12,5	7,02	13,54	1,392	105.1	1,69	0,7	
1830	sample									

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: 11077 (QED sample pro 1.75-inch).
YSI 556 MPS (06M1025AH), Hach 2100P (#007293)
QED MP10 Controller (#012594), WLI 100' (002547)
Eversmart Marine Battery, QED 3020 compressor (#0~~22~~49)
PROTECT CASING = 1.17

Signed/Sampler(s): MLL D. J

DUP01

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SW-4	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 28.09 TOC	Project #: AF7087 Date: 11-20-14 Time: 0955
DTW (ft): 13.33 DTP Top (ft):	Courier: ___FedEx ___UPS X Hand ~~X~~ TAL Pickup
MP Ht. Above/(Below) Ground Surface: -0.18	Sampling Method : BP
Condition of Bottom of Well: FILM	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (- 27.52)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	PARTLY CLOUDY, MODERATE WIND, 32°
Placement of Pump Inlet (ft): 23.11	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH (+/- 0.1)	Temp. (C) (+/- 0.5)	Cond. ~~(umhos/cm)~~ mS/cm (+/- 3%)	ORP (mv) (+/- 10)	DO (mg/L)	Turb. (NTU) (+/- 10)	Type, Size, and Amount of Sediment Discharged
1052	13.37	0.28	1.0	7.53	11.54	1.479	162.3	3.12	16.3	
1057	13.37	0.28	2.4	7.48	11.67	1.474	159.7	3.10	14.7	
1102	13.37	0.28	3.8	7.45	11.75	1.480	158.2	3.25	9.5	
1107	13.37	0.28	5.2	7.40	11.82	1.564	156.6	3.28	8.7	
1112	13.37	0.28	6.6	7.38	11.86	1.516	154.4	3.33	6.2	
1117	13.37	0.28	8.0	7.37	11.86	1.518	153.1	3.34	4.0	
1122	13.37	0.28	9.4	7.36	11.89	1.519	151.3	3.36	3.4	
1124	COLLECT	SAMPLES								

Observations

POST-PUMP INSTALL DTW = 13.37
DUP01 SAMPLE TIME = 0938

Color: (Clear) Other (describe):

Odor: None Low Medium High Very Strong H2S (Fuel-like) (NO SHEEN) (NO LNAPL)

Notes: #1077 (QED Sample Pro 1.75-inch pump), YSI 556 MPS (06M1025AH), HACH 2100P (#0072793) QED MP10 CONTROLLER (#012594), WLI 100' (002547) EVERSTART MARINE BATTERY, QED 3020 COMPRESSOR (#00249) AMBIENT BLANK COLLECTED @ 1105 (9/AB/2014) → 9/AB/2014

Signed/Sampler(s): Mike D

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SW-7	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 28.93	Project #: AF7087 Date: 11-19-14 Time: 1510
DTW (ft): 19.05 DTP Top (ft): 24.30	Courier: ___FedEx ___UPS (X) Hand ~~X~~ TAL Pickup
MP Ht. (Above/Below Ground Surface): PVC 2.62	Sampling Method : BP
Condition of Bottom of Well:	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (- 28.85)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): PARTLY CLOUDY, MODERATE WIND, 27°
Well Diameter (in): ~~8~~ 2	
Placement of Pump Inlet (ft): 24.5	

	+/-0.1	+/-0.5	+/-3%	+/-10		+/-10	
			Field Parameters				

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. ~~(umhos/cm)~~ mS/cm	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1535	19.03	0.20	0.5	7.79	11.81	1.379	75.2	1.21	18.6	
1540	19.03	0.20	~~0.5~~ 1.5	7.71	11.69	1.375	74.4	0.90	15.3	
1545	19.03	0.20	2.5	7.66	11.81	1.375	74.6	0.87	15.7	
1550	19.03	0.20	3.5	7.62	11.69	1.376	75.1	0.81	12.4	
1555	19.03	0.20	4.5	7.56	11.68	1.375	76.5	0.78	9.2	
1600	19.03	0.20	5.5	7.56	11.81	1.375	75.8	0.76	7.4	
1605	19.03	0.20	6.5	7.56	11.83	1.375	75.6	0.73	7.1	
1607	Collect		samples.							

Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes: #11077 (QED Sample Pro 1.75-inch pump)
YSI 556 MPS (06M1025AH), Hach 2100P (#007293)
QED MP10 Controller (#012594), WLI 100' (C002547)
EverStart Marine Battery, QED 3020 compressor (#00249)
Protective casing = 2.92 ft AGS

Signed/Sampler(s): Mike D. Jackson

Chrysler Boot
ON FLUSH
mount

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: URS-2D	Location: AFP59
Sampler(s): MIKE Jackson	Project Name: AFP59 2014 GWS
Well Depth: ~~90~~ 90.45 TOC	Project #: AF7087 Date: 11-13-14 Time: 0900
DTW (ft): 31.18 DTP Top (ft): 82.8	Courier: ___FedEx ___UPS (X) Hand X TAL Pickup
MP Ht. Above/Below Ground Surface: -0.4	Sampling Method : BP
Condition of Bottom of Well: SOFT	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (65 - 90)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	SUNNY, 18°, 15 mph WIND
Placement of Pump Inlet (ft): 83	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm) mS/cm	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1018 ~~1118~~	31.10	~~0.20~~ 0.20	0.0	6.70	10.93	1.399	-4.3	2.23	39.2	
1023 ~~1123~~	31.10	0.20	1.0	6.82	11.15	1.415	-23.0	1.12	36.7	
1028 ~~1128~~	31.10	0.20	2.0	6.85	11.16	1.419	-30.7	0.82	21.7	
1033	31.10	0.20	3.0	6.87	11.24	1.417	-32.6	0.72	23.2	
1038	31.10	0.20	4.0	6.86	11.24	1.415	-36.3	0.63	23.3	
1043	31.10	0.20	5.0	6.89	11.27	1.417	-37.6	0.56	23.4	
1048	31.10	0.20	6.0	6.90	11.24	1.417	-39.2	0.55	23.6	
1050	COLLECT		SAMPLES.							

