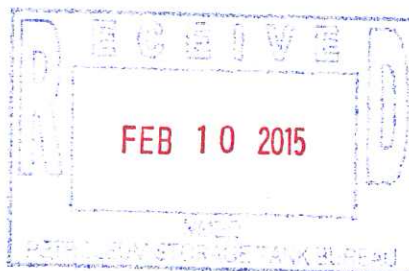




EA Engineering, Science, & Technology, Inc., PBC  
320 Gold Avenue SW, Suite 1210  
Albuquerque, New Mexico 87102  
Phone: (505) 224-9013 Fax (505) 224-9016

February 10, 2015

Ms. Allison Urbon  
New Mexico Environment Department  
Petroleum Storage Tank Bureau  
5500 San Antonio Drive, NE  
Albuquerque, New Mexico 87109



Dear Ms. Urbon:

EA Engineering, Science, and Technology, Inc., PBC (EA) is submitting the Well Installation, Plugging and Abandonment, and Groundwater Monitoring Report for Atex #213 located at 3501 Isleta Boulevard, Albuquerque, New Mexico. The report summarizes the activities conducted to fulfill requirements stated in the New Mexico Administrative Code, Title 20, Chapter 5, Part 12 and the New Mexico Environment Department Petroleum Storage Tank Bureau Guidelines for Corrective Action. This is the last monitoring event performed by EA under contract 14-667-2000-0030.

The full scope of work was implemented. The total cost for the Semi-Annual Groundwater Monitoring including additional monitoring well replacement and repair activities oversight and Report under deliverable ID 3776-1 is \$5,938.50, plus the additional approved amount of \$1,765.50, for a total of \$7,704.00, including NMGR.

Please let me know if you have any questions regarding the information provided in this report

Sincerely,

Lane Andress  
Project Manager

Teri McMillan  
Senior Geologist

Enclosure  
Cc: File



**GROUNDWATER MONITORING,  
MONITORING WELL  
REPLACEMENT AND REPAIR  
ACTIVITIES OVERSIGHT REPORT**

**ATEX #213  
PSTB FACILITY # 31815  
3501 ISLETA BOULEVARD,  
ALBUQUERQUE, NEW MEXICO**

Prepared by:

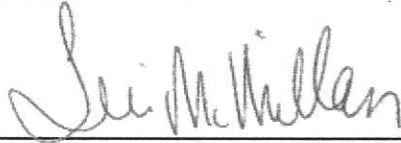
EA Engineering, Science,  
and Technology, Inc., PBC  
320 Gold Avenue SW, Suite 1210  
Albuquerque, New Mexico 87102

February 2015

### STATEMENT OF FAMILIARITY

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.

Signature:



Name: Teri McMillan

Affiliation: EA Engineering, Science, and Technology, Inc., PBC

Title: Project Manager

Date: February 10, 2015

## I. INTRODUCTION

EA Engineering, Science and Technology, Inc., PBC (EA) has completed the semi-annual groundwater monitoring event at Atex #213 located at 3501 Isleta Boulevard, Albuquerque, New Mexico. The monitoring event was completed in accordance with the *Work Plan for Semi-Annual Groundwater Monitoring, Atex 213, Albuquerque, New Mexico*, dated August 11, 2014, prepared by EA to satisfy the requirements stated in the New Mexico Administrative Code, Title 20, Chapter 5, Part 12 and the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) Guidelines for Corrective Action (GCA). The work plan was approved by the NMED PSTB on October 15, 2014. A change order for oversight to repair and replace damaged wells and additional reporting was submitted on November 20, 2014 and approved by the NMED PSTB on November 24, 2014. All work was completed under work plan identification number (WPID #) ~~3731~~-1.

3776

The Site is located at the intersection of Del Sur Drive and Isleta Boulevard in the South Valley area of Albuquerque, New Mexico. The main parcel of the site is currently a vacant lot. The site contains fast food restaurants to the north and east, and there is an electric substation to the south of the main parcel. A Middle Rio Grande Conservancy District (MRGCD) irrigation ditch is located south of the electric substation, and to the south of the irrigation ditch is another fast food restaurant (Figure 1).

Work was completed between November 17, 2014 and December 22, 2014. On November 17, 2014 fluid levels were measured in twelve (12) monitoring wells; MW-1R, MW-2, MW-3, MW-4R, MW-38, BB-2, NMW-1, NMW-4R, W-35, W-36, RNMW-2, and RNMW-3. Upon arrival to the site on November 17, 2014 it was noted that monitoring wells MW-1R, NMW-1, and RNMW-2 were damaged, and well MW-6R could not be located. Damage to monitoring wells appeared to be caused by a construction company, AUI, Inc. (AUI), who was using the site as an equipment staging area and construction debris yard.

Contact with AUI confirmed the damage to monitoring wells was caused by their use of the property. AUI agreed to repair the damaged well vaults for wells MW-1R, NMW-1, and RNMW-2, and replace the missing well, MW-6R. A change order was submitted by EA to NMED-PSTB to perform oversight to ensure the repairs to well vaults were performed correctly and the replacement well for MW-6R was installed properly.

On November 17, 2014 groundwater samples were collected from twelve (12) monitoring wells; MW-1R, MW-2, MW-3, MW-4R, MW-38, BB-2, NMW-1, NMW-4R, W-35, W-36, RNMW-2, and RNMW-3. On December 22, 2014 the fluid level was measured in the newly installed replacement well, MW-6RR and a groundwater sample was collected. Groundwater samples collected from all wells were submitted for laboratory analysis for volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), 1,2 dibromoethane (EDB), 1,2 dichloroethane (EDC), and total naphthalenes by Environmental Protection Agency (EPA) Method 8260B. In addition, specific conductance, dissolved oxygen (DO), pH, and temperature were monitored in the field.

This report summarizes the results of the monitoring event.



## II. ACTIVITIES PERFORMED DURING THIS PERIOD

This section provides a brief description of monitoring activities performed during this monitoring period.

### A. Brief Description of Remediation System and Date Installed

A remediation system is not installed at the Site; however, a summary of corrective action activities conducted at the Site follows:

- Site sampled December 2006 by Souder, Miller & Associates
- The Work Plan for the first two semi-annual groundwater monitoring events was approved by NMED on December 16, 2011.
- EA completed its 1<sup>st</sup> semi-annual sampling event in February 2012; EA continued to monitor the site on a semi-annual basis from this time through October 2013.
- EA performed additional monitoring well installation, well plugging and abandonment, and groundwater sampling in April and May 2014.
- EA submitted a work plan for semi-annual groundwater monitoring in August 2014; it was approved by NMED-PSTB in October 2014.

### B. Description of Activities Performed to Keep System Operating Properly

Billings & Associates installed a pump and treat remediation system at the Site in 1988. The system consisted of four recovery wells located along the southern property boundary, an air stripper and eight injection wells southwest of the site. The system was ineffective and had biofouling problems and was shut down in late 1989.

### C. Monitoring Activities Performed

#### *Drilling and Monitoring Well Replacement*

On December 22, 2014 groundwater monitoring well MW-6RR was installed at the site to replace monitoring well MW-6R, which was lost due to construction equipment activity.

Subsurface lithology beneath the site was logged via cuttings and was observed to be consistent with the installation of MW-6R in April 2014 and consisted of predominantly well graded and poorly graded sands, silty sands, silty sand with clay at a depth of approximately 10 feet below ground surface (ft bgs). The total depth of the boring was 21 ft bgs. Groundwater was noted at approximately 9 ft bgs during drilling activities.

Replacement monitoring wells MW-6RR was constructed with 2-inch Schedule 40 polyvinyl chloride (PVC) flush thread-jointed casing and 15 feet of 0.010-inch machine-slotted screen. The screen was placed in order to have approximately 5 feet of screen above the water table and 10 feet of screen below the water table. The monitoring well was completed with 10/20 Colorado silica sand placed approximately one to two feet above the top of the screen, followed by a hydrated bentonite seal to just beneath the surface. The well was completed with a flush-

mounted, traffic-rated well vault set in Portland cement. The boring log / monitoring well construction diagram is provided in Appendix A.

### *Soil Sampling*

Soil samples were not collected from the borings for laboratory analysis.

Drill cuttings were thin spread on site with approval from NMED-PSTB based on field screening screening results for MW-6R, installed April 2014, and the lab results from the composite IDW sample from monitoring well installations performed at the site in April and May 2014. The boring logs and well completion diagrams is presented in Appendix A.

### *Well Repair*

The well vault for MW-1R was repaired by AUI personnel. The replacement well, MW-6RR, was installed by Rodgers and Company, Inc. (Rodgers), using a CME 75 drilling rig equipped with a hollow-stem auger and the well vaults and well casing for monitoring wells NMW-1, and RNMW-2, were repaired by Rodgers, under contract to AUI, with oversight by EA. Photographs of damage to monitoring well and repairs are included as Appendix B.

### *Surveying*

Newly installed well MW-6RR and wells MW-1R, NMW-1, and RNMW-2 with repaired well vaults were to be surveyed by AUI.

As a result of damaged well vaults/casing at the time the groundwater monitoring was conducted on November 17, 2014, groundwater elevation data from wells MW-1R, MW-6RR, NMW-1, and RNMW-2 were not used in determining potentiometric surface contours. New survey information will be included in the next semi-annual monitoring report.

### *Well Development and Groundwater Sampling Activities – Installed Wells*

Newly installed replacement monitoring well MW-6RR was developed by purging approximately 20 well volumes with a pump. Field parameters (pH, specific conductance, temperature) were recorded during purging and development (see Table 4). After development a groundwater sample was collected, preserved, and delivered to the analytical laboratory. Purge/development water was ground discharged in accordance with Section 1.7.2 of the GCA.

### *Groundwater Sampling Activities – Existing Wells*

Prior to collecting groundwater samples, fluid levels in all existing wells were gauged with an electronic water level meter. No non-aqueous phase liquid was present in any monitoring wells during this event. Table 1 provides a summary of the groundwater gauging data collected from the monitoring network. A groundwater potentiometric surface map (Figure 2) was constructed based on the collected data. Hydrographs for select monitor wells are provided in Appendix C.



Monitoring wells were sampled with disposable bailers on November 17, 2014 and December 22, 2014. All equipment was decontaminated between wells with an Alconox™ solution to ensure sample quality. Purge water was ground discharged in accordance with Section 1.7.2 of the GCA. Sampling was accomplished by carefully pouring groundwater from the bailer into the sample containers.

Field parameters were measured with an Oakton water quality meter during purging and prior to sampling. Dissolved oxygen was measured using a YSI Pro DO water quality meter. Specific conductance, pH, dissolved oxygen, and temperature were monitored and recorded on monitoring well sampling field forms. The meter was calibrated and/or checked against a standard in accordance with manufacturer's specifications prior to use. Field forms are provided in Appendix D.

Sample containers, preservatives, analytical methods, and holding times are specified in Table 2. Samples for VOC analysis were collected such that no headspace existed in the sample vial. All samples were preserved in accordance with method requirements, then immediately cooled to less than 6°C with ice and delivered under chain-of-custody to HEAL in Albuquerque, New Mexico. The analytical laboratory reports are provided in Appendix E.

#### *Groundwater Sampling Results*

During this sampling event, dissolved phase hydrocarbon concentrations were above New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards in 5 (MW-1R, MW-3, MW-6RR, NMW-1, and W-35) of the 13 wells sampled. The NMWQCC groundwater quality standard for benzene is 10 µg/L and is 30 µg/L for total naphthalenes. Well NMW-1 contained benzene concentrations of 52 micrograms per liter (µg/L) and is currently the only monitoring well with benzene above NMWQCC standards. Monitoring wells MW-6RR, MW-3, W-35, and MW-1R contained total naphthalenes above NMWQCC standards at concentrations of 262 µg/L, 119 µg/L, 98.9 µg/L, and 59.9 µg/L, respectively. Laboratory results are summarized in Table 3, and analytical laboratory reports are provided in Appendix E.

#### **D. System Performance and Effectiveness**

A remediation system has not been installed at the site.

#### **E. Statement Verifying Containment of Release**

The naphthalene dissolved phase plume has migrated off-site and is not defined cross-gradient to the west. The benzene plume is adequately defined, the naphthalene plume

### III. SUMMARY AND CONCLUSIONS

This section summarizes the results, contains a brief discussion of site trends, and provides recommendations for future site activities.

#### A. Discussion of any Trends or Changes Noted in Analytical Results or Site Conditions

The results of groundwater gauging indicate that water levels have all dropped by approximately two-tenths of a foot when compared to the previous groundwater gauging conducted in April/May 2014. Hydrographs for select wells are included in Appendix D. The overall direction of groundwater flow is to the south with a gradient of 0.001 ft/ft. (Figure 2).

Hydrocarbon concentrations in existing monitoring wells have generally dropped when compared to the April/May 2014 event, with the exception of MW-3 which had an increase in benzene from <1.0 µg/L to 3.5 µg/L and an increase on total naphthalenes from 24.6 µg/L to 119 µg/L. The November/December 2014 distribution of dissolved phase organic contaminants is shown on Figure 3. Contaminant concentration trend graphs for selected analytes and wells are included in Appendix C.

Field parameters including pH, specific conductance, and temperature were measured during sampling and well development. The field parameters are summarized in Table 4.

#### B. Ongoing Assessment of Remediation System

A remediation system has not been installed at the site.

#### C. Recommendations

Based on the results of well installation and annual groundwater monitoring at the site, EA recommends the following:

- EA recommends continued semi-annual groundwater monitoring at the site.
- Redevelopment of MW-1R and MW-RNMW-2 that were damaged. This would consist of surging and bailing for 30 minutes to an hour for each well.

**TABLES**



**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
MW-1	29-Apr-14	4929.78	Well Plugged and Abandoned	
	1-Oct-13		Dry	NM
	25-Mar-13		Dry	NM
	22-Aug-12		Dry	NM
	21-Feb-12		Dry	NM
	26-Dec-06		Dry	NM
	25-Sep-06		Dry	NM
	17-May-06		Dry	NM
	31-Jan-06		Dry	NM
	3-Nov-05		Dry	NM
	28-Jul-05		Dry	NM
	22-Apr-04		9.25	4920.53
MW-1R	17-Nov-14	***	9.19	NA
	2-May-14	4932.03	9.06	4922.97
MW-2	17-Nov-14	4934.72	11.96	4922.76
	2-May-14		11.74	4922.98
	1-Oct-13		11.64	4923.08
	25-Mar-13		11.96	4922.76
	22-Aug-12		11.68	4923.04
	21-Feb-12		12.13	4922.59
	26-Dec-06		11.94	4922.78
	25-Sep-06		11.82	4922.90
	17-May-06		11.72	4923.00
	31-Jan-06		12.27	4922.45
	3-Nov-05		11.45	4923.27
	28-Jul-05		11.39	4923.33
22-Apr-04	11.43	4923.29		
MW-3	17-Nov-14	4932.98	10.19	4922.79
	2-May-14		10.00	4922.98
	1-Oct-13		9.80	4923.18
	25-Mar-13		10.25	4922.73
	22-Aug-12		9.92	4923.06
	21-Feb-12		10.42	4922.56
	26-Dec-06		10.27	4922.71
	25-Sep-06		10.05	4922.93
	17-May-06		10.02	4922.96
	31-Jan-06		10.57	4922.41
	3-Nov-05		9.78	4923.20
	28-Jul-05		9.65	4923.33
22-Apr-04	9.71	4923.27		

**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
MW-4	29-Apr-14	4932.55	Plugged and Abandoned	
	1-Oct-13		Well Destroyed	
	25-Mar-13		12.64	4919.91
	22-Aug-12		12.32	4920.23
	21-Feb-12		12.81	4919.74
	26-Dec-06		12.64	4919.91
	25-Sep-06		12.42	4920.13
	17-May-06		12.35	4920.20
	31-Jan-06		12.94	4919.61
	3-Nov-05		12.19	4920.36
	28-Jul-05		12.03	4920.52
	22-Apr-04		12.07	4920.48
	MW-4R		17-Nov-14	4933.42
2-May-14		10.56	4922.86	
MW-5	1-May-14	4931.85	Plugged and Abandoned	
	1-Oct-13		Dry	NM
	25-Mar-13		Dry	NM
	22-Aug-12		Dry	NM
	21-Feb-12		Dry	NM
	26-Dec-06		11.54	4920.31
	25-Sep-06		11.15	4920.70
	17-May-06		11.12	4920.73
	31-Jan-06		11.83	4920.02
	3-Nov-05		11.00	4920.85
	28-Jul-05		10.78	4921.07
	22-Apr-04		11.44	4920.41
	MW-6		29-Apr-14	4931.51
1-Oct-13		13.18	4918.33	
25-Mar-13		13.14	4918.37	
22-Aug-12		13.00	4918.51	
21-Feb-12		11.58	4919.93	
26-Dec-06		11.89	4919.62	
25-Sep-06		11.37	4920.14	
17-May-06		11.31	4920.20	
31-Jan-06		11.92	4919.59	
3-Nov-05		11.22	4920.29	
28-Jul-05		11.03	4920.48	
22-Apr-04		11.04	4920.47	

