

**3R - 339**

**2012 AGWMR**

**04 / 10 / 2013**



COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.

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April 10, 2013

New Mexico Oil Conservation Division  
Attn: Glenn von Goten  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**RE: 2012 Annual Groundwater Reports**  
**Williams Field Services, LLC**  
**PO Box 3483, MD 48-6**  
**Tulsa, Oklahoma 74101**

Dear Mr. von Goten:

Please find attached to this letter the "2012 Annual Groundwater Reports" for the following three locations in the San Juan Basin for Williams Field Services, LLC:

- Ice Canyon Drip              3R-322
- Jicarilla Contract 147-6    3R-325
- Pritchard #2A                3R-339

If you have any questions or comments, please do not hesitate to contact us at (505) 326-2107 or (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Kyla Vaughan  
Environmental Compliance Specialist

cc: Williams Field Services, LLC

# **2012 ANNUAL GROUNDWATER REPORT**

**PRITCHARD #2A**

**ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER**  
**3RP-339-0**

**APRIL 2013**

**Prepared for:**

**WILLIAMS FIELD SERVICES, LLC  
TULSA, OKLAHOMA**



# **2012 ANNUAL GROUNDWATER REPORT**

**PRITCHARD #2A  
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER  
3RP-339-0**

**APRIL 2013**

**Prepared for:**

**WILLIAMS FIELD SERVICES, LLC  
PO Box 3483, MD 48-6  
Tulsa, Oklahoma 74101**

**Prepared by:**

**LT ENVIRONMENTAL, INC.  
2243 Main Avenue, Suite 3  
Durango, Colorado 81301  
(970) 385-1096**



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## **EXECUTIVE SUMMARY**

Groundwater at the Pritchard #2A (Administrative/Environmental Order Number 3RP-339-0) natural gas production well site (Site) is impacted by petroleum hydrocarbons in excess of the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX) due to a release from two former pits, the east pit and the north pit. Williams Field Services, LLC (Williams) conducted groundwater monitoring activities at the Site between April 2012 and December 2012. In January 2013, LT Environmental Inc., (LTE) was retained by Williams to visit the Site and evaluate the status of all groundwater monitoring wells, complete annual sampling requirements, and recommend improvements to the groundwater remediation program.

Between April 2012 and March 2013, five groundwater monitoring events were conducted (April 2012, June 2012, September 2012, December 2012, and February 2013). Depth to groundwater and depth to free-phase hydrocarbon data for the monitoring events conducted in 2012 were not available. Depth to groundwater data in February 2013 indicate the groundwater flow is to the south in the northern portion of the Site and to the north in the southern portion of the Site.

Groundwater monitoring activities were conducted at the Site in April 2012, June 2012, September 2012, December 2012, and February 2013. Groundwater monitoring well MW-2 and MW-4 were not sampled during any of the monitoring events likely due to the presence of free-phase hydrocarbons in the wells. Groundwater monitoring wells MW-1, MW-3, and MW-5 contained benzene in excess of the NMWQCC groundwater standards during at least one of the monitoring events. Groundwater monitoring well MW-6 contained benzene and total xylenes in excess of the NMWQCC groundwater standards at least one of the monitoring events.

Williams will repair groundwater monitoring well MW-3 and resurvey the top of casing elevations. This data will allow Williams to evaluate groundwater flow direction and BTEX concentrations to determine where and how many additional groundwater wells are necessary. Williams will continue quarterly depth to groundwater, depth to product, and BTEX sampling from all six groundwater monitor wells on Site; and evaluate recovery of free-phase hydrocarbons in groundwater monitoring wells MW-2 and MW-4.

## **1.0 INTRODUCTION**

LT Environmental, Inc. (LTE) on behalf of Williams Field Services, LLC (Williams) has prepared this report detailing groundwater monitoring activities completed from April 2012 through February 2013 at the Pritchard #2A (Administrative/Environmental Order Number 3RP-339-0) natural gas production well site (Site) (Figure 1). The scope of work for this project was continued monitoring of petroleum hydrocarbon impacts to groundwater as a result of a release from two former pits, the east pit and the north pit. From April 2012 through December 2012, Williams conducted groundwater sampling. In February 2013, LTE visited the Site to evaluate the status of all groundwater monitoring wells, complete annual sampling requirements, and recommend improvements to the groundwater remediation program.

### **1.1 LOCATION**

The Site is located at latitude 36.837444 and longitude -107.713236 in Unit J, Section 6, Township 30 North, Range 8 West. The Site is at the confluence of an unnamed tributary to La Manga Canyon with La Manga Canyon, which drains into Pump Canyon, in the San Juan Basin, San Juan County, New Mexico.

### **1.2 HISTORY**

The source is two former pits, the east pit and the north pit; which are considered a single source due to their proximity to each other. In December 1997, almost 800 cubic yards of impacted soil were excavated from the Site. Soil samples from the floors of the two excavations revealed total petroleum hydrocarbons – diesel range organics and BTEX in excess of the New Mexico Oil and Conservation Division (NMOCD) remediation levels. A groundwater sample collected from a well drilled in the east pit at approximately 76.5 feet below ground surface (bgs) contained 8,600 micrograms per liter ( $\mu\text{g}/\text{L}$ ) benzene. Sometime prior to April 2000, groundwater monitoring wells MW-2, MW-3, and MW-4 were installed; and in April 2000, MW-5 and MW-6 were installed at the Site.

Between April 2000 (or earlier) and December 2012, groundwater at the Site was monitored. Records regarding these activities can be found in previous groundwater reports submitted to the NMOCD.

In March 2013, a site visit was conducted by LTE to observe site conditions and evaluate the status of all groundwater monitoring wells. Depth to groundwater and depth to product were measured and groundwater samples were collected, when possible, for laboratory analysis of benzene, toluene, ethylbenzene and total xylene (BTEX).

## **2.0 METHODOLOGY**

Groundwater monitoring activities were conducted at the Site in April 2012, June 2012, September 2012, December 2012, and February 2013. The April 2012 through December 2012 monitoring events were conducted by a third-party consultant and the methodology used is not known. Water level measurements were not available for the April 2012 through December 2012

monitoring events. Table 1 provides a cross-reference to match the sample identifier with the appropriate groundwater monitoring well for the April 2012 through December 2012 monitoring events. The first quarter 2013 monitoring event was conducted by LTE; the methodology used by LTE is discussed below.

## **2.1 WATER AND PRODUCT LEVEL MEASUREMENTS**

Groundwater level monitoring included recording depth to groundwater measurements with a Keck oil/water interface probe. The presence of any free-phase petroleum hydrocarbons was investigated using the interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. These data are summarized in Table 2.

## **2.2 GROUNDWATER SAMPLING**

Prior to sampling groundwater, depth to groundwater and total depth of monitoring wells was measured with a Keck oil/water interface probe. Groundwater monitoring wells containing measurable free-phase petroleum hydrocarbons were not sampled. The volume of water in monitoring well was calculated, and a minimum of three well casing volumes of water was purged from each well using a new disposable polyvinyl chloride (PVC) bailer or a dedicated PVC bailer. As water was removed from the monitoring well, pH, electric conductivity and temperature were monitored. Monitoring wells were purged until these properties stabilized, indicating the purge water was representative of aquifer conditions, or until the well was purged dry. Stabilization was defined as three consecutive stable readings for each water property ( $\pm 0.4$  units for pH,  $\pm 10$  percent for electric conductivity and  $\pm 2^{\circ}\text{C}$  for temperature). All purge water was containerized and disposed of at a facility designated by Williams. A copy of the laboratory reports are presented in Appendix A and copies of the field sheets are presented in Appendix B.

Once each monitoring well was properly purged, groundwater samples were collected by filling at least two 40-milliliter (ml) glass vials. The laboratory supplied vials were filled and capped with no air inside to prevent degradation of the sample. Samples were labeled with the date and time of collection, monitoring well designation, project name, collector's name, and parameters to be analyzed. They were immediately sealed and packed on ice. The samples were transferred to Hall Environmental Analysis Laboratory (HEAL) for analysis. Samples were stored on ice in a sealed cooler and maintained under chain-of-custody (COC) procedures. COC forms were completed documenting the date and time sampled, sample number, type of sample, sampler's name, preservative used (if any), analyses required, and sampler's signature.

## **2.3 GROUNDWATER CONTOUR MAPS**

LTE used existing top of casing well elevations and groundwater elevations obtained from monitoring wells during the February 2013 site visit to draft a groundwater contour map (Figure 2). Contours were inferred based on groundwater elevations obtained and observations of physical characteristics at the Site (topography, proximity to irrigation ditches, etc.).

### **3.0 RESULTS**

Depth to groundwater data during the February 2013 monitoring event is summarized on Table 2. Using the existing survey data, groundwater flow direction was determined to be to the south in the northern portion of the Site and to the north in the southern portion of the Site; the top of casing elevations may not be correct (Figure 2).

Groundwater monitoring well MW-2, located in the original source area, contains free-phase hydrocarbons and monitoring well MW-4 contains over one foot of free-phase hydrocarbons. All surrounding wells contain BTEX concentrations exceeding the NMWQCC groundwater standards. Table 3 summarizes the groundwater analytical results and copies of the laboratory reports can be found in Appendix A.

### **4.0 CONCLUSIONS**

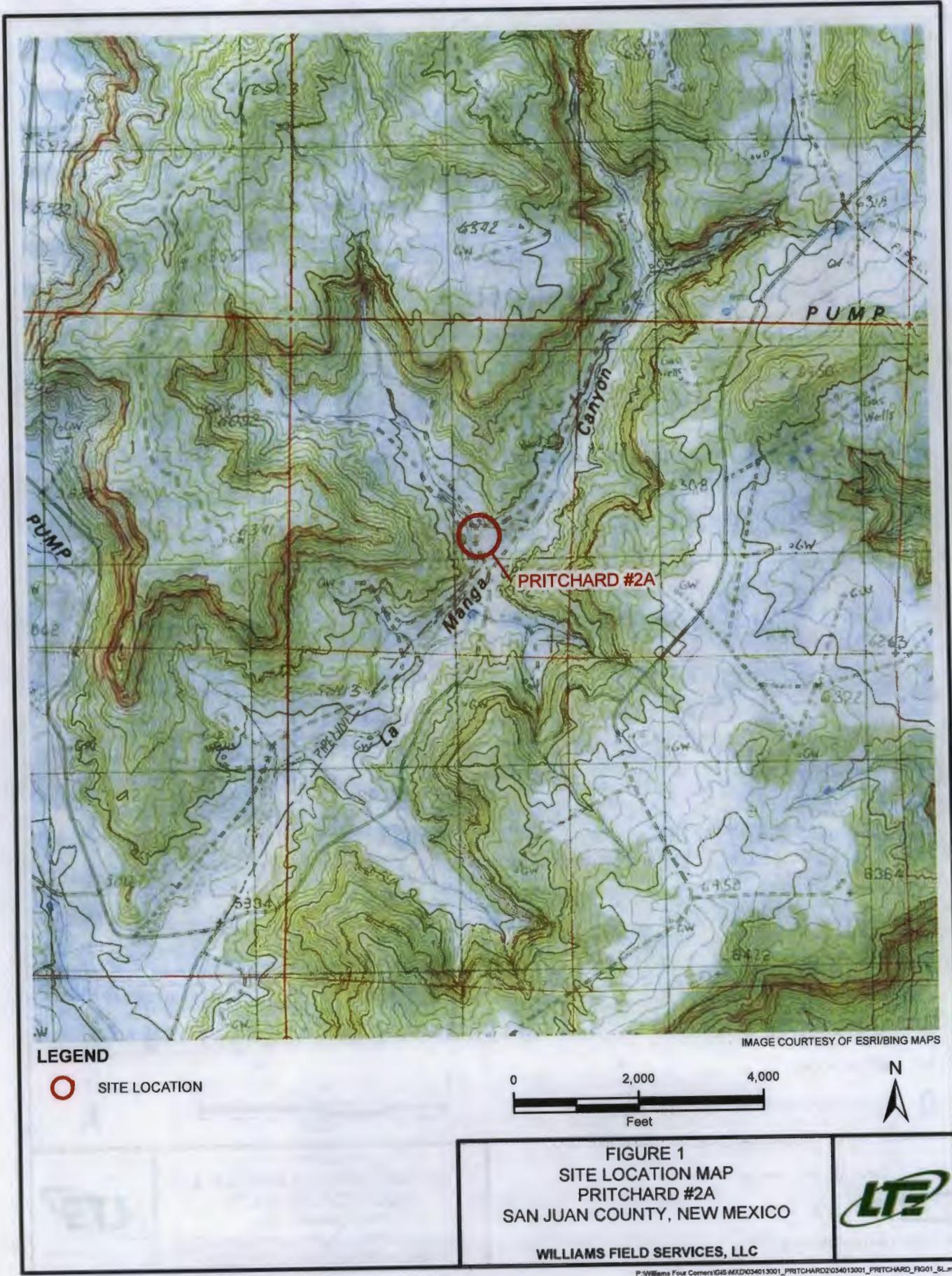
Free-phase hydrocarbons remain at the source and are present over 150 feet south of the source in groundwater monitoring well MW-4. All surrounding wells contain dissolved phase contaminants. Groundwater flow behavior does not appear to follow the drainage toward La Manga Canyon, making the top of casing elevation survey data suspect. Groundwater flow behavior is unclear, the original source is not delineated, and there is potential for multiple sources. Groundwater at the Site remains impacted by BTEX parameters above the NMWQCC groundwater standards in groundwater monitoring wells MW-1, MW-3, MW-5, and MW-6; MW-2 and MW-4 contain free-phase hydrocarbons.

