

3R - 317

2012 AGWMR

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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 four locations in the San Juan Basin for Williams Field Services, LLC:

- Davis #1 3R-311
- Dogie East Pit 3R-312
- Florance #40 3R-315
- Florance #47X 3R-317

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

FLORANCE #47X

ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-317-0

APRIL 2013

Prepared for:

WILLIAMS FIELD SERVICES, LLC
TULSA, OKLAHOMA



2012 ANNUAL GROUNDWATER REPORT
FLORANCE #47X
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-317-0

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 Florance #47X (Administrative/Environmental Order Number 3RP-317-0) 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 a former dehydrator 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, October 2012, December 2012, and March 2013). Depth to groundwater and depth to free-phase hydrocarbon data for the monitoring events conducted in 2012 was not available. Depth to groundwater data in March 2013 indicates the groundwater flow is to the southeast.

Groundwater monitoring wells MW-3 and MW-5 have historically contained free-phase hydrocarbons in the wells. Groundwater in monitoring well MW-2 in the original source area contains BTEX concentrations in excess of the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards. BTEX concentrations in groundwater monitoring wells MW-1 and MW-4 are compliant with the NMWQCC groundwater standards.

Williams proposes to cease collection of groundwater samples from groundwater monitoring wells MW-1 and MW-4; Williams will continue to collect depth to water data quarterly from these wells. Williams proposes to continue quarterly sampling and depth to water or depth to product monitoring in groundwater monitoring wells MW-2, MW-3, and MW-5 in addition to exploring options for recovery of free-phase hydrocarbons from monitoring wells MW-3 and MW-5. Lastly, Williams will consider installation of two new groundwater monitoring wells downgradient of monitoring wells MW-3 and MW-5 to better delineate hydrocarbon impacts.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) on behalf of Williams Field Services, LLC (Williams) has prepared this report detailing groundwater monitoring completed from April 2012 through March 2013 at the Florance #40 (Administrative/Environmental Order Number 3RP-317-0) 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 operation of a former lined pit to collect drip gas and water from a condensate tank. From April 2012 through December 2012, Williams conducted groundwater sampling. In March 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 36.843316 and longitude -107.800667 in Unit G, Section 5, Township 30 North, Range 9 West. The Site is in Crow Canyon, a tributary to Pump Canyon in the San Juan Basin, San Juan County, New Mexico.

1.2 HISTORY

In June 1996, approximately 399 cubic yards of impacted soil were excavated from what was believed to be the former dehydrator pit. Hand written notes indicate the dimensions of the pit were 27 feet by 21 feet by 19 feet deep. A composite soil sample from the pit excavation contained 97 milligrams per kilogram (mg/kg) total benzene, toluene, ethylbenzene, and total xylenes (BTEX) and 277 mg/kg of total petroleum hydrocarbons (TPH) – diesel range organics (DRO). A test hole was drilled in the location of the excavation to a depth of 115 feet below ground surface (bgs); groundwater was encountered at 96.95 feet in this test hole. A soil sample from this test hole at 56 feet bgs contained 6,318 mg/kg TPH – gasoline range organics (GRO) and 88.2 mg/kg TPH –DRO. A groundwater sample from this test hole, renamed groundwater monitoring well MW-2, contained 18,650 micrograms per liter (µg/L) BTEX.

Between September 1999 and December 2012, Williams monitored groundwater in five monitoring wells at the Site (Figure 2). Groundwater monitoring wells MW-2 and MW-3 have contained free phase hydrocarbons at some time between 1999 and 2013. Records regarding these activities can be found in previous groundwater reports submitted to the New Mexico Oil Conservation Division (NMOCD).

In February 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, ethyl benzene and total xylene (BTEX).

2.0 METHODOLOGY

Groundwater monitoring activities were conducted at the Site in April 2012, June 2012, October 2012, December 2012, and March 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 were 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 each 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. 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 (± 0.4 units for pH, ± 10 percent for electric conductivity and $\pm 2^\circ$ C for temperature). All purge water was containerized in a tank 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 three 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.

Groundwater monitoring well MW-2 bailed dry and did not recover during the February 2013 monitoring event; LTE returned to the Site on March 4, 2013 and collected a sample from monitoring well MW-2.

2.3 GROUNDWATER CONTOUR MAPS

LTE used existing top of casing well elevations and groundwater elevations obtained from monitoring wells during the March 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 March 2013 monitoring event is summarized on Table 2. Groundwater flow direction was determined to be to the southeast, toward Crow Canyon (Figure 2).

Groundwater monitoring wells MW-1 and MW-4 did not contain any BTEX above the NMWQCC groundwater standards during any of the sampling events. Groundwater monitoring well MW-3 contained 0.97 feet of free-phase hydrocarbons; the product recovery device was returned to the well. In March 2013, groundwater monitoring well MW-5 had tubing in it to the total depth of the well; the tubing was removed from the well and discarded. Groundwater monitoring wells MW-3 and MW-5 contained free-phase hydrocarbons. Benzene and total xylenes concentrations from groundwater monitoring well MW-2 exceeded the NMWQCC groundwater standards during the March 2013 sampling. Table 3 summarizes the groundwater analytical results and copies of the laboratory reports can be found in Appendix A.

4.0 CONCLUSIONS

BTEX concentrations in upgradient groundwater in monitoring wells MW-1 and MW-4 was compliant with NMWQCC groundwater standards during the period covered in this report. Groundwater monitoring wells MW-3 and MW-5 contained free product in March 2013 and likely contained free product during the rest of the year. Groundwater monitoring well MW-2, in the former source area, contained benzene, toluene, and total xylenes concentrations in excess of the NMWQCC groundwater standards during the 2012 monitoring events and benzene and total xylenes in excess of the NMWQCC groundwater standards during the March 2013 monitoring event.

5.0 RECOMMENDATIONS

Williams proposes to cease collection of groundwater samples from groundwater monitoring wells MW-1 and MW-4 since sample results have been below NMWQCC standards for at least eight consecutive quarters, or have demonstrated long term results below NMWQCC standards; Williams will continue to collect depth to water data quarterly from these wells. Williams proposes to continue quarterly sampling and depth to water or depth to product monitoring in groundwater monitoring wells MW-2, MW-3, and MW-5 in addition to exploring options for recovery of free-phase hydrocarbons from groundwater monitoring wells MW-3 and MW-5. Lastly, Williams will install two new groundwater monitoring wells downgradient of monitoring wells MW-3 and MW-5 to delineate hydrocarbon impacts.