**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
MW-6R	17-Nov-14	4934.26	Well Destroyed	
	2-May-14		11.36	4922.90
MW-6RR	22-Dec-14	‡	11.20	‡
MW-10	26-Dec-06	4930.98	Plugged	
	25-Sep-06			
	17-May-06			
	31-Jan-06			
	3-Nov-05			
	28-Jul-05			
	22-Apr-04			
MW-29	1-May-14	4930.19	Plugged and Abandoned	
	1-Oct-13		9.81	4920.38
	25-Mar-13		10.11	4920.08
	22-Aug-12		9.87	4920.32
	21-Feb-12		10.32	4919.87
	26-Dec-06		11.14	4919.05
	25-Sep-06		10.01	4920.18
	17-May-06		9.89	4920.30
	31-Jan-06		10.45	4919.74
	3-Nov-05		9.66	4920.53
	28-Jul-05		9.56	4920.63
	22-Apr-04		9.60	4920.59
	MW-38		17-Nov-14	4931.87
2-May-14		8.96	4922.91	
1-Oct-13		4929.10	8.85	4923.02
25-Mar-13			9.15	4922.72
22-Aug-12			8.88	4922.99
21-Feb-12			9.38	4922.49
26-Dec-06			9.19	4922.68
25-Sep-06			8.97	4922.90
17-May-06			8.90	4922.97
31-Jan-06			9.49	4922.38
3-Nov-05			8.70	4923.17
28-Jul-05			8.56	4923.31
22-Apr-04			8.62	4923.25



**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
BB-2	17-Nov-14	4934.64	12.06	4922.58
	2-May-14		11.81	4922.83
	1-Oct-13	4931.31	11.70	4922.94
	25-Mar-13		12.05	4922.59
	22-Aug-12		11.69	4922.95
	21-Feb-12		12.24	4922.40
	26-Dec-06		12.04	4922.60
	25-Sep-06		11.72	4922.92
	17-May-06		11.66	4922.98
	31-Jan-06		12.36	4922.28
	3-Nov-05		11.56	4923.08
	28-Jul-05		11.34	4923.30
	22-Apr-04		10.88	4923.76
	NMW-1	17-Nov-14	***	9.72
2-May-14		4932.62	9.55	4923.07
1-Oct-13		4929.81	9.41	4920.40
25-Mar-13			9.75	4920.06
22-Aug-12			9.48	4920.33
21-Feb-12			9.93	4919.88
26-Dec-06			9.75	4920.06
25-Sep-06			9.62	4920.19
17-May-06			9.53	4920.28
31-Jan-06			10.70	4919.11
3-Nov-05			9.31	4920.50
28-Jul-05			9.22	4920.59
22-Apr-04			9.24	4920.57
NMW-2*		28-Jul-05	4930.38	Destroyed
	22-Apr-04		10.03	4920.35
NMW-3*	28-Jul-05	4930.56	Destroyed	NM
	22-Apr-04		10.28	4920.28

**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
NMW-4	30-Apr-14	4929.02	Plugged and Abandoned	
	1-Oct-13		9.59	4919.43
	25-Mar-13		9.90	4919.12
	22-Aug-12		9.59	4919.43
	21-Feb-12		10.12	4918.90
	26-Dec-06		10.94	4918.08
	25-Sep-06		9.59	4919.43
	17-May-06		NM	NM
	31-Jan-06		NM	NM
	3-Nov-05		NM	NM
	28-Jul-05		NM	NM
	22-Apr-04		10.33	4918.69
NMW-4R	17-Nov-14	4932.53	10.12	4922.41
	2-May-14		9.91	4922.62
W-34	1-May-14	4928.70	Plugged and Abandoned	
	1-Oct-13		Well Paved Over	
	25-Mar-13		8.61	4920.09
	22-Aug-12		8.33	4920.37
	21-Feb-12		8.77	4919.93
	26-Dec-06		8.61	4920.09
	25-Sep-06		8.51	4920.19
	17-May-06		8.40	4920.30
	31-Jan-06		8.92	4919.78
	3-Nov-05		8.11	4920.59
	28-Jul-05		8.09	4920.61
	22-Apr-04		7.92	4920.78
W-35	17-Nov-14	4931.50	8.78	4922.72
	2-May-14		8.65	4922.85
	1-Oct-13	4928.93	Well Paved Over	
	25-Mar-13		8.85	4922.65
	22-Aug-12		8.55	4922.95
	21-Feb-12		8.99	4922.51
	26-Dec-06		8.83	4922.67
	25-Sep-06		8.74	4922.76
	17-May-06		8.64	4922.86
	31-Jan-06		9.14	4922.36
	3-Nov-05		8.31	4923.19
	28-Jul-05		8.29	4923.21
	22-Apr-04		8.14	4923.36



**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>		
W-36	17-Nov-14	4932.00	8.97	4923.03		
	2-May-14		8.80	4923.20		
W-36	1-Oct-13	4929.11	Well Paved Over			
	25-Mar-13		9.01	4922.99		
	22-Aug-12		8.72	4923.28		
	21-Feb-12		9.15	4922.85		
	26-Dec-06		8.97	4923.03		
	25-Sep-06		8.92	4923.08		
	17-May-06		8.79	4923.21		
	31-Jan-06		9.30	4922.70		
	3-Nov-05		8.50	4923.50		
	28-Jul-05		8.48	4923.52		
	22-Apr-04		8.31	4923.69		
	W-37		1-May-14	4930.10	Plugged and Abandoned	
			1-Oct-13		Well Paved Over	
25-Mar-13		9.97	4920.13			
22-Aug-12		9.67	4920.43			
21-Feb-12		10.09	4920.01			
26-Dec-06		8.78	4921.32			
25-Sep-06		9.90	4920.20			
17-May-06		9.74	4920.36			
31-Jan-06		10.22	4919.88			
3-Nov-05		9.49	4920.61			
28-Jul-05		9.43	4920.67			
22-Apr-04		9.26	4920.84			
RNMW-2**		17-Nov-14	***		10.87	NA
	2-May-14	4933.74	10.70	4923.04		
	1-Oct-13	4930.88	10.57	4920.31		
	25-Mar-13		10.90	4919.98		
	22-Aug-12		10.61	4920.27		
	21-Feb-12		11.09	4919.79		
	26-Dec-06		10.92	4919.96		
	25-Sep-06		10.72	4920.16		
	17-May-06		10.64	4920.24		
	31-Jan-06		11.23	4919.65		
	3-Nov-05		10.44	4920.44		
	28-Jul-05		10.33	4920.55		

**TABLE 1. SUMMARY OF FLUID GAUGING DATA  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Monitor Well	Date Measured	Casing Elevation <sup>2</sup>	Depth to Water <sup>3</sup>	Groundwater Elevation <sup>2</sup>
RNMW-3**	17-Nov-14	4933.22	10.45	4922.77
	2-May-14		10.23	4922.99
	1-Oct-13	4930.42	10.12	4923.10
	25-Mar-13		10.45	4922.77
	22-Aug-12		10.17	4923.05
	21-Feb-12		10.65	4922.57
	26-Dec-06		10.49	4922.73
	25-Sep-06		10.27	4922.95
	17-May-06		10.20	4923.02
	31-Jan-06		10.80	4922.42
	3-Nov-05		9.99	4923.23
	28-Jul-05		9.89	4923.33

**NOTES:**

The top of casing elevation for wells MW-2 and MW-3 were adjusted by -0.17 and -0.89, respectively from the survey point top of well steel plate on pipe.

<sup>1</sup> Horizontal control to NM State Plane Coordinates Central NAD83 Grid Coordinates (in feet)

<sup>2</sup> Vertical Control to NAVD88 Datum in feet above mean sea level

<sup>3</sup> Measured in feet below the top of casing at survey point on north side of well

\* = Well Destroyed during source area excavation.

\*\* = Replacement well installed 4/27/05.

\*\*\* = Surface completion/casing damaged at time of measurement

‡ = Waiting for survey data

NM = not measured.

**TABLE 2. SAMPLE ANALYTICAL REQUIREMENTS  
ATEX #213, ALBUQUERQUE, NEW MEXICO**

Target Analytes	Matrix	Analytical Method	Sample Container	Preservative	Holding Time
VOCs	Water	EPA 8260B	3 x 40- mL glass vials	Mercuric Chloride; Cool to < 6°C	14 days
NOTES: VOCs = Volatile Organic Compounds with naphthalenes					

**TABLE 3. SUMMARY OF GROUNDWATER SAMPLE RESULTS  
VOLATILE ORGANIC COMPOUNDS  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Total Naphthalenes
MW-1	29-Apr-14	Plugged and Abandoned					
	1-Oct-13	Dry	Dry	Dry	Dry	Dry	Dry
	22-Aug-12	Dry	Dry	Dry	Dry	Dry	Dry
	21-Feb-12	Dry	Dry	Dry	Dry	Dry	Dry
	26-Dec-06	Dry	Dry	Dry	Dry	Dry	Dry
	25-Sep-06	Dry	Dry	Dry	Dry	Dry	Dry
	17-May-06	Dry	Dry	Dry	Dry	Dry	Dry
	31-Jan-06	Dry	Dry	Dry	Dry	Dry	Dry
	3-Nov-05	Dry	Dry	Dry	Dry	Dry	Dry
	28-Jul-05	Dry	Dry	Dry	Dry	Dry	Dry
22-Apr-04	<1.0	<1.0	4.8	<1.0	<1.0	<1.0	4.3
Jan-98	ND	110	320	370	2,200	NA	
MW-1R	17-Nov-14	<1.0	1.6	50	4.6	<1.0	59.9
	1-May-14	<10	<10	440	260	<10	534
MW-2	17-Nov-14	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1-May-14	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	22-Aug-12	<1.0	<1.0	<1.0	<1.5	3.0	<4.0
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	NS	NS	NS	NS	NS	NS
	25-Sep-06	<1.0	<1.0	<1.0	<3.0	2.5	<10.0
	17-May-06	<1.0	<1.0	<1.0	<3.0	1.9	<10.0
	31-Jan-06	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	3-Nov-05	NS	NS	NS	NS	NS	NS
	28-Jul-05	<1.0	<1.0	<1.0	<1.0	3.6	<10.0
	22-Apr-04	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
Jan-98	1.9	ND	0.7	0.7	10	NA	
MW-3	17-Nov-14	3.5	<2.0	17	8.6	<2.0	119
	1-May-14	<1.0	<1.0	3.6	2.4	<1.0	24.6
	26-Mar-13	3.7	1.8	18	22	<1.0	108
	23-Aug-12	6.4	<5.0	19	28	<5.0	60
	21-Feb-12	7.4	<5.0	37	55	<5.0	142
	26-Dec-06	160	58	220	460	530	610
	25-Sep-06	62	11	37	100	230	180
	17-May-06	46	6.5	29	55	230	142
	31-Jan-06	60	<20	83	110	500	170
	3-Nov-05	180	9.7	58	47	920	438
	28-Jul-05	52	<10	14	<10	410	90
22-Apr-04	100	<10	25	11	320	98	
Jan-98	2,400	110	320	370	2,200	NA	
MW-4	29-Apr-14	Plugged and Abandoned					
	1-Oct-13	Well Destroyed					
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	62	<4.0
	23-Aug-12	<1.0	<1.0	<1.0	<1.5	46	<4.0
	22-Feb-12	<1.0	<1.0	<1.0	<1.5	18	<4.0
	26-Dec-06	93	<10	<10	<30	790	<100
	25-Sep-06	<1.0	<1.0	<1.0	<3.0	580	<10.0
	17-May-06	<1.0	<1.0	<1.0	<3.0	180	<10.0
	31-Jan-06	<1.0	<1.0	<1.0	<1.0	220	<10.0
	3-Nov-05	<5.0	<5.0	<5.0	<5.0	500	<50
	28-Jul-05	<1.0	<1.0	<1.0	<1.0	720	<10.0
22-Apr-04	590	<10	<10	<10	1400	<100	



**TABLE 3. SUMMARY OF GROUNDWATER SAMPLE RESULTS  
VOLATILE ORGANIC COMPOUNDS  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Total Naphthalenes
MW-4R	17-Nov-14	<1.0	<1.0	<1.0	<1.5	8.0	<4.0
	1-May-14	29	<1.0	3.8	<1.5	55	64.6
MW-5	1-May-14	Plugged and Abandoned					
	1-Oct-13	Dry	Dry	Dry	Dry	Dry	Dry
	25-Mar-13	Dry	Dry	Dry	Dry	Dry	Dry
	22-Aug-12	Dry	Dry	Dry	Dry	Dry	Dry
	21-Feb-12	Dry	Dry	Dry	Dry	Dry	Dry
	26-Dec-06	<1.0	<1.0	<1.0	<3.0	25	<10.0
	25-Sep-06	<1.0	<1.0	<1.0	<3.0	<1.5	<10.0
	17-May-06	<1.0	<1.0	<1.0	<3.0	<1.5	<10.0
	31-Jan-06	<1.0	<1.0	<1.0	<1.0	190	<10.0
	3-Nov-05	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	29-Jul-05	<1.0	<1.0	<1.0	<1.0	<2.0	<10.0
	22-Apr-04	<1.0	<1.0	<1.0	<1.0	280	<10.0
	Jun-94	<0.5	<0.5	<0.5	<0.5	<2.5	NA
MW-6	29-Apr-14	Plugged and Abandoned					
	1-Oct-13	Dry	Dry	Dry	Dry	Dry	Dry
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	1.1	<4.0
	22-Aug-12	<1.0	<1.0	<1.0	<1.5	1.8	<4.0
	22-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	33	<10	16	<30	720	395
	25-Sep-06	84	<5.0	32	15	1,200	630
	17-May-06	20	<10	11	<30	490	160
	31-Jan-06	24	<10	20	13	730	253
	3-Nov-05	46	<5.0	28	16	570	380
	29-Jul-05	45	<20	<20	<20	800	210
23-Apr-04	50	<10	14	15	830	140	
MW-6R	17-Nov-14	Well Destroyed					
	1-May-14	1.6	<1.0	6.6	<1.5	6.2	55.5
MW-6RR	22-Dec-14	<5.0	<5.0	130	27	13	262
MW-29	1-May-14	Plugged and Abandoned					
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	23-Aug-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	NS	NS	NS	NS	NS	NS
	25-Sep-06	<1.0	<1.0	<1.0	<1.0	7.5	<10.0
	17-May-06	NS	NS	NS	NS	NS	NS
	31-Jan-06	NS	NS	NS	NS	NS	NS
	3-Nov-05	NS	NS	NS	NS	NS	NS
	29-Jul-05	<1.0	<1.0	<1.0	<1.0	6.8	<10.0
	22-Apr-04	<1.0	<1.0	<1.0	<1.0	14	<10.0
1-Jun-94	<0.5	<0.5	<0.5	<0.5	<2.5	NA	



**TABLE 3. SUMMARY OF GROUNDWATER SAMPLE RESULTS  
VOLATILE ORGANIC COMPOUNDS  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Total Naphthalenes
MW-38	17-Nov-14	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1-May-14	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	23-Aug-12	1.5	<1.0	<1.0	<1.5	1.2	15
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	13	<1.0	2.5	<3.0	<1.5	12
	25-Sep-06	1.5	<1.0	<1.0	<3.0	<1.5	3.1
	17-May-06	1.4	<1.0	<1.0	<3.0	<1.5	<10.0
	31-Jan-06	2.5	<1.0	<1.0	<1.0	<1.0	2.5
	3-Nov-05	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	29-Jul-05	1.4	<1.0	<1.0	<1.0	<1.0	<10.0
	22-Apr-04	1.7	<1.0	<1.0	<1.0	<1.0	<10.0
Jan-98	46	1.2	8.1	7.6	9	NA	
BB-2	17-Nov-14	<1.0	<1.0	<1.0	<1.5	26	<4.0
	1-May-14	<1.0	<1.0	<1.0	<1.5	17	<4.0
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	53	<4.0
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	150	<4.0
	23-Aug-12	<1.0	<1.0	1.3	<1.5	94	17.0
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	290	<4.0
	26-Dec-06	NS	NS	NS	NS	NS	NS
	25-Sep-06	<1.0	<1.0	1.1	<1.0	<1.5	15.5
	17-May-06	NS	NS	NS	NS	NS	NS
	31-Jan-06	NS	NS	NS	NS	NS	NS
	3-Nov-05	NS	NS	NS	NS	NS	NS
	29-Jul-05	<1.0	<1.0	4.6	<1.0	<2.0	7.6
	22-Apr-04	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
Jan-98	5.8	ND	50	21	1,200	NA	
NMW-1	17-Nov-14	52	<5.0	5.3	19	9.3	<20
	2-May-14	190	1.6	5.9	6.3	35	25.4
	1-Oct-13	290	8.4	3.1	39	44	52.1
	26-Mar-13	510	17	22	71	130	126
	23-Aug-12	490	<10	23	70	94	48
	21-Feb-12	390	<10	33	38	110	92
	26-Dec-06	950	55	44	900	750	760
	25-Sep-06	410	<10	<10	86	420	140
	17-May-06	340	95	<20	1,700	320	840
	31-Jan-06	810	56	<50	1,100	570	220
	3-Nov-05	710	170	<50	640	480	190
	28-Jul-05	1,100	390	<50	3,600	840	920
	22-Apr-04	990	200	28	1,100	580	272
Jan-98	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	