### **5.0 RECOMMENDATIONS**

Williams will repair groundwater monitoring well MW-3 and resurvey the top of casing elevations. This data will allow Williams to evaluate groundwater flow direction and BTEX concentrations to determine where and how many additional groundwater wells are necessary. Williams will continue quarterly depth to groundwater, depth to product, and BTEX sampling from all six groundwater monitor wells on Site; and evaluate recovery of free-phase hydrocarbons in groundwater monitoring wells MW-2 and MW-4.

## **FIGURES**

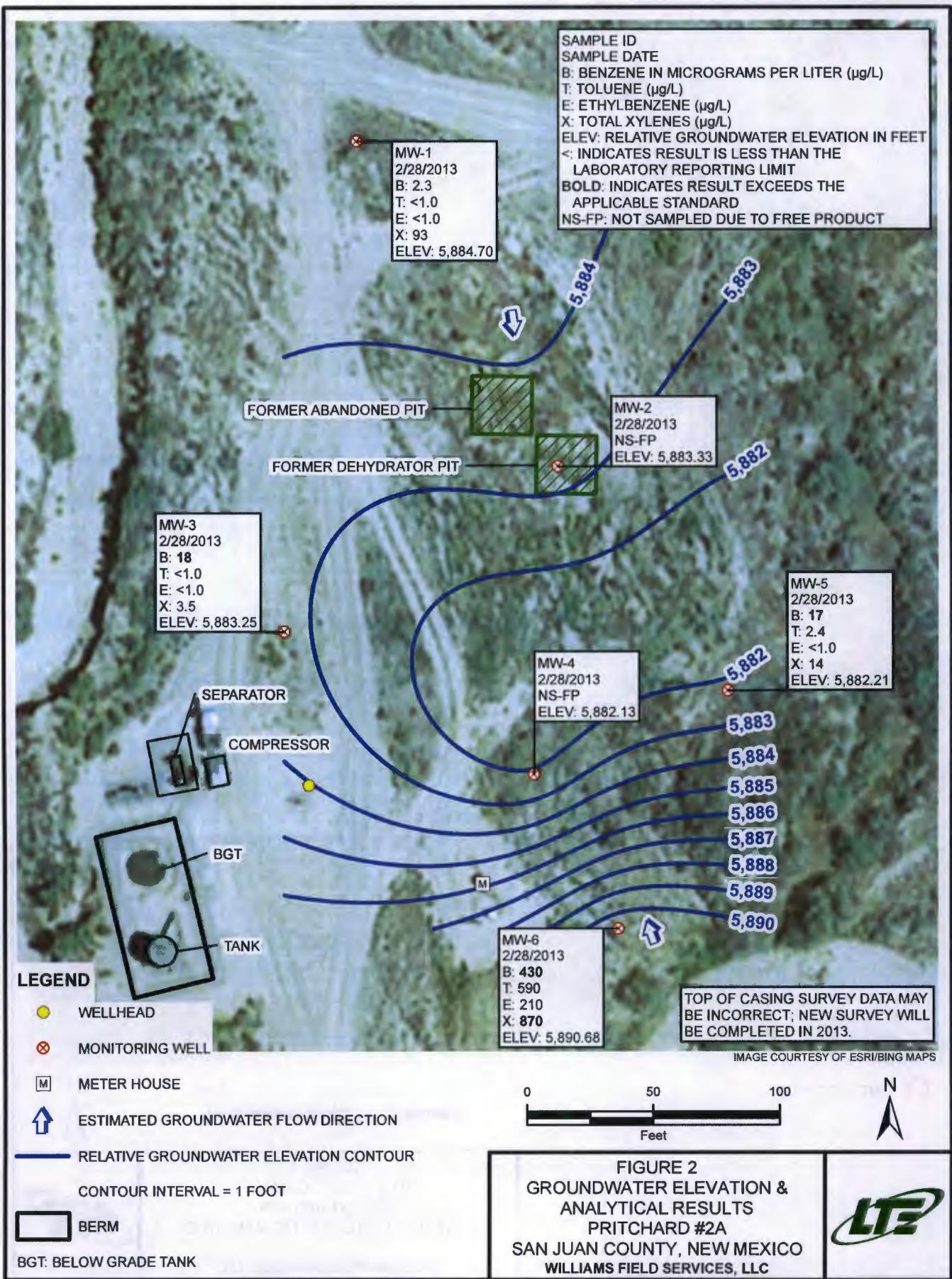




**FIGURE 1  
SITE LOCATION MAP  
PRITCHARD #2A  
SAN JUAN COUNTY, NEW MEXICO**

**WILLIAMS FIELD SERVICES, LLC**





## **TABLES**



**TABLE 1**

**CROSS REFERENCE WELL NAME AND SAMPLE IDENTIFIER  
APRIL 2012 THROUGH DECEMBER 2012 SAMPLE DATES  
PRITCHARD #2A  
WILLIAMS FIELD SERVICES, LLC**

<b>Sample Identifier</b>	<b>Well Name</b>	<b>Sample Date</b>
141902APR06	MW-1	4/2/2012
155613JUN12	MW-1	6/13/2012
132702OCT12	MW-1	10/2/2012
134806DEC12	MW-1	12/6/2012
142902APR06	MW-3	4/2/2012
161413JUN12	MW-3	6/13/2012
143802APR06	MW-5	4/2/2012
163313JUN12	MW-5	6/13/2012
141102OCT12	MW-5	10/2/2012
135706DEC12	MW-5	12/6/2012
145702APR06	MW-6	4/2/2012
164713JUN12	MW-6	6/13/2012
142202OCT12	MW-6	10/2/2012
141906DEC12	MW-6	12/6/2012

**Note:**

Samples summarized in this table were not collected by LTE



**TABLE 2**  
**GROUNDWATER ELEVATION SUMMARY**  
**PRITCHARD #2A**  
**WILLIAMS FIELD SERVICES, LLC**

Well ID	Date	Depth to Product (feet BTOC)	Product Thickness (feet)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW-1	4/2/2012	UNK	UNK	UNK	UNK
MW-1	6/13/2012	UNK	UNK	UNK	UNK
MW-1	10/2/2012	UNK	UNK	UNK	UNK
MW-1	12/6/2012	UNK	UNK	UNK	UNK
MW-1	2/28/2013	NP	NP	82.06	5884.70
MW-2	4/2/2012	UNK	UNK	UNK	UNK
MW-2	6/13/2012	UNK	UNK	UNK	UNK
MW-2	10/2/2012	UNK	UNK	UNK	UNK
MW-2	12/6/2012	UNK	UNK	UNK	UNK
MW-2 *	2/28/2013	79.63	0.34	79.97	5883.33
MW-3	4/2/2012	UNK	UNK	UNK	UNK
MW-3	6/13/2012	UNK	UNK	UNK	UNK
MW-3	10/2/2012	UNK	UNK	UNK	UNK
MW-3	12/6/2012	UNK	UNK	UNK	UNK
MW-3	2/28/2013	NP	NP	78.02	5883.25
MW-4	4/2/2012	UNK	UNK	UNK	UNK
MW-4	6/13/2012	UNK	UNK	UNK	UNK
MW-4	10/2/2012	UNK	UNK	UNK	UNK
MW-4	12/6/2012	UNK	UNK	UNK	UNK
MW-4	2/28/2013	77.97	1.58	79.55	5882.13
MW-5	4/2/2012	UNK	UNK	UNK	UNK
MW-5	6/13/2012	UNK	UNK	UNK	UNK
MW-5	10/2/2012	UNK	UNK	UNK	UNK
MW-5	12/6/2012	UNK	UNK	UNK	UNK
MW-5	2/28/2013	NP	NP	78.20	5882.21
MW-6	4/2/2012	UNK	UNK	UNK	UNK
MW-6	6/13/2012	UNK	UNK	UNK	UNK
MW-6	10/2/2012	UNK	UNK	UNK	UNK

**TABLE 2**

**GROUNDWATER ELEVATION SUMMARY  
PRITCHARD #2A  
WILLIAMS FIELD SERVICES, LLC**

Well ID	Date	Depth to Product (feet BTOC)	Product Thickness (feet)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW-6	12/6/2012	UNK	UNK	UNK	UNK
MW-6	2/28/2013	NP	NP	67.56	5890.68

**Notes:**

BTOC - Below Top of Casing

AMSL - Above Mean Sea Level

NP - No Product

UNK - data is not known

Groundwater elevation calculation in wells with product: (Top of Casing Elevation - Depth to Water) + (Product Thickness \* 0.8)

**TABLE 3**

**GROUNDWATER LABORATORY ANALYTICAL RESULTS**  
**PRITCHARD #2A**  
**WILLIAMS FIELD SERVICES, LLC**

Well Name	Sample Date	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )
<b>NMWQCC Standard (<math>\mu\text{g/L}</math>)</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>
MW-1	4/2/2012	<b>23.5</b>	<1.0	7.7	45.9
MW-1	6/13/2012	<b>19.0</b>	<1.0	4.4	33.6
MW-1	10/2/2012	8.0	<1.0	5.6	40.7
MW-1	12/6/2012	<b>22.0</b>	<1.0	6.4	52.2
MW-1	2/28/2013	2.3	<1.0	<1.0	93
MW-2	4/2/2012	NS	NS	NS	NS
MW-2	6/13/2012	NS	NS	NS	NS
MW-2	10/2/2012	NS	NS	NS	NS
MW-2	12/6/2012	NS	NS	NS	NS
MW-2	2/28/2013	NSP	NSP	NSP	NSP
MW-3	4/2/2012	<b>18.2</b>	1.8	<1.0	7.5
MW-3	6/13/2012	<b>35.5</b>	4.5	<1.0	20.7
MW-3	10/2/2012	NS	NS	NS	NS
MW-3	12/6/2012	NS	NS	NS	NS
MW-3	2/28/2013	<b>18</b>	<1.0	<1.0	3.5
MW-4	4/2/2012	NS	NS	NS	NS
MW-4	6/13/2012	NS	NS	NS	NS
MW-4	10/2/2012	NS	NS	NS	NS
MW-4	12/6/2012	NS	NS	NS	NS
MW-4	2/28/2013	NSP	NSP	NSP	NSP
MW-5	4/2/2012	<1.0	<1.0	<1.0	<3.0
MW-5	6/13/2012	3.3	<1.0	<1.0	<3.0
MW-5	10/2/2012	<b>18.2</b>	<1.0	3.7	21.2
MW-5	12/6/2012	<b>35.4</b>	<1.0	2.7	30.6
MW-5	2/28/2013	<b>17</b>	2.4	<1.0	14
MW-6	4/2/2012	<b>1,210</b>	259	36.2	423
MW-6	6/13/2012	<b>1,360</b>	501	103	<b>981</b>
MW-6	10/2/2012	<b>882</b>	375	40.8	<b>767</b>



**TABLE 3**

**GROUNDWATER LABORATORY ANALYTICAL RESULTS  
PRITCHARD #2A  
WILLIAMS FIELD SERVICES, LLC**

Well Name	Sample Date	Benzene ( $\mu\text{g}/\text{L}$ )	Toluene ( $\mu\text{g}/\text{L}$ )	Ethylbenzene ( $\mu\text{g}/\text{L}$ )	Total Xylenes ( $\mu\text{g}/\text{L}$ )
<b>NMWQCC Standard (<math>\mu\text{g}/\text{L}</math>)</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>
MW-6	12/6/2012	<b>768</b>	299	8.4	427
MW-6	2/28/2013	<b>430</b>	590	210	<b>870</b>

**Notes:**

NMWQCC - New Mexico Water Quality Control Commission

NS- not sampled

NSP - not sampled due to the presence of free phase hydrocarbons in the well

$\mu\text{g}/\text{L}$  - micrograms per liter

< - indicates result is less than laboratory reporting detection limit

**Bold** - indicates sample exceeds NMWQCC standard

**APPENDIX A  
ANALYTICAL LABORATORY REPORTS**





Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

April 17, 2012

Mr. Mark Harvey  
Mile High Environmental  
811 B West Apache  
Farmington, NM 87401

RE: Project: NM GW PRTCHO & JIC  
Pace Project No.: 60119079

Dear Mr. Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Heather M. Wilson".