FIGURES



LEGEND

○ SITE LOCATION

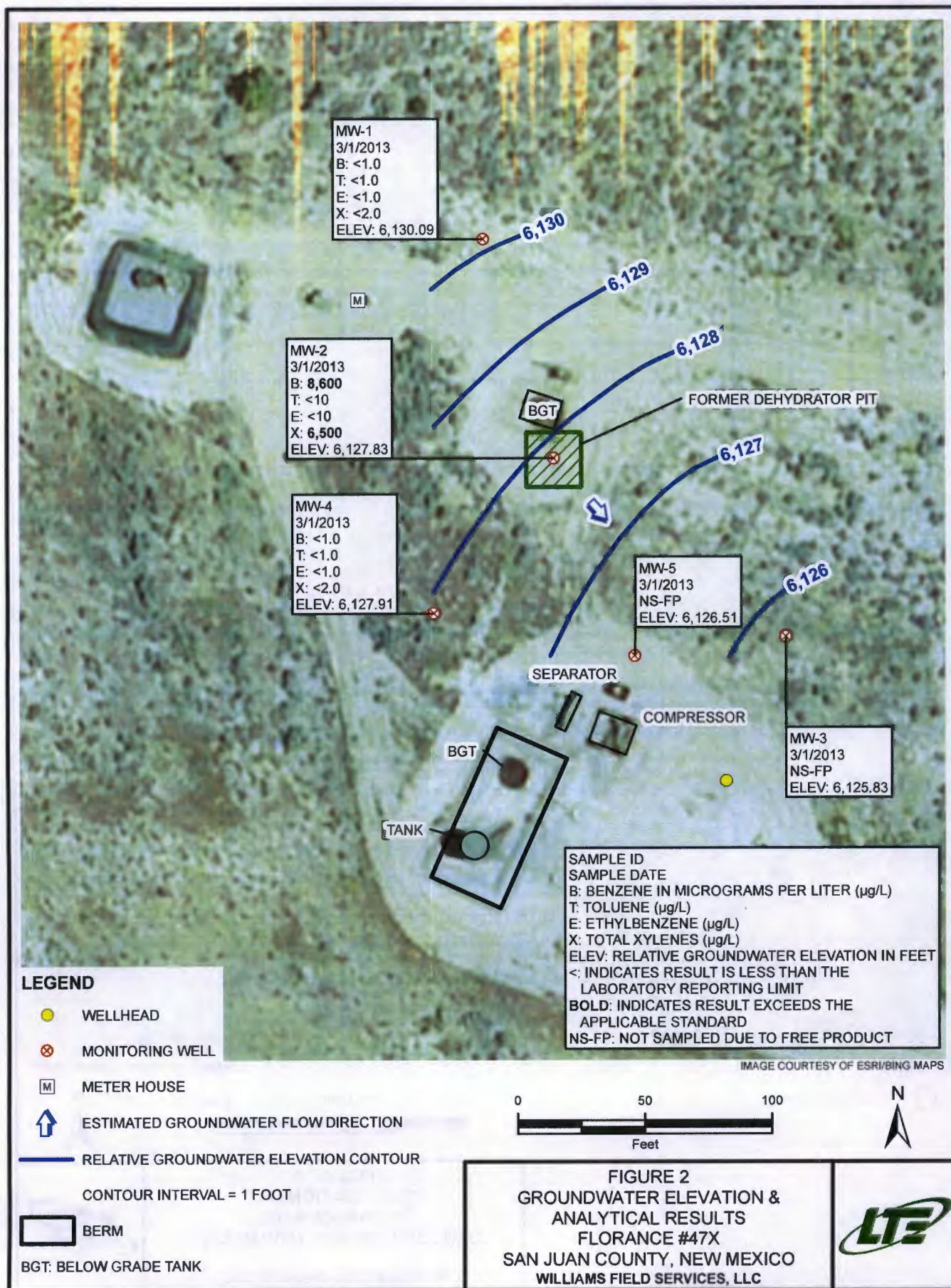
IMAGE COURTESY OF ESR/IBING MAPS



FIGURE 1
SITE LOCATION MAP
FLORANCE #47X
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
FLORANCE #47X
WILLIAMS FIELD SERVICES, LLC**

Sample Identifier	Well Name	Sample Date
163102APR12	MW-1	4/2/2012
171413JUN12	MW-1	6/13/2012
145402OCT12	MW-1	10/2/2012
144106DEC12	MW-1	12/6/2012
163902APR12	MW-2	4/2/2012
174413JUN12	MW-2	6/13/2012
150902OCT12	MW-2	10/2/2012
145006DEC12	MW-2	12/6/2012
164902APR12	MW-4	4/2/2012
175613JUN12	MW-4	6/13/2012
151502OCT12	MW-4	10/2/2012
145906DEC12	MW-4	12/6/2012

Note:

Samples summarized in this table were not collected by LTE



TABLE 2

**GROUNDWATER ELEVATION SUMMARY
FLORANCE #47X
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	3/1/2013	NP	NP	99.52	6130.09

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	3/1/2013	NP	NP	98.47	6127.83

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 *	3/1/2013	91.51	0.97	92.48	6125.83

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	3/1/2013	NP	NP	92.02	6127.91

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	3/1/2013	90.46	0.02	90.48	6126.51

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)

* - Due to presence of product recovery device, this may not be static water level



TABLE 3
GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #47X
WILLIAMS FIELD SERVICES, LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard (µg/L)		10	750	750	620
MW-1	4/2/2012	<1.0	<1.0	<1.0	<3.0
MW-1	6/13/2012	<1.0	<1.0	<1.0	<3.0
MW-1	10/2/2012	1.1	<1.0	<1.0	<3.0
MW-1	12/6/2012	<1.0	<1.0	<1.0	<3.0
MW-1	3/1/2013	<1.0	<1.0	<1.0	<2.0
MW-2	4/2/2012	10,000	710	<100	6,390
MW-2	6/13/2012	11,200	716	<50.0	6,790
MW-2	10/2/2012	10,200	765	<100	7,260
MW-2	12/6/2012	8,280	722	<50.0	5,610
MW-2	3/1/2013	8,600	<10	<10	6,500
MW-3	4/2/2012	NS	NS	NS	NS
MW-3	6/13/2012	NS	NS	NS	NS
MW-3	10/2/2012	NS	NS	NS	NS
MW-3	12/6/2012	NS	NS	NS	NS
MW-3	3/1/2013	NSP	NSP	NSP	NSP
MW-4	4/2/2012	<1.0	<1.0	<1.0	6.1
MW-4	6/13/2012	<1.0	<1.0	<1.0	3.7
MW-4	10/2/2012	<1.0	<1.0	<1.0	4.5
MW-4	12/6/2012	<1.0	<1.0	<1.0	6
MW-4	3/1/2013	<1.0	<1.0	<1.0	<2.0
MW-5	4/2/2012	NS	NS	NS	NS
MW-5	6/13/2012	NS	NS	NS	NS
MW-5	10/2/2012	NS	NS	NS	NS
MW-5	12/6/2012	NS	NS	NS	NS
MW-5	3/1/2013	NSP	NSP	NSP	NSP

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

µg/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
Pace Project No.: 60119078