**TABLE 3. SUMMARY OF GROUNDWATER SAMPLE RESULTS  
VOLATILE ORGANIC COMPOUNDS  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Total Naphthalenes	
NMW-2/RNMW-2	17-Nov-14	<1.0	<1.0	<1.0	<1.5	62	<4.0	
	2-May-14	12	<1.0	<1.0	<1.5	72	<4.0	
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	61	<4.0	
	26-Mar-13	99	1.2	1.7	2.2	220	7.4	
	22-Aug-12	54	<1.0	<1.0	<1.5	290	9.6	
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	83	<4.0	
	26-Dec-06	47	<10	<10	<30	1,000	20	
	25-Sep-06	20	<10	16	<30	1,300	<100	
	17-May-06	310	<1.0	31	19	550	14	
	31-Jan-06	11	<1.0	45	4.1	560	3.0	
	3-Nov-05	74	1.1	160	52	590	27.4	
	28-Jul-05	320	11	710	120	1300	39	
	23-Apr-04	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
NMW-3/RNMW-3	17-Nov-14	1.1	<1.0	<1.0	<1.5	63	<4.0	
	2-May-14	<1.0	<1.0	<1.0	<1.5	31	<4.0	
	1-Oct-13	1.2	<1.0	<1.0	<1.5	83	4.0	
	26-Mar-13	4.6	<1.0	<1.0	<1.5	86	5.4	
	23-Aug-12	1.2	<1.0	<1.0	<1.5	170	5.5	
	21-Feb-12	1.8	<1.0	<1.0	<1.5	120	4.9	
	26-Dec-06	6.4	<5.0	<5.0	<15	580	<50	
	25-Sep-06	220	<5	64.0	<15	1,400	110	
	17-May-06	16	<1.0	7.9	<3.0	370	<10.0	
	31-Jan-06	11	<1.0	16	6.4	550	3.3	
	3-Nov-05	130	7.7	89	170	1,400	32.4	
	28-Jul-05	150	23	270	130	1,200	32.3	
	23-Apr-04	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
	Jan-98	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
NMW-4	30-Apr-14	Plugged and Abandoned						
	1-Oct-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	23-Aug-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	22-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	26-Dec-06	<1.0	<1.0	<1.0	<3.0	<1.5	<10.0	
	25-Sep-06	<1.0	<1.0	<1.0	<3.0	<1.5	<10.0	
	17-May-06	<1.0	<1.0	<1.0	<3.0	9.7	<10.0	
	31-Jan-06	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	
	3-Nov-05	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	
	29-Jul-05	<1.0	<1.0	<1.0	<1.0	<2.0	<10.0	
23-Apr-04	<1.0	<1.0	<1.0	<1.0	2.7	<10.0		
Jun-94	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
NMW-4R	17-Nov-14	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	1-May-14	8.0	2.6	<1.0	<1.5	11	<4.0	
W-34	1-May-14	Plugged and Abandoned						
	1-Oct-13	Well Paved Over						
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	22-Aug-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0	
	26-Dec-06	NS	NS	NS	NS	NS	NS	
	25-Sep-06	<1.0	<1.0	<1.0	<3.0	<1.5	<10.0	
	17-May-06	NS	NS	NS	NS	NS	NS	
	31-Jan-06	NS	NS	NS	NS	NS	NS	
	3-Nov-05	NS	NS	NS	NS	NS	NS	
	28-Jul-05	<1.0	<1.0	3.7	1.3	<1.0	<10.0	
6-May-04	<1.0	<1.0	6.7	3.4	<1.0	<10.0		
Jan-98	1.2	ND	7.6	7.2	<2.5	NA		

**TABLE 3. SUMMARY OF GROUNDWATER SAMPLE RESULTS  
VOLATILE ORGANIC COMPOUNDS  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Total Naphthalenes
W-35	17-Nov-14	<1.0	<1.0	15	<1.5	<1.0	98.9
	2-May-14	<1.0	<1.0	7.5	<1.5	<1.0	124
	1-Oct-13	Well Paved Over					
	25-Mar-13	<1.0	<1.0	32	<1.5	<1.0	399
	22-Aug-12	<1.0	<1.0	6.9	<1.5	<1.0	55.3
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	NS	NS	NS	NS	NS	NS
	25-Sep-06	<1.0	<1.0	12	<3.0	<1.5	188
	17-May-06	NS	NS	NS	NS	NS	NS
	31-Jan-06	NS	NS	NS	NS	NS	NS
	3-Nov-05	NS	NS	NS	NS	NS	NS
	28-Jul-05	<5.0	<5.0	250	42	<5.0	400
	6-May-04	<1.0	<1.0	110	96	<1.0	164
Jan-98	ND	190	1700	5,600	ND	NA	
W-36	17-Nov-14	<1.0	<1.0	3.8	<1.5	<1.0	17
	2-May-14	<1.0	<1.0	2.4	<1.5	<1.0	12
	1-Oct-13	Well Paved Over					
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	22-Aug-12	<1.0	<1.0	2.3	<1.5	<1.0	11
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	<1.0	<1.0	15	4.5	<1.5	55.3
	25-Sep-06	<1.0	<1.0	23	3.0	<1.5	81.7
	17-May-06	<1.0	<1.0	3.0	<3.0	<1.5	4.1
	31-Jan-06	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	3-Nov-05	<1.0	<1.0	2.9	3.6	<1.0	3.3
	28-Jul-05	<1.0	<1.0	55	77	<1.0	76.5
	6-May-04	<10	<10	190	390	<10	230
Jan-98	ND	4.4	39	56	12	NA	
W-37	1-May-14	Plugged and Abandoned					
	1-Oct-13	Well Paved Over					
	25-Mar-13	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	22-Aug-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	21-Feb-12	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	26-Dec-06	NS	NS	NS	NS	NS	NS
	25-Sep-06	<1.0	<1.0	12	<3.0	<1.5	<10.0
	17-May-06	NS	NS	NS	NS	NS	NS
	31-Jan-06	NS	NS	NS	NS	NS	NS
	3-Nov-05	NS	NS	NS	NS	NS	NS
	28-Jul-05	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	6-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
	Jun-94	<0.5	<0.5	<0.5	<0.5	<2.5	NA

NOTES:  
<sup>1</sup> In May 2014, well was uncovered and a new vault cover, a new well seal, and a new "j-plug" were emplaced.  
All data reported prior to 2012 from *Groundwater Monitoring Report, ATEX #213 UST Release Site - Albuquerque, New Mexico* (Souder Miller Associates, 2007)  
All concentrations reported in parts per billion (micrograms per liter)  
NA = Not analyzed  
NS = Not sampled  
ND = Not detected  
MTBE = methyl tertiary butyl ether



**TABLE 4. SUMMARY OF FIELD PARAMETERS  
ATEX 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	pH	SpC ( $\mu$ S/cm)	Temp	DO (mg/L)
MW-1	1-Oct-13	DRY - Plugged and Abandoned April 2014			
	25-Mar-13	DRY			
	22-Aug-12	DRY			
	21-Feb-12	DRY			
MW-1R	17-Nov-14	7.56	913	21.8	1.18
	1-May-14	7.8	803	19.4	1.55
MW-2	17-Nov-14	7.1	1,009	22.9	1.70
	1-May-14	7.63	981	18.8	1.40
	1-Oct-13	6.31	1,023	25.5	--
	25-Mar-13	6.29	1,111	18.4	1.04
	22-Aug-12	8.17	950	24.5	1.31
	21-Feb-12	NM	761	19.7	1.35
MW-3	17-Nov-14	7.45	941	20.9	1.35
	1-May-14	7.70	1,043	19.1	1.77
	10-Oct-13	7.23	942	22.6	1.15
	25-Mar-13	6.64	1,021	17.6	0.97
	23-Aug-12	8.48	963	20.9	1.07
	21-Feb-12	NM	898	18.4	1.15
MW-4	1-Oct-13	Well Destroyed - Plugged and Abandoned April 2014			
	25-Mar-13	6.42	946	18.0	1.20
	23-Aug-12	8.11	980	24.9	1.38
	22-Feb-12	6.09	981	13.8	1.21
MW-4R	17-Nov-14	7.5	649	21.6	0.85
	1-May-14	7.69	922	20.0	2.18
MW-5	1-Oct-13	DRY - Plugged and Abandoned April 2014			
	25-Mar-13	DRY			
	22-Aug-12	DRY			
	21-Feb-12	DRY			
MW-6	29-Apr-14	DRY - Plugged and Abandoned April 2014			
	1-Oct-13 <sup>1</sup>	NM	NM	NM	NM
	25-Mar-13	NM	NM	NM	NM
	22-Aug-12	NM	NM	NM	NM
	22-Feb-12	6.37	6,310	15.6	NM
MW-6R	17-Nov-14	Well Destroyed			
	1-May-14	7.93	880	20.0	2.19
MW-6RR	22-Dec-14	7.18	815	21.1	10.4
MW-29	1-May-14	Plugged and Abandoned May 2014			
	1-Oct-13	6.29	1,024	24.9	--
	25-Mar-13	6.35	1,231	16.2	1.34
	23-Aug-12	7.18	1,179	26.3	0.99
	21-Feb-12	NM	884	16.7	1.82

**TABLE 4. SUMMARY OF FIELD PARAMETERS  
ATEX 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	pH	SpC ( $\mu$ S/cm)	Temp	DO (mg/L)
MW-38	17-Nov-14	7.2	880	21.7	1.76
	1-May-14	7.59	984	19.0	1.53
	1-Oct-13	6.13	1,003	25.4	--
	25-Mar-13	6.41	1,034	17.4	0.77
	23-Aug-12	7.79	1,090	25.1	2.1
	21-Feb-12	NM	859	17.8	1.08
BB-2	17-Nov-14	7.37	862	19.8	1.92
	1-May-14	7.77	945	17.7	1.74
	1-Oct-13	6.27	952	23.2	--
	25-Mar-13	6.43	1,009	17.1	1.47
	23-Aug-12	7.61	1,002	26.9	1.19
	21-Feb-12	NM	798	17.5	2.32
NMW-1	17-Nov-14	7.09	986	23.1	1.06
	2-May-14	7.29	1,174	19.0	1.31
	1-Oct-13	6.30	1,091	26.0	--
	26-Mar-13	6.31	1,124	17.1	0.63
	23-Aug-12	8.43	1,066	24.1	1.11
	21-Feb-12	NM	904	18.2	1.18
RNMW-2	17-Nov-14	7.32	871	22.2	0.56
	2-May-14	7.47	1,053	19.2	1.30
	1-Oct-13	6.49	1,051	24.5	--
	26-Mar-13	6.43	1,048	18.6	0.74
	22-Aug-12	7.84	1,176	23.1	1.28
	21-Feb-12	NM	852	19.3	1.14
RNMW-3	17-Nov-14	7.32	1,007	22.5	1.48
	2-May-14	7.53	1,009	19.7	1.54
	1-Oct-13	6.37	1,065	25.0	--
	26-Mar-13	6.71	1,002	18.5	0.70
	23-Aug-12	8.28	1,128	25.2	1.21
	21-Feb-12	NM	976	19.1	1.52
NMW-4	30-Apr-14	Plugged and Abandoned April 2014			
	1-Oct-131	NM	NM	NM	NM
	25-Mar-13	NM	NM	NM	NM
	23-Aug-12	NM	NM	NM	NM
	21-Feb-12	NM	NM	NM	NM
NMW-4R	17-Nov-14	7.36	513	20.9	1.31
	1-May-14	Developed at 4 gallons per minute; ~180 gallons removed.			



**TABLE 4. SUMMARY OF FIELD PARAMETERS  
ATEX 213, ALBUQUERQUE, NEW MEXICO**

Well Number	Date Sampled	pH	SpC ( $\mu$ S/cm)	Temp	DO (mg/L)
W-34	1-Oct-13	Paved Over - Plugged and Abandoned May 2014			
	25-Mar-13	6.55	1,129	17.3	0.77
	22-Aug-12	7.59	822	23.4	1.02
	21-Feb-12	NM	820	18.5	1.07
W-35	17-Nov-14	7.28	1065	22.6	2.48
	2-May-14	7.44	1148	19.5	0.91
	1-Oct-13	Paved Over - Well uncovered May 2014			
	25-Mar-13	6.63	1,238	16.7	0.84
	22-Aug-12	7.73	1,091	25.0	0.96
	21-Feb-12	NM	852	17.7	0.97
	17-Nov-14	7.24	847	22.1	1.66
W-36	2-May-14	7.39	878	18.8	3.03
	1-Oct-13	Paved Over - Well uncovered May 2014			
	25-Mar-13	6.24	1,143	17.5	0.75
	22-Aug-12	8.14	976	24.6	1.06
	21-Feb-12	NM	863	18.0	1.25
	17-Nov-14	7.24	847	22.1	1.66
W-37	1-Oct-13	Paved Over - Plugged and Abandoned May 2014			
	25-Mar-13	6.86	1,085	19.1	1.04
	22-Aug-12	6.82	1,012	24.3	1.15
	21-Feb-12	NM	819	19.9	1.21

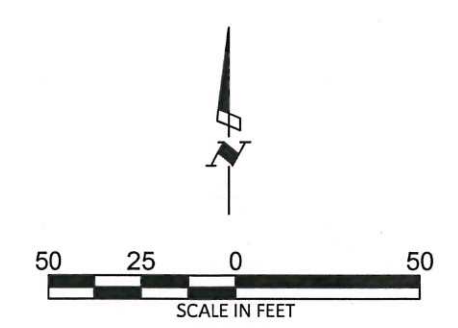
NOTES:  
<sup>1</sup> - Unable to obtain parameters due to extremely poor recharge  
DO = Dissolved oxygen. Meter malfunctioning during the October 2013 event  
mg/L = Milligrams per liter  
NM = Not Measured  
SpC = Specific conductance measured in micro siemens per centimeter ( $\mu$ S/cm)  
Temp = Temperature in degrees Celsius  
-- = meter malfunction, parameter not taken  
 $\mu$ S/cm = Microsiemens per centimeter

## **FIGURES**



**LEGEND:**

-  MW-2 MONITORING WELL
-  MW-6 P&A MONITORING WELL PLUGGED AND ABANDONED



ATEX #213  
 SOUTH VALLEY AREA,  
 ALBUQUERQUE, BERNALILLO COUNTY,  
 NEW MEXICO

**FIGURE 1  
 SITE MAP  
 NOVEMBER 2014**

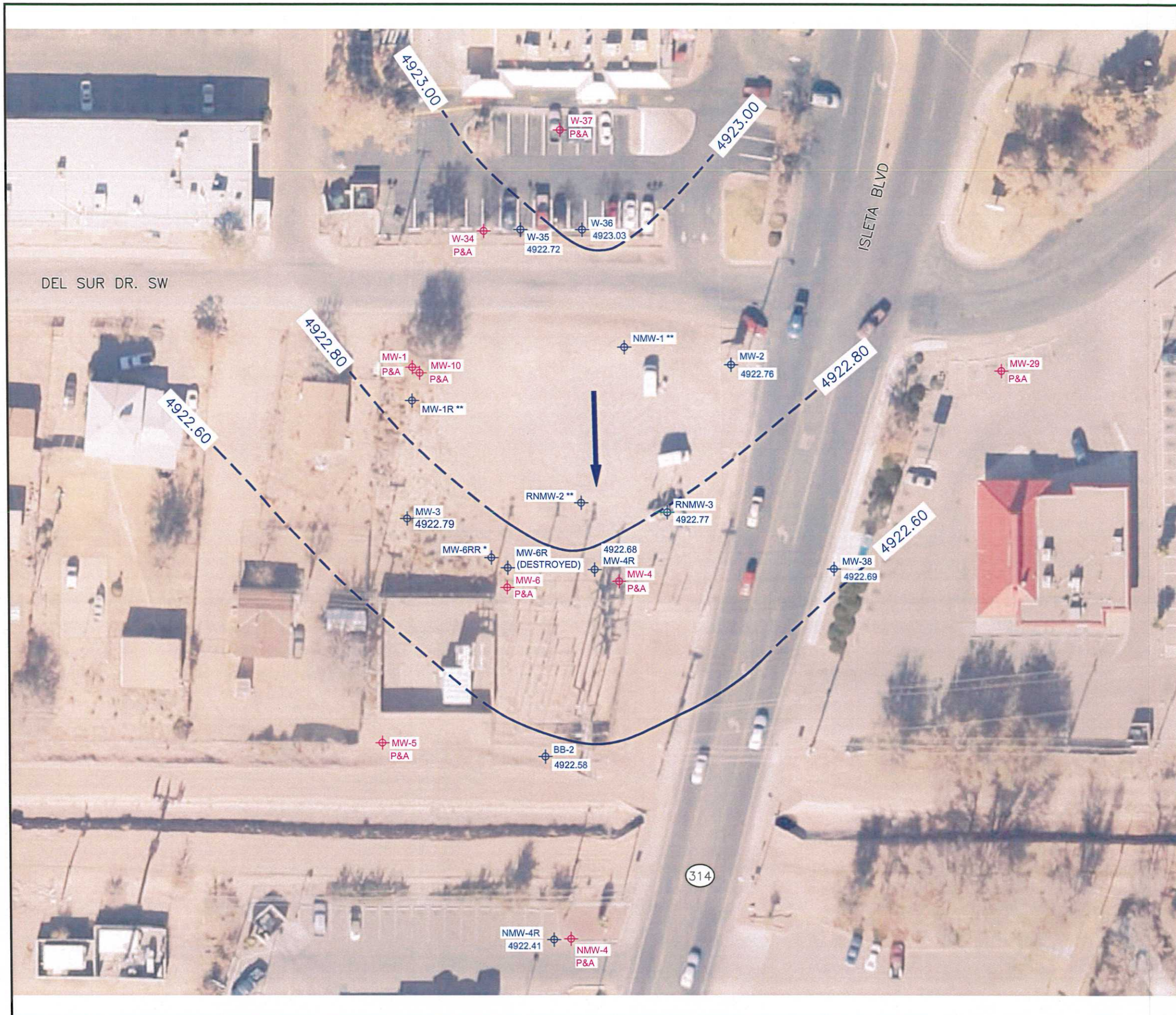
PROJECT #: 6289802 PROJECT PHASE: 01 PROJECT MANAGER: TM






320 Gold Avenue, SW Suite 1210  
 Albuquerque, NM 87102  
 Phone: (505) 224-9013  
 Fax: (505) 224-9016

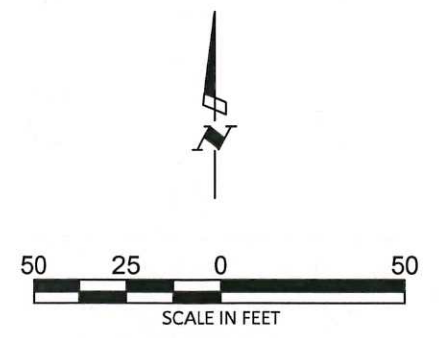
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.





