

3R - 322

2012 AGWMR

04 / 10 / 2013



RECEIVED 003

2013 APR 12 P 1:24

April 10, 2013

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

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

Dear Mr. von Goten:

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

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

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kyla Vaughan
Environmental Compliance Specialist

cc: Williams Field Services, LLC

2012 ANNUAL GROUNDWATER REPORT

ICE CANYON DRIP

**ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-322-0**

APRIL 2013

Prepared for:

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



2012 ANNUAL GROUNDWATER REPORT
ICE CANYON DRIP
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-322-0

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 Ice Canyon Drip (Administrative/Environmental Order Number 3RP-322-0) (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 drip pit. Williams Field Services, LLC (Williams) conducted groundwater monitoring activities at the Site between April 2012 and December 2012. In January 2013, LT Environmental Inc., (LTE) was retained by Williams to visit the Site and evaluate the status of all groundwater monitoring wells, complete annual sampling requirements, and recommend improvements to the groundwater remediation program.

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

BTEX concentrations in groundwater monitoring wells MW-1, MW-3, MW-4, MW-7, and MW-8 were compliant with the NMWQCC groundwater standards between April 2012 and March 2013. BTEX concentrations in groundwater monitoring wells MW-5 and SVE-4 were compliant with the NMWQCC groundwater standards between April 2012 and December 2012; however, both wells contained 0.01 feet of free-phase hydrocarbons in March 2013. The appearance of the free-phase hydrocarbons in these two wells may be the result of the groundwater table declining or mobilization of free-phase hydrocarbons from the source area (near monitoring well MW-2). Groundwater monitoring well MW-2 was not sampled between April 2012 and March 2013 due to an obstruction in the well. Groundwater monitoring well MW-6 was not sampled between April 2012 and March 2013, likely because the groundwater table has declined below the bottom of the well.

Williams proposes to discontinue quarterly BTEX sampling from groundwater monitoring wells MW-1 and MW-7; depth to groundwater data will continue to be collected. Groundwater monitoring wells MW-3, MW-4, MW-5, MW-6, MW-8, and SVE-4 will be monitored quarterly for depth to groundwater, depth to product, and collection of samples for BTEX analysis. Williams will install groundwater monitoring well MW-2R, a replacement for monitoring well MW-2 and will install a new groundwater monitoring well south/southwest of monitoring well MW-5.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) on behalf of Williams Field Services, LLC (Williams) has prepared this report detailing groundwater monitoring activities completed from April 2012 through March 2013 at the Ice Canyon Drip (Administrative/Environmental Order Number 3RP-322-0) (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 36.485004 and longitude -107.522750 in Unit H, Section 13, Township 26 North, Range 7 West. The Site is in Ice Canyon in the San Juan Basin, Rio Arriba County, New Mexico.

1.2 HISTORY

Soil and groundwater was impacted by a former drip pit. Remediation included excavation of 383 cubic yards of impacted soil in June 1997. A soil sample from the bottom of the excavation at 23 feet below ground surface (bgs) contained 144 milligrams per kilogram (mg/kg) total petroleum hydrocarbons (TPH) – diesel range organics (DRO) and 278 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX). In November 1997, a groundwater monitoring well was installed in the excavation; depth to groundwater was 38 feet bgs and a groundwater sample contained 19,523 micrograms per liter (µg/L) of benzene. In January 1998, an additional 8,690 cubic yards of impacted soil was excavated. In May 1998, groundwater monitoring wells MW-1, MW-2, MW-3, and MW-4 were installed; in December 1998, a 4-inch soil vapor extraction (SVE) well was installed. In 2000, groundwater monitoring wells MW-5, MW-6, MW-7, and MW-8 were installed.

Between May 1998 and December 2012, groundwater at the Site was monitored. Groundwater monitoring wells MW-2 and the 4-inch SVE wells have both contained free phase hydrocarbons at some time between 1998 and 2013. Records regarding these activities can be found in previous groundwater reports submitted to the New Mexico Oil Conservation Division (NMOCD).

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

2.0 METHODOLOGY

Groundwater monitoring activities were conducted at the Site in April 2012, June 2012, September 2012, December 2012, and 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 in this section.

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 monitoring well was calculated, and a minimum of three well casing volumes of water was purged from each well using a new disposable polyvinyl chloride (PVC) bailer. As water was removed from the well, pH, electric conductivity, and temperature were monitored. Monitoring wells were purged until these properties stabilized, indicating that 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 $\pm 2^\circ \text{C}$ for temperature). All purge water was containerized and disposed of at a facility designated by Williams. A copy of the laboratory reports are presented in Appendix A and copies of the field sheets are presented in Appendix B.

Once each monitoring well was properly purged, groundwater samples were collected by filling 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.

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 are summarized on Table 2. Groundwater flow direction was determined to be to the south/southwest (Figure 2).

Groundwater monitoring well MW-2 was not sampled during any of the monitoring events due to an obstruction in the well and groundwater monitoring well MW-6 was not sampled during any of the monitoring events, likely because it was dry. Groundwater monitoring wells MW-1, MW-4, MW-7, and MW-8 were sampled during each monitoring event. BTEX was not detected above the laboratory reporting detection limit during any of the monitoring events. Groundwater monitoring well MW-3 was sampled twice and BTEX concentrations did not exceed the laboratory reporting detection limit. BTEX concentrations in groundwater monitoring well MW-5 did not exceed the laboratory reporting detection limit when sampled; however, 0.01 feet of free-phase hydrocarbons were observed during the March 2013 monitoring event. BTEX concentrations in groundwater monitoring well SVE-4 were compliant with the NMWQCC groundwater standards; but the well contained 0.01 feet of free-phase hydrocarbons during the March 2013 monitoring event. Table 3 summarizes the groundwater analytical results and copies of the laboratory reports can be found in Appendix A.

4.0 CONCLUSIONS

Information regarding the groundwater in the source area is not known due to the obstruction in groundwater monitoring well MW-2. Because free-phase hydrocarbons were present in groundwater monitoring well MW-2 in the past, it appears a decline in the elevation of the groundwater table is allowing free-phase hydrocarbons to mobilize into groundwater monitoring wells MW-5 and SVE-4; these free-phase hydrocarbons are migrating to the south (monitoring wells MW-5 and SVE-4). Groundwater monitoring well MW-8 suffices to monitor groundwater southeast of the source area; there currently is no downgradient groundwater monitoring well to monitor groundwater southwest of the source area and the free-phase hydrocarbons in monitoring well MW-5.