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,

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
Pace Project No.: 60119078

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 18

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

SAMPLE SUMMARY

Project: NM GW
Pace Project No.: 60119078

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60119078001	163102APR06	Water	04/02/12 16:31	04/10/12 10:00
60119078002	163902APR06	Water	04/02/12 16:39	04/10/12 10:00
60119078003	164902APR06	Water	04/02/12 16:49	04/10/12 10:00
60119078004	132806APR06	Water	04/06/12 13:28	04/10/12 10:00
60119078005	134206APR06	Water	04/06/12 13:42	04/10/12 10:00
60119078006	135506APR06	Water	04/06/12 13:55	04/10/12 10:00
60119078007	140706APR06	Water	04/06/12 14:07	04/10/12 10:00
60119078008	142006APR06	Water	04/06/12 14:20	04/10/12 10:00
60119078009	143106APR06	Water	04/06/12 14:31	04/10/12 10:00
60119078010	EDD	Water	04/06/12 00:00	04/10/12 10:00

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: NM GW

Pace Project No.: 60119078

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60119078001	163102APR06	EPA 8260	JTS	9
60119078002	163902APR06	EPA 8260	JTS	9
60119078003	164902APR06	EPA 8260	JTS	9
60119078004	132806APR06	EPA 8260	JTS	9
60119078005	134206APR06	EPA 8260	JTS	9
60119078006	135506APR06	EPA 8260	RNS	9
60119078007	140706APR06	EPA 8260	RNS	9
60119078008	142006APR06	EPA 8260	RNS	9
60119078009	143106APR06	EPA 8260	RNS	9

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 163102APR06		Lab ID: 60119078001	Collected: 04/02/12 16:31	Received: 04/10/12 10:00	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		04/12/12 13:54	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 13:54	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 13:54	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 13:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	93 %		86-112	1		04/12/12 13:54	1868-53-7	
Toluene-d8 (S)	95 %		90-110	1		04/12/12 13:54	2037-26-5	
4-Bromofluorobenzene (S)	102 %		87-113	1		04/12/12 13:54	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		82-119	1		04/12/12 13:54	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 13:54		



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

ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60119078

Sample: 163902APR06		Lab ID: 60119078002		Collected: 04/02/12 16:39		Received: 04/10/12 10:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260							
Benzene	10000	ug/L	100	100			04/12/12 14:11	71-43-2	
Ethylbenzene	710	ug/L	100	100			04/12/12 14:11	100-41-4	
Toluene	ND	ug/L	100	100			04/12/12 14:11	108-88-3	
Xylene (Total)	6390	ug/L	300	100			04/12/12 14:11	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	92	%	86-112	100			04/12/12 14:11	1868-53-7	
Toluene-d8 (S)	100	%	90-110	100			04/12/12 14:11	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	100			04/12/12 14:11	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	82-119	100			04/12/12 14:11	17060-07-0	
Preservation pH	1.0		1.0	100			04/12/12 14:11		



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

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 164902APR06		Lab ID: 60119078003	Collected: 04/02/12 16:49		Received: 04/10/12 10:00		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		04/12/12 14:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 14:27	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 14:27	108-88-3	
Xylene (Total)	6.1	ug/L	3.0	1		04/12/12 14:27	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	92	%	86-112	1		04/12/12 14:27	1868-53-7	
Toluene-d8 (S)	96	%	90-110	1		04/12/12 14:27	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113	1		04/12/12 14:27	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	82-119	1		04/12/12 14:27	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 14:27		



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

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 132806APR06		Lab ID: 60119078004	Collected: 04/06/12 13:28		Received: 04/10/12 10:00		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		04/12/12 14:43	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 14:43	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 14:43	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 14:43	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	93	%	86-112	1		04/12/12 14:43	1868-53-7	
Toluene-d8 (S)	96	%	90-110	1		04/12/12 14:43	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-113	1		04/12/12 14:43	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	82-119	1		04/12/12 14:43	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 14:43		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 134206APR06		Lab ID: 60119078005	Collected: 04/06/12 13:42	Received: 04/10/12 10:00	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		04/12/12 15:00	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 15:00	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 15:00	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 15:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	93	%	86-112	1		04/12/12 15:00	1868-53-7	
Toluene-d8 (S)	94	%	90-110	1		04/12/12 15:00	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	1		04/12/12 15:00	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	82-119	1		04/12/12 15:00	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 15:00		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 135506APR06		Lab ID: 60119078006		Collected: 04/06/12 13:55		Received: 04/10/12 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV UST, Water		Analytical Method: EPA 8260							
Benzene	3.7	ug/L	1.0	1		04/14/12 04:57	71-43-2		
Ethylbenzene	63.9	ug/L	1.0	1		04/14/12 04:57	100-41-4		
Toluene	2.3	ug/L	1.0	1		04/14/12 04:57	108-88-3		
Xylene (Total)	142	ug/L	3.0	1		04/14/12 04:57	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	98	%	86-112	1		04/14/12 04:57	1868-53-7		
Toluene-d8 (S)	109	%	90-110	1		04/14/12 04:57	2037-26-5		
4-Bromofluorobenzene (S)	101	%	87-113	1		04/14/12 04:57	460-00-4		
1,2-Dichloroethane-d4 (S)	102	%	82-119	1		04/14/12 04:57	17060-07-0		
Preservation pH	1.0		1.0	1		04/14/12 04:57			

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 140706APR06		Lab ID: 60119078007	Collected: 04/06/12 14:07	Received: 04/10/12 10:00	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		04/12/12 10:03	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 10:03	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 10:03	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 10:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	86-112	1		04/12/12 10:03	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		04/12/12 10:03	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	1		04/12/12 10:03	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	82-119	1		04/12/12 10:03	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 10:03		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 142006APR06		Lab ID: 60119078008		Collected: 04/06/12 14:20		Received: 04/10/12 10:00		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		04/12/12 10:18	71-43-2	
Ethylbenzene		ND ug/L		1.0	1		04/12/12 10:18	100-41-4	
Toluene		ND ug/L		1.0	1		04/12/12 10:18	108-88-3	
Xylene (Total)		ND ug/L		3.0	1		04/12/12 10:18	1330-20-7	
Surrogates									
Dibromofluoromethane (S)		101 %		86-112	1		04/12/12 10:18	1868-53-7	
Toluene-d8 (S)		98 %		90-110	1		04/12/12 10:18	2037-26-5	
4-Bromofluorobenzene (S)		101 %		87-113	1		04/12/12 10:18	460-00-4	
1,2-Dichloroethane-d4 (S)		105 %		82-119	1		04/12/12 10:18	17060-07-0	
Preservation pH		1.0		1.0	1		04/12/12 10:18		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119078

Sample: 143106APR06		Lab ID: 60119078009	Collected: 04/06/12 14:31	Received: 04/10/12 10:00	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		04/12/12 10:33	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 10:33	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 10:33	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 10:33	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105 %		86-112	1		04/12/12 10:33	1868-53-7	
Toluene-d8 (S)	96 %		90-110	1		04/12/12 10:33	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	1		04/12/12 10:33	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		82-119	1		04/12/12 10:33	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 10:33		