Heather Wilson

heather.wilson@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

## CERTIFICATIONS

Project: NM GW PRTCHO & JIC  
Pace Project No.: 60119079

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 05-008-0  
Illinois Certification #: 001191  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-08-TX  
Utah Certification #: 9135995665

## REPORT OF LABORATORY ANALYSIS

Page 2 of 17

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## SAMPLE SUMMARY

Project: NM GW PRTCHO & JIC  
Pace Project No.: 60119079

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60119079001	141902APR06	Water	04/02/12 14:19	04/10/12 10:00
60119079002	142902APR06	Water	04/02/12 14:29	04/10/12 10:00
60119079003	143802APR06	Water	04/02/12 14:38	04/10/12 10:00
60119079004	145702APR06	Water	04/02/12 14:57	04/10/12 10:00
60119079005	152006APR06	Water	04/06/12 15:20	04/10/12 10:00
60119079006	153206APR06	Water	04/06/12 15:32	04/10/12 10:00
60119079007	154406APR06	Water	04/06/12 15:44	04/10/12 10:00
60119079008	155306APR06	Water	04/06/12 15:53	04/10/12 10:00
60119079009	160406APR06	Water	04/06/12 16:04	04/10/12 10:00
60119079010	161506APR06	Water	04/06/12 16:15	04/10/12 10:00
60119079011	EDD	Water	04/06/12 00:00	04/10/12 10:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: NM GW PRTCHO & JIC  
Pace Project No.: 60119079

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60119079001	141902APR06	EPA 8260	RNS	9
60119079002	142902APR06	EPA 8260	RNS	9
60119079003	143802APR06	EPA 8260	RNS	9
60119079004	145702APR06	EPA 8260	RNS	9
60119079005	152006APR06	EPA 8260	RNS	9
60119079006	153206APR06	EPA 8260	RNS	9
60119079007	154406APR06	EPA 8260	RNS	9
60119079008	155306APR06	EPA 8260	RNS	9
60119079009	160406APR06	EPA 8260	RNS	9
60119079010	161506APR06	EPA 8260	RNS	9

## REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219  
(913)599-5665

## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 141902APR06	Lab ID: 60119079001	Collected: 04/02/12 14:19	Received: 04/10/12 10:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>								Analytical Method: EPA 8260
Benzene	23.5 ug/L		1.0	1			04/12/12 10:48	71-43-2
Ethylbenzene	ND ug/L		1.0	1			04/12/12 10:48	100-41-4
Toluene	7.7 ug/L		1.0	1			04/12/12 10:48	108-88-3
Xylene (Total)	45.9 ug/L		3.0	1			04/12/12 10:48	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		86-112	1			04/12/12 10:48	1868-53-7
Toluene-d8 (S)	96 %		90-110	1			04/12/12 10:48	2037-26-5
4-Bromofluorobenzene (S)	98 %		87-113	1			04/12/12 10:48	460-00-4
1,2-Dichloroethane-d4 (S)	102 %		82-119	1			04/12/12 10:48	17060-07-0
Preservation pH	1.0			1.0	1		04/12/12 10:48	

## ANALYTICAL RESULTS

Project: NM GW PRTCCHO & JIC

Pace Project No.: 60119079

**Sample: 142902APR06      Lab ID: 60119079002      Collected: 04/02/12 14:29      Received: 04/10/12 10:00      Matrix: Water**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	<b>18.2</b> ug/L		1.0	1		04/12/12 11:03	71-43-2	
Ethylbenzene	<b>1.8</b> ug/L		1.0	1		04/12/12 11:03	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 11:03	108-88-3	
Xylene (Total)	<b>7.5</b> ug/L		3.0	1		04/12/12 11:03	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		86-112	1		04/12/12 11:03	1868-53-7	
Toluene-d8 (S)	98 %		90-110	1		04/12/12 11:03	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	1		04/12/12 11:03	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		82-119	1		04/12/12 11:03	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1	04/12/12 11:03		



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## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 143802APR06 Lab ID: 60119079003 Collected: 04/02/12 14:38 Received: 04/10/12 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		04/12/12 11:19	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 11:19	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 11:19	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 11:19	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		86-112	1		04/12/12 11:19	1868-53-7	
Toluene-d8 (S)	96 %		90-110	1		04/12/12 11:19	2037-26-5	
4-Bromofluorobenzene (S)	99 %		87-113	1		04/12/12 11:19	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		82-119	1		04/12/12 11:19	17060-07-0	
Preservation pH	7.0			1.0	1	04/12/12 11:19		pH

## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

**Sample: 145702APR06      Lab ID: 60119079004      Collected: 04/02/12 14:57      Received: 04/10/12 10:00      Matrix: Water**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	<b>1210</b> ug/L		20.0	20		04/12/12 11:34	71-43-2	
Ethylbenzene	<b>259</b> ug/L		20.0	20		04/12/12 11:34	100-41-4	
Toluene	<b>36.2</b> ug/L		20.0	20		04/12/12 11:34	108-88-3	
Xylene (Total)	<b>423</b> ug/L		60.0	20		04/12/12 11:34	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		86-112	20		04/12/12 11:34	1868-53-7	
Toluene-d8 (S)	99 %		90-110	20		04/12/12 11:34	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	20		04/12/12 11:34	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		82-119	20		04/12/12 11:34	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	20		04/12/12 11:34		



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## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 152006APR06	Lab ID: 60119079005	Collected: 04/06/12 15:20	Received: 04/10/12 10:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		04/12/12 11:49	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 11:49	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 11:49	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 11:49	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		86-112	1		04/12/12 11:49	1868-53-7	
Toluene-d8 (S)	96 %		90-110	1		04/12/12 11:49	2037-26-5	
4-Bromofluorobenzene (S)	98 %		87-113	1		04/12/12 11:49	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		82-119	1		04/12/12 11:49	17060-07-0	
Preservation pH	1.0			1.0	1		04/12/12 11:49	

## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 153206APR06	Lab ID: 60119079006	Collected: 04/06/12 15:32	Received: 04/10/12 10:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/12/12 12:04	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 12:04	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 12:04	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 12:04	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		86-112	1		04/12/12 12:04	1868-53-7	
Toluene-d8 (S)	97 %		90-110	1		04/12/12 12:04	2037-26-5	
4-Bromofluorobenzene (S)	102 %		87-113	1		04/12/12 12:04	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		82-119	1		04/12/12 12:04	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 12:04		



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## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 154406APR06 Lab ID: 60119079007 Collected: 04/06/12 15:44 Received: 04/10/12 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		04/12/12 12:19	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 12:19	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 12:19	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 12:19	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		86-112	1		04/12/12 12:19	1868-53-7	
Toluene-d8 (S)	98 %		90-110	1		04/12/12 12:19	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	1		04/12/12 12:19	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		82-119	1		04/12/12 12:19	17060-07-0	
Preservation pH	1.0			1.0	1		04/12/12 12:19	



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## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 155306APR06 Lab ID: 60119079008 Collected: 04/06/12 15:53 Received: 04/10/12 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	1900 ug/L		20.0	20		04/12/12 12:34	71-43-2	
Ethylbenzene	127 ug/L		20.0	20		04/12/12 12:34	100-41-4	
Toluene	955 ug/L		20.0	20		04/12/12 12:34	108-88-3	
Xylene (Total)	1040 ug/L		60.0	20		04/12/12 12:34	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		86-112	20		04/12/12 12:34	1868-53-7	
Toluene-d8 (S)	97 %		90-110	20		04/12/12 12:34	2037-26-5	
4-Bromofluorobenzene (S)	101 %		87-113	20		04/12/12 12:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		82-119	20		04/12/12 12:34	17060-07-0	
Preservation pH	2.0			1.0	20		04/12/12 12:34	



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## ANALYTICAL RESULTS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

Sample: 160406APR06 Lab ID: 60119079009 Collected: 04/06/12 16:04 Received: 04/10/12 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	13800 ug/L		100	100		04/12/12 12:49	71-43-2	
Ethylbenzene	333 ug/L		100	100		04/12/12 12:49	100-41-4	
Toluene	3070 ug/L		100	100		04/12/12 12:49	108-88-3	
Xylene (Total)	1590 ug/L		300	100		04/12/12 12:49	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		86-112	100		04/12/12 12:49	1868-53-7	
Toluene-d8 (S)	98 %		90-110	100		04/12/12 12:49	2037-26-5	
4-Bromofluorobenzene (S)	99 %		87-113	100		04/12/12 12:49	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		82-119	100		04/12/12 12:49	17060-07-0	
Preservation pH	7.0			1.0	100	04/12/12 12:49		pH

## ANALYTICAL RESULTS

Project: NM GW PRTCCHO & JIC

Pace Project No.: 60119079

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Sample: 161506APR06      Lab ID: 60119079010      Collected: 04/06/12 16:15      Received: 04/10/12 10:00      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/12/12 13:04	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 13:04	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 13:04	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 13:04	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		86-112	1		04/12/12 13:04	1868-53-7	
Toluene-d8 (S)	96 %		90-110	1		04/12/12 13:04	2037-26-5	
4-Bromofluorobenzene (S)	102 %		87-113	1		04/12/12 13:04	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		82-119	1		04/12/12 13:04	17060-07-0	
Preservation pH	1.0			1.0	1	04/12/12 13:04		



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## QUALITY CONTROL DATA

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

QC Batch:	MSV/44875	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60119079001, 60119079002, 60119079003, 60119079004, 60119079005, 60119079006, 60119079007, 60119079008, 60119079009, 60119079010		

METHOD BLANK: 980214 Matrix: Water

Associated Lab Samples: 60119079001, 60119079002, 60119079003, 60119079004, 60119079005, 60119079006, 60119079007,  
60119079008, 60119079009, 60119079010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/12/12 09:48	
Ethylbenzene	ug/L	ND	1.0	04/12/12 09:48	
Toluene	ug/L	ND	1.0	04/12/12 09:48	
Xylene (Total)	ug/L	ND	3.0	04/12/12 09:48	
1,2-Dichloroethane-d4 (S)	%	101	82-119	04/12/12 09:48	
4-Bromofluorobenzene (S)	%	102	87-113	04/12/12 09:48	
Dibromofluoromethane (S)	%	100	86-112	04/12/12 09:48	
Toluene-d8 (S)	%	97	90-110	04/12/12 09:48	

LABORATORY CONTROL SAMPLE: 980215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	22.0	110	82-117	
Ethylbenzene	ug/L	20	20.6	103	79-121	
Toluene	ug/L	20	21.0	105	80-120	
Xylene (Total)	ug/L	60	61.1	102	79-120	
1,2-Dichloroethane-d4 (S)	%			102	82-119	
4-Bromofluorobenzene (S)	%			100	87-113	
Dibromofluoromethane (S)	%			103	86-112	
Toluene-d8 (S)	%			98	90-110	