5.0 RECOMMENDATIONS

Based on BTEX results compliant with the NMWQCC standards for at least eight consecutive quarters or long term results compliant with the NMWQCC standards, Williams proposes to discontinue quarterly groundwater sampling activities from groundwater monitoring wells MW-1 and MW-7; depth to water data will still be collected from these wells. Williams proposes to collect depth to product, depth to groundwater, and samples for BTEX analysis from groundwater monitoring wells MW-3, MW-4, MW-5, MW-6, MW-8, and SVE-4 quarterly.

Lastly, Williams will replace groundwater monitoring well MW-2 and will install one new groundwater monitoring well downgradient of groundwater monitoring well MW-5. These new wells will be included in the quarterly groundwater monitoring events after installation.

FIGURES



LEGEND

 SITE LOCATION

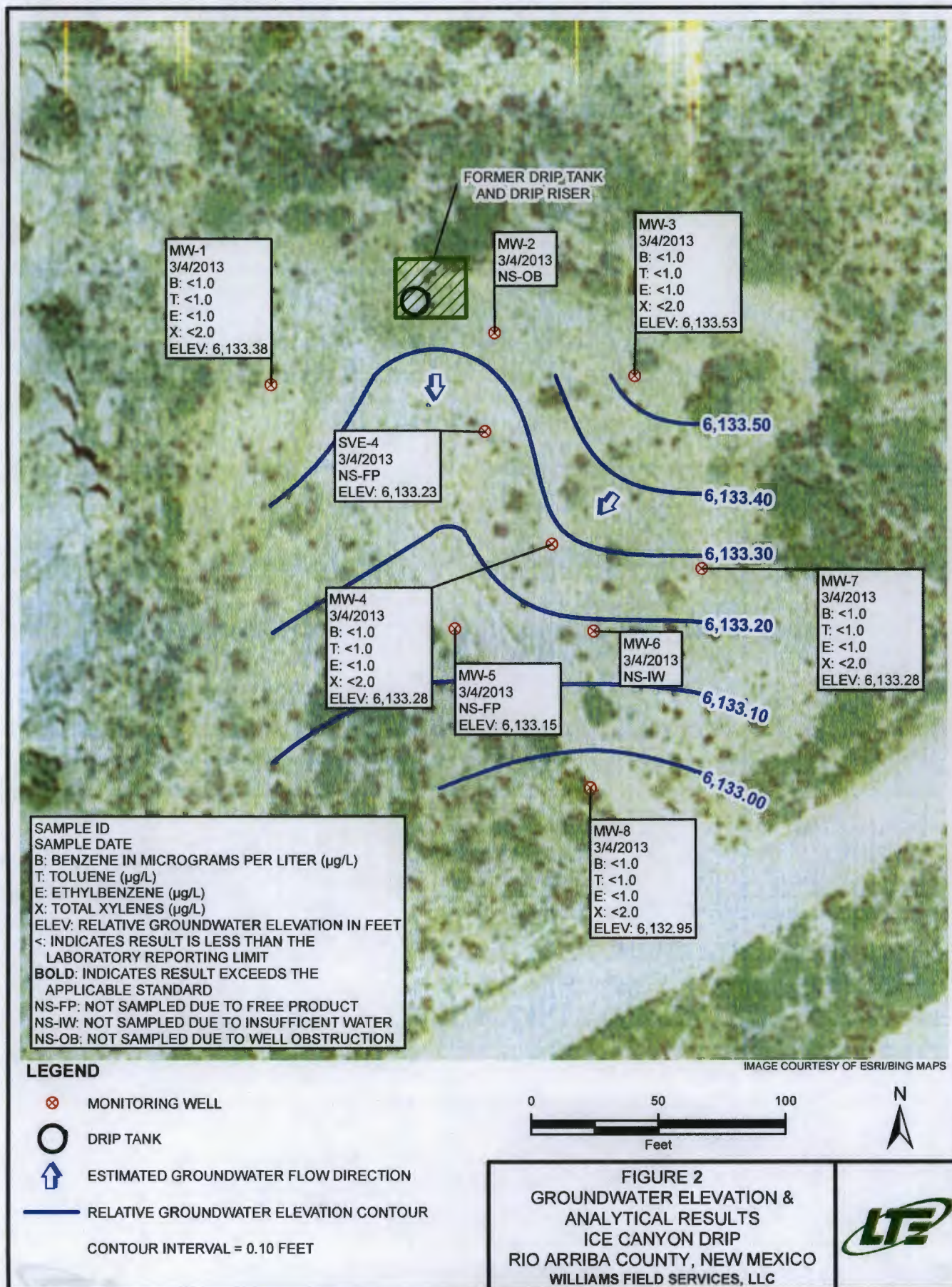
IMAGE COURTESY OF ESRI/BING MAPS



FIGURE 1
SITE LOCATION MAP
ICE CANYON DRIP
RIO ARRIBA COUNTY, NEW MEXICO

WILLIAMS FIELD SERVICES, LLC





TABLES

TABLE 1

**CROSS REFERENCE WELL NAME AND SAMPLE IDENTIFIER
APRIL 2012 THROUGH DECEMBER 2012 SAMPLE DATES
ICE CANYON DRIP
WILLIAMS FIELD SERVICES, LLC**

Sample Identifier	Well Name	Sample Date
134206APR06	MW-1	4/6/2012
104014JUN12	MW-1	6/14/2012
122127SEP12	MW-1	9/27/2012
113607DEC12	MW-1	12/7/2012
120207DEC12	MW-3	12/7/2012
142006APR06	MW-4	4/6/2012
110414JUN12	MW-4	6/14/2012
134427SEP12	MW-4	9/27/2012
121007DEC12	MW-4	12/7/2012
143106APR06	MW-5	4/6/2012
111514JUN12	MW-5	6/14/2012
135227SEP12	MW-5	9/27/2012
122007DEC12	MW-5	12/7/2012
140706APR06	MW-7	4/6/2012
105814JUN12	MW-7	6/14/2012
125627SEP12	MW-7	9/27/2012
115507DEC12	MW-7	12/7/2012
132806APR06	MW-8	4/6/2012
103314JUN12	MW-8	6/14/2012
121027SEP12	MW-8	9/27/2012
112407DEC12	MW-8	12/7/2012
135506APR06	SVE-4	4/6/2012
104814JUN12	SVE-4	6/14/2012
114507DEC12	SVE-4	12/7/2012

Note:

Samples summarized in this table were not collected by LTE



TABLE 2

**GROUNDWATER ELEVATION SUMMARY
ICE CANYON DRIP
WILLIAMS FOUR CORNERS, LLC**

Well ID	Date	Depth to Product (feet BTOC)	Product Thickness (feet)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW-1	4/6/2012	UNK	UNK	UNK	UNK
MW-1	6/14/2012	UNK	UNK	UNK	UNK
MW-1	9/27/2012	UNK	UNK	UNK	UNK
MW-1	12/7/2012	UNK	UNK	UNK	UNK
MW-1	3/4/2013	NP	NP	46.75	6133.38

MW-2	4/6/2012	UNK	UNK	UNK	UNK
MW-2	6/14/2012	UNK	UNK	UNK	UNK
MW-2	9/27/2012	UNK	UNK	UNK	UNK
MW-2	12/7/2012	UNK	UNK	UNK	UNK
MW-2	3/4/2013	OBS	OBS	OBS	OBS

MW-3	4/6/2012	UNK	UNK	UNK	UNK
MW-3	6/14/2012	UNK	UNK	UNK	UNK
MW-3	9/27/2012	UNK	UNK	UNK	UNK
MW-3	12/7/2012	UNK	UNK	UNK	UNK
MW-3	3/4/2013	NP	NP	40.66	6133.53

MW-4	4/6/2012	UNK	UNK	UNK	UNK
MW-4	6/14/2012	UNK	UNK	UNK	UNK
MW-4	9/27/2012	UNK	UNK	UNK	UNK
MW-4	12/7/2012	UNK	UNK	UNK	UNK
MW-4	3/4/2013	NP	NP	40.45	6133.28

MW-5	4/6/2012	UNK	UNK	UNK	UNK
MW-5	6/14/2012	UNK	UNK	UNK	UNK
MW-5	9/27/2012	UNK	UNK	UNK	UNK
MW-5	12/7/2012	UNK	UNK	UNK	UNK
MW-5	3/4/2013	36.82	0.01	36.83	6133.15

MW-6	4/6/2012	UNK	UNK	UNK	UNK
MW-6	6/14/2012	UNK	UNK	UNK	UNK
MW-6	9/27/2012	UNK	UNK	UNK	UNK
MW-6	12/7/2012	UNK	UNK	UNK	UNK



TABLE 2
GROUNDWATER ELEVATION SUMMARY
ICE CANYON DRIP
WILLIAMS FOUR CORNERS, LLC

Well ID	Date	Depth to Product (feet BTOC)	Product Thickness (feet)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW-6	3/4/2013	DRY	DRY	DRY	DRY
MW-7	4/6/2012	UNK	UNK	UNK	UNK
MW-7	6/14/2012	UNK	UNK	UNK	UNK
MW-7	9/27/2012	UNK	UNK	UNK	UNK
MW-7	12/7/2012	UNK	UNK	UNK	UNK
MW-7	3/4/2013	NP	NP	38.28	6133.28
MW-8	4/6/2012	UNK	UNK	UNK	UNK
MW-8	6/14/2012	UNK	UNK	UNK	UNK
MW-8	9/27/2012	UNK	UNK	UNK	UNK
MW-8	12/7/2012	UNK	UNK	UNK	UNK
MW-8	3/4/2013	NP	NP	34.69	6132.95
SVE-4	4/6/2012	UNK	UNK	UNK	UNK
SVE-4	6/14/2012	UNK	UNK	UNK	UNK
SVE-4	9/27/2012	UNK	UNK	UNK	UNK
SVE-4	12/7/2012	UNK	UNK	UNK	UNK
SVE-4	3/4/2013	42.72	0.01	42.73	6133.23

Notes:

BTOC - Below Top of Casing

AMSL - Above Mean Sea Level

NP - No Product

OBS - well was obstructed

UNK - data is not known

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

TABLE 3

**GROUNDWATER LABORATORY ANALYTICAL RESULTS
ICE CANYON DRIP
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	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-1	6/14/2012	<1.0	<1.0	<1.0	<3.0
MW-1	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-1	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-1	3/4/2013	<1.0	<1.0	<1.0	<2.0

MW-2	4/6/2012	NS	NS	NS	NS
MW-2	6/14/2012	NS	NS	NS	NS
MW-2	9/27/2012	NS	NS	NS	NS
MW-2	12/7/2012	NS	NS	NS	NS
MW-2	3/4/2013	NSO	NSO	NSO	NSO

MW-3	4/6/2012	NS	NS	NS	NS
MW-3	6/14/2012	NS	NS	NS	NS
MW-3	9/27/2012	NS	NS	NS	NS
MW-3	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-3	3/4/2013	<1.0	<1.0	<1.0	<2.0

MW-4	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-4	6/14/2012	<1.0	<1.0	<1.0	<3.0
MW-4	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-4	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-4	3/4/2013	<1.0	<1.0	<1.0	<2.0

MW-5	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-5	6/14/2012	<1.0	<1.0	<1.0	<3.0
MW-5	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-5	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-5	3/4/2013	NSP	NSP	NSP	NSP

MW-6	4/6/2012	NS	NS	NS	NS
MW-6	6/14/2012	NS	NS	NS	NS
MW-6	9/27/2012	NS	NS	NS	NS

TABLE 3
GROUNDWATER LABORATORY ANALYTICAL RESULTS
ICE CANYON DRIP
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-6	12/7/2012	NS	NS	NS	NS
MW-6	3/4/2013	NSD	NSD	NSD	NSD
MW-7	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-7	6/14/2012	<1.0	<1.0	<1.0	<3.0
MW-7	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-7	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-7	3/4/2013	<1.0	<1.0	<1.0	<2.0
MW-8	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-8	6/14/2012	<1.0	<1.0	<1.0	<3.0
MW-8	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-8	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-8	3/4/2013	<1.0	<1.0	<1.0	<2.0
SVE-4	4/6/2012	3.7	63.9	2.3	142
SVE-4	6/14/2012	3.1	52.7	1.5	121
SVE-4	9/27/2012	NS	NS	NS	NS
SVE-4	12/7/2012	<5.0	38.5	<5.0	92.6
SVE-4	3/4/2013	NSP	NSP	NSP	NSP

Notes:

NMWQCC - New Mexico Water Quality Control Commission

NS- not sampled

NSD - well did not contain sufficient volume of water to be sampled

NSO - well was not sampled due to an obstruction

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

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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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Pace Analytical Services, Inc.
9608 Loiret Blvd.
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		

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		



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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			



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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		



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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		



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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	

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.