QUALITY CONTROL DATA

Project: NM GW
Pace Project No.: 60119078

QC Batch: MSV/44874 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60119078001, 60119078002, 60119078003, 60119078004, 60119078005

METHOD BLANK: 980212 Matrix: Water
Associated Lab Samples: 60119078001, 60119078002, 60119078003, 60119078004, 60119078005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/12/12 09:50	
Ethylbenzene	ug/L	ND	1.0	04/12/12 09:50	
Toluene	ug/L	ND	1.0	04/12/12 09:50	
Xylene (Total)	ug/L	ND	3.0	04/12/12 09:50	
1,2-Dichloroethane-d4 (S)	%	90	82-119	04/12/12 09:50	
4-Bromofluorobenzene (S)	%	102	87-113	04/12/12 09:50	
Dibromofluoromethane (S)	%	89	86-112	04/12/12 09:50	
Toluene-d8 (S)	%	95	90-110	04/12/12 09:50	

LABORATORY CONTROL SAMPLE: 980213

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.1	91	82-117	
Ethylbenzene	ug/L	20	18.3	91	79-121	
Toluene	ug/L	20	19.3	96	80-120	
Xylene (Total)	ug/L	60	55.5	92	79-120	
1,2-Dichloroethane-d4 (S)	%			91	82-119	
4-Bromofluorobenzene (S)	%			101	87-113	
Dibromofluoromethane (S)	%			93	86-112	
Toluene-d8 (S)	%			91	90-110	



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QUALITY CONTROL DATA

Project: NM GW
Pace Project No.: 60119078

QC Batch: MSV/44875 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60119078007, 60119078008, 60119078009

METHOD BLANK: 980214 Matrix: Water

Associated Lab Samples: 60119078007, 60119078008, 60119078009

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	



QUALITY CONTROL DATA

Project: NM GW

Pace Project No.: 60119078

QC Batch: MSV/44918

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60119078006

METHOD BLANK: 981471

Matrix: Water

Associated Lab Samples: 60119078006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/14/12 04:26	
Ethylbenzene	ug/L	ND	1.0	04/14/12 04:26	
Toluene	ug/L	ND	1.0	04/14/12 04:26	
Xylene (Total)	ug/L	ND	3.0	04/14/12 04:26	
1,2-Dichloroethane-d4 (S)	%	103	82-119	04/14/12 04:26	
4-Bromofluorobenzene (S)	%	99	87-113	04/14/12 04:26	
Dibromofluoromethane (S)	%	101	86-112	04/14/12 04:26	
Toluene-d8 (S)	%	100	90-110	04/14/12 04:26	

LABORATORY CONTROL SAMPLE: 981472

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.5	98	82-117	
Ethylbenzene	ug/L	20	18.4	92	79-121	
Toluene	ug/L	20	19.2	96	80-120	
Xylene (Total)	ug/L	60	56.7	95	79-120	
1,2-Dichloroethane-d4 (S)	%			104	82-119	
4-Bromofluorobenzene (S)	%			102	87-113	
Dibromofluoromethane (S)	%			101	86-112	
Toluene-d8 (S)	%			102	90-110	



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QUALIFIERS

Project: NM GW
Pace Project No.: 60119078

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/44874

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

Batch: MSV/44875

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

Batch: MSV/44918

[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
Pace Project No.: 60119078

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60119078001	163102APR06	EPA 8260	MSV/44874		
60119078002	163902APR06	EPA 8260	MSV/44874		
60119078003	164902APR06	EPA 8260	MSV/44874		
60119078004	132806APR06	EPA 8260	MSV/44874		
60119078005	134206APR06	EPA 8260	MSV/44874		
60119078006	135506APR06	EPA 8260	MSV/44918		
60119078007	140706APR06	EPA 8260	MSV/44875		
60119078008	142006APR06	EPA 8260	MSV/44875		
60119078009	143106APR06	EPA 8260	MSV/44875		

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

***Important Note:** By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt

Client Name: mile HighProject # 60619078Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ OtherTracking #: 9001 1020 5172Pace Shipping Label Used? ☐ Yes ☒ NoCustody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No

Optional
Proj. Due Date: <u>4/17</u>
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ OtherThermometer Used: T-191 T-194Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begunCooler Temperature: 4.0

Temperature should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 4-10-12

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

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required?

Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]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
8260 MSV UST, Water		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	
Surrogates								
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		



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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
8260 MSV UST, Water		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	
Surrogates									
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	1.0			1.0	1		06/20/12 16:02		



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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
8260 MSV UST, Water		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	
Surrogates								
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		

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
8260 MSV UST, Water		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	
Surrogates								
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		

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
8260 MSV UST, Water		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	
Surrogates								
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	
8260 MSV UST, Water		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		
Surrogates									
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			



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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
8260 MSV UST, Water		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	
Surrogates								
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	1.0		1.0	1		06/19/12 07:38		

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
8260 MSV UST, Water		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	
Surrogates								
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
8260 MSV UST, Water		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	
Surrogates								
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		

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

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

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	

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	

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

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/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		



CHAIN-OF-CUSTODY / Analytical Request Document

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

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	MARK HARVEY / MILE HIGH	6-14-12	8:30am	Fed-Ex	6-14									
				Brenda Okamoto	6-16-12	845								

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: M. HARVEY

SIGNATURE of SAMPLER: M. Harvey

DATE Signed (MM/DD/YYYY): 6-14-12

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt

Client Name: Mile High Services Project # 60123512

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other
Tracking #: 8001 2095 7033 Pace Shipping Label Used? ☐ Yes ☒ No
Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other

Thermometer Used: T-19 / 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:	☒ Yes ☐ No ☐ N/A	1. <u>Out of temp, not enough ice.</u>
Chain of Custody filled out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler name & signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples arrived within holding time:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time analyses (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time requested:	☐ Yes ☒ No ☐ N/A	7.
Sufficient volume:	☒ Yes ☐ No ☐ N/A	8.
Correct containers used:	☒ Yes ☐ No ☐ N/A	9.
-Pace containers used:	☒ Yes ☐ No ☐ N/A	
Containers intact:	☒ Yes ☐ No ☐ N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐ Yes ☐ No ☒ N/A	11.
Filtered volume received for dissolved tests	☐ Yes ☐ No ☒ N/A	12.
Sample labels match COC:	☒ Yes ☐ No ☐ N/A	13.
-Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	☐ Yes ☐ No ☒ N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐ Yes ☐ No ☒ N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	☒ Yes ☐ No	Initial when completed: _____ Lot # of added preservative: _____
Trip Blank present:	☐ Yes ☒ No ☐ N/A	15.
Pace Trip Blank lot # (if purchased):		
Headspace in VOA vials (>6mm):	☐ Yes ☒ No ☐ N/A	16.
Project sampled in USDA Regulated Area:	☐ Yes ☐ No ☒ N/A	17. List State: _____