## QUALIFIERS

Project: NM GW PRTCHO & JIC

Pace Project No.: 60119079

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/44875

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW PRTCHO & JIC  
Pace Project No.: 60119079

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60119079001	141902APR06	EPA 8260	MSV/44875		
60119079002	142902APR06	EPA 8260	MSV/44875		
60119079003	143802APR06	EPA 8260	MSV/44875		
60119079004	145702APR06	EPA 8260	MSV/44875		
60119079005	152006APR06	EPA 8260	MSV/44875		
60119079006	153206APR06	EPA 8260	MSV/44875		
60119079007	154406APR06	EPA 8260	MSV/44875		
60119079008	155306APR06	EPA 8260	MSV/44875		
60119079009	160406APR06	EPA 8260	MSV/44875		
60119079010	161506APR06	EPA 8260	MSV/44875		



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



### Sample Condition Upon Receipt

Client Name: Mile Hgh Project # 66119079

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_

Tracking #: 8001 1020 5172 Pace Shipping Label Used?  Yes  No

Optional
Proj. Due Date:
Proj. Name:

4/17

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  Foam  None  Other \_\_\_\_\_

Thermometer Used: T-191 / T-194 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature: 4.0

Temperature should be above freezing to 6°C

Comments: \_\_\_\_\_

Date and Initials of person examining contents: WT 4/10/12

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace containers used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/analyses Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed _____ Lot # of added preservative _____
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased):		
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>NC</u>

Client Notification/ Resolution: Copy COC to Client?  Y /  N Field Data Required?  Y /  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: Amw

Date: 4/10/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



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June 25, 2012

Mr. Mark Harvey  
Mile High Environmental  
811 B West Apache  
Farmington, NM 87401

RE: Project: NM GW FLR40+PRTCHO+FLR47X  
Pace Project No.: 60123512

Dear Mr. Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory between June 16, 2012 and June 18, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heather Wilson

heather.wilson@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NM GW FLR40+PRTCHO+FLR47X  
Pace Project No.: 60123512

---

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 05-008-0  
Illinois Certification #: 001191  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-08-TX  
Utah Certification #: 9135995665

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: NM GW FLR40+PRTCHO+FLR47X  
Pace Project No.: 60123512

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60123512001	151313JUN12	Water	06/13/12 15:13	06/16/12 08:45
60123512002	153113JUN12	Water	06/13/12 15:31	06/16/12 08:45
60123512003	155613JUN12	Water	06/13/12 15:56	06/16/12 08:45
60123512004	161413JUN12	Water	06/13/12 16:14	06/16/12 08:45
60123512005	163313JUN12	Water	06/13/12 16:33	06/16/12 08:45
60123512006	164713JUN12	Water	06/13/12 16:47	06/16/12 08:45
60123512007	171413JUN12	Water	06/13/12 17:14	06/16/12 08:45
60123512008	174413JUN12	Water	06/13/12 17:44	06/16/12 08:45
60123512009	175613JUN12	Water	06/13/12 17:56	06/16/12 08:45
60123512010	EDD	Water		06/18/12 10:24

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: NM GW FLR40+PRTCHO+FLR47X  
Pace Project No.: 60123512

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60123512001	151313JUN12	EPA 8260	RNS	9
60123512002	153113JUN12	EPA 8260	HNS	9
60123512003	155613JUN12	EPA 8260	HNS	9
60123512004	161413JUN12	EPA 8260	HNS	9
60123512005	163313JUN12	EPA 8260	JTK	9
60123512006	164713JUN12	EPA 8260	JTK	9
60123512007	171413JUN12	EPA 8260	JTK	9
60123512008	174413JUN12	EPA 8260	JTK	9
60123512009	175613JUN12	EPA 8260	JTK	9

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 151313JUN12	Lab ID: 60123512001	Collected: 06/13/12 15:13	Received: 06/16/12 08:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	81.8 ug/L		20.0	20		06/21/12 22:18	71-43-2	
Ethylbenzene	966 ug/L		20.0	20		06/21/12 22:18	100-41-4	
Toluene	30.5 ug/L		20.0	20		06/21/12 22:18	108-88-3	
Xylene (Total)	4480 ug/L		60.0	20		06/21/12 22:18	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		86-112	20		06/21/12 22:18	1868-53-7	
Toluene-d8 (S)	104 %		90-110	20		06/21/12 22:18	2037-26-5	
4-Bromofluorobenzene (S)	107 %		87-113	20		06/21/12 22:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		82-119	20		06/21/12 22:18	17060-07-0	
Preservation pH	1.0		1.0	20		06/21/12 22:18		

Date: 06/25/2012 04:10 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 153113JUN12	Lab ID: 60123512002	Collected: 06/13/12 15:31	Received: 06/16/12 08:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		06/20/12 16:02	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/20/12 16:02	100-41-4	
Toluene	ND ug/L		1.0	1		06/20/12 16:02	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/20/12 16:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		86-112	1		06/20/12 16:02	1868-53-7	
Toluene-d8 (S)	92 %		90-110	1		06/20/12 16:02	2037-26-5	
4-Bromofluorobenzene (S)	103 %		87-113	1		06/20/12 16:02	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		82-119	1		06/20/12 16:02	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1	06/20/12 16:02		

## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 155613JUN12      Lab ID: 60123512003      Collected: 06/13/12 15:56      Received: 06/16/12 08:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	19.0	ug/L	1.0	1		06/20/12 16:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/20/12 16:19	100-41-4	
Toluene	4.4	ug/L	1.0	1		06/20/12 16:19	108-88-3	
Xylene (Total)	33.6	ug/L	3.0	1		06/20/12 16:19	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		86-112	1		06/20/12 16:19	1868-53-7	
Toluene-d8 (S)	95 %		90-110	1		06/20/12 16:19	2037-26-5	
4-Bromofluorobenzene (S)	104 %		87-113	1		06/20/12 16:19	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		82-119	1		06/20/12 16:19	17060-07-0	
Preservation pH	1.0			1.0	1			06/20/12 16:19



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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X  
Pace Project No.: 60123512

Sample: 161413JUN12	Lab ID: 60123512004	Collected: 06/13/12 16:14	Received: 06/16/12 08:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	35.5 ug/L		1.0	1		06/20/12 16:35	71-43-2	
Ethylbenzene	4.5 ug/L		1.0	1		06/20/12 16:35	100-41-4	
Toluene	ND ug/L		1.0	1		06/20/12 16:35	108-88-3	
Xylene (Total)	20.7 ug/L		3.0	1		06/20/12 16:35	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	106 %		86-112	1		06/20/12 16:35	1868-53-7	
Toluene-d8 (S)	95 %		90-110	1		06/20/12 16:35	2037-26-5	
4-Bromofluorobenzene (S)	106 %		87-113	1		06/20/12 16:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		82-119	1		06/20/12 16:35	17060-07-0	
Preservation pH	1.0		1.0	1		06/20/12 16:35		



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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 163313JUN12 Lab ID: 60123512005 Collected: 06/13/12 16:33 Received: 06/16/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>								Analytical Method: EPA 8260
Benzene	3.3 ug/L		1.0	1			06/19/12 07:04	71-43-2
Ethylbenzene	ND ug/L		1.0	1			06/19/12 07:04	100-41-4
Toluene	ND ug/L		1.0	1			06/19/12 07:04	108-88-3
Xylene (Total)	ND ug/L		3.0	1			06/19/12 07:04	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		86-112	1			06/19/12 07:04	1868-53-7
Toluene-d8 (S)	99 %		90-110	1			06/19/12 07:04	2037-26-5
4-Bromofluorobenzene (S)	103 %		87-113	1			06/19/12 07:04	460-00-4
1,2-Dichloroethane-d4 (S)	96 %		82-119	1			06/19/12 07:04	17060-07-0
Preservation pH	1.0			1.0	1		06/19/12 07:04	



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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 164713JUN12	Lab ID: 60123512006	Collected: 06/13/12 16:47	Received: 06/16/12 08:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	1360 ug/L		25.0	25		06/19/12 07:21	71-43-2	
Ethylbenzene	501 ug/L		25.0	25		06/19/12 07:21	100-41-4	
Toluene	103 ug/L		25.0	25		06/19/12 07:21	108-88-3	
Xylene (Total)	981 ug/L		75.0	25		06/19/12 07:21	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		86-112	25		06/19/12 07:21	1868-53-7	
Toluene-d8 (S)	105 %		90-110	25		06/19/12 07:21	2037-26-5	
4-Bromofluorobenzene (S)	106 %		87-113	25		06/19/12 07:21	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		82-119	25		06/19/12 07:21	17060-07-0	
Preservation pH	1.0		1.0	25		06/19/12 07:21		

## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 171413JUN12      Lab ID: 60123512007      Collected: 06/13/12 17:14      Received: 06/16/12 08:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		06/19/12 07:38	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/19/12 07:38	100-41-4	
Toluene	ND ug/L		1.0	1		06/19/12 07:38	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/19/12 07:38	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		86-112	1		06/19/12 07:38	1868-53-7	
Toluene-d8 (S)	103 %		90-110	1		06/19/12 07:38	2037-26-5	
4-Bromofluorobenzene (S)	103 %		87-113	1		06/19/12 07:38	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		82-119	1		06/19/12 07:38	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1		06/19/12 07:38	



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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 174413JUN12      Lab ID: 60123512008      Collected: 06/13/12 17:44      Received: 06/16/12 08:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	11200 ug/L		100	100		06/19/12 20:11	71-43-2	
Ethylbenzene	716 ug/L		50.0	50		06/19/12 07:55	100-41-4	
Toluene	ND ug/L		50.0	50		06/19/12 07:55	108-88-3	
Xylene (Total)	6790 ug/L		150	50		06/19/12 07:55	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		86-112	50		06/19/12 07:55	1868-53-7	
Toluene-d8 (S)	102 %		90-110	50		06/19/12 07:55	2037-26-5	
4-Bromofluorobenzene (S)	102 %		87-113	50		06/19/12 07:55	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		82-119	50		06/19/12 07:55	17060-07-0	
Preservation pH	1.0		1.0	50		06/19/12 07:55		



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## ANALYTICAL RESULTS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Sample: 175613JUN12      Lab ID: 60123512009      Collected: 06/13/12 17:56      Received: 06/16/12 08:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		06/19/12 08:13	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 08:13	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 08:13	108-88-3	
Xylene (Total)	3.7	ug/L	3.0	1		06/19/12 08:13	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	98 %		86-112	1		06/19/12 08:13	1868-53-7	
Toluene-d8 (S)	100 %		90-110	1		06/19/12 08:13	2037-26-5	
4-Bromofluorobenzene (S)	105 %		87-113	1		06/19/12 08:13	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		82-119	1		06/19/12 08:13	17060-07-0	
Preservation pH	1.0			1.0	1	06/19/12 08:13		



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## QUALITY CONTROL DATA

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

QC Batch: MSV/46450

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60123512002, 60123512003, 60123512004

METHOD BLANK: 1016008 Matrix: Water

Associated Lab Samples: 60123512002, 60123512003, 60123512004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/20/12 11:26	
Ethylbenzene	ug/L	ND	1.0	06/20/12 11:26	
Toluene	ug/L	ND	1.0	06/20/12 11:26	
Xylene (Total)	ug/L	ND	3.0	06/20/12 11:26	
1,2-Dichloroethane-d4 (S)	%	100	82-119	06/20/12 11:26	
4-Bromofluorobenzene (S)	%	104	87-113	06/20/12 11:26	
Dibromofluoromethane (S)	%	102	86-112	06/20/12 11:26	
Toluene-d8 (S)	%	93	90-110	06/20/12 11:26	

LABORATORY CONTROL SAMPLE: 1016009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.4	102	82-117	
Ethylbenzene	ug/L	20	20.7	104	79-121	
Toluene	ug/L	20	19.8	99	80-120	
Xylene (Total)	ug/L	60	64.5	108	79-120	
1,2-Dichloroethane-d4 (S)	%			92	82-119	
4-Bromofluorobenzene (S)	%			101	87-113	
Dibromofluoromethane (S)	%			103	86-112	
Toluene-d8 (S)	%			94	90-110	