**LEGEND:**

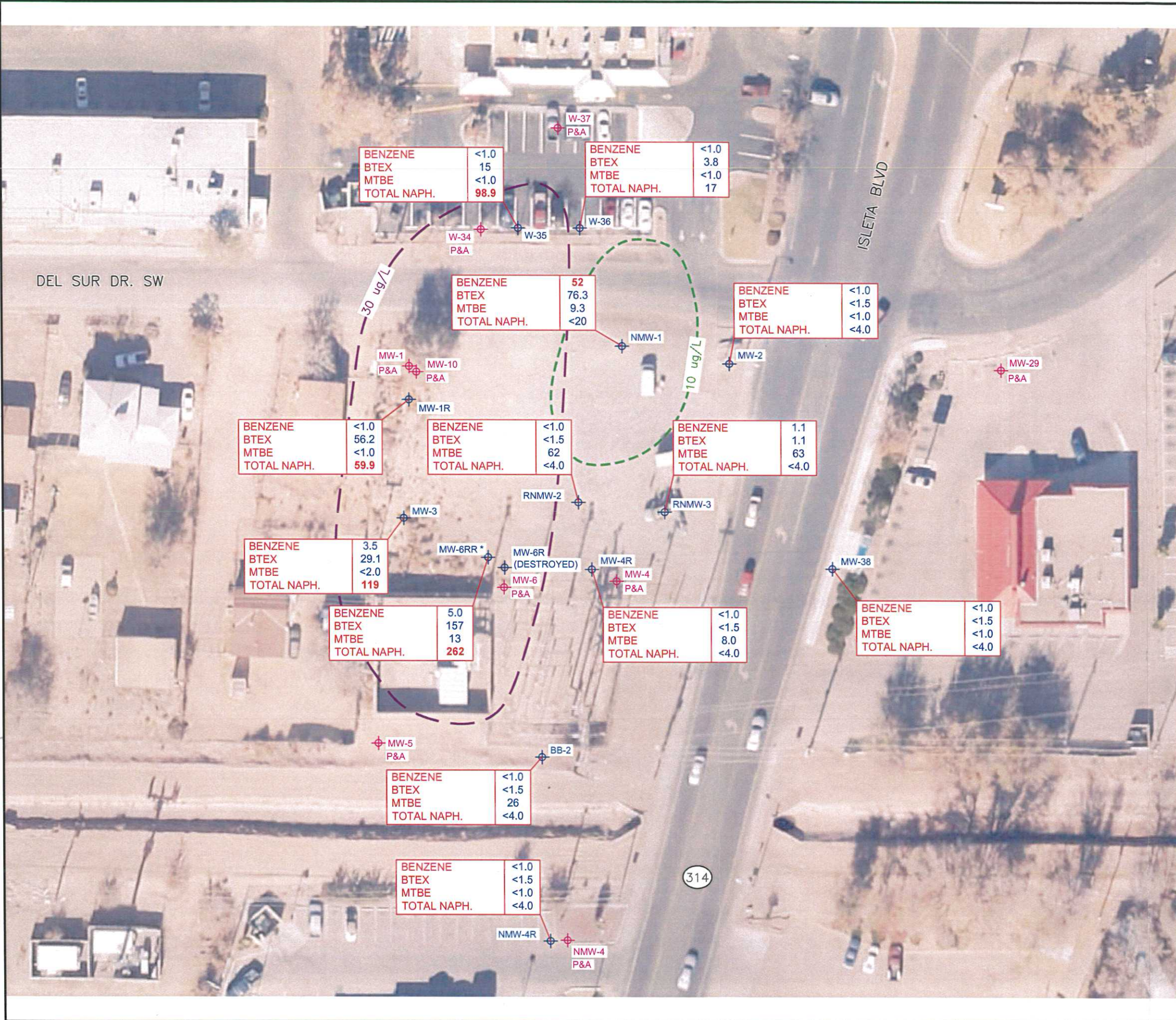
-  MW-1R 4920.37 MONITORING WELL
-  MW-6 P&A MONITORING WELL PLUGGED AND ABANDONED
- 4923.00 GROUNDWATER CONTOURS, (DASHED WHERE INFERRED) FEET ABOVE MEAN SEA LEVEL
-  GROUNDWATER FLOW DIRECTION
- \* WELL INSTALLED 12/22/2014 NOT USED IN POTENTIOMETRIC CONTOURING
- \*\* WELL SURFACE COMPLETIONS/CASING DAMAGED NOT USED IN POTENTIOMETRIC CONTOURING



ATEX #213  
SOUTH VALLEY AREA,  
ALBUQUERQUE, BERNALILLO COUNTY,  
NEW MEXICO

**FIGURE 2**  
**POTENTIOMETRIC SURFACE MAP**  
**NOVEMBER 2014**

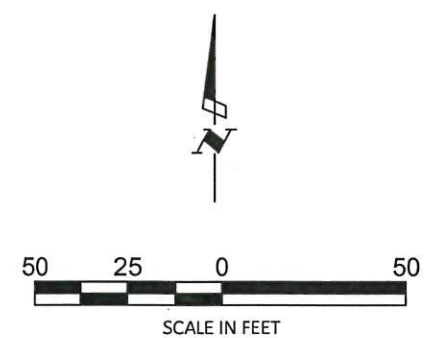




**LEGEND:**

- MW-2 MONITORING WELL
- MW-6 P&A MONITORING WELL PLUGGED AND ABANDONED
- BTEX BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES
- MTBE METHYL TERTIARY BUTYL ETHER
- TOTAL NAPH. TOTAL NAPHTHALENES
- ESTIMATED EXTENT OF BENZENE (10 ug/L)
- ESTIMATED EXTENT OF TOTAL NAPHTHALENES (30 ug/L)
- \* WELL INSTALLED 12/22/2014

- NOTES:
1. ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (ug/L)
  2. **RED** TEXT INDICATES CONCENTRATIONS ARE ABOVE NEW MEXICO WATER QUALITY CONTROL COMMISSION (NMWQCC) STANDARDS.



ATEX #213  
SOUTH VALLEY AREA,  
ALBUQUERQUE, BERNALILLO COUNTY,  
NEW MEXICO

**FIGURE 3**  
**CONTAMINANT CONCENTRATION MAP**  
**NOVEMBER/DECEMBER 2014**



**APPENDIX A**

**SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM**





EA Engineering, Science, and Technology, Inc.

## BORING/WELL CONSTRUCTION LOG

Project:	Atex 213	Project Number:	6289802.01
Drilling Company:	Rodgers Drilling	Start Time/Date:	0915; 12/22/2014
Drilling Rig/Bit:	CME-75 HSA, 24" split spoon	Completion Time/Date:	1300; 12/22/2014
Driller:	John Tanner	Final Depth:	21 feet
Boring/Well ID:	MW-6RR	Logged By:	L. Address 1 of 1

Sample Type	Recovery (in)	Sample Interval	PID Reading (ppmv)	USCS Soil Type	Depth, ft bgs	Soil Description* (soil type, color, density/consistency, plasticity, moisture, grain size, angularity/minerology, other)	Boring and/or Well Details		
Cuttings	NA			SM	1	0-4.0', silty sand, loose, fine grained	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 100%; text-align: center;"> <span style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Bentonite</span> <div style="border: 1px solid black; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); background-size: 4px 4px;"></div> </div> <span style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">PVC</span> </div> <div style="width: 100%; text-align: center;"> <span style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Bentonite</span> </div> </div>		
		2							
		3							
		4							
						SP		5	~5'-10', poorly graded sand, brown, loose, damp, fine grained
		6							
		7							
		8							
						ML/C L		9	
								10	~10', silty sand with clay, gray color, petroleum hydrocarbon odor
						SW		11	Wet at ~11 feet.
								12	
								13	~13'-21', well graded sand, dark gray, loose, wet, petroleum
								14	hydrocarbon odor
								15	
								16	
								17	
						18			
						19			
						20			
						21			
21': Total Depth									
						3.5" flat end cap: ~20.3'-20' 0.010" Slot Screen: 20'-5' 2" Schedule 40 PVC riser: 5'-0.0' native flowing sand: 21'-19.9' 10-20 Silica Sand: 19.9'-3' Hydrated, 1/4" uncoated Bentonite Pellets ~3'-1'			

SS = Split Spoon    CUT = Drill Cuttings  
 \* Logged from cuttings

**APPENDIX B**  
**PHOTOGRAPHS**



Photograph No. 1  
Looking north towards location of well MW-1R.



Photograph No. 2  
Well vault for MW-1R located in a pile of construction debris approximately 10 feet from location of  
Well casing for MW-1R





Photograph No. 3

Well casing for MW-1R located in place, well vault sheared off by construction equipment.



Photograph No. 4

Well plug placed in well casing for MW-1R to prevent anything from entering the well before it is repaired.



Photograph No. 5

Well vault replaced on MW-1R by AUI, Inc. prior to repair/ replacement activities.



Photograph No. 6

Damaged well vault for NMW-1. Well vault lid has been forced inside well vault.



Photograph No. 7  
View of NMW-1 with lid removed from vault.



Photograph No. 8  
Repair activities for NMW-1. Old concrete well pad and well vault were removed.





Photograph No. 9  
New well vault and concrete pad for NMW-1.



Photograph No. 10  
Well vault and pad secured prior to leaving the site to allow concrete to cure.



Photograph No. 11  
Missing well vault for RNMW-2.



Photograph No. 12  
PVC well casing for RNMW-2 located; casing bent approximately 1 foot below ground surface.





Photograph No. 13  
Close-up view of bent casing in RNMW-2.



Photograph No. 14  
Left to right: Steel ring used to mark location of well for metal detector use, plug made from rag attached to wire, remains of upper portion of casing from RNMW-2





Photograph No. 15

Plug with rag and well plug to secure RNMW-2 from anything entering well prior to repairs.



Photograph No. 16

Repair of RNMW-2 with glued collar to PVC riser extension.



Photograph No. 17

New concrete well pad and well vault for RNMW-2. Barrier to protect well while concrete well pad cures.



Photograph No. 18

Former location of MW-6R, looking east.





Photograph No. 19  
Former location of MW-6R, looking west-northwest. Well MW-4R in foreground.



Photograph No. 20  
Newly installed replacement for MW-6R, MW-6RR, with bentonite pellets hydrating.



Photograph No. 21  
Well vault and concrete pad for newly installed MW-6RR.



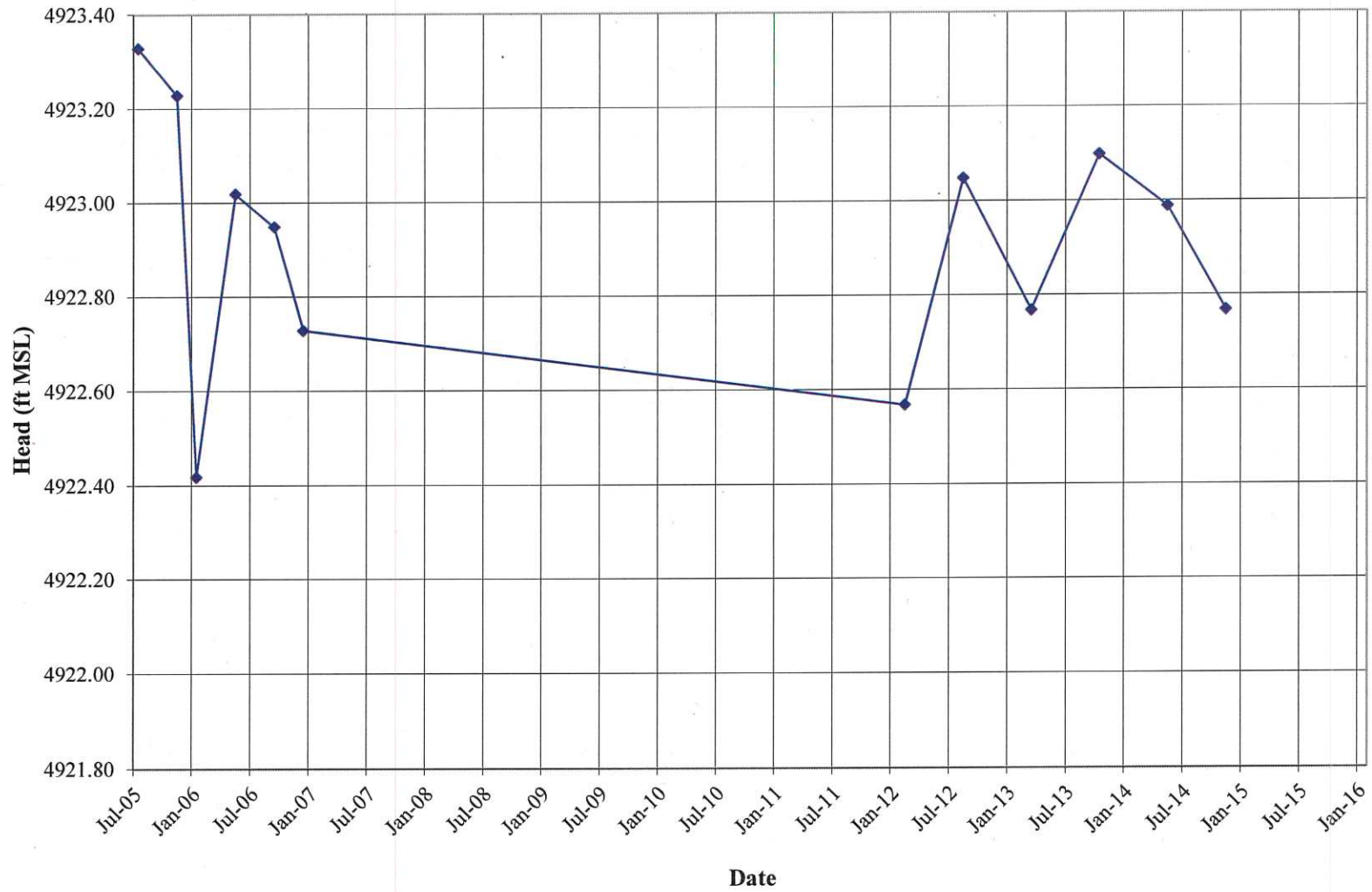
Photograph No. 22  
Well vault and concrete pad for newly installed MW-6RR, looking south.



**APPENDIX C**

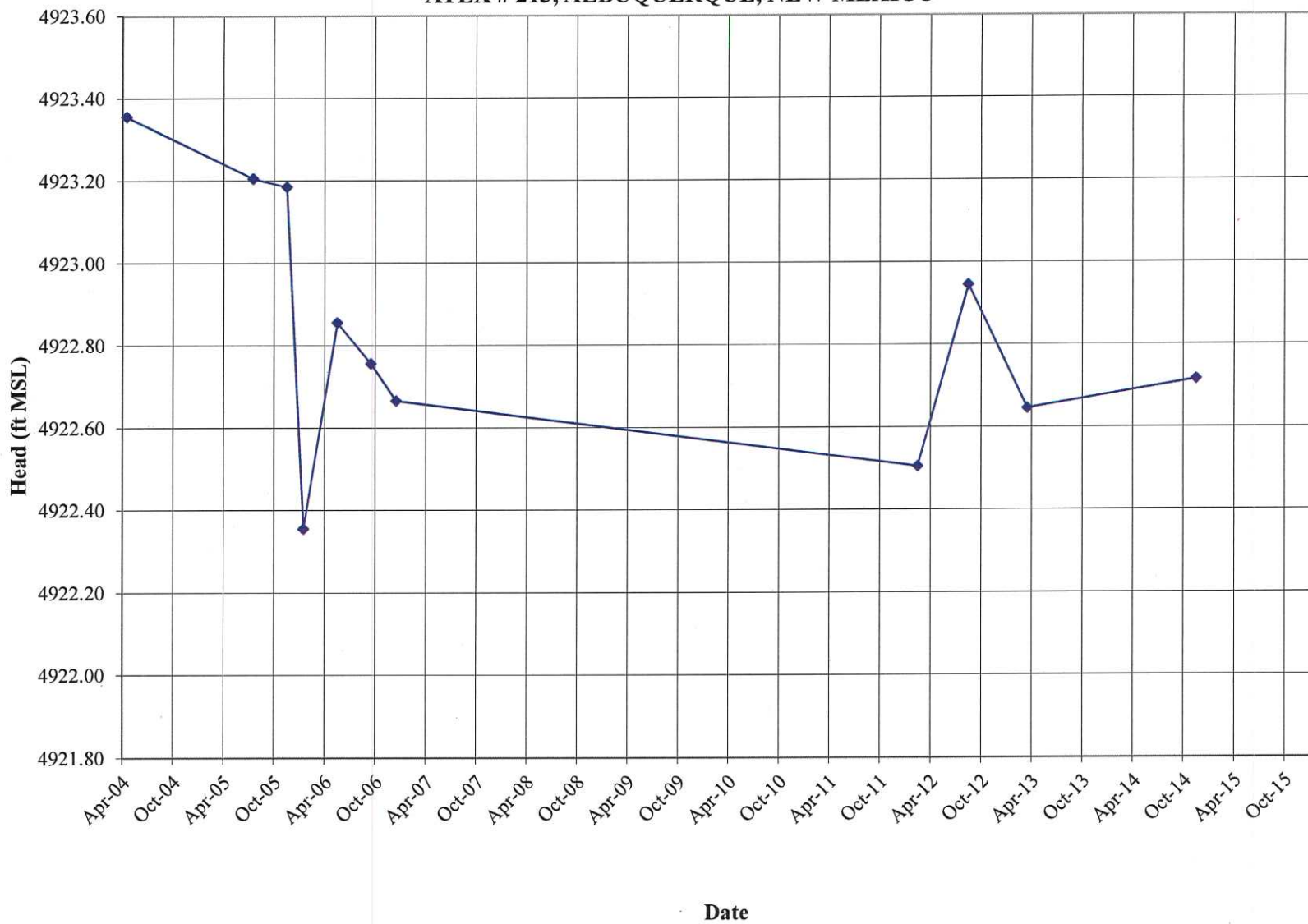
**HYDROGRAPHS AND CONCENTRATION TRENDS**