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: #10883 (QED Sample Pro 1.75 inch pump)
YSI 556 MPS (06M1025AH), HACH 2100P (#007293),
QED MP10 controller (#012594), WCI 100' (#002547),
EverStart Marine Battery, QED 3020 compressor (#002249),

Signed/Sampler(s): [signature]

Normal 9/16" bolt

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: URS-2S	Location: AFP59
Sampler(s): MIKE JACKSON	Project Name: AFP59 2014 GWS
Well Depth: 58.7	Project #: AF7087 Date: 11-18-14 Time: 1150
DTW (ft): 31.33 DTP Top (ft): 53.25	Courier: ___FedEx ___UPS (X) Hand X TAL Pickup
FM MP Ht. Above/Below Ground Surface: -0.35	Sampling Method : BP
Condition of Bottom of Well: SOFT	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (35.45 - 60.45)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SUNNY, 20°, 15 MPH GUSTS
Well Diameter (in): 2	
Placement of Pump Inlet (ft): 53.45	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH (+/-0.1)	Temp. (C) (+/-3%)	Cond. (umhos/cm) mS/cm (+/-10)	ORP (mv) (+/-10 mV)	DO (mg/L) (+/-0.5)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1217	31.52	0.2	1.0	6.78	11.06	1.179	16.0	1.01	40.0	
1222	31.52	0.2	2.0	6.75	11.26	1.182	16.4	0.73	54.4	
1227	31.52	0.2	3.0	6.65	11.29	1.181	18.8	0.64	151.8	
1232	31.52	0.2	4.0	6.60	11.28	1.182	20.4	0.57	49.8	
1237	31.52	0.2	5.0	6.58	11.32	1.185	22.3	0.53	45.2	
1242	31.52	0.2	6.0	6.55	11.35	1.187	24.5	0.51	40.0	
1247	31.52	0.2	7.0	6.56	11.26	1.190	25.1	0.50	39.5	
1249	COLLECT		SAMPLES.							

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: #11077 (QED SAMPLE PRO 1.75-INCH PUMP)
YSI 556 MPS (06M1025AH), HACH 2100P (# 00 7293),
QED MP-10 CONTROLLER (# 012594), WLI 100' (# 002547),
EVERSTART MARINE BATTERY, QED 3020 COMPRESSOR (# 02249)

Signed/Sampler(s): [signature]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: URS-3D	Location: AFP59
Sampler(s): MIKE Strzelczyk	Project Name: AFP59 2014 GWS
Well Depth: 90.47	Project #: AF7087 Date: 11-17-14 Time: 1320
DTW (ft): 35.50 DTP Top (ft): 82.4	Courier: ___FedEx ___UPS (X) Hand X TAL Pickup
MP Ht. Above/Below Ground Surface: 1.81	Sampling Method : BP
Condition of Bottom of Well: SOFT	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (65.33 - 95.33)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	RAIN (STEADY), 39°
Placement of Pump Inlet (ft): 83	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH (+/-0.1)	Temp. (C) (+/-0.5)	Cond. (umhos/cm) mS/cm (+/-3%)	ORP (mv) (+/-10)	DO (mg/L) (+/-10%)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1348 1353 1448	35.52	0.2	0.5	6.53	10.12	1.423	137.6	3.60	over	range OVER FLOW
1453	35.52	0.2	1.5	6.59	10.21	1.425	133.0	2.63	over	range
1458	35.52	0.2	2.5	6.63	10.23	1.425	141.7	2.62	over	range FLOW
1503	35.52	0.2	3.5	6.66	10.10	1.430	118.3	3.36	over	range (EMPTY FLOWCELL)
1508	35.52	0.2	4.5	6.67	10.07	1.430	102.6	2.70	over	range
1513	35.52	0.2	5.5	6.70	10.05	1.430	94.5	2.61	over	range
1518	35.52	0.2	6.5	6.72	10.13	1.429	89.6	2.56	over	range
1523	35.52	0.2	7.5	6.73	10.14	1.429	87.4	2.54	over	range
1528	35.52	0.2	8.5	6.75	10.17	1.428	83.4	2.47	over	range
1533	35.52	0.2	9.5	6.77	10.20	1.429	76.6	2.45	over	range
1538	35.52	0.2	10.5	6.79	10.20	1.429	74.2	2.42	over	range
1543	35.52	0.2	11.5	6.78	10.14	1.430	69.0	2.40	over	range
1545	collect Sample									

Observations

Color: Clear (Other (describe): ORANGISH

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes: Pump #10833 (QED sample pro 1.75-inch), Hose #2100F (607843), (QED) MPT (#012594), PST 556 OBM1025 AH, WLI 100ft (#2547), STEEL PUMP 1.95' AGS, AVG = 1.81' AGL) FIRST PUMP DTW = 35.52

Signed/Sampler(s): [signature]

MS + MSD

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: URS-5S	Location: AFP59
Sampler(s): MIKE Jackson	Project Name: AFP59 2014 GWS
Well Depth: 66.35	Project #: AF7087 Date: 11-18-14 Time: 1425
DTW (ft): 22.71 DTP Top (ft): -58.8	Courier: ___FedEx ___UPS (X) Hand ___TAL Pickup
MP Ht. Above/Below Ground Surface: -1.25	Sampling Method : BP
Condition of Bottom of Well:	Type of Pump: Bladder Pump
Screen Interval FTOC(ft): (-)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	25°, windy, partly cloudy
Placement of Pump Inlet (ft): 59.	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH (+/- 0.1)	Temp. (C) (+/-0.5)	Cond. ~~umhos/cm~~ mS/cm (+/- 3%)	ORP (mv) (+/-10)	DO (mg/L)	Turb. (NTU) (+/- 10)	Type, Size, and Amount of Sediment Discharged
1508	22.70	0.2	0.5	7.10	9.29	1.450	95.1	4.60	overrange	
1513	22.70	0.2	1.5	7.16	9.88	1.424	88.9	2.70	93.7	
1518	22.70	0.2	2.5	7.15	9.86	1.417	88.4	2.41	79.4	
1523	22.70	0.2	3.5	7.12	9.84	1.413	89.1	2.25	53.0	
1528	22.70	0.2	4.5	7.10	9.88	1.409	89.7	2.13	54.6	
1533	22.70	0.2	5.5	7.10	9.88	1.409	89.6	2.06	38.9	
1538	22.70	0.2	6.5	7.08	9.91	1.409	90.2	1.98	32.6	
1543	22.70	0.2	7.5	7.08	9.99	1.407	90.7	1.98	27.8	
1548	22.70	0.2	8.5	7.09	9.94	1.408	90.7	1.98	26.4	
1550	collect		samples							