## QUALITY CONTROL DATA

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

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QC Batch:	MSV/46452	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples: 60123512005, 60123512006, 60123512007, 60123512008, 60123512009			

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METHOD BLANK: 1016022 Matrix: Water

Associated Lab Samples: 60123512005, 60123512006, 60123512007, 60123512008, 60123512009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/19/12 06:46	
Ethylbenzene	ug/L	ND	1.0	06/19/12 06:46	
Toluene	ug/L	ND	1.0	06/19/12 06:46	
Xylene (Total)	ug/L	ND	3.0	06/19/12 06:46	
1,2-Dichloroethane-d4 (S)	%	95	82-119	06/19/12 06:46	
4-Bromofluorobenzene (S)	%	103	87-113	06/19/12 06:46	
Dibromofluoromethane (S)	%	102	86-112	06/19/12 06:46	
Toluene-d8 (S)	%	103	90-110	06/19/12 06:46	

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LABORATORY CONTROL SAMPLE: 1016023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.7	93	82-117	
Ethylbenzene	ug/L	20	19.0	95	79-121	
Toluene	ug/L	20	19.6	98	80-120	
Xylene (Total)	ug/L	60	55.9	93	79-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			103	87-113	
Dibromofluoromethane (S)	%			102	86-112	
Toluene-d8 (S)	%			104	90-110	



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## QUALITY CONTROL DATA

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

QC Batch:	MSV/46486	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60123512008		

METHOD BLANK: 1016544 Matrix: Water

Associated Lab Samples: 60123512008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/19/12 19:37	
1,2-Dichloroethane-d4 (S)	%	94	82-119	06/19/12 19:37	
4-Bromofluorobenzene (S)	%	104	87-113	06/19/12 19:37	
Dibromofluoromethane (S)	%	106	86-112	06/19/12 19:37	
Toluene-d8 (S)	%	103	90-110	06/19/12 19:37	

LABORATORY CONTROL SAMPLE: 1016545

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.6	93	82-117	
1,2-Dichloroethane-d4 (S)	%			90	82-119	
4-Bromofluorobenzene (S)	%			103	87-113	
Dibromofluoromethane (S)	%			102	86-112	
Toluene-d8 (S)	%			100	90-110	



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## QUALITY CONTROL DATA

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

QC Batch:	MSV/46544	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60123512001		

METHOD BLANK: 1017866 Matrix: Water

Associated Lab Samples: 60123512001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/21/12 21:48	
Ethylbenzene	ug/L	ND	1.0	06/21/12 21:48	
Toluene	ug/L	ND	1.0	06/21/12 21:48	
Xylene (Total)	ug/L	ND	3.0	06/21/12 21:48	
1,2-Dichloroethane-d4 (S)	%	103	82-119	06/21/12 21:48	
4-Bromofluorobenzene (S)	%	104	87-113	06/21/12 21:48	
Dibromofluoromethane (S)	%	104	86-112	06/21/12 21:48	
Toluene-d8 (S)	%	101	90-110	06/21/12 21:48	

LABORATORY CONTROL SAMPLE: 1017867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.4	102	82-117	
Ethylbenzene	ug/L	20	20.1	100	79-121	
Toluene	ug/L	20	21.0	105	80-120	
Xylene (Total)	ug/L	60	59.5	99	79-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			106	87-113	
Dibromofluoromethane (S)	%			100	86-112	
Toluene-d8 (S)	%			102	90-110	

## QUALIFIERS

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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### BATCH QUALIFIERS

Batch: MSV/46450

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/46452

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/46486

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/46544

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW FLR40+PRTCHO+FLR47X

Pace Project No.: 60123512

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60123512001	151313JUN12	EPA 8260	MSV/46544		
60123512002	153113JUN12	EPA 8260	MSV/46450		
60123512003	155613JUN12	EPA 8260	MSV/46450		
60123512004	161413JUN12	EPA 8260	MSV/46450		
60123512005	163313JUN12	EPA 8260	MSV/46452		
60123512006	164713JUN12	EPA 8260	MSV/46452		
60123512007	171413JUN12	EPA 8260	MSV/46452		
60123512008	174413JUN12	EPA 8260	MSV/46452		
60123512008	174413JUN12	EPA 8260	MSV/46486		
60123512009	175613JUN12	EPA 8260	MSV/46452		



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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

F-ALL-Q-020rev.07, 15-May-2007

1



### Sample Condition Upon Receipt

Client Name: Mile High Services Project # 60123512

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace  Other  
Tracking #: 800120951033 Pace Shipping Label Used?  Yes  No

Optional  
Proj. Due Date: 6/25  
Proj. Name:

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-191 / T-194 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature: 11.3

Temperature should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 6-16-12 BA

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1. Out of temp, not enough ice.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC: -Includes date/time/ID/analyses Matrix: <u>WT</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed _____ Lot # of added preservative _____
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased):		
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>NC</u>

Client Notification/ Resolution: Copy COC to Client?  Y /  N Field Data Required?  Y /  N

Person Contacted: Mark Harvey Date/Time: 6/18/12  
Comments/ Resolution: Emailed about cooler out of temp (AMW) 6/18/12  
Per Mark Harvey analyze samples (AMW) 6/18/12

Project Manager Review: AMW

Date: 6/18/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



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(913)599-5665

October 10, 2012

Mr. Mark Harvey  
Mile High Environmental  
811 B West Apache  
Farmington, NM 87401

RE: Project: NM GW PRTCHD + FLR47X + DVS  
Pace Project No.: 60130503

Dear Mr. Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on October 04, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive ink that reads "Andy Brownfield".

Andy Brownfield for  
Heather Wilson  
[heather.wilson@pacelabs.com](mailto:heather.wilson@pacelabs.com)  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NM GW PRTC HD + FLR47X + DVS  
Pace Project No.: 60130503

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 12-019-0  
Illinois Certification #: 002885  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-12-3  
Utah Certification #: KS000212012-2

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## SAMPLE SUMMARY

Project: NM GW PRTCHD + FLR47X + DVS  
Pace Project No.: 60130503

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60130503001	132702OCT12	Water	10/02/12 13:27	10/04/12 08:20
60130503002	141102OCT12	Water	10/02/12 14:11	10/04/12 08:20
60130503003	142202OCT12	Water	10/02/12 14:22	10/04/12 08:20
60130503004	145402OCT12	Water	10/02/12 14:54	10/04/12 08:20
60130503005	150902OCT12	Water	10/02/12 15:09	10/04/12 08:20
60130503006	151502OCT12	Water	10/02/12 15:15	10/04/12 08:20
60130503007	164002OCT12	Water	10/02/12 16:40	10/04/12 08:20
60130503008	164702OCT12	Water	10/02/12 16:47	10/04/12 08:20
60130503009	165402OCT12	Water	10/02/12 16:54	10/04/12 08:20
60130503010	170202OCT12	Water	10/02/12 17:02	10/04/12 08:20

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### SAMPLE ANALYTE COUNT

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60130503001	132702OCT12	EPA 8260	JTK	9
60130503002	141102OCT12	EPA 8260	JTK	9
60130503003	142202OCT12	EPA 8260	JTK	9
60130503004	145402OCT12	EPA 8260	JTK	9
60130503005	150902OCT12	EPA 8260	JTK	9
60130503006	151502OCT12	EPA 8260	JTK	9
60130503007	164002OCT12	EPA 8260	JTK	9
60130503008	164702OCT12	EPA 8260	JTK	9
60130503009	165402OCT12	EPA 8260	JTK	9
60130503010	170202OCT12	EPA 8260	JTK	9

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 132702OCT12 Lab ID: 60130503001 Collected: 10/02/12 13:27 Received: 10/04/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	8.0 ug/L		1.0	1			10/06/12 06:02	71-43-2
Ethylbenzene	ND ug/L		1.0	1			10/06/12 06:02	100-41-4
Toluene	5.6 ug/L		1.0	1			10/06/12 06:02	108-88-3
Xylene (Total)	40.7 ug/L		3.0	1			10/06/12 06:02	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		80-120	1			10/06/12 06:02	1868-53-7
Toluene-d8 (S)	102 %		80-120	1			10/06/12 06:02	2037-26-5
4-Bromofluorobenzene (S)	104 %		80-120	1			10/06/12 06:02	460-00-4
1,2-Dichloroethane-d4 (S)	101 %		80-120	1			10/06/12 06:02	17060-07-0
Preservation pH	1.0			1.0	1			10/06/12 06:02

## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

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Sample: 141102OCT12      Lab ID: 60130503002      Collected: 10/02/12 14:11      Received: 10/04/12 08:20      Matrix: Water

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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	18.2 ug/L		1.0	1			10/08/12 00:43	71-43-2
Ethylbenzene	ND ug/L		1.0	1			10/08/12 00:43	100-41-4
Toluene	3.7 ug/L		1.0	1			10/08/12 00:43	108-88-3
Xylene (Total)	21.2 ug/L		3.0	1			10/08/12 00:43	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	1			10/08/12 00:43	1868-53-7
Toluene-d8 (S)	106 %		80-120	1			10/08/12 00:43	2037-26-5
4-Bromofluorobenzene (S)	96 %		80-120	1			10/08/12 00:43	460-00-4
1,2-Dichloroethane-d4 (S)	98 %		80-120	1			10/08/12 00:43	17060-07-0
Preservation pH	1.0			1.0	1			10/08/12 00:43



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## ANALYTICAL RESULTS

Project: NM GW PRTC HD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 142202OCT12	Lab ID: 60130503003	Collected: 10/02/12 14:22	Received: 10/04/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	882 ug/L		20.0	20		10/06/12 07:19	71-43-2	
Ethylbenzene	375 ug/L		20.0	20		10/06/12 07:19	100-41-4	
Toluene	40.8 ug/L		20.0	20		10/06/12 07:19	108-88-3	
Xylene (Total)	767 ug/L		60.0	20		10/06/12 07:19	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		80-120	20		10/06/12 07:19	1868-53-7	
Toluene-d8 (S)	116 %		80-120	20		10/06/12 07:19	2037-26-5	
4-Bromofluorobenzene (S)	105 %		80-120	20		10/06/12 07:19	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	20		10/06/12 07:19	17060-07-0	
Preservation pH	1.0			1.0	20			10/06/12 07:19



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## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 145402OCT12      Lab ID: 60130503004      Collected: 10/02/12 14:54      Received: 10/04/12 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	1.1 ug/L		1.0	1			10/06/12 07:34	71-43-2
Ethylbenzene	ND ug/L		1.0	1			10/06/12 07:34	100-41-4
Toluene	ND ug/L		1.0	1			10/06/12 07:34	108-88-3
Xylene (Total)	ND ug/L		3.0	1			10/06/12 07:34	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	106 %		80-120	1			10/06/12 07:34	1868-53-7
Toluene-d8 (S)	100 %		80-120	1			10/06/12 07:34	2037-26-5
4-Bromofluorobenzene (S)	106 %		80-120	1			10/06/12 07:34	460-00-4
1,2-Dichloroethane-d4 (S)	105 %		80-120	1			10/06/12 07:34	17060-07-0
Preservation pH	1.0			1.0	1		10/06/12 07:34	



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## ANALYTICAL RESULTS

Project: NM GW PRTC HD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 150902OCT12	Lab ID: 60130503005	Collected: 10/02/12 15:09	Received: 10/04/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	10200 ug/L		100	100			10/06/12 07:50	71-43-2
Ethylbenzene	765 ug/L		100	100			10/06/12 07:50	100-41-4
Toluene	ND ug/L		100	100			10/06/12 07:50	108-88-3
Xylene (Total)	7260 ug/L		300	100			10/06/12 07:50	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	98 %		80-120	100			10/06/12 07:50	1868-53-7
Toluene-d8 (S)	106 %		80-120	100			10/06/12 07:50	2037-26-5
4-Bromofluorobenzene (S)	107 %		80-120	100			10/06/12 07:50	460-00-4
1,2-Dichloroethane-d4 (S)	102 %		80-120	100			10/06/12 07:50	17060-07-0
Preservation pH	1.0		1.0	100			10/06/12 07:50	

## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 151502OCT12      Lab ID: 60130503006      Collected: 10/02/12 15:15      Received: 10/04/12 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		10/06/12 08:05	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/06/12 08:05	100-41-4	
Toluene	ND ug/L		1.0	1		10/06/12 08:05	108-88-3	
Xylene (Total)	<b>4.5 ug/L</b>		3.0	1		10/06/12 08:05	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1		10/06/12 08:05	1868-53-7	
Toluene-d8 (S)	100 %		80-120	1		10/06/12 08:05	2037-26-5	
4-Bromofluorobenzene (S)	98 %		80-120	1		10/06/12 08:05	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		10/06/12 08:05	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1			10/06/12 08:05



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## ANALYTICAL RESULTS

Project: NM GW PRTC HD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 164002OCT12	Lab ID: 60130503007	Collected: 10/02/12 16:40	Received: 10/04/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		10/06/12 08:21	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/06/12 08:21	100-41-4	
Toluene	ND ug/L		1.0	1		10/06/12 08:21	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/06/12 08:21	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	1		10/06/12 08:21	1868-53-7	
Toluene-d8 (S)	106 %		80-120	1		10/06/12 08:21	2037-26-5	
4-Bromofluorobenzene (S)	104 %		80-120	1		10/06/12 08:21	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		80-120	1		10/06/12 08:21	17060-07-0	
Preservation pH	1.0			1.0	1	10/06/12 08:21		



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## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 164702OCT12	Lab ID: 60130503008	Collected: 10/02/12 16:47	Received: 10/04/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>								Analytical Method: EPA 8260
Benzene	ND ug/L		1.0	1			10/06/12 08:36	71-43-2
Ethylbenzene	ND ug/L		1.0	1			10/06/12 08:36	100-41-4
Toluene	ND ug/L		1.0	1			10/06/12 08:36	108-88-3
Xylene (Total)	ND ug/L		3.0	1			10/06/12 08:36	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1			10/06/12 08:36	1868-53-7
Toluene-d8 (S)	104 %		80-120	1			10/06/12 08:36	2037-26-5
4-Bromofluorobenzene (S)	92 %		80-120	1			10/06/12 08:36	460-00-4
1,2-Dichloroethane-d4 (S)	101 %		80-120	1			10/06/12 08:36	17060-07-0
Preservation pH	<b>1.0</b>			1.0	1			10/06/12 08:36



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## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 165402OCT12	Lab ID: 60130503009	Collected: 10/02/12 16:54	Received: 10/04/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b> Analytical Method: EPA 8260								
Benzene	ND ug/L		1.0	1			10/06/12 08:51	71-43-2
Ethylbenzene	ND ug/L		1.0	1			10/06/12 08:51	100-41-4
Toluene	ND ug/L		1.0	1			10/06/12 08:51	108-88-3
Xylene (Total)	ND ug/L		3.0	1			10/06/12 08:51	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	1			10/06/12 08:51	1868-53-7
Toluene-d8 (S)	96 %		80-120	1			10/06/12 08:51	2037-26-5
4-Bromofluorobenzene (S)	98 %		80-120	1			10/06/12 08:51	460-00-4
1,2-Dichloroethane-d4 (S)	106 %		80-120	1			10/06/12 08:51	17060-07-0
Preservation pH	1.0			1.0	1		10/06/12 08:51	

## ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 170202OCT12      Lab ID: 60130503010      Collected: 10/02/12 17:02      Received: 10/04/12 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/06/12 09:07	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 09:07	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 09:07	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 09:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		80-120	1		10/06/12 09:07	1868-53-7	
Toluene-d8 (S)	110 %		80-120	1		10/06/12 09:07	2037-26-5	
4-Bromofluorobenzene (S)	101 %		80-120	1		10/06/12 09:07	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		80-120	1		10/06/12 09:07	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		10/06/12 09:07		



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## QUALITY CONTROL DATA

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

QC Batch: MSV/49035

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60130503001

METHOD BLANK: 1074431

Matrix: Water

Associated Lab Samples: 60130503001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/06/12 00:37	
Ethylbenzene	ug/L	ND	1.0	10/06/12 00:37	
Toluene	ug/L	ND	1.0	10/06/12 00:37	
Xylene (Total)	ug/L	ND	3.0	10/06/12 00:37	
1,2-Dichloroethane-d4 (S)	%	98	80-120	10/06/12 00:37	
4-Bromofluorobenzene (S)	%	98	80-120	10/06/12 00:37	
Dibromofluoromethane (S)	%	99	80-120	10/06/12 00:37	
Toluene-d8 (S)	%	101	80-120	10/06/12 00:37	

LABORATORY CONTROL SAMPLE: 1074432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	17.9	89	74-123	
Ethylbenzene	ug/L	20	18.4	92	76-123	
Toluene	ug/L	20	17.6	88	75-123	
Xylene (Total)	ug/L	60	52.1	87	76-123	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1074433 1074434

Parameter	Units	MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		60130008014	Result	Conc.	Conc.	Result	Result	% Rec	% Rec				
Benzene	ug/L	ND	20	20	18.7	18.2	93	91	40-155	2	45		
Ethylbenzene	ug/L	ND	20	20	20.4	19.8	102	99	40-158	3	48		
Toluene	ug/L	ND	20	20	20.4	19.6	102	98	42-151	4	46		
Xylene (Total)	ug/L	ND	60	60	59.4	58.8	99	98	40-151	1	45		
1,2-Dichloroethane-d4 (S)	%						97	101	80-120				
4-Bromofluorobenzene (S)	%						101	99	80-120				
Dibromofluoromethane (S)	%						99	101	80-120				
Toluene-d8 (S)	%						106	98	80-120				
Preservation pH		1.0				1.0	1.0				0		

## QUALITY CONTROL DATA

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

QC Batch: MSV/49039

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60130503003, 60130503004, 60130503005, 60130503006, 60130503007, 60130503008, 60130503009,  
60130503010

METHOD BLANK: 1074538

Matrix: Water

Associated Lab Samples: 60130503003, 60130503004, 60130503005, 60130503006, 60130503007, 60130503008, 60130503009,  
60130503010

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Benzene	ug/L	ND	1.0	10/06/12 07:04	
Ethylbenzene	ug/L	ND	1.0	10/06/12 07:04	
Toluene	ug/L	ND	1.0	10/06/12 07:04	
Xylene (Total)	ug/L	ND	3.0	10/06/12 07:04	
1,2-Dichloroethane-d4 (S)	%	97	80-120	10/06/12 07:04	
4-Bromofluorobenzene (S)	%	95	80-120	10/06/12 07:04	
Dibromofluoromethane (S)	%	99	80-120	10/06/12 07:04	
Toluene-d8 (S)	%	104	80-120	10/06/12 07:04	

LABORATORY CONTROL SAMPLE: 1074539

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Benzene	ug/L	20	16.2	81	74-123	
Ethylbenzene	ug/L	20	17.6	88	76-123	
Toluene	ug/L	20	17.1	85	75-123	
Xylene (Total)	ug/L	60	54.3	91	76-123	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			90	80-120	
Dibromofluoromethane (S)	%			96	80-120	
Toluene-d8 (S)	%			100	80-120	

### QUALITY CONTROL DATA

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

QC Batch: MSV/49051	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60130503002	

METHOD BLANK: 1075346 Matrix: Water

Associated Lab Samples: 60130503002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/08/12 00:12	
Ethylbenzene	ug/L	ND	1.0	10/08/12 00:12	
Toluene	ug/L	ND	1.0	10/08/12 00:12	
Xylene (Total)	ug/L	ND	3.0	10/08/12 00:12	
1,2-Dichloroethane-d4 (S)	%	100	80-120	10/08/12 00:12	
4-Bromofluorobenzene (S)	%	99	80-120	10/08/12 00:12	
Dibromofluoromethane (S)	%	101	80-120	10/08/12 00:12	
Toluene-d8 (S)	%	110	80-120	10/08/12 00:12	

LABORATORY CONTROL SAMPLE: 1075347

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.8	84	74-123	
Ethylbenzene	ug/L	20	17.9	89	76-123	
Toluene	ug/L	20	16.9	85	75-123	
Xylene (Total)	ug/L	60	56.2	94	76-123	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			91	80-120	
Dibromofluoromethane (S)	%			98	80-120	
Toluene-d8 (S)	%			98	80-120	

## QUALIFIERS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/49039

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/49051

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60130503001	132702OCT12	EPA 8260	MSV/49035		
60130503002	141102OCT12	EPA 8260	MSV/49051		
60130503003	142202OCT12	EPA 8260	MSV/49039		
60130503004	145402OCT12	EPA 8260	MSV/49039		
60130503005	150902OCT12	EPA 8260	MSV/49039		
60130503006	151502OCT12	EPA 8260	MSV/49039		
60130503007	164002OCT12	EPA 8260	MSV/49039		
60130503008	164702OCT12	EPA 8260	MSV/49039		
60130503009	165402OCT12	EPA 8260	MSV/49039		
60130503010	170202OCT12	EPA 8260	MSV/49039		





ple Upon

Client Name: Mile High Project # 100130503

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  
 Tracking #: 100092844088

Pace Shipping Label Used?  Yes  No

Optional  
 Proj. Due Date: 11/11/12  
 Proj. Name: NM GLL

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  NoPacking Material:  Bubble Wrap  Bubble Bags  Foam  None  Other 2916Thermometer Used: T-191 / T-194Type of Ice: White Blue None Samples on ice, cooling process has begunCooler Temperature: 3.8  
Temperature should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: PR/16/4/12

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/analyses Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed _____ Lot # of added preservative _____
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased):		
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client?  Y /  N Field Data Required?  Y /  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Project Manager Review: TJMCWDate: 10/5/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Pace Analytical Services, Inc.  
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December 21, 2012

Mr. Mark Harvey  
Mile High Environmental  
811 B West Apache  
Farmington, NM 87401

RE: Project: NM GW  
Pace Project No.: 60135460

Dear Mr. Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Heather M. Wilson".

Heather Wilson

heather.wilson@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NM GW  
Pace Project No.: 60135460

---

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 12-019-0  
Illinois Certification #: 002885  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-12-3  
Utah Certification #: KS000212012-2

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: NM GW  
Pace Project No.: 60135460

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60135460001	EDD	Water	12/07/12 14:42	12/14/12 08:30
60135460002	144207DEC12	Water	12/07/12 14:42	12/14/12 08:30
60135460003	144607DEC12	Water	12/07/12 14:46	12/14/12 08:30
60135460004	145107DEC12	Water	12/07/12 14:51	12/14/12 08:30
60135460005	150107DEC12	Water	12/07/12 15:01	12/14/12 08:30
60135460006	150607DEC12	Water	12/07/12 15:06	12/14/12 08:30
60135460007	151907DEC12	Water	12/07/12 15:19	12/14/12 08:30
60135460008	125106DEC12	Water	12/06/12 12:51	12/14/12 08:30
60135460009	130306DEC12	Water	12/06/12 13:03	12/14/12 08:30
60135460010	132506DEC12	Water	12/06/12 13:25	12/14/12 08:30
60135460011	134806DEC12	Water	12/06/12 13:48	12/14/12 08:30
60135460012	135706DEC12	Water	12/06/12 13:57	12/14/12 08:30
60135460013	141906DEC12	Water	12/06/12 14:19	12/14/12 08:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: NM GW  
Pace Project No.: 60135460

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60135460002	144207DEC12	EPA 8260	RNS	9
60135460003	144607DEC12	EPA 8260	RNS	9
60135460004	145107DEC12	EPA 8260	RNS	9
60135460005	150107DEC12	EPA 8260	RNS	9
60135460006	150607DEC12	EPA 8260	RNS	9
60135460007	151907DEC12	EPA 8260	RNS	9
60135460008	125106DEC12	EPA 8260	RNS	9
60135460009	130306DEC12	EPA 8260	RNS	9
60135460010	132506DEC12	EPA 8260	RNS	9
60135460011	134806DEC12	EPA 8260	RNS	9
60135460012	135706DEC12	EPA 8260	RNS	9
60135460013	141906DEC12	EPA 8260	RNS	9