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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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,

Andy Brownfield for
Heather Wilson
heather.wilson@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NM GW PRTCHD + 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

REPORT OF LABORATORY ANALYSIS

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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

REPORT OF LABORATORY ANALYSIS

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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
8260 MSV UST, Water		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	
Surrogates								
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		



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ANALYTICAL RESULTS

Project: NM GW PRTCHD + FLR47X + DVS

Pace Project No.: 60130503

Sample: 141102OCT12		Lab ID: 60130503002	Collected: 10/02/12 14:11		Received: 10/04/12 08:20		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		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	
Surrogates								
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		

ANALYTICAL RESULTS

Project: NM GW PRTCHD + 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
8260 MSV UST, Water		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	
Surrogates								
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
8260 MSV UST, Water		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	
Surrogates								
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		

ANALYTICAL RESULTS

Project: NM GW PRTCHD + 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
8260 MSV UST, Water		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	
Surrogates									
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		



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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
8260 MSV UST, Water		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)	4.5	ug/L	3.0	1		10/06/12 08:05	1330-20-7	
Surrogates								
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	1.0		1.0	1		10/06/12 08:05		

ANALYTICAL RESULTS

Project: NM GW PRTCHD + 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
8260 MSV UST, Water		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	
Surrogates								
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
8260 MSV UST, Water		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	
Surrogates								
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	1.0		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
8260 MSV UST, Water		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	
Surrogates								
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		



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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
8260 MSV UST, Water		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	
Surrogates								
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	1.0		1.0	1		10/06/12 09:07		



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	60130008014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
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	



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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 Result	Reporting Limit	Analyzed	Qualifiers
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 Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
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.

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		

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A Required Client Information: Company: MILE HIGH Address: 221 S. MAIN Phone: 303-402-1958 Fax: 303-402-1958 Requested Due Date/TAT:		Section B Required Project Information: Report To: M. HARVEY Copy To: Purchase Order No.: Project Name: NM GW Project Number: PATCHA + FLR47X + DVS		Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:		Page: 1 of 1 1564130 REGULATORY AGENCY ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER Site Location STATE: NM	
Section D Required Client Information SAMPLE ID (A-Z, 0-9 / . -) Sample IDs MUST BE UNIQUE		Matrix Codes MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Solid/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT		SAMPLE TYPE (G=GRAB C=COMP) MATRIX CODE (see valid codes to left) COLLECTED COMPOSITE START DATE TIME COMPOSITE END/GRAB DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other		Requested Analysis Filtered (Y/N) Residual Chlorine (Y/N) Pace Project No./ Lab I.D. PATCHA-1 001 PATCHA-5 002 PATCHA-6 003 47X-1 004 47X-2 005 47X-4 006 DVS-1 007 DVS-4 008 DVS-7 009 DVS-6 010	
ADDITIONAL COMMENTS M. HARVEY		RELINQUISHED BY / AFFILIATION DATE 10-3-12 10:30 FLD-EX M. HARVEY		ACCEPTED BY / AFFILIATION DATE 10-3-12 10:30 M. HARVEY		SAMPLE CONDITIONS Temp in °C Received on Custody Sealed Cooler (Y/N) Samples Intact (Y/N)	

ORIGINAL

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: **M. HARVEY**
 SIGNATURE of SAMPLER: *M. Harvey*
 DATE Signed (MM/DD/YY): **10-3-12**



ple Upon

Client Name: mile High Project # 600130503

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 800092844088 Pace Shipping Label Used? ☐ Yes ☒ No

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☒ Other 2x16

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

Cooler Temperature: 3.8

Temperature should be above freezing to 6°C

Comments:

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

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

Date: 12/15/12

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 JIC + FLR47X
Pace Project No.: 60135457

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,

Heather Wilson

heather.wilson@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NM GW JIC + FLR47X
Pace Project No.: 60135457

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 JIC + FLR47X
Pace Project No.: 60135457

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60135457001	EDD	Water	12/07/12 13:00	12/14/12 08:30
60135457002	130007DEC12	Water	12/07/12 13:00	12/14/12 08:30
60135457003	131307DEC12	Water	12/07/12 13:13	12/14/12 08:30
60135457004	132007DEC12	Water	12/07/12 13:20	12/14/12 08:30
60135457005	132907DEC12	Water	12/07/12 13:29	12/14/12 08:30
60135457006	134307DEC12	Water	12/07/12 13:43	12/14/12 08:30
60135457007	134807DEC12	Water	12/07/12 13:48	12/14/12 08:30
60135457008	140007DEC12	Water	12/07/12 14:00	12/14/12 08:30
60135457009	144106DEC12	Water	12/06/12 14:41	12/14/12 08:30
60135457010	145006DEC12	Water	12/06/12 14:50	12/14/12 08:30
60135457011	145906DEC12	Water	12/06/12 14:59	12/14/12 08:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60135457002	130007DEC12	EPA 8260	PRG	9
60135457003	131307DEC12	EPA 8260	PRG	9
60135457004	132007DEC12	EPA 8260	PRG	9
60135457005	132907DEC12	EPA 8260	PRG	9
60135457006	134307DEC12	EPA 8260	JTS, PRG	9
60135457007	134807DEC12	EPA 8260	RNS	9
60135457008	140007DEC12	EPA 8260	RNS	9
60135457009	144106DEC12	EPA 8260	RNS	9
60135457010	145006DEC12	EPA 8260	RNS	9
60135457011	145906DEC12	EPA 8260	RNS	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 130007DEC12		Lab ID: 60135457002	Collected: 12/07/12 13:00		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		12/18/12 04:48	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 04:48	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 04:48	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 04:48	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	1		12/18/12 04:48	1868-53-7	
Toluene-d8 (S)	109 %		80-120	1		12/18/12 04:48	2037-26-5	
4-Bromofluorobenzene (S)	103 %		80-120	1		12/18/12 04:48	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-120	1		12/18/12 04:48	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 04:48		



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 131307DEC12		Lab ID: 60135457003		Collected: 12/07/12 13:13		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		12/18/12 05:03	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 05:03	100-41-4		
Toluene	ND	ug/L	1.0	1		12/18/12 05:03	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 05:03	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	101	%	80-120	1		12/18/12 05:03	1868-53-7		
Toluene-d8 (S)	108	%	80-120	1		12/18/12 05:03	2037-26-5		
4-Bromofluorobenzene (S)	98	%	80-120	1		12/18/12 05:03	460-00-4		
1,2-Dichloroethane-d4 (S)	110	%	80-120	1		12/18/12 05:03	17060-07-0		
Preservation pH	1.0		1.0	1		12/18/12 05:03			