Observations

Color: (Clear) Other (describe): MS/MSD

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: #10883 (QED sample pro 1.75 inch pump) Post (Cassell) pump DTW = 22.69
YSI 556 MPS (06M1025AH), HACH 2100P (#007293)
QED MP10 Controller (#012544), WLI 100' (C002547)
Everstart Marine Battery, QED 3020 Compressor (#02249

Signed/Sampler(s): Mike Jackson

HGL

GROUNDWATER FIELD SAMPLING DATA SHEET

Well Name.: JC2	Project Name: AFP59	LOCID:
Sampler(s): MIKE JACKSON	Project No.: AF7087	
Well Depth: N/A	Date: 11-20-14	Time: 0855
DTW (ft TOC): N/A	Screen Interval: N/A	
Well Diameter (in): N/A	Placement of Pump (ft TOC): N/A	
Type of Pump: N/A		

Field Parameters

Time	Depth to Water (ft)	Flow Rate (gpm)	Total Volume (gal)	pH	Temp. (C)	Cond. (~~umhos/cm~~)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
0900	PURGE pump	JC2 PUSH	FOR	5 MINUTES.		OPEN GARDEN HOSE TYPE CONNECTION NEW				
0905	COLLECT 1,4-DIOXANE	SAMPLES BY METHOD		JC2WG1		(VOCS 8260B -> TEST AMERICA, 522 TO GEL LABORATORY)				
0906	READINGS	—		6.84	10.98	1.030	190.8	13.46	0.7	

Observations

Notes: JC2 LOCATED IN BRICK BLDG SOUTH OF WATER DEPT BREAK ROOM (MAKE A RIGHT WHEN LEAVING BREAK ROOM, LAST ROOM (BRICK BUILDING CLOSEST TO RIVER)

Signed/Sampler(s): Mell D. [illegible]

ATTACHMENT 2

LABORATORY REPORT

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: 59URS3DWG1

Lab Sample ID: 280-62916-1
Client Matrix: Water

Date Sampled: 11/17/2014 1445
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0095.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2043			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2043				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	1.3		0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~U~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~U~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~U~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~U~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~U~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~U~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~U~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.95	J F	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~U~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/14/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS3DWG1**

Lab Sample ID: 280-62916-1
Client Matrix: Water

Date Sampled: 11/17/2014 1445
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0095.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2043			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2043				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	1.9		0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Dibromofluoromethane (Surr)	101		85 - 115
Toluene-d8 (Surr)	113		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59BM121WG1**

Lab Sample ID: 280-62916-2
Client Matrix: Water

Date Sampled: 11/17/2014 1650
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0097.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2126			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2126				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~UQ~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~UQ~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~UQ~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~UQ~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~UQ~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~UQ~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~UQ~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~UQ~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59BM121WG1**

Lab Sample ID: 280-62916-2
Client Matrix: Water

Date Sampled: 11/17/2014 1650
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0097.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2126			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2126				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.16	U	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		70 - 120
4-Bromofluorobenzene (Surr)	104		75 - 120
Dibromofluoromethane (Surr)	115		85 - 115
Toluene-d8 (Surr)	110		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: 59URS2DWG1

Lab Sample ID: 280-62916-3
Client Matrix: Water

Date Sampled: 11/18/2014 1050
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0099.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2208			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2208				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~UQ~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.27	~~J~~ F	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~UQ~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~UQ~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~UQ~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~UQ~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~UQ~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~UQ~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	75	~~J~~ F	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~UQ~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 11/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2DWG1**

Lab Sample ID: 280-62916-3
Client Matrix: Water

Date Sampled: 11/18/2014 1050
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0099.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2208			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2208				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.16	U	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 120
4-Bromofluorobenzene (Surr)	98		75 - 120
Dibromofluoromethane (Surr)	109		85 - 115
Toluene-d8 (Surr)	107		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2DWG1**

Lab Sample ID: 280-62916-3
Client Matrix: Water

Date Sampled: 11/18/2014 1050
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0100.D
Dilution:	4.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2229	Run Type:	DL	Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2229				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.68	U	0.68	4.0
1,1,1-Trichloroethane	0.64	U	0.64	4.0
1,1,2,2-Tetrachloroethane	0.80	U Q	0.80	4.0
1,1,2-Trichloroethane	1.3	U	1.3	4.0
1,1-Dichloroethane	0.64	U	0.64	4.0
1,1-Dichloroethene	0.56	U	0.56	4.0
1,1-Dichloropropene	0.60	U	0.60	4.0
1,2,3-Trichlorobenzene	0.72	U Q	0.72	4.0
1,2,3-Trichloropropane	3.1	U	3.1	12
1,2,4-Trichlorobenzene	1.3	U Q	1.3	4.0
1,2,4-Trimethylbenzene	0.56	U	0.56	4.0
1,2-Dibromo-3-Chloropropane	3.2	U Q	3.2	20
1,2-Dichlorobenzene	0.52	U	0.52	4.0
1,2-Dichloroethane	0.52	U	0.52	4.0
1,2-Dichloropropane	0.52	U	0.52	4.0
1,3,5-Trimethylbenzene	0.56	U	0.56	4.0
1,3-Dichlorobenzene	0.64	U	0.64	4.0
1,3-Dichloropropane	0.60	U	0.60	4.0
1,4-Dichlorobenzene	0.64	U	0.64	4.0
1-Chlorohexane	0.68	U	0.68	4.0
2,2-Dichloropropane	0.80	U	0.80	4.0
2-Butanone (MEK)	7.3	U Q	7.3	24
2-Chlorotoluene	0.68	U	0.68	4.0
4-Chlorotoluene	0.68	U	0.68	4.0
4-Isopropyltoluene	0.68	U	0.68	4.0
4-Methyl-2-pentanone (MIBK)	4.2	U Q	4.2	20
Acetone	7.6	U	7.6	40
Benzene	0.64	U	0.64	4.0
Bromobenzene	0.68	U	0.68	4.0
Bromoform	0.76	U	0.76	4.0
Bromomethane	0.84	U Q	0.84	8.0
Carbon tetrachloride	0.76	U	0.76	8.0
Chlorobenzene	0.68	U	0.68	4.0
Chlorobromomethane	0.40	U	0.40	4.0
Chloroform	0.64	U	0.64	4.0
Chloromethane	1.2	U	1.2	8.0
cis-1,2-Dichloroethene	67	D	0.60	4.0
cis-1,3-Dichloropropene	0.64	U	0.64	4.0
Dibromomethane	0.68	U	0.68	4.0
Dichlorobromomethane	0.68	U	0.68	4.0
Dichlorodifluoromethane	1.2	U	1.2	8.0
Ethylbenzene	0.64	U	0.64	4.0
Ethylene Dibromide	0.72	U	0.72	4.0
Hexachlorobutadiene	1.4	U	1.4	4.0
Isopropylbenzene	0.76	U Q	0.76	4.0
Methyl tert-butyl ether	1.0	U	1.0	20