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		

CHAIN-OF-CUSTODY / Analytical Request Document

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



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Section A Required Client Information: Company: MILE HIGH SERVICES Address: 811 B. WEST APACHE Email To: FARMINGTON, NM 87401 Phone: 505-326-5422 Requested Due Date/TAT:		Section B Required Project Information: Report To: M. HARVEY Copy To: Purchase Order No.: Project Name: NM GW Project Number: FLR47X + ICE		Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:		Page: 1 of 1 1369885 REGULATORY AGENCY ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER Site Location: NM STATE:												
Section D Required Client Information Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE		MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) COLLECTED COMPOSITE START COMPOSITE END/GRAB DATE TIME DATE TIME		SAMPLE TEMP AT COLLECTION # OF CONTAINERS PRESERVATIVES Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Y/N		Requested Analysis Filtered (Y/N) Residual Chlorine (Y/N) Pace Project No./ Lab I.D.												
1	163102APR06	WT	G	4-2-12	16:31	16:31	2	2500H	✓	✓	✓	✓	✓	✓	✓	✓	FLR47X-1	001
2	163902APR06	WT	G	"	16:39	16:39	1	1500H	✓	✓	✓	✓	✓	✓	✓	✓	FLR47X-2	002
3	164902APR06	WT	G	"	16:49	16:49	2	2500H	✓	✓	✓	✓	✓	✓	✓	✓	FLR47X-4	003
4	132806APR06	WT	G	4-6-12	13:28	13:28	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-8	004
5	134206APR06	WT	G	"	13:42	13:42	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-1	005
6	135506APR06	WT	G	"	13:55	13:55	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-SVE4	006
7	140706APR06	WT	G	"	14:07	14:07	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-7	007
8	142006APR06	WT	G	"	14:20	14:20	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-4	008
9	143106APR06	WT	G	"	14:31	14:31	2		✓	✓	✓	✓	✓	✓	✓	✓	ICE-5	009
10																		
11																		
12																		
ADDITIONAL COMMENTS M. HARVEY / MILE HIGH		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)												
ORIGINAL SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: M. HARVEY SIGNATURE of SAMPLER: <i>M. Harvey</i> DATE Signed (MM/DD/YYYY): 4-9-12		Temp in °C: 40 Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y																



Sample Condition Upon Receipt

Client Name: mile High

Project # 60119078

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

Tracking #: 8001 1020 5172 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

Thermometer Used: T-191 T-194

Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.0

Temperature should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 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
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: <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: James

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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(913)599-5665

June 22, 2012

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

RE: Project: NM GW DVS & ICE
Pace Project No.: 60123513

Dear Mr. Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on 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 DVS & ICE
Pace Project No.: 60123513

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 DVS & ICE

Pace Project No.: 60123513

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60123513001	191613JUN12	Water	06/13/12 19:16	06/18/12 08:45
60123513002	192413JUN12	Water	06/13/12 19:24	06/18/12 08:45
60123513003	193113JUN12	Water	06/13/12 19:31	06/18/12 08:45
60123513004	193913JUN12	Water	06/13/12 19:39	06/18/12 08:45
60123513005	103314JUN12	Water	06/14/12 10:33	06/18/12 08:45
60123513006	104014JUN12	Water	06/14/12 10:40	06/18/12 08:45
60123513007	104814JUN12	Water	06/14/12 10:48	06/18/12 08:45
60123513008	105814JUN12	Water	06/14/12 10:58	06/18/12 08:45
60123513009	110414JUN12	Water	06/14/12 11:04	06/18/12 08:45
60123513010	111514JUN12	Water	06/14/12 11:15	06/18/12 08:45
60123513011	TRIP BLANK	Water	06/14/12 00:00	06/18/12 08:45
60123513012	EDD	Water	06/14/12 00:00	06/18/12 08:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW DVS & ICE
Pace Project No.: 60123513

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60123513001	191613JUN12	EPA 8260	JTK	9
60123513002	192413JUN12	EPA 8260	JTK	9
60123513003	193113JUN12	EPA 8260	JTK	9
60123513004	193913JUN12	EPA 8260	JTK	9
60123513005	103314JUN12	EPA 8260	JTK	9
60123513006	104014JUN12	EPA 8260	JTK	9
60123513007	104814JUN12	EPA 8260	JTK	9
60123513008	105814JUN12	EPA 8260	JTK	9
60123513009	110414JUN12	EPA 8260	JTK	9
60123513010	111514JUN12	EPA 8260	JTK	9
60123513011	TRIP BLANK	EPA 8260	JTK	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 191613JUN12		Lab ID: 60123513001		Collected: 06/13/12 19:16		Received: 06/18/12 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 08:30	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 08:30	100-41-4		
Toluene	ND	ug/L	1.0	1		06/19/12 08:30	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 08:30	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	108	%	86-112	1		06/19/12 08:30	1868-53-7		
Toluene-d8 (S)	99	%	90-110	1		06/19/12 08:30	2037-26-5		
4-Bromofluorobenzene (S)	103	%	87-113	1		06/19/12 08:30	460-00-4		
1,2-Dichloroethane-d4 (S)	97	%	82-119	1		06/19/12 08:30	17060-07-0		
Preservation pH	1.0		1.0	1		06/19/12 08:30			



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 192413JUN12		Lab ID: 60123513002	Collected: 06/13/12 19:24		Received: 06/18/12 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 08:47	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 08:47	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 08:47	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 08:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	108	%	86-112	1		06/19/12 08:47	1868-53-7	
Toluene-d8 (S)	102	%	90-110	1		06/19/12 08:47	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-113	1		06/19/12 08:47	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	82-119	1		06/19/12 08:47	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 08:47		



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 193113JUN12		Lab ID: 60123513003	Collected: 06/13/12 19:31		Received: 06/18/12 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 09:04	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/19/12 09:04	100-41-4	
Toluene	ND ug/L		1.0	1		06/19/12 09:04	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/19/12 09:04	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		86-112	1		06/19/12 09:04	1868-53-7	
Toluene-d8 (S)	98 %		90-110	1		06/19/12 09:04	2037-26-5	
4-Bromofluorobenzene (S)	102 %		87-113	1		06/19/12 09:04	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		82-119	1		06/19/12 09:04	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 09:04		



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 193913JUN12		Lab ID: 60123513004	Collected: 06/13/12 19:39		Received: 06/18/12 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 09:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 09:21	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 09:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 09:21	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	108	%	86-112	1		06/19/12 09:21	1868-53-7	
Toluene-d8 (S)	102	%	90-110	1		06/19/12 09:21	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-113	1		06/19/12 09:21	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	82-119	1		06/19/12 09:21	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 09:21		