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 132007DEC12		Lab ID: 60135457004	Collected: 12/07/12 13:20		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		12/18/12 05:18	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 05:18	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 05:18	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 05:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	110	%	80-120	1		12/18/12 05:18	1868-53-7	
Toluene-d8 (S)	105	%	80-120	1		12/18/12 05:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	1		12/18/12 05:18	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120	1		12/18/12 05:18	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 05:18		



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 132907DEC12		Lab ID: 60135457005	Collected: 12/07/12 13:29		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		12/18/12 05:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 05:32	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 05:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 05:32	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	80-120	1		12/18/12 05:32	1868-53-7	
Toluene-d8 (S)	105	%	80-120	1		12/18/12 05:32	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		12/18/12 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120	1		12/18/12 05:32	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 05:32		

ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 134307DEC12		Lab ID: 60135457006		Collected: 12/07/12 13:43		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	1650	ug/L	20.0	20			12/18/12 19:57	71-43-2	
Ethylbenzene	145	ug/L	1.0	1			12/18/12 05:47	100-41-4	
Toluene	1810	ug/L	20.0	20			12/18/12 19:57	108-88-3	
Xylene (Total)	1630	ug/L	60.0	20			12/18/12 19:57	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	99	%	80-120	1			12/18/12 05:47	1868-53-7	
Toluene-d8 (S)	98	%	80-120	1			12/18/12 05:47	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1			12/18/12 05:47	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1			12/18/12 05:47	17060-07-0	
Preservation pH	1.0		1.0	1			12/18/12 05:47		



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 134807DEC12		Lab ID: 60135457007		Collected: 12/07/12 13:48		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	10200	ug/L	50.0	50		12/20/12 11:02	71-43-2	E,P2	
Ethylbenzene	315	ug/L	50.0	50		12/20/12 11:02	100-41-4		
Toluene	1540	ug/L	50.0	50		12/20/12 11:02	108-88-3		
Xylene (Total)	1760	ug/L	150	50		12/20/12 11:02	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	99	%	80-120	50		12/20/12 11:02	1868-53-7	HS	
Toluene-d8 (S)	99	%	80-120	50		12/20/12 11:02	2037-26-5		
4-Bromofluorobenzene (S)	101	%	80-120	50		12/20/12 11:02	460-00-4		
1,2-Dichloroethane-d4 (S)	104	%	80-120	50		12/20/12 11:02	17060-07-0		
Preservation pH	6.0		1.0	50		12/20/12 11:02		pH	



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 140007DEC12		Lab ID: 60135457008	Collected: 12/07/12 14:00		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 12:48	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 12:48	100-41-4	
Toluene	ND	ug/L	1.0	1		12/20/12 12:48	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/20/12 12:48	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	80-120	1		12/20/12 12:48	1868-53-7	
Toluene-d8 (S)	98	%	80-120	1		12/20/12 12:48	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		12/20/12 12:48	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/20/12 12:48	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 12:48		



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X
Pace Project No.: 60135457

Sample: 144106DEC12		Lab ID: 60135457009	Collected: 12/06/12 14:41	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 13:03	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 13:03	100-41-4	
Toluene	ND	ug/L	1.0	1		12/20/12 13:03	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/20/12 13:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102 %		80-120	1		12/20/12 13:03	1868-53-7	
Toluene-d8 (S)	99 %		80-120	1		12/20/12 13:03	2037-26-5	
4-Bromofluorobenzene (S)	101 %		80-120	1		12/20/12 13:03	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		12/20/12 13:03	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 13:03		



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ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 145006DEC12		Lab ID: 60135457010	Collected: 12/06/12 14:50		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	8280	ug/L	50.0	50		12/20/12 13:18	71-43-2	
Ethylbenzene	722	ug/L	50.0	50		12/20/12 13:18	100-41-4	
Toluene	ND	ug/L	50.0	50		12/20/12 13:18	108-88-3	
Xylene (Total)	5610	ug/L	150	50		12/20/12 13:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	80-120	50		12/20/12 13:18	1868-53-7	
Toluene-d8 (S)	101	%	80-120	50		12/20/12 13:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	50		12/20/12 13:18	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	50		12/20/12 13:18	17060-07-0	
Preservation pH	1.0		1.0	50		12/20/12 13:18		



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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Sample: 145906DEC12		Lab ID: 60135457011		Collected: 12/06/12 14:59		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 13:33	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 13:33	100-41-4		
Toluene	ND	ug/L	1.0	1		12/20/12 13:33	108-88-3		
Xylene (Total)	6.0	ug/L	3.0	1		12/20/12 13:33	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	103	%	80-120	1		12/20/12 13:33	1868-53-7		
Toluene-d8 (S)	102	%	80-120	1		12/20/12 13:33	2037-26-5		
4-Bromofluorobenzene (S)	104	%	80-120	1		12/20/12 13:33	460-00-4		
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/20/12 13:33	17060-07-0		
Preservation pH	1.0		1.0	1		12/20/12 13:33			

QUALITY CONTROL DATA

Project: NM GW JIC + FLR47X
Pace Project No.: 60135457

QC Batch: MSV/50853 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60135457002, 60135457003, 60135457004, 60135457005, 60135457006

METHOD BLANK: 1116016 Matrix: Water
Associated Lab Samples: 60135457002, 60135457003, 60135457004, 60135457005, 60135457006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/18/12 01:39	
Ethylbenzene	ug/L	ND	1.0	12/18/12 01:39	
Toluene	ug/L	ND	1.0	12/18/12 01:39	
Xylene (Total)	ug/L	ND	3.0	12/18/12 01:39	
1,2-Dichloroethane-d4 (S)	%	105	80-120	12/18/12 01:39	
4-Bromofluorobenzene (S)	%	100	80-120	12/18/12 01:39	
Dibromofluoromethane (S)	%	102	80-120	12/18/12 01:39	
Toluene-d8 (S)	%	111	80-120	12/18/12 01:39	

LABORATORY CONTROL SAMPLE: 1116017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.2	101	74-123	
Ethylbenzene	ug/L	20	22.6	113	76-123	
Toluene	ug/L	20	22.1	110	75-123	
Xylene (Total)	ug/L	60	67.6	113	76-123	
1,2-Dichloroethane-d4 (S)	%			108	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Dibromofluoromethane (S)	%			107	80-120	
Toluene-d8 (S)	%			107	80-120	

QUALITY CONTROL DATA

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

QC Batch:	MSV/50879	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60135457006		

METHOD BLANK: 1116579 Matrix: Water

Associated Lab Samples: 60135457006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/18/12 17:43	
Toluene	ug/L	ND	1.0	12/18/12 17:43	
Xylene (Total)	ug/L	ND	3.0	12/18/12 17:43	
1,2-Dichloroethane-d4 (S)	%	105	80-120	12/18/12 17:43	
4-Bromofluorobenzene (S)	%	104	80-120	12/18/12 17:43	
Dibromofluoromethane (S)	%	100	80-120	12/18/12 17:43	
Toluene-d8 (S)	%	99	80-120	12/18/12 17:43	