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2DWG1**

Lab Sample ID: 280-62916-3
Client Matrix: Water

Date Sampled: 11/18/2014 1050
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0100.D
Dilution:	4.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2229	Run Type:	DL	Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2229				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	1.3	U	1.3	20
m-Xylene & p-Xylene	1.4	U	1.4	8.0
Naphthalene	0.88	U	0.88	4.0
n-Butylbenzene	1.3	U	1.3	4.0
N-Propylbenzene	0.64	U	0.64	4.0
o-Xylene	0.76	U	0.76	4.0
sec-Butylbenzene	0.68	U	0.68	4.0
Styrene	0.68	U	0.68	4.0
tert-Butylbenzene	0.64	U	0.64	4.0
Tetrachloroethene	0.80	U	0.80	4.0
Toluene	0.68	U	0.68	4.0
trans-1,2-Dichloroethene	0.60	U	0.60	4.0
trans-1,3-Dichloropropene	0.76	U	0.76	4.0
Trichloroethene	0.64	U	0.64	4.0
Trichlorofluoromethane	1.2	U	1.2	8.0
Vinyl chloride	0.40	U	0.40	6.0
Dibromochloromethane	0.68	U	0.68	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Dibromofluoromethane (Surr)	110		85 - 115
Toluene-d8 (Surr)	109		85 - 120

AF 1116/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: 59URS2SWG1

Lab Sample ID: 280-62916-4
Client Matrix: Water

Date Sampled: 11/18/2014 1249
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0101.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2251			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2251				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	4.1		0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~UG~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	2.1		0.16	1.0
1,1-Dichloroethene	0.32	~~J~~ F	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~UG~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~UG~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~UG~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~UG~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~UG~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~UG~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	1.2		0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~UG~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2SWG1**

Lab Sample ID: 280-62916-4
Client Matrix: Water

Date Sampled: 11/18/2014 1249
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0101.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2251			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2251				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	3.7		0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	119		70 - 120
4-Bromofluorobenzene (Surr)	104		75 - 120
Dibromofluoromethane (Surr)	114		85 - 115
Toluene-d8 (Surr)	111		85 - 120

AF 1/14/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: 59URS5SWG1

Lab Sample ID: 280-62916-5
Client Matrix: Water

Date Sampled: 11/18/2014 1550
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0102.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2312			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2312				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.68	~~UF~~	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~UQ~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~UQ~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~UQ~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~UQ~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~UQ~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~UQ~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~UQ~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~UQ~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS5SWG1**

Lab Sample ID: 280-62916-5
Client Matrix: Water

Date Sampled: 11/18/2014 1550
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0102.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/01/2014 2312			Final Weight/Volume:	20 mL
Prep Date:	12/01/2014 2312				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.65	J F	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		70 - 120
4-Bromofluorobenzene (Surr)	97		75 - 120
Dibromofluoromethane (Surr)	108		85 - 115
Toluene-d8 (Surr)	104		85 - 120

AC 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW1WG1**

Lab Sample ID: 280-62916-6
Client Matrix: Water

Date Sampled: 11/19/2014 0941
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7151.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1753			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1753				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.19	JF	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW1WG1**

Lab Sample ID: 280-62916-6
Client Matrix: Water

Date Sampled: 11/19/2014 0941
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7151.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1753			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1753				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.16	U	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 120
4-Bromofluorobenzene (Surr)	100		75 - 120
Dibromofluoromethane (Surr)	102		85 - 115
Toluene-d8 (Surr)	103		85 - 120

AF 11/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW1WG1**

Lab Sample ID: 280-62916-7
Client Matrix: Water

Date Sampled: 11/19/2014 1116
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7152.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1815			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1815				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW1WG1**

Lab Sample ID: 280-62916-7
Client Matrix: Water

Date Sampled: 11/19/2014 1116
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7152.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1815			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1815				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.16	U	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		70 - 120
4-Bromofluorobenzene (Surr)	93		75 - 120
Dibromofluoromethane (Surr)	93		85 - 115
Toluene-d8 (Surr)	93		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW3WG1**

Lab Sample ID: 280-62916-8
Client Matrix: Water

Date Sampled: 11/19/2014 1413
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255537	Instrument ID:	VMS_Z
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Z3720.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 0925			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 0925				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.32	JF	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	49		0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW3WG1**

Lab Sample ID: 280-62916-8
Client Matrix: Water

Date Sampled: 11/19/2014 1413
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255537	Instrument ID:	VMS_Z
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Z3720.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 0925			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 0925				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.16	U	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		70 - 120
4-Bromofluorobenzene (Surr)	102		75 - 120
Dibromofluoromethane (Surr)	90		85 - 115
Toluene-d8 (Surr)	97		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW3WG1**

Lab Sample ID: 280-62916-9
Client Matrix: Water

Date Sampled: 11/18/2014 1830
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0105.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 0016			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 0016				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.26	~~J~~ F	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	~~UQ~~ U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.16	U	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	~~UQ~~ U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	~~UQ~~ U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	~~UQ~~ U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	~~UQ~~ U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	~~UQ~~ U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	~~UQ~~ U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	0.31	~~J~~ F	0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	~~UQ~~ U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AR 1/14/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW3WG1**

Lab Sample ID: 280-62916-9
Client Matrix: Water

Date Sampled: 11/18/2014 1830
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255342	Instrument ID:	VMS_G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G0105.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 0016			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 0016				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.20	U	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	0.51	~~U~~ JF	0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 120
4-Bromofluorobenzene (Surr)	97		75 - 120
Dibromofluoromethane (Surr)	105		85 - 115
Toluene-d8 (Surr)	104		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW7WG1**