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 103314JUN12		Lab ID: 60123513005		Collected: 06/14/12 10:33		Received: 06/18/12 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 09:38	71-43-2	
Ethylbenzene		ND	ug/L	1.0	1		06/19/12 09:38	100-41-4	
Toluene		ND	ug/L	1.0	1		06/19/12 09:38	108-88-3	
Xylene (Total)		ND	ug/L	3.0	1		06/19/12 09:38	1330-20-7	
Surrogates									
Dibromofluoromethane (S)		101	%	86-112	1		06/19/12 09:38	1868-53-7	
Toluene-d8 (S)		100	%	90-110	1		06/19/12 09:38	2037-26-5	
4-Bromofluorobenzene (S)		103	%	87-113	1		06/19/12 09:38	460-00-4	
1,2-Dichloroethane-d4 (S)		97	%	82-119	1		06/19/12 09:38	17060-07-0	
Preservation pH		7.0		1.0	1		06/19/12 09:38		pH

ANALYTICAL RESULTS

Project: NM GW DVS & ICE
Pace Project No.: 60123513

Sample: 104014JUN12		Lab ID: 60123513006	Collected: 06/14/12 10:40	Received: 06/18/12 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 09:54	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 09:54	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 09:54	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 09:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99 %		86-112	1		06/19/12 09:54	1868-53-7	
Toluene-d8 (S)	101 %		90-110	1		06/19/12 09:54	2037-26-5	
4-Bromofluorobenzene (S)	103 %		87-113	1		06/19/12 09:54	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		82-119	1		06/19/12 09:54	17060-07-0	
Preservation pH	7.0		1.0	1		06/19/12 09:54		pH



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 104814JUN12		Lab ID: 60123513007	Collected: 06/14/12 10:48		Received: 06/18/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	3.1 ug/L		1.0	1		06/19/12 20:28	71-43-2	
Ethylbenzene	52.7 ug/L		1.0	1		06/19/12 20:28	100-41-4	
Toluene	1.5 ug/L		1.0	1		06/19/12 20:28	108-88-3	
Xylene (Total)	121 ug/L		3.0	1		06/19/12 20:28	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		86-112	1		06/19/12 20:28	1868-53-7	
Toluene-d8 (S)	110 %		90-110	1		06/19/12 20:28	2037-26-5	
4-Bromofluorobenzene (S)	103 %		87-113	1		06/19/12 20:28	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		82-119	1		06/19/12 20:28	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 20:28		

ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 105814JUN12		Lab ID: 60123513008	Collected: 06/14/12 10:58	Received: 06/18/12 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 10:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 10:29	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 10:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 10:29	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	109	%	86-112	1		06/19/12 10:29	1868-53-7	
Toluene-d8 (S)	105	%	90-110	1		06/19/12 10:29	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-113	1		06/19/12 10:29	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	82-119	1		06/19/12 10:29	17060-07-0	
Preservation pH	7.0		1.0	1		06/19/12 10:29		pH



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 110414JUN12		Lab ID: 60123513009	Collected: 06/14/12 11:04		Received: 06/18/12 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 20:45	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/19/12 20:45	100-41-4	
Toluene	ND ug/L		1.0	1		06/19/12 20:45	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/19/12 20:45	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112 %		86-112	1		06/19/12 20:45	1868-53-7	
Toluene-d8 (S)	104 %		90-110	1		06/19/12 20:45	2037-26-5	
4-Bromofluorobenzene (S)	104 %		87-113	1		06/19/12 20:45	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		82-119	1		06/19/12 20:45	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 20:45		



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: 111514JUN12		Lab ID: 60123513010	Collected: 06/14/12 11:15		Received: 06/18/12 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 21:02	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 21:02	100-41-4	
Toluene	ND	ug/L	1.0	1		06/19/12 21:02	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 21:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	112	%	86-112	1		06/19/12 21:02	1868-53-7	
Toluene-d8 (S)	102	%	90-110	1		06/19/12 21:02	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-113	1		06/19/12 21:02	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	82-119	1		06/19/12 21:02	17060-07-0	
Preservation pH	1.0		1.0	1		06/19/12 21:02		



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ANALYTICAL RESULTS

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Sample: TRIP BLANK		Lab ID: 60123513011		Collected: 06/14/12 00:00		Received: 06/18/12 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 21:18	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		06/19/12 21:18	100-41-4		
Toluene	ND	ug/L	1.0	1		06/19/12 21:18	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		06/19/12 21:18	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	104	%	86-112	1		06/19/12 21:18	1868-53-7		
Toluene-d8 (S)	99	%	90-110	1		06/19/12 21:18	2037-26-5		
4-Bromofluorobenzene (S)	105	%	87-113	1		06/19/12 21:18	460-00-4		
1,2-Dichloroethane-d4 (S)	92	%	82-119	1		06/19/12 21:18	17060-07-0		
Preservation pH	1.0		1.0	1		06/19/12 21:18			

QUALITY CONTROL DATA

Project: NM GW DVS & ICE

Pace Project No.: 60123513

QC Batch: MSV/46452

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60123513001, 60123513002, 60123513003, 60123513004, 60123513005, 60123513006, 60123513008

METHOD BLANK: 1016022

Matrix: Water

Associated Lab Samples: 60123513001, 60123513002, 60123513003, 60123513004, 60123513005, 60123513006, 60123513008

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 DVS & ICE

Pace Project No.: 60123513

QC Batch: MSV/46486 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60123513007, 60123513009, 60123513010, 60123513011

METHOD BLANK: 1016544 Matrix: Water
Associated Lab Samples: 60123513007, 60123513009, 60123513010, 60123513011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/19/12 19:37	
Ethylbenzene	ug/L	ND	1.0	06/19/12 19:37	
Toluene	ug/L	ND	1.0	06/19/12 19:37	
Xylene (Total)	ug/L	ND	3.0	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	
Ethylbenzene	ug/L	20	20.4	102	79-121	
Toluene	ug/L	20	20.2	101	80-120	
Xylene (Total)	ug/L	60	59.2	99	79-120	
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	

QUALIFIERS

Project: NM GW DVS & ICE
Pace Project No.: 60123513

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/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.