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 144207DEC12 Lab ID: 60135460002 Collected: 12/07/12 14:42 Received: 12/14/12 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		12/20/12 13:47	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/20/12 13:47	100-41-4	
Toluene	ND ug/L		1.0	1		12/20/12 13:47	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		12/20/12 13:47	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	1		12/20/12 13:47	1868-53-7	
Toluene-d8 (S)	99 %		80-120	1		12/20/12 13:47	2037-26-5	
4-Bromofluorobenzene (S)	99 %		80-120	1		12/20/12 13:47	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-120	1		12/20/12 13:47	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1	12/20/12 13:47		



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 144607DEC12 Lab ID: 60135460003 Collected: 12/07/12 14:46 Received: 12/14/12 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		12/20/12 14:02	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/20/12 14:02	100-41-4	
Toluene	ND ug/L		1.0	1		12/20/12 14:02	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		12/20/12 14:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1		12/20/12 14:02	1868-53-7	
Toluene-d8 (S)	99 %		80-120	1		12/20/12 14:02	2037-26-5	
4-Bromofluorobenzene (S)	102 %		80-120	1		12/20/12 14:02	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		12/20/12 14:02	17060-07-0	
Preservation pH	<b>1.0</b>			1.0	1			12/20/12 14:02



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 145107DEC12	Lab ID: 60135460004	Collected: 12/07/12 14:51	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	11.4 ug/L		10.0	10			12/20/12 14:17	71-43-2
Ethylbenzene	403 ug/L		10.0	10			12/20/12 14:17	100-41-4
Toluene	16.4 ug/L		10.0	10			12/20/12 14:17	108-88-3
Xylene (Total)	1250 ug/L		30.0	10			12/20/12 14:17	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	10			12/20/12 14:17	1868-53-7
Toluene-d8 (S)	100 %		80-120	10			12/20/12 14:17	2037-26-5
4-Bromofluorobenzene (S)	103 %		80-120	10			12/20/12 14:17	460-00-4
1,2-Dichloroethane-d4 (S)	103 %		80-120	10			12/20/12 14:17	17060-07-0
Preservation pH	1.0			1.0	10		12/20/12 14:17	



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 150107DEC12	Lab ID: 60135460005	Collected: 12/07/12 15:01	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		12/20/12 14:32	71-43-2	
Ethylbenzene	14.2 ug/L		1.0	1		12/20/12 14:32	100-41-4	
Toluene	1.3 ug/L		1.0	1		12/20/12 14:32	108-88-3	
Xylene (Total)	49.7 ug/L		3.0	1		12/20/12 14:32	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		12/20/12 14:32	1868-53-7	
Toluene-d8 (S)	101 %		80-120	1		12/20/12 14:32	2037-26-5	
4-Bromofluorobenzene (S)	102 %		80-120	1		12/20/12 14:32	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		80-120	1		12/20/12 14:32	17060-07-0	
Preservation pH	1.0			1.0	1		12/20/12 14:32	



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## ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60135460

Sample: 150607DEC12 Lab ID: 60135460006 Collected: 12/07/12 15:06 Received: 12/14/12 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	64.0 ug/L		1.0	1			12/20/12 14:47	71-43-2
Ethylbenzene	3.4 ug/L		1.0	1			12/20/12 14:47	100-41-4
Toluene	12.6 ug/L		1.0	1			12/20/12 14:47	108-88-3
Xylene (Total)	18.2 ug/L		3.0	1			12/20/12 14:47	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1			12/20/12 14:47	1868-53-7
Toluene-d8 (S)	100 %		80-120	1			12/20/12 14:47	2037-26-5
4-Bromofluorobenzene (S)	102 %		80-120	1			12/20/12 14:47	460-00-4
1,2-Dichloroethane-d4 (S)	104 %		80-120	1			12/20/12 14:47	17060-07-0
Preservation pH	1.0			1.0	1		12/20/12 14:47	



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 151907DEC12	Lab ID: 60135460007	Collected: 12/07/12 15:19	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		12/20/12 15:02	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/20/12 15:02	100-41-4	
Toluene	ND ug/L		1.0	1		12/20/12 15:02	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		12/20/12 15:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	1		12/20/12 15:02	1868-53-7	
Toluene-d8 (S)	101 %		80-120	1		12/20/12 15:02	2037-26-5	
4-Bromofluorobenzene (S)	104 %		80-120	1		12/20/12 15:02	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		80-120	1		12/20/12 15:02	17060-07-0	
Preservation pH	1.0			1.0	1	12/20/12 15:02		

## ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60135460

**Sample: 125106DEC12      Lab ID: 60135460008      Collected: 12/06/12 12:51      Received: 12/14/12 08:30      Matrix: Water**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	<b>80.4</b> ug/L		5.0	5			12/20/12 15:47	71-43-2
Ethylbenzene	<b>952</b> ug/L		5.0	5			12/20/12 15:47	100-41-4
Toluene	ND ug/L		5.0	5			12/20/12 15:47	108-88-3
Xylene (Total)	<b>3730</b> ug/L		150	50			12/20/12 11:17	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	5			12/20/12 15:47	1868-53-7
Toluene-d8 (S)	106 %		80-120	5			12/20/12 15:47	2037-26-5
4-Bromofluorobenzene (S)	110 %		80-120	5			12/20/12 15:47	460-00-4
1,2-Dichloroethane-d4 (S)	102 %		80-120	5			12/20/12 15:47	17060-07-0
Preservation pH	<b>1.0</b>			1.0	5		12/20/12 15:47	



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 130306DEC12	Lab ID: 60135460009	Collected: 12/06/12 13:03	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b> Analytical Method: EPA 8260								
Benzene	1670 ug/L		10.0	10			12/20/12 16:02	71-43-2
Ethylbenzene	1300 ug/L		10.0	10			12/20/12 16:02	100-41-4
Toluene	ND ug/L		10.0	10			12/20/12 16:02	108-88-3
Xylene (Total)	995 ug/L		30.0	10			12/20/12 16:02	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	10			12/20/12 16:02	1868-53-7
Toluene-d8 (S)	99 %		80-120	10			12/20/12 16:02	2037-26-5
4-Bromofluorobenzene (S)	103 %		80-120	10			12/20/12 16:02	460-00-4
1,2-Dichloroethane-d4 (S)	98 %		80-120	10			12/20/12 16:02	17060-07-0
Preservation pH	1.0			1.0	10		12/20/12 16:02	



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 132506DEC12	Lab ID: 60135460010	Collected: 12/06/12 13:25	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		12/20/12 11:48	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/20/12 11:48	100-41-4	
Toluene	ND ug/L		1.0	1		12/20/12 11:48	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		12/20/12 11:48	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1		12/20/12 11:48	1868-53-7	
Toluene-d8 (S)	105 %		80-120	1		12/20/12 11:48	2037-26-5	
4-Bromofluorobenzene (S)	104 %		80-120	1		12/20/12 11:48	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		12/20/12 11:48	17060-07-0	
Preservation pH	1.0			1.0	1			12/20/12 11:48

Date: 12/21/2012 11:58 AM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 134806DEC12	Lab ID: 60135460011	Collected: 12/06/12 13:48	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>								Analytical Method: EPA 8260
Benzene	22.0 ug/L		1.0	1			12/20/12 12:03	71-43-2
Ethylbenzene	ND ug/L		1.0	1			12/20/12 12:03	100-41-4
Toluene	6.4 ug/L		1.0	1			12/20/12 12:03	108-88-3
Xylene (Total)	52.2 ug/L		3.0	1			12/20/12 12:03	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	1			12/20/12 12:03	1868-53-7
Toluene-d8 (S)	98 %		80-120	1			12/20/12 12:03	2037-26-5
4-Bromofluorobenzene (S)	104 %		80-120	1			12/20/12 12:03	460-00-4
1,2-Dichloroethane-d4 (S)	106 %		80-120	1			12/20/12 12:03	17060-07-0
Preservation pH	1.0			1.0	1		12/20/12 12:03	

## ANALYTICAL RESULTS

Project: NM GW  
 Pace Project No.: 60135460

Sample: 135706DEC12      Lab ID: 60135460012      Collected: 12/06/12 13:57      Received: 12/14/12 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	35.4	ug/L	1.0	1		12/20/12 12:18	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 12:18	100-41-4	
Toluene	2.7	ug/L	1.0	1		12/20/12 12:18	108-88-3	
Xylene (Total)	30.6	ug/L	3.0	1		12/20/12 12:18	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	98	%	80-120	1		12/20/12 12:18	1868-53-7	
Toluene-d8 (S)	101	%	80-120	1		12/20/12 12:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	1		12/20/12 12:18	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		12/20/12 12:18	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 12:18		



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## ANALYTICAL RESULTS

Project: NM GW  
Pace Project No.: 60135460

Sample: 141906DEC12	Lab ID: 60135460013	Collected: 12/06/12 14:19	Received: 12/14/12 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>	Analytical Method: EPA 8260							
Benzene	768 ug/L		10.0	10			12/20/12 16:17	71-43-2
Ethylbenzene	299 ug/L		5.0	5			12/20/12 12:33	100-41-4
Toluene	8.4 ug/L		5.0	5			12/20/12 12:33	108-88-3
Xylene (Total)	427 ug/L		15.0	5			12/20/12 12:33	1330-20-7
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	5			12/20/12 12:33	1868-53-7
Toluene-d8 (S)	104 %		80-120	5			12/20/12 12:33	2037-26-5
4-Bromofluorobenzene (S)	106 %		80-120	5			12/20/12 12:33	460-00-4
1,2-Dichloroethane-d4 (S)	105 %		80-120	5			12/20/12 12:33	17060-07-0
Preservation pH	1.0			1.0	5		12/20/12 12:33	

Date: 12/21/2012 11:58 AM

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NM GW  
Pace Project No.: 60135460

QC Batch: MSV/50893 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 60135460002, 60135460003, 60135460004, 60135460005, 60135460006, 60135460007, 60135460008,  
60135460009, 60135460010, 60135460011, 60135460012, 60135460013

METHOD BLANK: 1116780 Matrix: Water

Associated Lab Samples: 60135460002, 60135460003, 60135460004, 60135460005, 60135460006, 60135460007, 60135460008,  
60135460009, 60135460010, 60135460011, 60135460012, 60135460013

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Benzene	ug/L	ND	1.0	12/20/12 10:32	
Ethylbenzene	ug/L	ND	1.0	12/20/12 10:32	
Toluene	ug/L	ND	1.0	12/20/12 10:32	
Xylene (Total)	ug/L	ND	3.0	12/20/12 10:32	
1,2-Dichloroethane-d4 (S)	%	101	80-120	12/20/12 10:32	
4-Bromofluorobenzene (S)	%	101	80-120	12/20/12 10:32	
Dibromofluoromethane (S)	%	98	80-120	12/20/12 10:32	
Toluene-d8 (S)	%	100	80-120	12/20/12 10:32	

LABORATORY CONTROL SAMPLE: 1116781

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Benzene	ug/L	20	20.2	101	74-123	
Ethylbenzene	ug/L	20	20.5	103	76-123	
Toluene	ug/L	20	19.7	99	75-123	
Xylene (Total)	ug/L	60	58.8	98	76-123	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Dibromofluoromethane (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

## QUALIFIERS

Project: NM GW  
Pace Project No.: 60135460

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/50893

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW  
 Pace Project No.: 60135460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60135460002	144207DEC12	EPA 8260	MSV/50893		
60135460003	144607DEC12	EPA 8260	MSV/50893		
60135460004	145107DEC12	EPA 8260	MSV/50893		
60135460005	150107DEC12	EPA 8260	MSV/50893		
60135460006	150607DEC12	EPA 8260	MSV/50893		
60135460007	151907DEC12	EPA 8260	MSV/50893		
60135460008	125106DEC12	EPA 8260	MSV/50893		
60135460009	130306DEC12	EPA 8260	MSV/50893		
60135460010	132506DEC12	EPA 8260	MSV/50893		
60135460011	134806DEC12	EPA 8260	MSV/50893		
60135460012	135706DEC12	EPA 8260	MSV/50893		
60135460013	141906DEC12	EPA 8260	MSV/50893		