Lab Sample ID: 280-62916-10
Client Matrix: Water

Date Sampled: 11/19/2014 1607
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7155.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1922			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1922				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	1.9		0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	4.6		0.16	1.0
1,1-Dichloroethene	0.67	JF	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	33		0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW7WG1**

Lab Sample ID: 280-62916-10
Client Matrix: Water

Date Sampled: 11/19/2014 1607
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255385	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H7155.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/02/2014 1922			Final Weight/Volume:	20 mL
Prep Date:	12/02/2014 1922				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.62	JF	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.20	JF	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	7.8		0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.78	JF	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89		70 - 120
4-Bromofluorobenzene (Surr)	90		75 - 120
Dibromofluoromethane (Surr)	95		85 - 115
Toluene-d8 (Surr)	98		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW4WG1**

Lab Sample ID: 280-62916-11
Client Matrix: Water

Date Sampled: 11/20/2014 1124
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255538	Instrument ID:	VMS_MS1
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	MS2484.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 1529			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 1529				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.75	*F	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.46	*F	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	97	B	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	1.7		0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW4WG1**

Lab Sample ID: 280-62916-11
Client Matrix: Water

Date Sampled: 11/20/2014 1124
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255538	Instrument ID:	VMS_MS1
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	MS2484.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 1529			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 1529				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.30	J F	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	3.4		0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 120
4-Bromofluorobenzene (Surr)	92		75 - 120
Dibromofluoromethane (Surr)	95		85 - 115
Toluene-d8 (Surr)	96		85 - 120

AF 1/14/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DUP01WG1**

Lab Sample ID: 280-62916-12FD
Client Matrix: Water

Date Sampled: 11/20/2014 0938
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255538	Instrument ID:	VMS_MS1
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	MS2486.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 1613			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 1613				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1,2-Tetrachloroethane	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.81	JF	0.16	1.0
1,1,2,2-Tetrachloroethane	0.20	U	0.20	1.0
1,1,2-Trichloroethane	0.32	U	0.32	1.0
1,1-Dichloroethane	0.50	JF	0.16	1.0
1,1-Dichloroethene	0.14	U	0.14	1.0
1,1-Dichloropropene	0.15	U	0.15	1.0
1,2,3-Trichlorobenzene	0.18	U	0.18	1.0
1,2,3-Trichloropropane	0.77	U	0.77	3.0
1,2,4-Trichlorobenzene	0.32	U	0.32	1.0
1,2,4-Trimethylbenzene	0.14	U	0.14	1.0
1,2-Dibromo-3-Chloropropane	0.81	U	0.81	5.0
1,2-Dichlorobenzene	0.13	U	0.13	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3,5-Trimethylbenzene	0.14	U	0.14	1.0
1,3-Dichlorobenzene	0.16	U	0.16	1.0
1,3-Dichloropropane	0.15	U	0.15	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1-Chlorohexane	0.17	U	0.17	1.0
2,2-Dichloropropane	0.20	U	0.20	1.0
2-Butanone (MEK)	1.8	U	1.8	6.0
2-Chlorotoluene	0.17	U	0.17	1.0
4-Chlorotoluene	0.17	U	0.17	1.0
4-Isopropyltoluene	0.17	U	0.17	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	5.0
Acetone	110	B	1.9	10
Benzene	0.16	U	0.16	1.0
Bromobenzene	0.17	U	0.17	1.0
Bromoform	0.19	U	0.19	1.0
Bromomethane	0.21	U	0.21	2.0
Carbon tetrachloride	0.19	U	0.19	2.0
Chlorobenzene	0.17	U	0.17	1.0
Chlorobromomethane	0.10	U	0.10	1.0
Chloroform	0.16	U	0.16	1.0
Chloromethane	0.30	U	0.30	2.0
cis-1,2-Dichloroethene	1.9		0.15	1.0
cis-1,3-Dichloropropene	0.16	U	0.16	1.0
Dibromomethane	0.17	U	0.17	1.0
Dichlorobromomethane	0.17	U	0.17	1.0
Dichlorodifluoromethane	0.31	U	0.31	2.0
Ethylbenzene	0.16	U	0.16	1.0
Ethylene Dibromide	0.18	U	0.18	1.0
Hexachlorobutadiene	0.36	U	0.36	1.0
Isopropylbenzene	0.19	U	0.19	1.0
Methyl tert-butyl ether	0.25	U	0.25	5.0

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DUP01WG1**

Lab Sample ID: 280-62916-12FD
Client Matrix: Water

Date Sampled: 11/20/2014 0938
Date Received: 11/21/2014 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-255538	Instrument ID:	VMS_MS1
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	MS2486.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	12/03/2014 1613			Final Weight/Volume:	20 mL
Prep Date:	12/03/2014 1613				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Methylene Chloride	0.32	U	0.32	5.0
m-Xylene & p-Xylene	0.34	U	0.34	2.0
Naphthalene	0.22	U	0.22	1.0
n-Butylbenzene	0.32	U	0.32	1.0
N-Propylbenzene	0.16	U	0.16	1.0
o-Xylene	0.19	U	0.19	1.0
sec-Butylbenzene	0.17	U	0.17	1.0
Styrene	0.17	U	0.17	1.0
tert-Butylbenzene	0.16	U	0.16	1.0
Tetrachloroethene	0.32	~~J~~ F	0.20	1.0
Toluene	0.17	U	0.17	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.19	U	0.19	1.0
Trichloroethene	3.6		0.16	1.0
Trichlorofluoromethane	0.29	U	0.29	2.0
Vinyl chloride	0.10	U	0.10	1.5
Dibromochloromethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 120
4-Bromofluorobenzene (Surr)	108		75 - 120
Dibromofluoromethane (Surr)	111		85 - 115
Toluene-d8 (Surr)	112		85 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS3DWG1**

Lab Sample ID: 280-62916-1
Client Matrix: Water

Date Sampled: 11/17/2014 1445
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7415.D
Dilution:	1.0			Initial Weight/Volume:	1037.9 mL
Analysis Date:	12/05/2014 1408			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	4.7	~~M~~ M	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	94		54 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59BM121WG1**

Lab Sample ID: 280-62916-2
Client Matrix: Water

Date Sampled: 11/17/2014 1650
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7416.D
Dilution:	1.0			Initial Weight/Volume:	1050.8 mL
Analysis Date:	12/05/2014 1451			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.082	J um	0.082	0.95