ANALYTE QUALIFIERS

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



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW DVS & ICE

Pace Project No.: 60123513

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60123513001	191613JUN12	EPA 8260	MSV/46452		
60123513002	192413JUN12	EPA 8260	MSV/46452		
60123513003	193113JUN12	EPA 8260	MSV/46452		
60123513004	193913JUN12	EPA 8260	MSV/46452		
60123513005	103314JUN12	EPA 8260	MSV/46452		
60123513006	104014JUN12	EPA 8260	MSV/46452		
60123513007	104814JUN12	EPA 8260	MSV/46486		
60123513008	105814JUN12	EPA 8260	MSV/46452		
60123513009	110414JUN12	EPA 8260	MSV/46486		
60123513010	111514JUN12	EPA 8260	MSV/46486		
60123513011	TRIP BLANK	EPA 8260	MSV/46486		

*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 # 60123513

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other
Tracking #: 800120957033 Pace Shipping Label Used? ☐ Yes ☒ No
Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No

Optional
Proj. Due Date: <u>6/25</u>
Proj. Name:

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

Thermometer Used: T-191 / T-194

Type of Ice: Wet Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature: 11.3

Temperature should be above freezing to 6°C

Comments:

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

Chain of Custody present:	☒ 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
Trip Blank present:	☒ Yes ☐ No ☐ N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>021411-3</u>		
Headspace in VOA vials (>6mm):	☐ Yes ☒ No ☐ N/A	15.
Project sampled in USDA Regulated Area:	☐ Yes ☐ No ☒ N/A	16.
		17. List State: <u>h</u>

Client Notification/ Resolution:

Copy COC to Client? ☒ Y ☐ N

Field Data Required?

☐ Y ☐ N

Person Contacted: Mark Harvey

Date/Time: 6/18/12

Comments/ Resolution: Emailed about cooler out of temp & AMW 6/18/12
Per Mark Harvey analyze samples & AMW 6/18/12
Emailed about TB - analyze & 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 ICE & JIC
Pace Project No.: 60130478

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 ICE & JIC
Pace Project No.: 60130478

Kansas Certification IDs

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

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

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SAMPLE SUMMARY

Project: NM GW ICE & JIC
Pace Project No.: 60130478

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60130478001	121027SEP12	Water	09/27/12 12:10	10/04/12 08:20
60130478002	122127SEP12	Water	09/27/12 12:21	10/04/12 08:20
60130478003	125627SEP12	Water	09/27/12 12:56	10/04/12 08:20
60130478004	134427SEP12	Water	09/27/12 13:44	10/04/12 08:20
60130478005	135227SEP12	Water	09/27/12 13:52	10/04/12 08:20
60130478006	142227SEP12	Water	09/27/12 14:22	10/04/12 08:20
60130478007	142927SEP12	Water	09/27/12 14:29	10/04/12 08:20
60130478008	143927SEP12	Water	09/27/12 14:39	10/04/12 08:20
60130478009	145427SEP12	Water	09/27/12 14:54	10/04/12 08:20
60130478010	150727SEP12	Water	09/27/12 15:07	10/04/12 08:20
60130478011	152127SEP12	Water	09/27/12 15:21	10/04/12 08:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60130478001	121027SEP12	EPA 8260	SDR	9
60130478002	122127SEP12	EPA 8260	SDR	9
60130478003	125627SEP12	EPA 8260	SDR	9
60130478004	134427SEP12	EPA 8260	JTK	9
60130478005	135227SEP12	EPA 8260	JTK	9
60130478006	142227SEP12	EPA 8260	JTK	9
60130478007	142927SEP12	EPA 8260	JTK	9
60130478008	143927SEP12	EPA 8260	JTK	9
60130478009	145427SEP12	EPA 8260	JTK	9
60130478010	150727SEP12	EPA 8260	JTK	9
60130478011	152127SEP12	EPA 8260	JTK	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 121027SEP12		Lab ID: 60130478001	Collected: 09/27/12 12:10		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 04:20	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/06/12 04:20	100-41-4	
Toluene	ND ug/L		1.0	1		10/06/12 04:20	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/06/12 04:20	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		80-120	1		10/06/12 04:20	1868-53-7	
Toluene-d8 (S)	104 %		80-120	1		10/06/12 04:20	2037-26-5	
4-Bromofluorobenzene (S)	107 %		80-120	1		10/06/12 04:20	460-00-4	
1,2-Dichloroethane-d4 (S)	89 %		80-120	1		10/06/12 04:20	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 04:20		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 122127SEP12		Lab ID: 60130478002		Collected: 09/27/12 12:21		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 04:36	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 04:36	100-41-4		
Toluene	ND	ug/L	1.0	1		10/06/12 04:36	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 04:36	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	99	%	80-120	1		10/06/12 04:36	1868-53-7		
Toluene-d8 (S)	104	%	80-120	1		10/06/12 04:36	2037-26-5		
4-Bromofluorobenzene (S)	103	%	80-120	1		10/06/12 04:36	460-00-4		
1,2-Dichloroethane-d4 (S)	92	%	80-120	1		10/06/12 04:36	17060-07-0		
Preservation pH	1.0		1.0	1		10/06/12 04:36			



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 125627SEP12		Lab ID: 60130478003	Collected: 09/27/12 12:56		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 04:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 04:52	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 04:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 04:52	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	80-120	1		10/06/12 04:52	1868-53-7	
Toluene-d8 (S)	103	%	80-120	1		10/06/12 04:52	2037-26-5	
4-Bromofluorobenzene (S)	106	%	80-120	1		10/06/12 04:52	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		10/06/12 04:52	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 04:52		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 134427SEP12		Lab ID: 60130478004	Collected: 09/27/12 13:44		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 03:58	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/06/12 03:58	100-41-4	
Toluene	ND ug/L		1.0	1		10/06/12 03:58	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/06/12 03:58	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102 %		80-120	1		10/06/12 03:58	1868-53-7	
Toluene-d8 (S)	98 %		80-120	1		10/06/12 03:58	2037-26-5	
4-Bromofluorobenzene (S)	104 %		80-120	1		10/06/12 03:58	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		10/06/12 03:58	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 03:58		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 135227SEP12		Lab ID: 60130478005	Collected: 09/27/12 13:52		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 04:13	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 04:13	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 04:13	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 04:13	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	80-120	1		10/06/12 04:13	1868-53-7	
Toluene-d8 (S)	101	%	80-120	1		10/06/12 04:13	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		10/06/12 04:13	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		10/06/12 04:13	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 04:13		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 142227SEP12		Lab ID: 60130478006		Collected: 09/27/12 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	ND	ug/L	1.0	1		10/06/12 04:29	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 04:29	100-41-4		
Toluene	ND	ug/L	1.0	1		10/06/12 04:29	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 04:29	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	93	%	80-120	1		10/06/12 04:29	1868-53-7		
Toluene-d8 (S)	104	%	80-120	1		10/06/12 04:29	2037-26-5		
4-Bromofluorobenzene (S)	94	%	80-120	1		10/06/12 04:29	460-00-4		
1,2-Dichloroethane-d4 (S)	93	%	80-120	1		10/06/12 04:29	17060-07-0		
Preservation pH	1.0		1.0	1		10/06/12 04:29			