LABORATORY CONTROL SAMPLE: 1116580

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.1	95	74-123	
Toluene	ug/L	20	20.9	105	75-123	
Xylene (Total)	ug/L	60	60.4	101	76-123	
1,2-Dichloroethane-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			105	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			101	80-120	



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(913)599-5665

QUALITY CONTROL DATA

Project: NM GW JIC + FLR47X
Pace Project No.: 60135457

QC Batch: MSV/50893 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60135457007, 60135457008, 60135457009, 60135457010, 60135457011

METHOD BLANK: 1116780 Matrix: Water
Associated Lab Samples: 60135457007, 60135457008, 60135457009, 60135457010, 60135457011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
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 Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
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 JIC + FLR47X
Pace Project No.: 60135457

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/50853

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

Batch: MSV/50879

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

Batch: MSV/50893

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

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

P2 Re-extraction or re-analysis could not be performed due to insufficient sample amount.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW JIC + FLR47X

Pace Project No.: 60135457

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60135457002	130007DEC12	EPA 8260	MSV/50853		
60135457003	131307DEC12	EPA 8260	MSV/50853		
60135457004	132007DEC12	EPA 8260	MSV/50853		
60135457005	132907DEC12	EPA 8260	MSV/50853		
60135457006	134307DEC12	EPA 8260	MSV/50853		
60135457006	134307DEC12	EPA 8260	MSV/50879		
60135457007	134807DEC12	EPA 8260	MSV/50893		
60135457008	140007DEC12	EPA 8260	MSV/50893		
60135457009	144106DEC12	EPA 8260	MSV/50893		
60135457010	145006DEC12	EPA 8260	MSV/50893		
60135457011	145906DEC12	EPA 8260	MSV/50893		



WO#: 60135457



60135457

Client Name: Mile HighCourier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐Tracking #: 6022 4483 7980Pace Shipping Label Used? Yes ☐ No ☒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-194Type of Ice: Vel 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 lho

Temperature should be above freezing to 6°C

Chain of Custody present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody filled out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler name & signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples arrived within holding time:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time analyses (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time requested:	☐ Yes ☒ No ☐ N/A	7.
Sufficient volume:	☒ Yes ☐ No ☐ N/A	8.
Correct containers used:	☒ Yes ☐ No ☐ N/A	
Pace containers used:	☒ Yes ☐ No ☐ N/A	9.
Containers intact:	☒ Yes ☐ No ☐ N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐ Yes ☐ No ☒ N/A	11.
Filtered volume received for dissolved tests?	☐ Yes ☐ No ☒ N/A	12.
Sample labels match COC:	☒ Yes ☐ No ☐ N/A	
Includes date/time/ID/analyses Matrix: <u>water</u>		13.
All containers needing preservation have been checked.	☐ Yes ☐ No ☒ N/A	
All containers needing preservation are found to be in compliance with EPA recommendation	☐ Yes ☐ No ☒ N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒ Yes ☐ No	Initial when completed <u>lho</u> Lot # of added preservative
Trip Blank present:	☐ Yes ☒ No ☐ N/A	
Pace Trip Blank lot # (if purchased): <u>NA</u>		15.
Headspace in VOA vials (>6mm)	☒ Yes ☐ No ☐ N/A	16. <u>134802</u> <u>134807 DEC 12</u> <u>lot 2 vials</u>
Project sampled in USDA Regulated Area:	☐ Yes ☐ No ☒ 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: APF for HMWDate: 12/14/12

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

www.gacelabs.com

[illegible]

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

March 07, 2013

Julie Linn

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 385-1096

FAX:

RE: Florance 47X

OrderNo.: 1303037

Dear Julie Linn:

Hall Environmental Analysis Laboratory received 2 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 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1303037

Date Reported: 3/7/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** LTE
Project: Florance 47X**Lab Order:** 1303037**Lab ID:** 1303037-001**Collection Date:** 3/1/2013 10:45:00 AM**Client Sample ID:** MW-4**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/5/2013 3:39:53 AM
Toluene	ND	1.0		µg/L	1	3/5/2013 3:39:53 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2013 3:39:53 AM
Xylenes, Total	ND	2.0		µg/L	1	3/5/2013 3:39:53 AM
Surr: 4-Bromofluorobenzene	96.7	69.7-152		%REC	1	3/5/2013 3:39:53 AM

Lab ID: 1303037-002**Collection Date:** 3/1/2013 11:53:00 AM**Client Sample ID:** MW-1**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/5/2013 4:10:02 AM
Toluene	ND	1.0		µg/L	1	3/5/2013 4:10:02 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2013 4:10:02 AM
Xylenes, Total	ND	2.0		µg/L	1	3/5/2013 4:10:02 AM
Surr: 4-Bromofluorobenzene	104	69.7-152		%REC	1	3/5/2013 4:10:02 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1303037

07-Mar-13

Client: LTE
Project: Florance 47X

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								
Surr: 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			
Surr: 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 87105
TEL: 505-345-3975 FAX: 505-345-4101
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	LTE	Work Order Number:	1303037
Received by/date:	AF 03/02/13		
Logged By:	Lindsay Mangin	3/2/2013 12:00:00 PM	<i>[Signature]</i>
Completed By:	Lindsay Mangin	3/4/2013 9:05:50 AM	<i>[Signature]</i>
Reviewed By:	IO 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 $>0^{\circ}\text{C}$ 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:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	_____		
Client Instructions:	_____		

18. Additional remarks:

-002A - ONE VOA HAS SOME HEAD SPACE.

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes			



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

March 18, 2013

Julie Linn

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 385-1096

FAX

RE: Florance #47X

OrderNo.: 1303403

Dear Julie Linn:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/8/2013 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 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1303403

Date Reported: 3/18/2013

CLIENT: LTE

Client Sample ID: MW-2

Project: Florance #47X

Collection Date: 3/4/2013 1:20:00 PM

Lab ID: 1303403-001

Matrix: AQUEOUS

Received Date: 3/8/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	8600	100		µg/L	100	3/12/2013 3:21:49 PM
Toluene	ND	10		µg/L	10	3/12/2013 5:22:37 AM
Ethylbenzene	ND	10		µg/L	10	3/12/2013 5:22:37 AM
Xylenes, Total	6500	200		µg/L	100	3/12/2013 3:21:49 PM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%REC	10	3/12/2013 5:22:37 AM
Surr: 4-Bromofluorobenzene	112	69.5-130		%REC	10	3/12/2013 5:22:37 AM
Surr: Dibromofluoromethane	93.8	70-130		%REC	10	3/12/2013 5:22:37 AM
Surr: Toluene-d8	90.5	70-130		%REC	10	3/12/2013 5:22:37 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1303403