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		54 - 120

AF 1/16/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2DWG1**

Lab Sample ID: 280-62916-3
Client Matrix: Water

Date Sampled: 11/18/2014 1050
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7417.D
Dilution:	1.0			Initial Weight/Volume:	1039 mL
Analysis Date:	12/05/2014 1512			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	28	M	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	85		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59URS2SWG1**

Lab Sample ID: 280-62916-4
Client Matrix: Water

Date Sampled: 11/18/2014 1249
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7418.D
Dilution:	1.0			Initial Weight/Volume:	1039.3 mL
Analysis Date:	12/05/2014 1534			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	20	M m	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	71		54 - 120

MC 1/14/15

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: 59URS5SWG1

Lab Sample ID: 280-62916-5
Client Matrix: Water

Date Sampled: 11/18/2014 1550
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254744	Lab File ID:	G4_7410.D
Dilution:	1.0			Initial Weight/Volume:	1031.8 mL
Analysis Date:	12/05/2014 1218			Final Weight/Volume:	2 mL
Prep Date:	11/25/2014 1630			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.083	~~UQJ~~ UM	0.083	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW1WG1**

Lab Sample ID: 280-62916-6
Client Matrix: Water

Date Sampled: 11/19/2014 0941
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7419.D
Dilution:	1.0			Initial Weight/Volume:	1029.8 mL
Analysis Date:	12/05/2014 1555			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.084	U um	0.084	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW1WG1**

Lab Sample ID: 280-62916-7
Client Matrix: Water

Date Sampled: 11/19/2014 1116
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7420.D
Dilution:	1.0			Initial Weight/Volume:	1042.2 mL
Analysis Date:	12/05/2014 1616			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.083	~~U~~ UM	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	83		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DW3WG1**

Lab Sample ID: 280-62916-8
Client Matrix: Water

Date Sampled: 11/19/2014 1413
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7421.D
Dilution:	1.0			Initial Weight/Volume:	1024.9 mL
Analysis Date:	12/05/2014 1638			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	11	M	0.084	0.98

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW3WG1**

Lab Sample ID: 280-62916-9
Client Matrix: Water

Date Sampled: 11/18/2014 1830
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-256284	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7437.D
Dilution:	1.0			Initial Weight/Volume:	1033.9 mL
Analysis Date:	12/08/2014 1655			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.083	J UM	0.083	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	74		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW7WG1**

Lab Sample ID: 280-62916-10
Client Matrix: Water

Date Sampled: 11/19/2014 1607
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7423.D
Dilution:	1.0			Initial Weight/Volume:	1030.7 mL
Analysis Date:	12/05/2014 1721			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	4.4	M m	0.083	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59SW4WG1**

Lab Sample ID: 280-62916-11
Client Matrix: Water

Date Sampled: 11/20/2014 1124
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7424.D
Dilution:	1.0			Initial Weight/Volume:	1031.7 mL
Analysis Date:	12/05/2014 1742			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	2.5	~~M~~ M	0.083	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	90		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DUP01WG1**

Lab Sample ID: 280-62916-12FD
Client Matrix: Water

Date Sampled: 11/20/2014 0938
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7425.D
Dilution:	1.0			Initial Weight/Volume:	1038.6 mL
Analysis Date:	12/05/2014 1803			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	2.2	M M	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	80		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59DUP02WG1**

Lab Sample ID: 280-62916-13FD
Client Matrix: Water

Date Sampled: 11/19/2014 0903
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7426.D
Dilution:	1.0			Initial Weight/Volume:	1042.2 mL
Analysis Date:	12/05/2014 1824			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	9.8	~~M~~ M	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	83		54 - 120

Client: HydroGeoLogic Inc

Job Number: 280-62916-1

Client Sample ID: **59EB112014**

Lab Sample ID: 280-62916-15EB
Client Matrix: Water

Date Sampled: 11/20/2014 1240
Date Received: 11/21/2014 1040

8270C/DoD Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C/DoD	Analysis Batch:	280-255944	Instrument ID:	SMS_G4
Prep Method:	3520C	Prep Batch:	280-254398	Lab File ID:	G4_7427.D
Dilution:	1.0			Initial Weight/Volume:	1040.1 mL
Analysis Date:	12/05/2014 1846			Final Weight/Volume:	2 mL
Prep Date:	11/23/2014 1450			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,4-Dioxane	0.083	U	0.083	0.96

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		54 - 120

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**361848**	**Date Collected:**	**11/20/2014 09:05**	**Matrix:**	**WATER**
Lab Sample ID:	**361848001**	**Date Received:**	**11/21/2014 09:15**		
		Client:	**HGLG007**	**Project:**	**HGLG00114**
Client ID:	**59JC2WG1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1440153**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**12/02/2014 17:00**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**12/02/2014 10:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s120114.B\s6l0208.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	~~J~~ F	0.739	ug/L	0.320	0.320	1.00

AF 1/14/15

ATTACHMENT 3

DATA VALIDATION REPORT

1,4-Dioxane
SW-846 Method 8270C-SIM
USEPA Level II Review

Site: Air Force Plant 59	SDG #: 280-62916
Laboratory: GEL Laboratories	Date: 01/15/2015
HydroGeoLogic, Inc. Reviewer: Andrea Fletcher Peer Reviewer: Joseph Vilain (01/16/15)	Project: AF7087.05.01

Client Sample ID	Laboratory Sample ID	Analysis/Prep Batch	Matrix
59URS3DWG1	280-62916-1	280-255944/280-254398	Groundwater
59BM121WG1	280-62916-2	280-255944/280-254398	Groundwater
59URS2DWG1	280-62916-3	280-255944/280-254398	Groundwater
59URS2SWG1	280-62916-4	280-255944/280-254398	Groundwater
59URS5SWG1	280-62916-5	280-255944/280-254744	Groundwater
59DW1WG1	280-62916-6	280-255944/280-254398	Groundwater
59SW1WG1	280-62916-7	280-255944/280-254398	Groundwater
59DW3WG1	280-62916-8	280-255944/280-254398	Groundwater
59SW3WG1	280-62916-9	280-255944/280-254398	Groundwater
59SW7WG1	280-62916-10	280-255944/280-254398	Groundwater
59SW4WG1	280-62916-11	280-255944/280-254398	Groundwater
59DUP01WG1	280-62916-12FD	280-255944/280-254398	Groundwater
59DUP02WG1	280-62916-13FD	280-255944/280-254398	Groundwater
59EB112014	280-62916-15EB	280-255944/280-254398	Water QC

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – All samples arrived at the laboratory in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were extracted within the 7-day holding time required by the QAPP and analyzed within 40 days of extraction.