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC
Pace Project No.: 60130478

Sample: 142927SEP12		Lab ID: 60130478007	Collected: 09/27/12 14:29		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 04:44	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 04:44	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 04:44	108-88-3	
Xylene (Total)	18.5	ug/L	3.0	1		10/06/12 04:44	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%	80-120	1		10/06/12 04:44	1868-53-7	
Toluene-d8 (S)	101	%	80-120	1		10/06/12 04:44	2037-26-5	
4-Bromofluorobenzene (S)	99	%	80-120	1		10/06/12 04:44	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120	1		10/06/12 04:44	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 04:44		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 143927SEP12		Lab ID: 60130478008	Collected: 09/27/12 14:39		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 05:00	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/06/12 05:00	100-41-4	
Toluene	ND ug/L		1.0	1		10/06/12 05:00	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/06/12 05:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		80-120	1		10/06/12 05:00	1868-53-7	
Toluene-d8 (S)	96 %		80-120	1		10/06/12 05:00	2037-26-5	
4-Bromofluorobenzene (S)	100 %		80-120	1		10/06/12 05:00	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		10/06/12 05:00	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 05:00		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 145427SEP12		Lab ID: 60130478009	Collected: 09/27/12 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	2070	ug/L	20.0	20		10/06/12 05:15	71-43-2	
Ethylbenzene	194	ug/L	20.0	20		10/06/12 05:15	100-41-4	
Toluene	4380	ug/L	50.0	50		10/08/12 00:28	108-88-3	
Xylene (Total)	2690	ug/L	60.0	20		10/06/12 05:15	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	80-120	20		10/06/12 05:15	1868-53-7	
Toluene-d8 (S)	103	%	80-120	20		10/06/12 05:15	2037-26-5	
4-Bromofluorobenzene (S)	105	%	80-120	20		10/06/12 05:15	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	20		10/06/12 05:15	17060-07-0	
Preservation pH	1.0		1.0	20		10/06/12 05:15		



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 150727SEP12		Lab ID: 60130478010	Collected: 09/27/12 15:07		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	10300	ug/L	100	100		10/06/12 05:31	71-43-2	
Ethylbenzene	360	ug/L	100	100		10/06/12 05:31	100-41-4	
Toluene	3430	ug/L	100	100		10/06/12 05:31	108-88-3	
Xylene (Total)	2070	ug/L	300	100		10/06/12 05:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	100		10/06/12 05:31	1868-53-7	HS
Toluene-d8 (S)	95 %		80-120	100		10/06/12 05:31	2037-26-5	
4-Bromofluorobenzene (S)	105 %		80-120	100		10/06/12 05:31	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	100		10/06/12 05:31	17060-07-0	
Preservation pH	7.0		1.0	100		10/06/12 05:31		pH



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ANALYTICAL RESULTS

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Sample: 152127SEP12		Lab ID: 60130478011	Collected: 09/27/12 15:21		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 05:46	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 05:46	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 05:46	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 05:46	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99 %		80-120	1		10/06/12 05:46	1868-53-7	HS
Toluene-d8 (S)	109 %		80-120	1		10/06/12 05:46	2037-26-5	
4-Bromofluorobenzene (S)	103 %		80-120	1		10/06/12 05:46	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		80-120	1		10/06/12 05:46	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 05:46		

QUALITY CONTROL DATA

Project: NM GW ICE & JIC

Pace Project No.: 60130478

QC Batch:	MSV/49022	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples: 60130478001, 60130478002, 60130478003			

METHOD BLANK: 1074070 Matrix: Water

Associated Lab Samples: 60130478001, 60130478002, 60130478003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/05/12 23:31	
Ethylbenzene	ug/L	ND	1.0	10/05/12 23:31	
Toluene	ug/L	ND	1.0	10/05/12 23:31	
Xylene (Total)	ug/L	ND	3.0	10/05/12 23:31	
1,2-Dichloroethane-d4 (S)	%	101	80-120	10/05/12 23:31	
4-Bromofluorobenzene (S)	%	105	80-120	10/05/12 23:31	
Dibromofluoromethane (S)	%	100	80-120	10/05/12 23:31	
Toluene-d8 (S)	%	104	80-120	10/05/12 23:31	

LABORATORY CONTROL SAMPLE: 1074071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.8	94	74-123	
Ethylbenzene	ug/L	20	19.6	98	76-123	
Toluene	ug/L	20	20.6	103	75-123	
Xylene (Total)	ug/L	60	57.9	97	76-123	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			99	80-120	
Toluene-d8 (S)	%			103	80-120	



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QUALITY CONTROL DATA

Project: NM GW ICE & JIC
Pace Project No.: 60130478

QC Batch: MSV/49035 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60130478004, 60130478005, 60130478006, 60130478007, 60130478008, 60130478009, 60130478010, 60130478011

METHOD BLANK: 1074431 Matrix: Water
Associated Lab Samples: 60130478004, 60130478005, 60130478006, 60130478007, 60130478008, 60130478009, 60130478010, 60130478011

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	RPD	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 ICE & JIC

Pace Project No.: 60130478

QC Batch: MSV/49051

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60130478009

METHOD BLANK: 1075346

Matrix: Water

Associated Lab Samples: 60130478009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	ND	1.0	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
Toluene	ug/L	20	16.9	85	75-123	
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 ICE & JIC
Pace Project No.: 60130478

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/49022

[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.

ANALYTE QUALIFIERS

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

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



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW ICE & JIC

Pace Project No.: 60130478

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60130478001	121027SEP12	EPA 8260	MSV/49022		
60130478002	122127SEP12	EPA 8260	MSV/49022		
60130478003	125627SEP12	EPA 8260	MSV/49022		
60130478004	134427SEP12	EPA 8260	MSV/49035		
60130478005	135227SEP12	EPA 8260	MSV/49035		
60130478006	142227SEP12	EPA 8260	MSV/49035		
60130478007	142927SEP12	EPA 8260	MSV/49035		
60130478008	143927SEP12	EPA 8260	MSV/49035		
60130478009	145427SEP12	EPA 8260	MSV/49035		
60130478009	145427SEP12	EPA 8260	MSV/49051		
60130478010	150727SEP12	EPA 8260	MSV/49035		
60130478011	152127SEP12	EPA 8260	MSV/49035		