18-Mar-13

Client: LTE

Project: Florance #47X

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R9117	RunNo:	9117					
Prep Date:		Analysis Date:	3/11/2013	SeqNo:	259724	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	69.5	130			
Surr: Dibromofluoromethane	9.1		10.00		91.0	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	R9117	RunNo:	9117					
Prep Date:		Analysis Date:	3/11/2013	SeqNo:	259725	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	21	1.0	20.00	0	103	80	120			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	69.5	130			
Surr: Dibromofluoromethane	9.1		10.00		90.6	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R9145	RunNo:	9145					
Prep Date:		Analysis Date:	3/12/2013	SeqNo:	260276	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	69.5	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	R9145	RunNo:	9145					
Prep Date:		Analysis Date:	3/12/2013	SeqNo:	260277	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.9	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	69.5	130			
Surr: Dibromofluoromethane	9.3		10.00		93.2	70	130			
Surr: Toluene-d8	9.1		10.00		91.1	70	130			

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



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	LTE	Work Order Number:	1303403
Received by/date:	MG 03/08/13		
Logged By:	Anne Thorne	3/8/2013 10:00:00 AM	<i>Anne Thorne</i>
Completed By:	Anne Thorne	3/8/2013	<i>Anne Thorne</i>
Reviewed By:	AT 03/08/13		

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 $>0^{\circ}\text{C}$ 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:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	_____		
Client Instructions:	_____		

18. Additional remarks:

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

APPENDIX B
MARCH 2013 FIELD NOTES



Water Sample Collection Form

Sample Location	<u>Florance #47X</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/1/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>11:53</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-1</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>BTEX 8021</u>		
Matrix	<u>Groundwater</u>	Laboratory	<u>Hall Environmental</u>
Turn Around Time	<u>Standard</u>	Shipping Method	<u>Hand delivery</u>
Depth to Water	<u>99.52</u>	TD of Well	<u>107.50</u>
Time	<u>10:55</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>7.98 * 0.16 = 1.27 * 3 = 3.83</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
11:20	0.25	0.25	6.72	16.0	2.87	Dark gray, cloudy, no odor, no sheen
	0.25	0.50	6.44	15.2	2.82	No change
	0.25	0.75	6.51	15.5	2.82	No change
	0.25	1.00	6.45	15.6	2.82	No change
	1.00	2.00	6.52	15.6	2.83	No change
	1.00	3.00	6.50	15.6	2.88	No change
	0.25	3.25	6.50	15.8	2.83	No change
	0.25	3.50	6.49	15.9	2.82	No change
	0.25	3.75	6.50	16.0	2.85	No change
11:50	0.25	4.00	6.49	16.0	2.83	No change

Comments: _____

Describe Deviations from SOP: None

Signature: Brooke Herb Date: 3/1/2013



Water Sample Collection Form

Sample Location	<u>Florance #47X</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/1/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>13:20</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-2</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>BTEX 8021</u>		
Matrix	<u>Groundwater</u>	Laboratory	<u>Hall Environmental</u>
Turn Around Time	<u>Standard</u>	Shipping Method	<u>Hand delivery</u>
Depth to Water	<u>98.47</u>	TD of Well	<u>101.81</u>
Time	<u>12:00</u>	Depth to Product	<u>NA</u>

Vol. of H2O to purge $3.34 * 0.16 = 0.53 * 3 = 1.60$
*(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 H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (µs)	Comments
12:18	0.25	0.25	7.22	16.8	1,436	Strong HC odor, minor sheen, clearish gray with black particles and debris
	0.25	0.50	7.23	17.0	1,433	No change
	0.25	0.75	7.31	17.0	1,463	Black, heavier sheen
	0.25	1.00	7.37	17.0	1,525	No change
12:30	0.25	1.25	7.43	17.1	1,538	No change
						Bailed Dry at 12:35

Comments: Well bailed dry at 12:35. Return to MW-2 at 13:45, no water in bailer. Return to well after dumping purge water at 15:25, well still dry. Return March 4, 2013 for grab sample.

It feels like there is an obstruction at ~98.00 feet preventing the bailer from going any deeper. Was able to collect grab sample at 13:20.

Describe Deviations from SOP: See Above

Signature: _____

Brooke Herb

Date: _____

3/1/2013



Water Sample Collection Form

Sample Location	<u>Florance #47X</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/1/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-3</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>NA</u>		
Matrix	<u>NA</u>	Laboratory	<u>NA</u>
Turn Around Time	<u>NA</u>	Shipping Method	<u>NA</u>
Depth to Water	<u>92.48</u>	TD of Well	<u>NM</u>
Time	<u>13:40</u>	Depth to Product	<u>91.51</u>
Vol. of H2O to purge	<u>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</u>		
Method of Purging	<u>NA</u>		
Method of Sampling	<u>NA</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments

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

Product recovery device in well; returned to well after DTW and DTP measurements were complete.

Describe Deviations from SOP: _____

Signature: _____

Brooke Herb

Date: _____

3/1/2013



Water Sample Collection Form

Sample Location	<u>Florance #47X</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/1/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>10:45</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-4</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>BTEX 8021</u>		
Matrix	<u>Groundwater</u>	Laboratory	<u>Hall Environmental</u>
Turn Around Time	<u>Standard</u>	Shipping Method	<u>Hand delivery</u>
Depth to Water	<u>92.02</u>	TD of Well	<u>102.55</u>
Time	<u>9:40</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>10.53 * 0.16 = 1.68 * 3 = 5.05</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
9:51	0.25	0.25	5.45	14.8	2.68	Brown, silty
	0.25	0.50	5.65	14.4	2.55	No change
	0.25	0.75	5.70	14.0	2.66	No change
	0.25	1.00	5.62	14.4	2.57	No change
	1.00	2.00	5.74	14.7	2.63	Bailing down - bailers only 1/2 full
	1.00	3.00	5.68	14.9	2.62	less silt
	1.00	4.00	5.65	15.0	2.65	No change
	0.25	4.25	5.56	14.5	2.61	No change
	0.25	4.50	5.39	14.9	2.68	No change
	0.25	4.75	5.43	14.8	2.71	No change
	0.25	5.00	5.44	14.9	2.68	No change
10:45	0.25	5.25	5.43	14.8	2.66	No change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/1/2013



Water Sample Collection Form

Sample Location	<u>Florance #47X</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/1/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-5</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>NA</u>		
Matrix	<u>NA</u>	Laboratory	<u>NA</u>
Turn Around Time	<u>NA</u>	Shipping Method	<u>NA</u>
Depth to Water	<u>90.48</u>	TD of Well	<u>NM</u>
Time	<u>12:40</u>	Depth to Product	<u>90.46</u>
Vol. of H2O to purge	<u>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</u>		
Method of Purging	<u>NA</u>		
Method of Sampling	<u>NA</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments

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

Probe had gray sludge on it.

Tubing was present in the well all the way to the bottom; product was on the bottom 5 feet of tubing.

The tubing was removed from well and discarded.

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/1/2013