Qualification: None required.

Surrogates – All surrogate recoveries were within the control limits specified by the laboratory.

Qualification: None required.

Laboratory Control Sample – The laboratory reported different recovery and RPD limits for 1,4-dioxane than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data. The LCS for batch 280-254398 met the %R control limit established in the QAPP. The LCS %R exceeded the upper control limit for 1,4-dioxane established in the QAPP. 1,4-Dioxane was not detected in the associated sample and no qualification is required.

Qualification: None required.

MS/MSD – The laboratory reported different recovery and RPD limits for 1,4-dioxane than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data.

Matrix spike/matrix spike duplicate analyses were performed for 1,4-dioxane on sample 59JC2WG1 from this SDG. The RPD results were within the QAPP control limits. The %R for the MS and MSD exceeded the upper control limit. All results should be qualified M.

***Qualification:* All results were qualified M.**

Laboratory Duplicate – Laboratory duplicate analyses were not requested or performed on a sample from this SDG.

Qualification: None required.

Method Blank – Two method blanks were associated with the samples in this SDG. The method blanks analyzed on 12/05/14 for batches 280-254398 and 280-254744 were free from contamination.

Qualification: None required.

Equipment Blank – One equipment blank, identified as 59EB112014, was associated with all samples in this SDG and was free from contamination.

Qualification: None required.

Field Duplicate – Sample 59DUP01WG1 was a field duplicate of sample 59SW4WG1 with a calculated RPD of 12.8%. Sample 59DUP02WG1 was a field duplicate of sample 59DW3WG1 with a calculated RPD of 11.5%. All RPDs were within the control limits established in the QAPP for duplicate pairs.

Qualification: None required.

Compound Quantitation – Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "MDL U." Analyte detections below the RL were reported as J-qualified results. These J qualifiers should be changed to F qualifiers per the QAPP instructions, unless superseded by a more severe qualifier. The laboratory has applied M flags to results in samples 59SW7WG1 and 59SW4WG1, indicating manual integration. These M flags should be replaced by M qualifiers indicating matrix interference.

Qualification: The M flags applied by the laboratory were changed to M qualifiers indicating matrix interference.

Qualification Summary Table (results in μg/L):

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier
59URS3DWG1	1,4-Dioxane	4.7	M	4.7	M
59BM121WG1	1,4-Dioxane	0.082	U	0.082	UM
59URS2DWG1	1,4-Dioxane	28	---	28	M
59URS2SWG1	1,4-Dioxane	20	M	20	M
59URS5SWG1	1,4-Dioxane	0.083	U	0.083	UM
59DW1WG1	1,4-Dioxane	0.084	U	0.084	UM
59SW1WG1	1,4-Dioxane	0.083	U	0.083	UM
59DW3WG1	1,4-Dioxane	11	---	11	M
59SW3WG1	1,4-Dioxane	0.083	U Q J	0..083	UM
59SW7WG1	1,4-Dioxane	4.4	M	4.4	M
59SW4WG1	1,4-Dioxane	2.5	M	2.5	M
59DUP01WG1	1,4-Dioxane	2.2	M	2.2	M
59DUP02WG1	1,4-Dioxane	9.8	M	9.8	M

Volatile Organic Compounds
SW-846 Method 8260B
USEPA Level II Review

Site: Air Force Plant 59	SDG #: 280-62916-1
Laboratory: TestAmerica Laboratories	Date: 01/13/2015
HydroGeoLogic, Inc. Reviewer: Andrea Fletcher Peer Reviewer: Joseph Vilain (01/16/14)	Project: AF7087.05.01

Client Sample ID	Laboratory Sample ID	Analysis Batch	Matrix
59URS3DWG1	280-62916-1	280-255342	Groundwater
59BM121WG1	280-62916-2	280-255342	Groundwater
59URS2DWG1	280-62916-3	280-255342	Groundwater
59URS2SWG1	280-62916-4	280-255342	Groundwater
59URS5SWG1	280-62916-5	280-255342	Groundwater
59DW1WG1	280-62916-6	280-255385	Groundwater
59SW1WG1	280-62916-7	280-255385	Groundwater
59DW3WG1	280-62916-8	280-255537	Groundwater
59SW3WG1	280-62916-9	280-255342	Groundwater
59SW7WG1	280-62916-10	280-255385	Groundwater
59SW4WG1	280-62916-11	280-255538	Groundwater
59DUP01WG1	280-62916-12FD	280-255538	Water QC
59AB112014	280-62916-14FB	280-255538	Water QC
59EB112014	280-62916-15EB	280-255538	Water QC
TB111714	280-62916-16TB	280-255342	Water QC
59JC2WG1	280-62916-17	280-255538	Groundwater

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted. The laboratory flagged several analytes based on %D values in the continuing calibration that were outside of control limits. Calibration data is not reviewed as part of the Level II validation process and the non standard flags should be removed.

Qualification: **Laboratory applied Q flags have been removed.**

Sample Delivery and Condition – All samples arrived at the laboratory in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – The samples were analyzed within the 14-day holding time required by the QAPP for preserved aqueous samples

Qualification: None required.

Surrogates – The laboratory reported different control limits for all VOC surrogates than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data.

All surrogate recoveries were within the control limits specified in the QAPP.

Qualification: None required.

Laboratory Control Sample – The laboratory reported different recovery and RPD limits for all target analytes than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data.

Two LCS/LCSD pairs and two LCSs were associated with the samples in this SDG. The LCS/LCSD pairs for batches 280-255537 and 280-255538 met the %R and RPD control limits established in the QAPP.

The LCSs for batches 280-255342 and 280-255385 met the %R control limits established in the QAPP.

Qualification: None required.

MS/MSD – The laboratory reported different recovery and RPD limits for all target analytes than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data.

Matrix spike/matrix spike duplicate analyses were performed for all target VOCs on sample 59DW1WG1 from this SDG. The %R and RPD results were within the QAPP control limits with the exception of the RPDs for dichlordifluoromethane, trichlorofluoromethane and vinyl chloride. All results are non-detections and no qualification is required.