**HYDROGRAPH FOR WELL RNMW-3  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

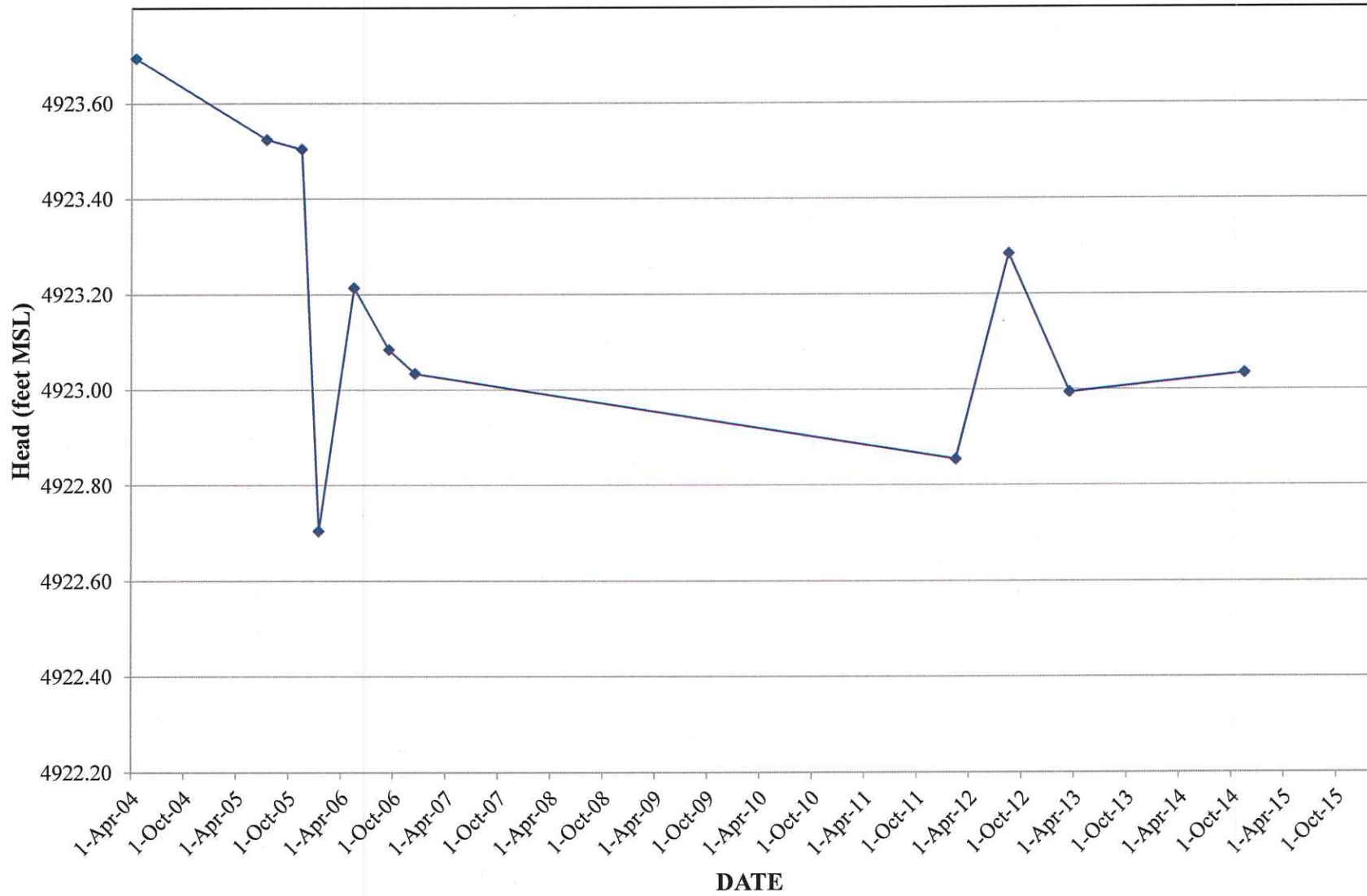




**HYDROGRAPH FOR WELL W-35  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

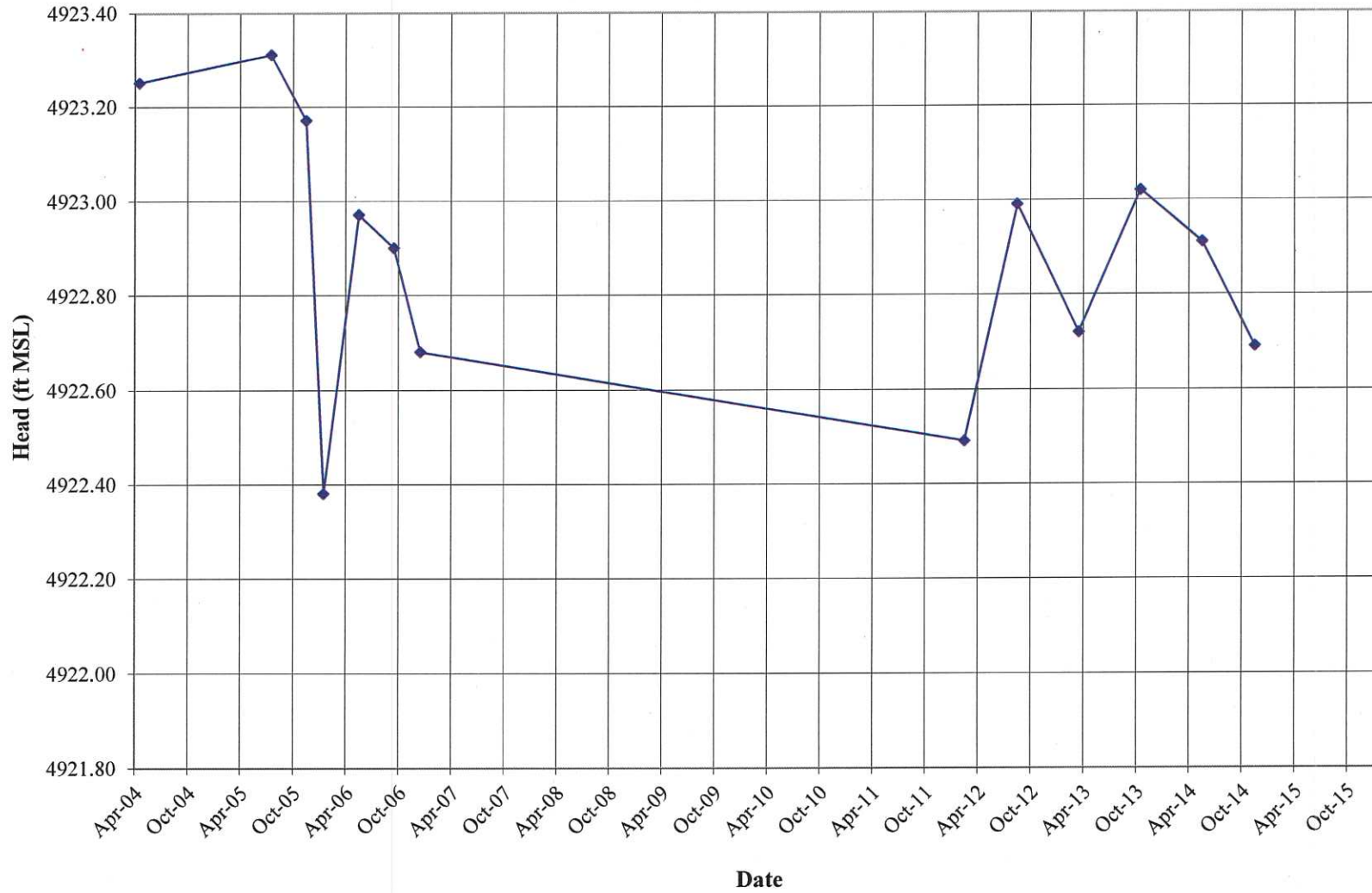


**HYDROGRAPH FOR WELL W-36  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

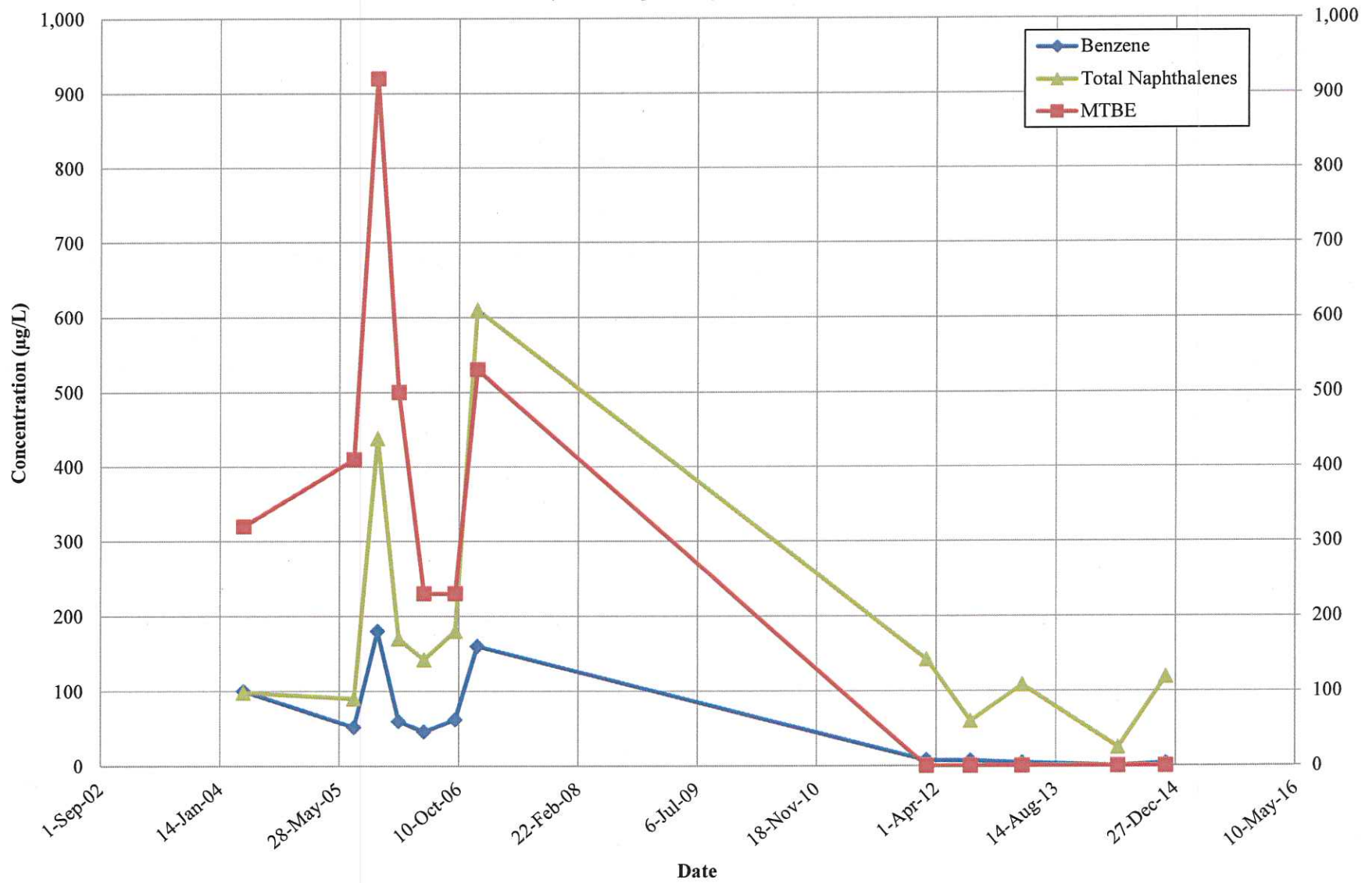




**HYDROGRAPH FOR WELL MW-38  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

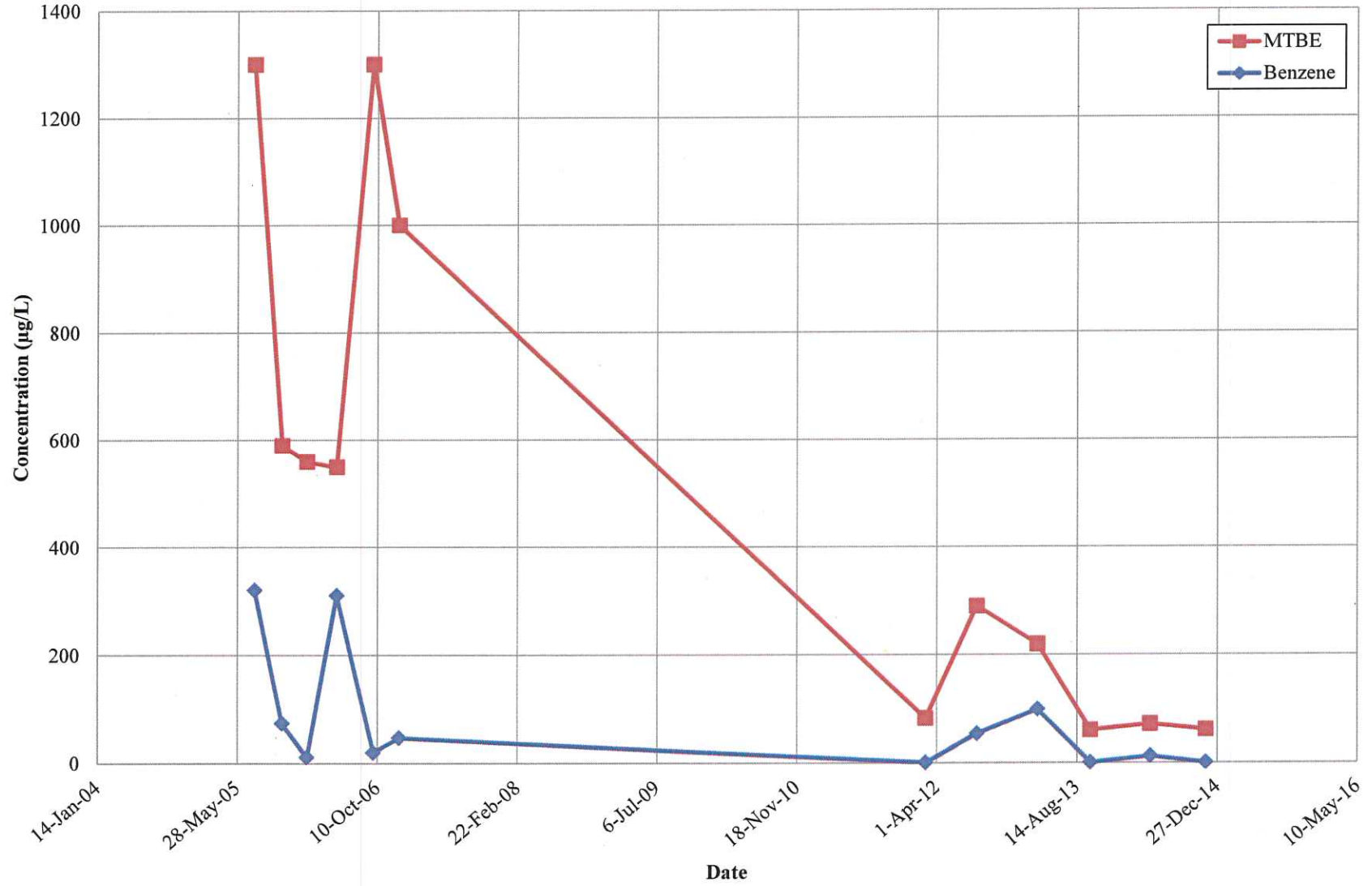


**CONCENTRATION TRENDS IN MW-3  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**

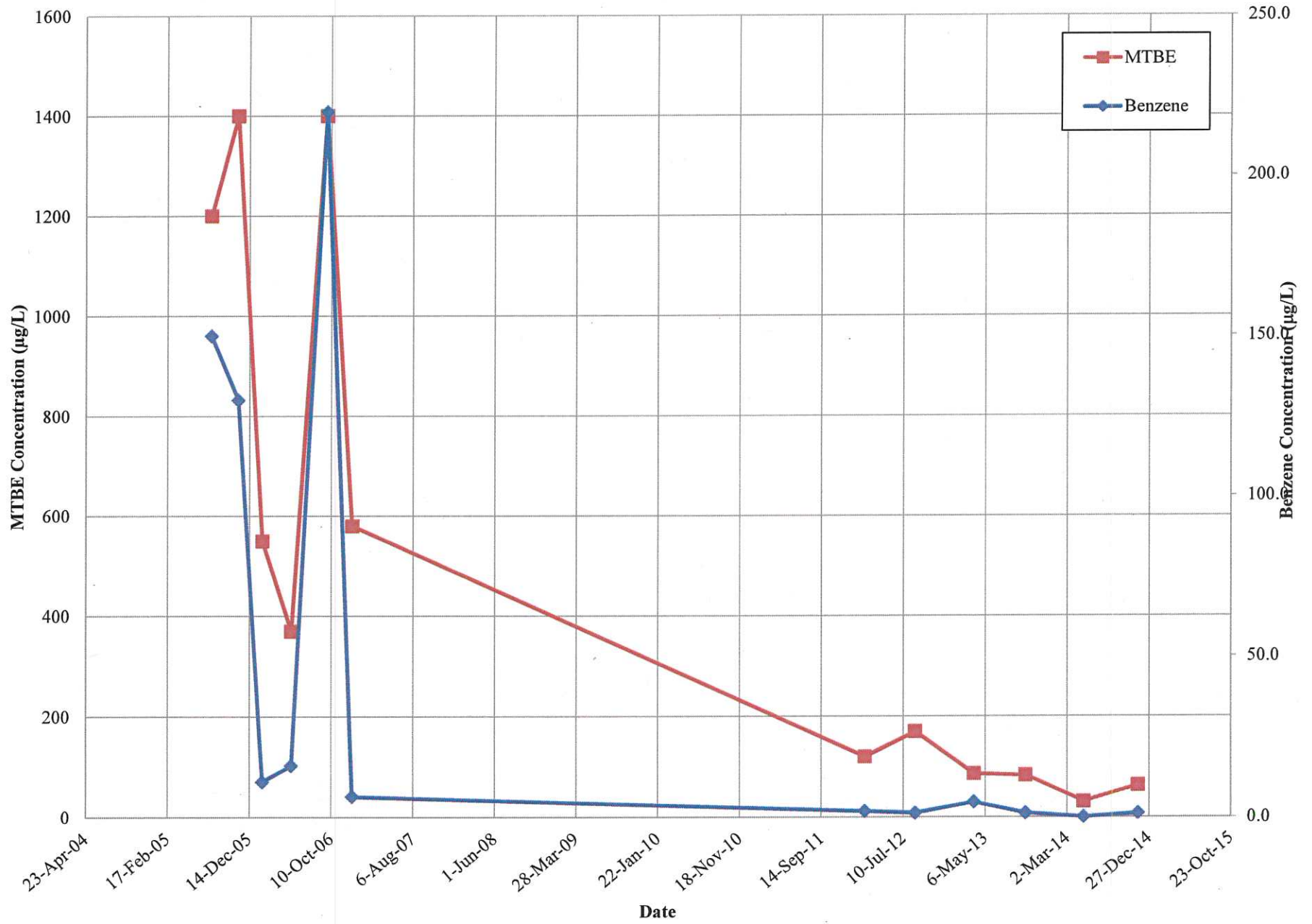




**CONCENTRATION TRENDS IN RNMW-2  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**



**CONCENTRATION TRENDS IN RNMW-3  
ATEX # 213, ALBUQUERQUE, NEW MEXICO**





**APPENDIX D**  
**FIELD FORMS**



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID MW-1R Date gauged 11/17/14  
 Site Alex 213 Time gauged 1600  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2 Inches  
 Depth to water 9.19 Feet Height of fluid column 5.39 Feet  
 Total depth 14.58 Feet Volume in well 0.92 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 After Bailing NAPL  
 Depth to PSH \_\_\_\_\_ Feet  
 Depth to water \_\_\_\_\_ Feet  
 NAPL thickness \_\_\_\_\_ Feet  
 NAPL Recovered \_\_\_\_\_ Gallons  
 \* top of sheared off PVC (3 well volumes = 2.74 gallons) well casing

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1607 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1608	0.25	21.2	912	7.51	-	1.18
1613	2.00	21.9	915	7.53	-	✓
1615	2.50	21.8	913	7.56	-	✓

Actual purge volume 2.75 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 1618 Purged/sampled by Lore Andress  
 Sample method Disposable Bailor  
 Requested analyses 8260

Comments/observations well vault sheared off, only pvc sticking up - level w/ newly graded dirt

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

petroleum H-C odor slight spotty sheen



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID MW-3 Date gauged 11/17/14  
 Site Atex 213 Time gauged 1333  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2" Inches  
 Depth to water 10.19 Feet Height of fluid column 5.81 Feet  
 Total depth 16.00 Feet Volume in well 0.99 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 2.96 gallons)

After Bailing NAPL	
Depth to PSH _____ Feet	
Depth to water _____ Feet	
NAPL thickness _____ Feet	
NAPL Recovered _____ Gallons	

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1339 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1340	0.25	20.4	962	7.29	-	1.35
1343	1.50	20.4	957	7.38	-	✓
1345	2.75	20.9	941	7.45	-	✓

Actual purge volume 3.0 gal. Field measurements stabilized within ± 10%? Y

Time/date sampled 11/17/14 1350 Purged/sampled by Lane Anderson

Sample method Disposable Bail

Requested analyses 8260

Comments/observations petroleum HC odor  
steel stick-up - in tumbleweed  
Bush

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft





MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID MW-4R Date gauged 11/17/14  
 Site Alex 213 Time gauged 1400  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2 Inches  
 Depth to water 10.74 Feet Height of fluid column 10.25 Feet  
 Total depth 20.99 Feet Volume in well 1.74 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 5.23 gallons)

After Bailing NAPL

Depth to PSH \_\_\_\_\_ Feet

Depth to water \_\_\_\_\_ Feet

NAPL thickness \_\_\_\_\_ Feet

NAPL Recovered \_\_\_\_\_ Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1405 Purge Method Hand Bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>1406</u>	<u>0.25</u>	<u>21.0</u>	<u>313</u>	<u>7.59</u>	<u>-</u>	<u>0.85</u>
<u>1411</u>	<u>3.50</u>	<u>21.5</u>	<u>643</u>	<u>7.53</u>	<u>-</u>	<u>↓</u>
<u>1413</u>	<u>4.00</u>	<u>21.6</u>	<u>644</u>	<u>7.56</u>	<u>-</u>	<u>↓</u>
<u>1415</u>	<u>5.00</u>	<u>21.6</u>	<u>649</u>	<u>7.50</u>	<u>-</u>	<u>↓</u>

Actual purge volume 5.25 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 1418 Purged/sampled by Lore Andress  
 Sample method Dispersible Bailer  
 Requested analyses 8260  
 Comments/observations \_\_\_\_\_

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID MW-6RR Date gauged 12/22/14  
 Site Hex 213 Time gauged \_\_\_\_\_  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2" Inches  
 Depth to water 11.2 Feet Height of fluid column 8.8 Feet  
 Total depth 20.0 Feet Volume in well 1.50 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 4.50 gallons)

After Bailing NAPL	
Depth to PSH _____ Feet	
Depth to water _____ Feet	
NAPL thickness _____ Feet	
NAPL Recovered _____ Gallons	

Post-install  
 Development

GROUNDWATER SAMPLING DATA

Time/date purged 12-22-14 / 1128 Purge Method downhole pump

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1128	Begin development, pump rate ~ 1.00 gallon per minute ~ 4gpm					
1158	~20+ gallons purged					
1159	23	21.3	830	7.03	NM	17.8
1200	24	21.2	812	7.05	NM	11.8
1202	26	21.0	815	7.14	NM	9.1
1204	28	20.9	818	7.18	NM	9.5
1206	30	21.1	815	7.18	NM	10.4
1209	Pump off					

Actual purge volume 33.25 gal. Field measurements stabilized within ± 10%? Y

Time/date sampled 12-22-14 Purged/sampled by Lore Andreas

Sample method Disposable Bailor

Requested analyses 82600

Comments/observations well water clear & stable when sampled

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID MW-38 Date gauged 11/17/14  
 Site Box 213 Time gauged 0842  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2 1/2 Inches  
 Depth to water 9.18 Feet Height of fluid column 2.8 Feet  
 Total depth 11.98 Feet Volume in well 0.48 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 1.43 gallons)

After Bailing NAPL	
Depth to PSH _____ Feet	
Depth to water _____ Feet	
NAPL thickness _____ Feet	
NAPL Recovered _____ Gallons	

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 0850 Purge Method Hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
0851	0.25	19.4	874	7.14	-	1.76
0852	0.75	21.0	895	7.15	-	↓
0853	1.25	21.7	880	7.20	-	↓

Actual purge volume 1.50 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 0855 Purged/sampled by Low Andreas  
 Sample method Disposable Baiter  
 Requested analyses 8260  
 Comments/observations \_\_\_\_\_

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft





MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID BB-2 Date gauged 11/17/14  
 Site Area 213 Time gauged 0912  
 Depth to PSH      Feet Well diameter 2" Inches  
 Depth to water 12.06 Feet Height of fluid column 2.38 Feet  
 Total depth 14.44 Feet Volume in well 0.40 Gallons  
 NAPL thickness      Feet  
 (3 well volumes = 1.21 gallons)

After Bailing NAPL

Depth to PSH      Feet

Depth to water      Feet

NAPL thickness      Feet

NAPL Recovered      Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 0928 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>0929</u>	<u>0.25</u>	<u>19.0</u>	<u>818</u>	<u>7.24</u>	<u>    </u>	<u>1.92</u>
<u>0931</u>	<u>0.75</u>	<u>20.3</u>	<u>855</u>	<u>7.35</u>	<u>    </u>	<u>    </u>
<u>0933</u>	<u>1.00</u>	<u>19.8</u>	<u>862</u>	<u>7.37</u>	<u>    </u>	<u>    </u>

Actual purge volume 1.25 gal. Field measurements stabilized within ± 10%? Y

Time/date sampled 11/17/14 0935 Purged/sampled by Lara Andres

Sample method Disposable Bail

Requested analyses 8260

Comments/observations Metal stick up under power poles

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID NMW-1 Date gauged 11/17/14  
 Site Alex 213 Time gauged 1453  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2" Inches  
 Depth to water 9.72 Feet Height of fluid column 5.3 Feet  
 Total depth 15.02 Feet Volume in well 0.90 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 2.70 gallons)

After Bailing NAPL

Depth to PSH \_\_\_\_\_ Feet

Depth to water \_\_\_\_\_ Feet

NAPL thickness \_\_\_\_\_ Feet

NAPL Recovered \_\_\_\_\_ Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1501 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1502	0.25	21.9	970	7.14	-	1.06
1505	1.75	22.9	970	7.12	-	5
1507	2.50	23.1	980	7.09	-	5

Actual purge volume 2.75 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 1510 Purged/sampled by Lara Anderson  
 Sample method Disposable Bails  
 Requested analyses 8260  
 Comments/observations Strong Petroleum H-C odor, slight  
spotty sheen

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID NMW-4R Date gauged 11/17/14  