WO# : 60135460

60135460

Client Name: Mile High

Optional

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other Proj Due Date: 12/12Tracking #: B022 4483 7980 Pace Shipping Label Used? Yes  No 

Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other Thermometer Used: T-193 / T-194Type of Ice:  Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 1.1Date and Initials of person examining  
contents: 12/14/12 lh

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>water</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>12/14/12</u> Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>12/14/12</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y /  N Field Data Required? Y /  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: ADM for JMW Date: 12/14/12



Pace Analytical  
www.paceanalytical.com

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



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)

March 07, 2013

Julie Linn  
LTE  
2243 Main Ave Suite 3  
Durango, CO 81301  
TEL: (970) 385-1096  
FAX:

RE: Pritchard #2A OrderNo.: 1303036

Dear Julie Linn:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/2/2013 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. 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. 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.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order: 1303036

Date Reported: 3/7/2013

**Hall Environmental Analysis Laboratory, Inc.**

<b>CLIENT:</b>	LTE	<b>Lab Order:</b>	1303036
<b>Project:</b>	Pritchard #2A		

<b>Lab ID:</b>	1303036-001	<b>Collection Date:</b>	2/28/2013 12:55:00 PM
<b>Client Sample ID:</b>	MW-1	<b>Matrix:</b>	AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>EPA METHOD 8021B: VOLATILES</b> Analyst: NSB						
Benzene	2.3	1.0		µg/L	1	3/5/2013 1:39:48 AM
Toluene	ND	1.0		µg/L	1	3/5/2013 1:39:48 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2013 1:39:48 AM
Xylenes, Total	93	2.0		µg/L	1	3/5/2013 1:39:48 AM
Surr: 4-Bromofluorobenzene	103	69.7-152		%REC	1	3/5/2013 1:39:48 AM

<b>Lab ID:</b>	1303036-002	<b>Collection Date:</b>	2/28/2013 2:05:00 PM
<b>Client Sample ID:</b>	MW-3	<b>Matrix:</b>	AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>EPA METHOD 8021B: VOLATILES</b> Analyst: NSB						
Benzene	18	1.0		µg/L	1	3/5/2013 2:09:42 AM
Toluene	ND	1.0		µg/L	1	3/5/2013 2:09:42 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2013 2:09:42 AM
Xylenes, Total	3.5	2.0		µg/L	1	3/5/2013 2:09:42 AM
Surr: 4-Bromofluorobenzene	99.4	69.7-152		%REC	1	3/5/2013 2:09:42 AM

<b>Lab ID:</b>	1303036-003	<b>Collection Date:</b>	2/28/2013 3:50:00 PM
<b>Client Sample ID:</b>	MW-6	<b>Matrix:</b>	AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>EPA METHOD 8021B: VOLATILES</b> Analyst: NSB						
Benzene	430	100		µg/L	100	3/5/2013 3:09:53 AM
Toluene	590	100		µg/L	100	3/5/2013 3:09:53 AM
Ethylbenzene	210	100		µg/L	100	3/5/2013 3:09:53 AM
Xylenes, Total	870	200		µg/L	100	3/5/2013 3:09:53 AM
Surr: 4-Bromofluorobenzene	98.7	69.7-152		%REC	100	3/5/2013 3:09:53 AM

<b>Lab ID:</b>	1303036-004	<b>Collection Date:</b>	2/28/2013 4:30:00 PM
<b>Client Sample ID:</b>	MW-5	<b>Matrix:</b>	AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>EPA METHOD 8021B: VOLATILES</b> Analyst: NSB						
Benzene	17	1.0		µg/L	1	3/5/2013 2:39:41 AM
Toluene	2.4	1.0		µg/L	1	3/5/2013 2:39:41 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2013 2:39:41 AM
Xylenes, Total	14	2.0		µg/L	1	3/5/2013 2:39:41 AM
Surr: 4-Bromofluorobenzene	99.1	69.7-152		%REC	1	3/5/2013 2:39:41 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1303036  
07-Mar-13

Client: LTE  
Project: Pritchard #2A

Sample ID: 5ML RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch ID: R8955	RunNo: 8955								
Prep Date:	Analysis Date: 3/4/2013	SeqNo: 255896 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								
Xylenes, Total	ND	2.0								
Sur: 4-Bromofluorobenzene	19		20.00		93.9	69.7	152			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch ID: R8955	RunNo: 8955								
Prep Date:	Analysis Date: 3/4/2013	SeqNo: 255897 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	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	21	1.0	20.00	0	103	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
Sur: 4-Bromofluorobenzene	21		20.00		103	69.7	152			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4101  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name:	LTE	Work Order Number:	1303036
Received by/date:	AF	03/02/13	
Logged By:	Lindsay Mangin	3/2/2013 12:00:00 PM	<i>Judy Mago</i>
Completed By:	Lindsay Mangin	3/4/2013 8:59:24 AM	<i>Judy Mago</i>
Reviewed By:	JO	03/04/2013	

### Chain of Custody

1. Were seals intact? Yes  No  Not Present
2. Is Chain of Custody complete? Yes  No  Not Present
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes  No  NA
5. Was an attempt made to cool the samples? Yes  No  NA
6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
7. Sample(s) in proper container(s)? Yes  No
8. Sufficient sample volume for indicated test(s)? Yes  No
9. Are samples (except VOA and ONG) properly preserved? Yes  No
10. Was preservative added to bottles? Yes  No  NA
11. VOA vials have zero headspace? Yes  No  No VOA Vials
12. Were any sample containers received broken? Yes  No
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
14. Are matrices correctly identified on Chain of Custody? Yes  No
15. Is it clear what analyses were requested? Yes  No
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH:  
<2 or >12 unless noted  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

17. 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:	

18. Additional remarks:

-002A - ONE VOA HAS SOME HEAD SPACE.

### 19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes			



**APPENDIX B  
MARCH 2013 FIELD NOTES**



**Water Sample Collection Form**

Sample Location	Pritchard #2	Client	Williams Field Services, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	12:55	Project #	034013001
Sample ID	MW-1	Sampler	Brooke Herb
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	82.06	TD of Well	88.25
Time	12:15	Depth to Product	NA
Vol. of H <sub>2</sub> O to purge	6.19 * 0.1631 = 0.99 * 3 = 2.97 (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols		
Method of Purging	PVC Bailer		
Method of Sampling	PVC Bailer		

Time	Vol. Removed (gallons)	Total Vol H <sub>2</sub> O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
12:30	0.25	0.25	6.78	16.6	2.20	Dark gray, minor silt, no odor, no sheen
	0.25	0.50	7.04	16.4	2.40	No change
	0.25	0.75	7.05	16.4	2.41	More silt
	0.25	1.00	7.06	16.4	2.45	Darker gray, more silt
12:43	0.50	1.50	7.08	16.2	2.38	No change
	0.50	2.00	7.11	16.1	2.45	No change
	0.25	2.25	7.14	16.2	2.41	No change
	0.25	2.50	7.14	16.2	2.39	No change
	0.25	2.75	7.15	16.2	2.41	More silt, brownish gray
12:55	0.25	3.00	7.15	16.2	2.42	No change

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_  
 \_\_\_\_\_

Signature: Brooke Herb Date: 2/28/2013



## ***Water Sample Collection Form***

Sample Location	Pritchard #2	Client	Williams Four Corners, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	NA	Project #	034013001
Sample ID	MW-2	Sampler	Brooke Herb
Analyses	NA		
Matrix	NA	Laboratory	NA
Turn Around Time	NA	Shipping Method	NA
Depth to Water	79.97	TD of Well	NM
Time	16:40	Depth to Product	79.63
Vol. of H2O to purge	<i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	NA		
Method of Sampling	NA		

**Comments:** No sample was collected due to the presence of product.

Product recovery sock present in well; black. Returned to well after DTP and DTW measurements.

**Describe Deviations from SOP:**

Signature: Brooke Hart Date: 2/28/2013



### Water Sample Collection Form

Sample Location	Pritchard #2	Client	Williams Field Services, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	14:05	Project #	034013001
Sample ID	MW-3	Sampler	Brooke Herb
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	78.02	TD of Well	83.10
Time	13:00	Depth to Product	NA
Vol. of H2O to purge	$5.08 * 0.1631 = 0.81 * 3 = 2.44$ <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	PVC Bailer		
Method of Sampling	PVC Bailer		

**Comments:** There is an obstruction in the well, possibly bent PVC. Cannot fit the 2-inch bailer down the well. Was able to get a small bailer down the well for a grab sample. Very hard to get enough water to fill all 3 VOAs. Unsuccessfully tried to use a fish hook to remove obstruction.

**Describe Deviations from SOP:**

**Signature:** Brooke Hub **Date:** 2/28/2013



### Water Sample Collection Form

Sample Location	Pritchard #2	Client	Williams Field Services, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	NA	Project #	034013001
Sample ID	MW-4	Sampler	Brooke Herb
Analyses	NA	Laboratory	NA
Matrix	NA	Shipping Method	NA
Turn Around Time	NA	TD of Well	NM
Depth to Water	79.55	Depth to Product	77.97
Time	14:20		
Vol. of H2O to purge	<i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	NA		
Method of Sampling	NA		

**Comments:** No sample was collected due to the presence of product.

**Describe Deviations from SOP:**

**Signature:** Brooke Hart **Date:** 2/28/2013



**Water Sample Collection Form**

Sample Location	Pritchard #2	Client	Williams Field Services, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	16:30	Project #	034013001
Sample ID	MW-5	Sampler	Brooke Herb
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	78.20	TD of Well	83.03
Time	16:00	Depth to Product	NA
Vol. of H <sub>2</sub> O to purge	4.81 * 0.16 = 0.77 * 3 = 2.30 <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	PVC Bailer		
Method of Sampling	PVC Bailer		

Time	Vol. Removed (gallons)	Total Vol H <sub>2</sub> O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
16:07	0.25	0.25	6.87	16.1	2.53	Clear/light gray
	0.25	0.50	6.96	16.0	2.59	Black flecks, minor HC odor, no sheen
	0.25	0.75	6.97	15.7	2.54	Dark gray
	0.25	1.00	6.96	16.0	2.54	Siltier
	0.50	1.50	6.96	15.7	2.49	No change
	0.25	1.75	7.04	15.7	2.58	No change
	0.25	2.00	7.05	15.7	2.58	No change
	0.25	2.25	7.05	15.8	2.57	No change
16:30	0.25	2.50	7.05	15.7	2.54	No change

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: Brooke Herb Date: 2/28/2013



**Water Sample Collection Form**

Sample Location	Pritchard #2	Client	Williams Four Corners, LLC
Sample Date	2/28/2013	Project Name	Historical Groundwater
Sample Time	15:50	Project #	034013001
Sample ID	MW-6	Sampler	Brooke Herb
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	67.56	TD of Well	82.60
Time	14:30	Depth to Product	NA
Vol. of H <sub>2</sub> O to purge	15.04 * 0.16 = 2.40 * 3 = 7.22 (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols		
Method of Purging	PVC Bailer		
Method of Sampling	PVC Bailer		

Time	Vol. Removed (gallons)	Total Vol H <sub>2</sub> O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
	0.25	0.25	7.13	16.2	2.31	Clear, HC odor
14:41	0.25	0.50	7.17	16.1	2.00	Gray, minor silt
	0.25	0.75	7.18	15.9	2.22	Darker gray, sheen present
	0.25	1.00	7.19	16.3	2.35	More silt
	1.00	2.00	7.26	16.2	2.03	No change
	1.00	3.00	7.31	16.0	2.26	Light Gray
	1.00	4.00	7.42	16.2	2.07	Bailing Down
	1.00	5.00	7.37	16.0	2.14	No change
	1.00	6.00	7.42	15.9	2.03	No change
	0.25	6.25	7.29	16.2	2.15	No change
	0.25	6.50	7.30	16.3	2.06	No change
	0.25	6.75	7.30	16.2	2.02	No change
	0.25	7.00	7.31	16.2	2.06	No change
15:50	0.25	7.25	7.31	16.3	2.04	No change

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_  
 \_\_\_\_\_

Signature: Brooke Herb Date: 2/28/2013