Qualification: None required.

Laboratory Duplicate – Laboratory duplicate analyses were not requested or performed on a sample from this SDG.

Qualification: None required.

Method Blank – Four method blanks were associated with the samples in this SDG. The method blank analyzed on 12/01/14, for batch 280-255342 was contaminated with methylene chloride, methylene chloride was not detected in associated sample and no qualification was required. The method blanks analyzed on 12/02/14 for batch 280-255385 and on 12/03/14 for batches 280-255537 and 2880-255538, respectively, were free from contamination.

Qualification: None required.

Field Blanks – One equipment blank, identified as 59EB112014, was associated with all samples in this SDG and was free from contamination with the exception of acetone (4.9 μg/L). Acetone detections above the RL and less than 10x the contamination amount should be qualified B. One ambient blank, identified as 59AB112014, was associated with all samples in this SDG and was free from contamination with the exception of acetone (5.1 μg/L). Acetone detections above the RL and less

than 10x the contamination amount should be qualified B. All acetone detections were either below the RL or > 10x the contamination amount and no qualification was required.

Qualification: None required.

Trip Blank – One trip blank, identified as TB112014, was associated with all samples in this SDG and was free from contamination.

Qualification: None required.

Field Duplicate – Sample 59DUP01WG1 is a field duplicate of sample 59SW4WG1. All calculated RPDs were within the control limits established in the QAPP for the duplicate pair.

Qualification: None required.

Compound Quantitation – Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "MDL U." Analyte detections below the RL were reported as J-qualified results. These J qualifiers should be changed to F qualifiers per the QAPP instructions, unless superseded by a more severe qualifier. Due to a target analyte concentration, sample 59UR52DWG1was reanalyzed at 4x dilution. The diluted results should be considered the definitive result and the non-diluted results should have an X appended to the laboratory-applied qualifier.

Qualification: All diluted results for sample 59URS2DWG1 except for cis-1,2-dichloroethene, has an X appended to it, cis-1,2-dichloroethene in original analysis has an X appended to it. The diluted cis-1,2-dichloroethene result should be considered the definitive result. All laboratory detections below the RL are qualified F.

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier
59URS3DWG1	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	Isopropylbenzene	0.19	UQ	0.19	U
	Varies	Varies	J	Varies	F
59BM121WG1	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	Isopropylbenzene	0.19	UQ	0.19	U

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier
	Varies	Varies	J	Varies	F
59URS2DWG1 (Original run)	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	cis-1,2-Dichloroethene	75	J	75	JX
	All other J qualified analytes	Varies	J	Varies	F
	Isopropylbenzene	0.19	UQ	0.19	U
59URS2DWG1 (Dilution 4x)	cis-1,2-dichloroethene	67	--	Report this Value	
	All other results	Varies	U	Varies	UX
59URS2SWG1	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	Isopropylbenzene	0.19	UQ	0.19	U
	Varies	Varies	J	Varies	F
59URS5SWG1	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	Isopropylbenzene	0.19	UQ	0.19	U
	Varies	Varies	J	Varies	F
59DW1WG1	Varies	Varies	J	Varies	F
59SW1WG1	1,1,1-Trichloroethane	0.19	J	0.26	F
59DW3WG1	1,1-Dichloroethane	0.32	J	0.32	F
59SW3WG1	1,1,2,2-Tetrachloroethane	0.20	UQ	0.20	U
	1,2,3-Trichlorobenzene	0.18	UQ	0.18	U
	1,2,4-Trichlorobenzene	0.32	UQ	0.32	U

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier
	1,2-Dibromor-3-chloropropane	0.81	UQ	0.81	U
	2-Butanone	1.8	UQ	1.8	U
	4-Methyl-2-pentanone	1.0	UQ	1.0	U
	Bromomethane	0.21	UQ	0.21	U
	Isopropylbenzene	0.19	UQ	0.19	U
	Varies	Varies	J	Varies	F
59SW7WG1	Varies	Varies	J	Varies	F
59SW4WG1	Varies	Varies	J	Varies	F
59DUP01WG1	Varies	Varies	J	Varies	F
59JC2WG1	Varies	Varies	J	Varies	F

1,4-Dioxane
SW-846 Method 8270C-SIM
USEPA Level II Review

Site: Air Force Plant 59	SDG #: 361848
Laboratory: GEL Laboratories	Date: 01/15/2015
HydroGeoLogic, Inc. Reviewer: Andrea Fletcher Peer Reviewer: Joseph Vilain (01/16/15)	Project: AF7087.05.01

Client Sample ID	Laboratory Sample ID	Analysis/Prep Batch	Matrix
59JC2WG1	361848001	1440153/1440152	Groundwater

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – The sample arrived at the laboratory in acceptable condition and temperature and was properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – The sample was extracted within the 7-day holding time required by the QAPP and analyzed within 40 days of extraction.

Qualification: None required.

Surrogates – All surrogate recoveries were within the control limits specified by the laboratory.

Qualification: None required.

Laboratory Control Sample – The laboratory reported different recovery and RPD limits for 1,4-dioxane than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data. One LCS was associated with the sample in this SDG and met the %R control limit established in the QAPP.

Qualification: None required.

MS/MSD – The laboratory reported different recovery and RPD limits for 1,4-dioxane than were established in the QAPP; those limits listed in the QAPP were used to evaluate the data.

Matrix spike/matrix spike duplicate analyses were performed for 1,4-dioxane on sample 59JC2WG1 from this SDG. The %R and RPD results were within the QAPP control limits.

Qualification: None required.

Laboratory Duplicate – Laboratory duplicate analyses were not requested or performed on a sample from this SDG.

Qualification: None required.

Method Blank – One method blank was associated with the sample in this SDG. The method blank analyzed on 12/02/14 was free from contamination.

Qualification: None required.

Equipment Blank – An equipment blank was not submitted with this sample.

Qualification: None required.

Field Duplicate – A field duplicate was not submitted with this sample.

Qualification: None required.

Compound Quantitation – Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "MDL U." Analyte detections below the RL were reported as J-qualified results. These J qualifiers should be changed to F qualifiers per the QAPP instructions, unless superseded by a more severe qualifier.

Qualification: The J flag applied by the laboratory was changed to F.

Qualification Summary Table (results in μg/L):

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier
59JC2WG1	1,4-Dioxane	0.739	J	0.739	F