 Site Alex 213 Time gauged 1030  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2" Inches  
 Depth to water 10.12 Feet Height of fluid column 9.68 Feet  
 Total depth 19.80 Feet Volume in well 1.65 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 4.94 gallons)

After Bailing NAPL

Depth to PSH \_\_\_\_\_ Feet

Depth to water \_\_\_\_\_ Feet

NAPL thickness \_\_\_\_\_ Feet

NAPL Recovered \_\_\_\_\_ Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1035 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>1036</u>	<u>0.25</u>	<u>20.2</u>	<u>530</u>	<u>7.45</u>	<u>-</u>	<u>1.31</u>
<u>1041</u>	<u>3.00</u>	<u>20.9</u>	<u>513</u>	<u>7.37</u>	<u>-</u>	<u>↓</u>
<u>1044</u>	<u>4.75</u>	<u>20.9</u>	<u>513</u>	<u>7.36</u>	<u>-</u>	<u>↓</u>

Actual purge volume 5.0 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 1047 Purged/sampled by Lena Andross  
 Sample method Disposable Bail  
 Requested analyses 8260  
 Comments/observations \_\_\_\_\_

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft





MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-35 Date gauged 11/17/14  
 Site Alex 213 Time gauged 1522  
 Depth to PSH \_\_\_\_\_ Feet Well diameter 2 Inches  
 Depth to water 8.78 Feet Height of fluid column 4.94 Feet  
 Total depth 13.72 Feet Volume in well 0.84 Gallons  
 NAPL thickness \_\_\_\_\_ Feet  
 (3 well volumes = 2.52 gallons)

After Bailing NAPL

Depth to PSH \_\_\_\_\_ Feet

Depth to water \_\_\_\_\_ Feet

NAPL thickness \_\_\_\_\_ Feet

NAPL Recovered \_\_\_\_\_ Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1534 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>1534</u>	<u>0.25</u>	<u>21.7</u>	<u>1072</u>	<u>7.28</u>	<u>—</u>	<u>2.48</u>
<u>1538</u>	<u>1.50</u>	<u>22.2</u>	<u>1080</u>	<u>7.29</u>	<u>—</u>	<u>—</u>
<u>1540</u>	<u>2.50</u>	<u>22.6</u>	<u>1065</u>	<u>7.28</u>	<u>—</u>	<u>—</u>

Actual purge volume 2.75 gal. Field measurements stabilized within ± 10%? Y  
 Time/date sampled 11/17/14 1544 Purged/sampled by Lane Andross  
 Sample method Disposable Bailor  
 Requested analyses 8260  
 Comments/observations petroleum HC odor

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-36 Date gauged 11/17/14  
 Site Atex 213 Time gauged 0957  
 Depth to PSH      Feet Well diameter 2 1/2 Inches  
 Depth to water 8.97 Feet Height of fluid column 3.03 Feet  
 Total depth 12.00 Feet Volume in well 0.52 Gallons  
 NAPL thickness      Feet  
 (3 well volumes = 1.54 gallons)

After Bailing NAPL

Depth to PSH      Feet

Depth to water      Feet

NAPL thickness      Feet

NAPL Recovered      Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1002 Purge Method handpump

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1003	0.25	19.9	815	7.19	-	1.66
1005	1.00	21.6	847	7.21	-	↓
1007	1.50	22.1	847	7.24	-	↓

Actual purge volume 1.75 gal. Field measurements stabilized within ± 10%? X  
 Time/date sampled 11/17/14 1010 Purged/sampled by Lane Andross  
 Sample method Disposable Bailer  
 Requested analyses 8260  
 Comments/observations patroler m Hydrocarbon odor

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft





MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID RNMW-2 Date gauged 11/17/14  
 Site AT&T 213 Time gauged 1108  
 Depth to PSH      Feet Well diameter 2" Inches  
 Depth to water 10.87 Feet Height of fluid column 5.01 Feet  
 Total depth 15.91 Feet Volume in well 0.86 Gallons  
 NAPL thickness      Feet

After Bailing NAPL

Depth to PSH      Feet  
 Depth to water      Feet  
 NAPL thickness      Feet  
 NAPL Recovered      Gallons

⊗ Casing Broken off at surface (3 well volumes = 2.57 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1302 Purge Method hand bail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1303	0.25	21.1	1490	7.17	-	0.56
1307	1.75	21.9	981	7.18	-	↓
1308	2.00	22.2	823	7.36	↓	↓
1309	2.25	22.2	871	7.32	↓	↓

Actual purge volume 2.75 gal.

Field measurements stabilized within ± 10%? Y

Time/date sampled 11/17/14 1322

Purged/sampled by Lane Andross

Sample method Disposable Bailer

-faint petroleum H-C odor

Requested analyses 8260

Comments/observations

well vault missing - PVC riser showed off by construction equipment - dug out to bent part to sample - bridge off bent PVC, sampled, plugged

Well Casing Volumes w/ Ring on a wide & J-plug w/ spacers

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

PVC casing bent w/ 4 bgs

See photos → Ring (to find later w/ metal detector)





MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID RNMW-3 Date gauged 11/17/14  
 Site Atey 213 Time gauged 1104  
 Depth to PSH      Feet Well diameter 2 1/2 Inches  
 Depth to water 10.45 Feet Height of fluid column 5.41 Feet  
 Total depth 15.86 Feet Volume in well 0.92 Gallons  
 NAPL thickness      Feet  
 (3 well volumes = 2.76 gallons)

After Bailing NAPL

Depth to PSH      Feet

Depth to water      Feet

NAPL thickness      Feet

NAPL Recovered      Gallons

GROUNDWATER SAMPLING DATA

Time/date purged 11/17/14 1123 Purge Method handbail

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1124	0.25	20.6	1315	7.24	=	1.48
1127	1.75	22.0	1104	7.24	↘	↘
1128	2.95	22.3	1076	7.33	↘	↘
1130	2.75	22.5	1007	7.32	↘	↘

Actual purge volume 3.0 gal. Field measurements stabilized within ± 10%?     

Time/date sampled 11/17/14 1132 Purged/sampled by Lane Andress

Sample method Disposable Bailer

Requested analyses 8260

Comments/observations faint petroleum H-C odor

Well Casing Volumes  
 2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

# Chain-of-Custody Record

Client: EA Engineering

Mailing Address: 320 Golf Ave Ste 1210

ABQ NM 87102

Phone #: 505-224-9013

email or Fax#: t.mcmillan@east.com

QA/QC Package:  
 Standard       Level 4 (Full Validation)

Accreditation  
 NELAP       Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Turn-Around Time:

Standard       Rush

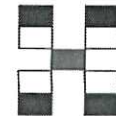
Project Name: Atex 213

Project #: 6289805/PO#  
~~250106~~ / 13368

Project Manager: Ter. McMillan

Sampler:  
 On Ice:       Yes       No

Sample Temperature: 23



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975      Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
11/17/14	0820	Ag	MW-2	VOA(3)	HgCl <sub>2</sub>											X		
	0855		MW-38															
	0935		SB-2															
	1010		W-36															
	1047		NMW-4R															
	1132		RNMW-2															
	1322		RNMW-2															
	1350		MW-3															
	1418		MW-4R															
	1510		NMW-1															
	1544		W-35															
	1618		MW-1R															

Date: 11/18/14 Time: 1319 Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: 11/18/14 Time: 1:11

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Remarks: 1012

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



# Chain-of-Custody Record

Turn-Around Time:

Client: EA Engineering

Standard  Rush

320 Coyle Ave Ste 1210

Project Name: Atey 213

Mailing Address: ABQ NM 87102

Project #: 6289805 / PO# 13368  
10250106 / 13368

Phone #: 505-224-9013

Project Manager: Teri McMillan

email or Fax#: +McMillan@earthlink.net

QA/QC Package:

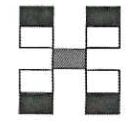
Standard  Level 4 (Full Validation)

Sampler: On Ice:  Yes  No

Accreditation  NELAP  Other

Sample Temperature: 3.3

EDD (Type)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
11/27/14	NA	Ag	TRIP: 4AK	VOA (2)	HgCl <sub>2</sub>											X		

11/14/14 Date: 13:19 Time: Relinquished by:

Received by: Date: 11/14/14 Time: 13:19

Remarks: 2 of 2

11/14/14 Date: 13:19 Time: Relinquished by:

Received by: Date: 11/14/14 Time: 13:19

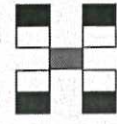
If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



# Chain-of-Custody Record

Client: EA Engineering  
 320 Gold Ave SW SE T210  
 Mailing Address: ABO, NM 87102  
 Phone #: 505 224 9013  
 email or Fax#: tmcmillan@capst.com  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard  Rush  
 Project Name: A-bx 213  
 Project #: 6250106.5  
 Project Manager: Teri McMillan  
 Sampler: Lane Anderson  
 On Ice:  Yes  No  
 Sample Temperature: 10.4



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
12-22-11	1221	Ag	MW-6RR	B)VOA	HgCl <sub>2</sub>											X			

Date: 12-22-11 Time: 1300 Relinquished by: [Signature]  
 Received by: [Signature] Date: 12/22/11 Time: 1300  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.

**APPENDIX E**  
**LABORATORY REPORTS**





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 26, 2014

Teri McMillan  
EA Engineering  
320 Gold Ave SW Suite 1210  
Albuquerque, NM 87102  
TEL: (505) 259-6779  
FAX

RE: Atex 213

OrderNo.: 1411707

Dear Teri McMillan:

Hall Environmental Analysis Laboratory received 13 sample(s) on 11/18/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: MW-2

Project: Atex 213

Collection Date: 11/17/2014 8:24:00 AM

Lab ID: 1411707-001

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 2:38:37 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 2:38:37 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 2:38:37 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: MW-2

Project: Atex 213

Collection Date: 11/17/2014 8:24:00 AM

Lab ID: 1411707-001

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 2:38:37 PM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 2:38:37 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 2:38:37 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 2:38:37 PM	R22714
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	1	11/21/2014 2:38:37 PM	R22714
Surr: 4-Bromofluorobenzene	138	70-130	S	%REC	1	11/21/2014 2:38:37 PM	R22714
Surr: Dibromofluoromethane	87.4	70-130		%REC	1	11/21/2014 2:38:37 PM	R22714
Surr: Toluene-d8	108	70-130		%REC	1	11/21/2014 2:38:37 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: MW-38

Project: Atex 213

Collection Date: 11/17/2014 8:55:00 AM

Lab ID: 1411707-002

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 3:05:28 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 3:05:28 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 3:05:28 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: MW-38

Project: Atex 213

Collection Date: 11/17/2014 8:55:00 AM

Lab ID: 1411707-002

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 3:05:28 PM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 3:05:28 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 3:05:28 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 3:05:28 PM	R22714
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%REC	1	11/21/2014 3:05:28 PM	R22714
Surr: 4-Bromofluorobenzene	130	70-130	S	%REC	1	11/21/2014 3:05:28 PM	R22714
Surr: Dibromofluoromethane	88.4	70-130		%REC	1	11/21/2014 3:05:28 PM	R22714
Surr: Toluene-d8	104	70-130		%REC	1	11/21/2014 3:05:28 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: BB-2

Project: Atex 213

Collection Date: 11/17/2014 9:35:00 AM

Lab ID: 1411707-003

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Methyl tert-butyl ether (MTBE)	26	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 3:32:14 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 3:32:14 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 3:32:14 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 5 of 34
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: BB-2

Project: Atex 213

Collection Date: 11/17/2014 9:35:00 AM

Lab ID: 1411707-003

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 3:32:14 PM	R22714
Isopropylbenzene	2.4	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 3:32:14 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
n-Propylbenzene	8.3	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
sec-Butylbenzene	2.5	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 3:32:14 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 3:32:14 PM	R22714
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	11/21/2014 3:32:14 PM	R22714
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	11/21/2014 3:32:14 PM	R22714
Surr: Dibromofluoromethane	91.6	70-130		%REC	1	11/21/2014 3:32:14 PM	R22714
Surr: Toluene-d8	105	70-130		%REC	1	11/21/2014 3:32:14 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: W-36

Project: Atex 213

Collection Date: 11/17/2014 10:10:00 AM

Lab ID: 1411707-004

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Ethylbenzene	3.8	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2,4-Trimethylbenzene	3.1	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Naphthalene	17	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 3:58:57 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 3:58:57 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 3:58:57 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: W-36

Project: Atex 213

Collection Date: 11/17/2014 10:10:00 AM

Lab ID: 1411707-004

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 3:58:57 PM	R22714
Isopropylbenzene	3.9	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 3:58:57 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
n-Propylbenzene	12	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
sec-Butylbenzene	1.6	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 3:58:57 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 3:58:57 PM	R22714
Surr: 1,2-Dichloroethane-d4	113	70-130		%REC	1	11/21/2014 3:58:57 PM	R22714
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	11/21/2014 3:58:57 PM	R22714
Surr: Dibromofluoromethane	103	70-130		%REC	1	11/21/2014 3:58:57 PM	R22714
Surr: Toluene-d8	104	70-130		%REC	1	11/21/2014 3:58:57 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: NMW-4R

Project: Atex 213

Collection Date: 11/17/2014 10:47:00 AM

Lab ID: 1411707-005

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 4:25:37 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 4:25:37 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 4:25:37 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: NMW-4R

Project: Atex 213

Collection Date: 11/17/2014 10:47:00 AM

Lab ID: 1411707-005

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 4:25:37 PM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 4:25:37 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 4:25:37 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 4:25:37 PM	R22714
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%REC	1	11/21/2014 4:25:37 PM	R22714
Surr: 4-Bromofluorobenzene	122	70-130		%REC	1	11/21/2014 4:25:37 PM	R22714
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	11/21/2014 4:25:37 PM	R22714
Surr: Toluene-d8	106	70-130		%REC	1	11/21/2014 4:25:37 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: RNMW-3

Project: Atex 213

Collection Date: 11/17/2014 11:32:00 AM

Lab ID: 1411707-006

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	1.1	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Methyl tert-butyl ether (MTBE)	63	5.0		µg/L	5	11/22/2014 12:26:40 PM	R22739
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Naphthalene	2.0	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 4:52:23 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 4:52:23 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 4:52:23 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: RNMW-3

Project: Atex 213

Collection Date: 11/17/2014 11:32:00 AM

Lab ID: 1411707-006

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 4:52:23 PM	R22714
Isopropylbenzene	1.9	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 4:52:23 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
n-Propylbenzene	4.0	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 4:52:23 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 4:52:23 PM	R22714
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	11/21/2014 4:52:23 PM	R22714
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	11/21/2014 4:52:23 PM	R22714
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	11/21/2014 4:52:23 PM	R22714
Surr: Toluene-d8	107	70-130		%REC	1	11/21/2014 4:52:23 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 12 of 34
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		



Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: RNMW-2

Project: Atex 213

Collection Date: 11/17/2014 1:22:00 PM

Lab ID: 1411707-007

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Methyl tert-butyl ether (MTBE)	62	5.0		µg/L	5	11/22/2014 12:53:21 PM	R22739
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Naphthalene	2.3	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 5:19:08 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 5:19:08 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 5:19:08 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: RNMW-2

Project: Atex 213

Collection Date: 11/17/2014 1:22:00 PM

Lab ID: 1411707-007

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 5:19:08 PM	R22714
Isopropylbenzene	2.0	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 5:19:08 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
n-Propylbenzene	5.1	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 5:19:08 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 5:19:08 PM	R22714
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	11/21/2014 5:19:08 PM	R22714
Surr: 4-Bromofluorobenzene	118	70-130		%REC	1	11/21/2014 5:19:08 PM	R22714
Surr: Dibromofluoromethane	92.5	70-130		%REC	1	11/21/2014 5:19:08 PM	R22714
Surr: Toluene-d8	106	70-130		%REC	1	11/21/2014 5:19:08 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		



Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: MW-3

Project: Atex 213

Collection Date: 11/17/2014 1:50:00 PM

Lab ID: 1411707-008

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	3.5	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Toluene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Ethylbenzene	17	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2,4-Trimethylbenzene	4.8	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,3,5-Trimethylbenzene	2.2	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Naphthalene	57	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1-Methylnaphthalene	24	8.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
2-Methylnaphthalene	38	8.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Acetone	ND	20		µg/L	2	11/21/2014 5:45:53 PM	R22714
Bromobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Bromodichloromethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Bromoform	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Bromomethane	ND	6.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
2-Butanone	ND	20		µg/L	2	11/21/2014 5:45:53 PM	R22714
Carbon disulfide	ND	20		µg/L	2	11/21/2014 5:45:53 PM	R22714
Carbon Tetrachloride	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Chlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Chloroethane	ND	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Chloroform	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Chloromethane	ND	6.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
2-Chlorotoluene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
4-Chlorotoluene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
cis-1,2-DCE	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Dibromochloromethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Dibromomethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2-Dichlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,3-Dichlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,4-Dichlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Dichlorodifluoromethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1-Dichloroethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1-Dichloroethene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2-Dichloropropane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,3-Dichloropropane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
2,2-Dichloropropane	ND	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

**CLIENT:** EA Engineering

**Client Sample ID:** MW-3

**Project:** Atex 213

**Collection Date:** 11/17/2014 1:50:00 PM

**Lab ID:** 1411707-008

**Matrix:** AQUEOUS

**Received Date:** 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Hexachlorobutadiene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
2-Hexanone	ND	20		µg/L	2	11/21/2014 5:45:53 PM	R22714
Isopropylbenzene	21	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
4-Isopropyltoluene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
4-Methyl-2-pentanone	ND	20		µg/L	2	11/21/2014 5:45:53 PM	R22714
Methylene Chloride	ND	6.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
n-Butylbenzene	25	6.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
n-Propylbenzene	74	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
sec-Butylbenzene	11	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Styrene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
tert-Butylbenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
trans-1,2-DCE	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1,1-Trichloroethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,1,2-Trichloroethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Trichloroethene (TCE)	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Trichlorofluoromethane	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
1,2,3-Trichloropropane	ND	4.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Vinyl chloride	ND	2.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Xylenes, Total	8.6	3.0		µg/L	2	11/21/2014 5:45:53 PM	R22714
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%REC	2	11/21/2014 5:45:53 PM	R22714
Surr: 4-Bromofluorobenzene	83.0	70-130		%REC	2	11/21/2014 5:45:53 PM	R22714
Surr: Dibromofluoromethane	81.9	70-130		%REC	2	11/21/2014 5:45:53 PM	R22714
Surr: Toluene-d8	104	70-130		%REC	2	11/21/2014 5:45:53 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 16 of 34
E Value above quantitation range	H Holding times for preparation or analysis exceeded		
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit		
O RSD is greater than RSDlimit	P Sample pH greater than 2.		
R RPD outside accepted recovery limits	RL Reporting Detection Limit		
S Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: MW-4R

Project: Atex 213

Collection Date: 11/17/2014 2:18:00 PM

Lab ID: 1411707-009

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Methyl tert-butyl ether (MTBE)	8.0	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 6:12:35 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 6:12:35 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 6:12:35 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



## Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: MW-4R

Project: Atex 213

Collection Date: 11/17/2014 2:18:00 PM

Lab ID: 1411707-009

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 6:12:35 PM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 6:12:35 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 6:12:35 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 6:12:35 PM	R22714
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%REC	1	11/21/2014 6:12:35 PM	R22714
Surr: 4-Bromofluorobenzene	128	70-130		%REC	1	11/21/2014 6:12:35 PM	R22714
Surr: Dibromofluoromethane	92.4	70-130		%REC	1	11/21/2014 6:12:35 PM	R22714
Surr: Toluene-d8	104	70-130		%REC	1	11/21/2014 6:12:35 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: NMW--1

Project: Atex 213

Collection Date: 11/17/2014 3:10:00 PM

Lab ID: 1411707-010

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	52	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Toluene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Ethylbenzene	5.3	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Methyl tert-butyl ether (MTBE)	9.3	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2,4-Trimethylbenzene	12	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Naphthalene	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739
1-Methylnaphthalene	ND	20		µg/L	5	11/22/2014 1:20:08 PM	R22739
2-Methylnaphthalene	ND	20		µg/L	5	11/22/2014 1:20:08 PM	R22739
Acetone	ND	50		µg/L	5	11/22/2014 1:20:08 PM	R22739
Bromobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Bromodichloromethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Bromoform	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Bromomethane	ND	15		µg/L	5	11/22/2014 1:20:08 PM	R22739
2-Butanone	ND	50		µg/L	5	11/22/2014 1:20:08 PM	R22739
Carbon disulfide	ND	50		µg/L	5	11/22/2014 1:20:08 PM	R22739
Carbon Tetrachloride	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Chlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Chloroethane	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739
Chloroform	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Chloromethane	ND	15		µg/L	5	11/22/2014 1:20:08 PM	R22739
2-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
4-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
cis-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739
Dibromochloromethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Dibromomethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1-Dichloroethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1-Dichloroethene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,3-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
2,2-Dichloropropane	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: NMW--1

Project: Atex 213

Collection Date: 11/17/2014 3:10:00 PM

Lab ID: 1411707-010

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Hexachlorobutadiene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
2-Hexanone	ND	50		µg/L	5	11/22/2014 1:20:08 PM	R22739
Isopropylbenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
4-Isopropyltoluene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
4-Methyl-2-pentanone	ND	50		µg/L	5	11/22/2014 1:20:08 PM	R22739
Methylene Chloride	ND	15		µg/L	5	11/22/2014 1:20:08 PM	R22739
n-Butylbenzene	ND	15		µg/L	5	11/22/2014 1:20:08 PM	R22739
n-Propylbenzene	7.8	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
sec-Butylbenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Styrene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
tert-Butylbenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
trans-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Trichlorofluoromethane	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
1,2,3-Trichloropropane	ND	10		µg/L	5	11/22/2014 1:20:08 PM	R22739
Vinyl chloride	ND	5.0		µg/L	5	11/22/2014 1:20:08 PM	R22739
Xylenes, Total	19	7.5		µg/L	5	11/22/2014 1:20:08 PM	R22739
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%REC	5	11/22/2014 1:20:08 PM	R22739
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	5	11/22/2014 1:20:08 PM	R22739
Surr: Dibromofluoromethane	89.7	70-130		%REC	5	11/22/2014 1:20:08 PM	R22739
Surr: Toluene-d8	101	70-130		%REC	5	11/22/2014 1:20:08 PM	R22739

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: W-35

Project: Atex 213

Collection Date: 11/17/2014 3:44:00 PM

Lab ID: 1411707-011

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Ethylbenzene	15	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Naphthalene	64	20		µg/L	10	11/22/2014 1:46:59 PM	R22739
1-Methylnaphthalene	28	4.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
2-Methylnaphthalene	6.9	4.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 8:53:02 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 8:53:02 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 8:53:02 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 8:53:02 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EA Engineering

Client Sample ID: W-35

Project: Atex 213

Collection Date: 11/17/2014 3:44:00 PM

Lab ID: 1411707-011

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 8:53:02 PM	R22714
Isopropylbenzene	27	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 8:53:02 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
n-Butylbenzene	5.9	3.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
n-Propylbenzene	72	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
sec-Butylbenzene	6.2	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 8:53:02 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 8:53:02 PM	R22714
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%REC	1	11/21/2014 8:53:02 PM	R22714
Surr: 4-Bromofluorobenzene	90.5	70-130		%REC	1	11/21/2014 8:53:02 PM	R22714
Surr: Dibromofluoromethane	90.7	70-130		%REC	1	11/21/2014 8:53:02 PM	R22714
Surr: Toluene-d8	100	70-130		%REC	1	11/21/2014 8:53:02 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: MW-1R

Project: Atex 213

Collection Date: 11/17/2014 4:18:00 PM

Lab ID: 1411707-012

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Toluene	1.6	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Ethylbenzene	50	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2,4-Trimethylbenzene	2.7	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,3,5-Trimethylbenzene	5.6	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Naphthalene	33	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1-Methylnaphthalene	18	4.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
2-Methylnaphthalene	8.9	4.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Acetone	ND	10		µg/L	1	11/22/2014 2:13:49 PM	R22739
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Bromoform	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Bromomethane	ND	3.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
2-Butanone	ND	10		µg/L	1	11/22/2014 2:13:49 PM	R22739
Carbon disulfide	ND	10		µg/L	1	11/22/2014 2:13:49 PM	R22739
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Chloroethane	ND	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Chloroform	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Chloromethane	ND	3.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: MW-1R

Project: Atex 213

Collection Date: 11/17/2014 4:18:00 PM

Lab ID: 1411707-012

Matrix: AQUEOUS

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
2-Hexanone	ND	10		µg/L	1	11/22/2014 2:13:49 PM	R22739
Isopropylbenzene	17	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
4-Isopropyltoluene	1.3	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 2:13:49 PM	R22739
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
n-Butylbenzene	12	3.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
n-Propylbenzene	63	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
sec-Butylbenzene	8.3	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Styrene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 2:13:49 PM	R22739
Xylenes, Total	4.6	1.5		µg/L	1	11/22/2014 2:13:49 PM	R22739
Surr: 1,2-Dichloroethane-d4	99.1	70-130		%REC	1	11/22/2014 2:13:49 PM	R22739
Surr: 4-Bromofluorobenzene	87.5	70-130		%REC	1	11/22/2014 2:13:49 PM	R22739
Surr: Dibromofluoromethane	85.0	70-130		%REC	1	11/22/2014 2:13:49 PM	R22739
Surr: Toluene-d8	101	70-130		%REC	1	11/22/2014 2:13:49 PM	R22739

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 24 of 34
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: EA Engineering

Client Sample ID: TRIP BLANK

Project: Atex 213

Collection Date:

Lab ID: 1411707-013

Matrix: TRIP BLANK

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Toluene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Naphthalene	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Acetone	ND	10		µg/L	1	11/21/2014 9:46:30 PM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Bromoform	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Bromomethane	ND	3.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
2-Butanone	ND	10		µg/L	1	11/21/2014 9:46:30 PM	R22714
Carbon disulfide	ND	10		µg/L	1	11/21/2014 9:46:30 PM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Chloroethane	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Chloroform	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Chloromethane	ND	3.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411707

Date Reported: 11/26/2014

CLIENT: EA Engineering

Client Sample ID: TRIP BLANK

Project: Atex 213

Collection Date:

Lab ID: 1411707-013

Matrix: TRIP BLANK

Received Date: 11/18/2014 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
2-Hexanone	ND	10		µg/L	1	11/21/2014 9:46:30 PM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2014 9:46:30 PM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Styrene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/21/2014 9:46:30 PM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 9:46:30 PM	R22714
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%REC	1	11/21/2014 9:46:30 PM	R22714
Surr: 4-Bromofluorobenzene	133	70-130	S	%REC	1	11/21/2014 9:46:30 PM	R22714
Surr: Dibromofluoromethane	92.6	70-130		%REC	1	11/21/2014 9:46:30 PM	R22714
Surr: Toluene-d8	112	70-130		%REC	1	11/21/2014 9:46:30 PM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

**Client:** EA Engineering

**Project:** Atex 213

Sample ID <b>b1</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R22649</b>		RunNo: <b>22649</b>							
Prep Date:	Analysis Date: <b>11/19/2014</b>		SeqNo: <b>667863</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		141	70	130			S
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R22649</b>		RunNo: <b>22649</b>							
Prep Date:	Analysis Date: <b>11/19/2014</b>		SeqNo: <b>667865</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		134	70	130			S
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID <b>5mL rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R22714</b>		RunNo: <b>22714</b>							
Prep Date:	Analysis Date: <b>11/21/2014</b>		SeqNo: <b>669903</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

Client: EA Engineering

Project: Atex 213

Sample ID	5mL rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID: R22714	RunNo: 22714							
Prep Date:		Analysis Date: 11/21/2014	SeqNo: 669903		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

Client: EA Engineering

Project: Atex 213

Sample ID	5mL rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R22714	RunNo:	22714					
Prep Date:		Analysis Date:	11/21/2014	SeqNo:	669903	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R22714	RunNo:	22714					
Prep Date:		Analysis Date:	11/21/2014	SeqNo:	669905	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	80	120			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.4	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	86.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	1411707-009a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	MW-4R	Batch ID:	R22714	RunNo:	22714					
Prep Date:		Analysis Date:	11/21/2014	SeqNo:	669918	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	18	1.0	20.00	0	91.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	90.3	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		125	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.2	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

**Client:** EA Engineering

**Project:** Atex 213

Sample ID	1411707-009a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	MW-4R	Batch ID:	R22714	RunNo:	22714						
Prep Date:		Analysis Date:	11/21/2014	SeqNo:	669919	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	101	70	130	3.54	20		
Toluene	19	1.0	20.00	0	96.9	70	130	5.09	20		
Chlorobenzene	18	1.0	20.00	0	89.4	70	130	2.18	20		
1,1-Dichloroethene	17	1.0	20.00	0	85.3	70	130	5.73	20		
Trichloroethene (TCE)	16	1.0	20.00	0	80.8	70	130	1.34	20		
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.7	70	130	0	0		
Surr: 4-Bromofluorobenzene	13		10.00		133	70	130	0	0	S	
Surr: Dibromofluoromethane	9.0		10.00		89.7	70	130	0	0		
Surr: Toluene-d8	10		10.00		104	70	130	0	0		

Sample ID	5mL rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID:	R22739	RunNo:	22739						
Prep Date:		Analysis Date:	11/22/2014	SeqNo:	670904	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	1.0									
Toluene	ND	1.0									
Ethylbenzene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,2-Dichloroethane (EDC)	ND	1.0									
1,2-Dibromoethane (EDB)	ND	1.0									
Naphthalene	ND	2.0									
1-Methylnaphthalene	ND	4.0									
2-Methylnaphthalene	ND	4.0									
Acetone	ND	10									
Bromobenzene	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	3.0									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	2.0									
Chloroform	ND	1.0									
Chloromethane	ND	3.0									
2-Chlorotoluene	ND	1.0									

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

Client: EA Engineering

Project: Atex 213

Sample ID	5mL rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID: R22739	RunNo: 22739							
Prep Date:		Analysis Date: 11/22/2014	SeqNo: 670904 Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

**Client:** EA Engineering  
**Project:** Atex 213

Sample ID	<b>5mL rb</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R22739</b>	RunNo:	<b>22739</b>					
Prep Date:		Analysis Date:	<b>11/22/2014</b>	SeqNo:	<b>670904</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.3	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		119	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID	<b>100ng lcs</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R22739</b>	RunNo:	<b>22739</b>					
Prep Date:		Analysis Date:	<b>11/22/2014</b>	SeqNo:	<b>670906</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	100	80	120			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.6	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	87.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID	<b>b2</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R22739</b>	RunNo:	<b>22739</b>					
Prep Date:		Analysis Date:	<b>11/22/2014</b>	SeqNo:	<b>670944</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

Client: EA Engineering

Project: Atex 213

Sample ID	b2	SampType	MBLK	TestCode	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R22739	RunNo:	22739					
Prep Date:		Analysis Date:	11/22/2014	SeqNo:	670944	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1411707

26-Nov-14

**Client:** EA Engineering  
**Project:** Atex 213

Sample ID	b2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R22739	RunNo:	22739					
Prep Date:		Analysis Date:	11/22/2014	SeqNo:	670944	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		126	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R22739	RunNo:	22739					
Prep Date:		Analysis Date:	11/22/2014	SeqNo:	670946	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	21	1.0	20.00	0	103	80	120			
Chlorobenzene	19	1.0	20.00	0	96.2	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	88.4	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		125	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.2	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client Name: EA Engineering Alb

Work Order Number: 1411707

RcptNo: 1

Received by/date:	<i>[Signature]</i>	11/18/14	
Logged By:	Ashley Gallegos	11/18/2014 1:19:00 PM	<i>[Signature]</i>
Completed By:	Ashley Gallegos	11/18/2014 2:47:30 PM	<i>[Signature]</i>
Reviewed By:	CS	11/19/14	

**Chain of Custody**

- Custody seals intact on sample bottles? Yes  No  Not Present
- Is Chain of Custody complete? Yes  No  Not Present
- How was the sample delivered? Client

**Log In**

- Was an attempt made to cool the samples? Yes  No  NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- Sample(s) in proper container(s)? Yes  No
- Sufficient sample volume for indicated test(s)? Yes  No
- Are samples (except VOA and ONG) properly preserved? Yes  No
- Was preservative added to bottles? Yes  No  NA
- VOA vials have zero headspace? Yes  No  No VOA Vials
- Were any sample containers received broken? Yes  No
- Does paperwork match bottle labels? Yes  No
- Are matrices correctly identified on Chain of Custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Were all holding times able to be met? Yes  No

# of preserved bottles checked for pH: _____
( <2 or >12 unless noted )
Adjusted? _____
Checked by: _____

**Special Handling (if applicable)**

- Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

**18. Cooler Information**

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	3.3	Good	Not Present			



# Chain-of-Custody Record

Turn-Around Time:

Client: EA Engineering

Standard  Rush

320 Gold Ave Ste 1210

Project Name: Alex 213

Mailing Address: ABQ NM 8710

Project #: 6289805/PO#

Phone #: 505-224-9013

~~6250106~~ / 13368

email or Fax#: tmmillan@east.com

Project Manager: Teri McMillan

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation

NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Sampler:

On Ice:  Yes  No

Sample Temperature: 3.3



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
1/17/14	0824	Ag	MW-2	VOA(3)	HgCl <sub>2</sub>	-001										X		
	0855		MW-38			-002												
	0935		BS-2			-003												
	1010		W-36			-004												
	1047		NMW-4R			-005												
	1132		RNMW-3			-006												
	1322		RNMW-2			-007												
	1350		MW-3			-008												
	1418		MW-4R			-009												
	1510		NMW-1			-010												
	1544		W-35			-011												
	1618		MW-1R			-012												

Date: 1/18/14 Time: 1319 Relinquished by: [Signature]

Received by: [Signature] Date: 1/18/14 Time: 1319

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Remarks: 102

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.







Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 05, 2015

Teri McMillan

EA Engineering, Science and Technology  
320 Gold Ave SW Suite 1210

Albuquerque, NM 87102

TEL: (505) 259-6779

FAX

RE: Atex 213

OrderNo.: 1412A34

Dear Teri McMillan:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/22/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1412A34

Date Reported: 1/5/2015

CLIENT: EA Engineering, Science and Technology

Client Sample ID: MW-6RR

Project: Atex 213

Collection Date: 12/22/2014 12:21:00 PM

Lab ID: 1412A34-001

Matrix: AQUEOUS

Received Date: 12/22/2014 1:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
Benzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Toluene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Ethylbenzene	130	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Methyl tert-butyl ether (MTBE)	13	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2,4-Trimethylbenzene	88	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,3,5-Trimethylbenzene	7.8	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Naphthalene	170	10		µg/L	5	1/2/2015 1:35:26 PM	R23462
1-Methylnaphthalene	60	20		µg/L	5	1/2/2015 1:35:26 PM	R23462
2-Methylnaphthalene	32	20		µg/L	5	1/2/2015 1:35:26 PM	R23462
Acetone	ND	50		µg/L	5	1/2/2015 1:35:26 PM	R23462
Bromobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Bromodichloromethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Bromoform	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Bromomethane	ND	15		µg/L	5	1/2/2015 1:35:26 PM	R23462
2-Butanone	ND	50		µg/L	5	1/2/2015 1:35:26 PM	R23462
Carbon disulfide	ND	50		µg/L	5	1/2/2015 1:35:26 PM	R23462
Carbon Tetrachloride	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Chlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Chloroethane	ND	10		µg/L	5	1/2/2015 1:35:26 PM	R23462
Chloroform	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Chloromethane	ND	15		µg/L	5	1/2/2015 1:35:26 PM	R23462
2-Chlorotoluene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
4-Chlorotoluene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
cis-1,2-DCE	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	1/2/2015 1:35:26 PM	R23462
Dibromochloromethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Dibromomethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2-Dichlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,3-Dichlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,4-Dichlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Dichlorodifluoromethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1-Dichloroethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1-Dichloroethene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2-Dichloropropane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,3-Dichloropropane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
2,2-Dichloropropane	ND	10		µg/L	5	1/2/2015 1:35:26 PM	R23462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1412A34

Date Reported: 1/5/2015

CLIENT: EA Engineering, Science and Technology

Client Sample ID: MW-6RR

Project: Atex 213

Collection Date: 12/22/2014 12:21:00 PM

Lab ID: 1412A34-001

Matrix: AQUEOUS

Received Date: 12/22/2014 1:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: cadg
1,1-Dichloropropene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Hexachlorobutadiene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
2-Hexanone	ND	50		µg/L	5	1/2/2015 1:35:26 PM	R23462
Isopropylbenzene	32	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
4-Isopropyltoluene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
4-Methyl-2-pentanone	ND	50		µg/L	5	1/2/2015 1:35:26 PM	R23462
Methylene Chloride	ND	15		µg/L	5	1/2/2015 1:35:26 PM	R23462
n-Butylbenzene	16	15		µg/L	5	1/2/2015 1:35:26 PM	R23462
n-Propylbenzene	92	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
sec-Butylbenzene	8.3	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Styrene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
tert-Butylbenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	1/2/2015 1:35:26 PM	R23462
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
trans-1,2-DCE	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1,1-Trichloroethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,1,2-Trichloroethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Trichloroethene (TCE)	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Trichlorofluoromethane	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
1,2,3-Trichloropropane	ND	10		µg/L	5	1/2/2015 1:35:26 PM	R23462
Vinyl chloride	ND	5.0		µg/L	5	1/2/2015 1:35:26 PM	R23462
Xylenes, Total	27	7.5		µg/L	5	1/2/2015 1:35:26 PM	R23462
Surr: 1,2-Dichloroethane-d4	87.7	70-130		%REC	5	1/2/2015 1:35:26 PM	R23462
Surr: 4-Bromofluorobenzene	73.3	70-130		%REC	5	1/2/2015 1:35:26 PM	R23462
Surr: Dibromofluoromethane	85.9	70-130		%REC	5	1/2/2015 1:35:26 PM	R23462
Surr: Toluene-d8	87.7	70-130		%REC	5	1/2/2015 1:35:26 PM	R23462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A34  
05-Jan-15

**Client:** EA Engineering, Science and Technology  
**Project:** Atex 213

Sample ID	<b>5mL-rb</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R23448</b>	RunNo:	<b>23448</b>					
Prep Date:		Analysis Date:	<b>12/31/2014</b>	SeqNo:	<b>692880</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.0	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.9	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.2	70	130			
Surr: Toluene-d8	8.9		10.00		89.2	70	130			

Sample ID	<b>100ng lcs</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R23448</b>	RunNo:	<b>23448</b>					
Prep Date:		Analysis Date:	<b>12/31/2014</b>	SeqNo:	<b>692882</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.4	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		88.4	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.6	70	130			
Surr: Toluene-d8	8.2		10.00		81.6	70	130			

Sample ID	<b>b2</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R23448</b>	RunNo:	<b>23448</b>					
Prep Date:		Analysis Date:	<b>12/31/2014</b>	SeqNo:	<b>692922</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.0	70	130			
Surr: Dibromofluoromethane	8.0		10.00		80.2	70	130			
Surr: Toluene-d8	8.9		10.00		88.8	70	130			

Sample ID	<b>100ng lcs</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R23448</b>	RunNo:	<b>23448</b>					
Prep Date:		Analysis Date:	<b>12/31/2014</b>	SeqNo:	<b>692924</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		86.3	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.3	70	130			
Surr: Toluene-d8	8.6		10.00		86.3	70	130			

Sample ID	<b>5mL rb</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R23462</b>	RunNo:	<b>23462</b>					
Prep Date:		Analysis Date:	<b>1/2/2015</b>	SeqNo:	<b>693311</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A34

05-Jan-15

Client: EA Engineering, Science and Technology

Project: Atex 213

Sample ID	5mL rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R23462	RunNo:	23462					
Prep Date:		Analysis Date:	1/2/2015	SeqNo:	693311	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A34

05-Jan-15

Client: EA Engineering, Science and Technology

Project: Atex 213

Sample ID	5mL rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R23462		RunNo: 23462						
Prep Date:		Analysis Date: 1/2/2015		SeqNo: 693311		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.2	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		84.2	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.5	70	130			
Surr: Toluene-d8	8.8		10.00		88.1	70	130			

Sample ID	100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID: R23462		RunNo: 23462						
Prep Date:		Analysis Date: 1/2/2015		SeqNo: 693313		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.6	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

**Qualifiers:**

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
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- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A34

05-Jan-15

Client: EA Engineering, Science and Technology

Project: Atex 213

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R23462	RunNo:	23462					
Prep Date:		Analysis Date:	1/2/2015	SeqNo:	693313	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	118	75.6	144			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.6	70	130			
Surr: 4-Bromofluorobenzene	8.5		10.00		85.0	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.4	70	130			
Surr: Toluene-d8	8.9		10.00		88.8	70	130			

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
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- J Analyte detected below quantitation limits
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
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- P Sample pH greater than 2.
- RL Reporting Detection Limit

**Sample Log-In Check List**

Client Name: EA Engineering Alb

Work Order Number: 1412A34

RcptNo: 1

Received by/date: At 12/22/14

Logged By: Anne Thorne 12/22/2014 1:00:00 PM

*Anne Thorne*

Completed By: Anne Thorne 12/22/2014

*Anne Thorne*

Reviewed By: At 12/22/14

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Client

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
Samples were collected the same day and chilled.
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No  # of preserved bottles checked for pH: \_\_\_\_\_  
 Adjusted? \_\_\_\_\_  
 (<2 or >12 unless noted)
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No  Checked by: \_\_\_\_\_  
 (If no, notify customer for authorization.)

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.4	Good	Not Present			



# Chain-of-Custody Record

Turn-Around Time:

Client: EA Engineering

Standard  Rush

320 Gold Ave SW STE 210

Project Name: Alex 213

Mailing Address: ABQ, NM 87102

Project #: 6550106.5 #1212114

Phone #: 505 224 9013

PO# 6289805 / PO# 13368

email or Fax#: tmcmillan@caest.com

Project Manager: Teri McMillan

QA/QC Package:  
 Standard  Level 4 (Full Validation)

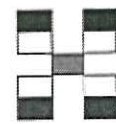
Sampler: Lane Anderson

Accreditation  
 NELAP  Other

On Ice:  Yes  No

EDD (Type)

Sample Temperature: 10.4



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
1-22-14	1221	Ag	MW-6RR	B) VOA	HgCl <sub>2</sub>	1412A34 201										<input checked="" type="checkbox"/>		

Date: 1-22-14 Time: 1300 Relinquished by: [Signature] Received by: [Signature] Date: 12/22/14 Time: 1300

Date: Time: Relinquished by: Received by: Date: Time:

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.