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical
www.paceanalytical.com

Section A Required Client Information: Company: <u>WILE HOLT</u> Address: <u>221 S MAIN</u> Phone: <u>505-402-1958</u> Fax: <u></u> Requested Due Date/TAT: <u></u>		Section B Required Project Information: Report To: <u>M. HARVEY</u> Copy To: <u></u> Purchase Order No.: <u>NM GW</u> Project Name: <u>ICB + DIC</u> Project Number: <u></u>		Section C Invoice Information: Attention: <u></u> Company Name: <u></u> Address: <u></u> Pace Quote Reference: <u></u> Pace Project Manager: <u></u> Pace Profile #: <u></u>	
Page: <u>1</u> of <u>1</u> 1564128		REGULATORY AGENCY ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER <u></u> Site Location: <u>NM</u> STATE: <u></u>			

ITEM #	Section D Required Client Information	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	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↑ Y/N ↓	Requested Analysis Filtered (Y/N)				Pace Project No./ Lab I.D.			
					COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl		NaOH	Na ₂ S ₂ O ₃	Methanol	Other		Residual Chlorine (Y/N)		
1	121027SEP12		WT G		9-27	12:10		2													ICB-8	60130478			
2	122127SEP12					12:21		2													ICB-1				
3	125627SEP12					12:56		2													ICB-7				
4	134427SEP12					13:44		2													ICB-4				
5	135227SEP12					13:52		2													ICB-5				
6	142227SEP12					14:22		2													ICB-1				
7	142927SEP12					14:29		2													ICB-2				
8	143927SEP12					14:39		2													ICB-8				
9	145427SEP12					14:54		2													ICB-3				
10	150727SEP12					15:07		2													ICB-6				
11	152127SEP12					15:21		2													ICB-9				
12																									
ADDITIONAL COMMENTS										RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS			
M HANFEN										FEB-2012		10-3-12		10:30		10-3		10:30		10/4		10/30		X X Y	

ADDITIONAL COMMENTS M HARVEY		RELINQUISHED BY / AFFILIATION 10-3-12 10:30		DATE 10-3 10:30		TIME 10/4 0820		ACCEPTED BY / AFFILIATION PHD		DATE 10-3 10:30		TIME 10/4 0820		SAMPLE CONDITIONS Temp in °C: 38 Received on: X Sealed Cooler: X Custody: X Samples Intact: Y	
--	--	---	--	---------------------------	--	--------------------------	--	---	--	---------------------------	--	--------------------------	--	---	--



Samp Upon Receipt

Client Name: Mile High

Project # 60130478

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

Tracking #: 90009284 4088 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 2P/C

Thermometer Used: (T-191) T-194

Type of Ice: Wet 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: pu/10/14/12

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
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.
		<u>2 of 2 0694 1507, 1521</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: Mark Harvey

Date/Time: 10/4/12

Comments/ Resolution: Email about vials w/ headspace to Amw 10/4/12
For Mark Harvey analyze headspace samples - Amw 10/4/12

Project Manager Review: Amw

Date: 10/5/12

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



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December 20, 2012

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

RE: Project: NMGW DVS & ICE
Pace Project No.: 60135430

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: NMGW DVS & ICE

Pace Project No.: 60135430

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: NMGW DVS & ICE
Pace Project No.: 60135430

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60135430001	111513DEC12	Water	12/13/12 11:15	12/14/12 08:30
60135430002	112513DEC12	Water	12/13/12 11:25	12/14/12 08:30
60135430003	113213DEC12	Water	12/13/12 11:32	12/14/12 08:30
60135430004	114113DEC12	Water	12/13/12 11:41	12/14/12 08:30
60135430005	120913DEC12	Water	12/13/12 12:09	12/14/12 08:30
60135430006	112407DEC12	Water	12/07/12 11:24	12/14/12 08:30
60135430007	113607DEC12	Water	12/07/12 11:36	12/14/12 08:30
60135430008	114507DEC12	Water	12/07/12 11:45	12/14/12 08:30
60135430009	115507DEC12	Water	12/07/12 11:55	12/14/12 08:30
60135430010	120207DEC12	Water	12/07/12 12:02	12/14/12 08:30
60135430011	121007DEC12	Water	12/07/12 12:10	12/14/12 08:30
60135430012	122007DEC12	Water	12/07/12 12:20	12/14/12 08:30
60135430013	EDD	Water		12/14/12 13:22

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NMGW DVS & ICE
Pace Project No.: 60135430

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60135430001	111513DEC12	EPA 8260	PRG	9
60135430002	112513DEC12	EPA 8260	PRG	9
60135430003	113213DEC12	EPA 8260	PRG	9
60135430004	114113DEC12	EPA 8260	PRG	9
60135430005	120913DEC12	EPA 8260	PRG	9
60135430006	112407DEC12	EPA 8260	PRG	9
60135430007	113607DEC12	EPA 8260	PRG	9
60135430008	114507DEC12	EPA 8260	JTS	9
60135430009	115507DEC12	EPA 8260	PRG	9
60135430010	120207DEC12	EPA 8260	PRG	9
60135430011	121007DEC12	EPA 8260	PRG	9
60135430012	122007DEC12	EPA 8260	PRG	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 111513DEC12		Lab ID: 60135430001		Collected: 12/13/12 11:15	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 01:54	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 01:54	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 01:54	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 01:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	80-120	1		12/18/12 01:54	1868-53-7	
Toluene-d8 (S)	109	%	80-120	1		12/18/12 01:54	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		12/18/12 01:54	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120	1		12/18/12 01:54	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 01:54		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 112513DEC12		Lab ID: 60135430002		Collected: 12/13/12 11:25		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 02:08	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 02:08	100-41-4		
Toluene	ND	ug/L	1.0	1		12/18/12 02:08	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 02:08	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	101	%	80-120	1		12/18/12 02:08	1868-53-7		
Toluene-d8 (S)	106	%	80-120	1		12/18/12 02:08	2037-26-5		
4-Bromofluorobenzene (S)	100	%	80-120	1		12/18/12 02:08	460-00-4		
1,2-Dichloroethane-d4 (S)	103	%	80-120	1		12/18/12 02:08	17060-07-0		
Preservation pH	1.0		1.0	1		12/18/12 02:08			



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE
Pace Project No.: 60135430

Sample: 113213DEC12		Lab ID: 60135430003	Collected: 12/13/12 11:32	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 02:23	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 02:23	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 02:23	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 02:23	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	80-120	1		12/18/12 02:23	1868-53-7	
Toluene-d8 (S)	105	%	80-120	1		12/18/12 02:23	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		12/18/12 02:23	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		12/18/12 02:23	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 02:23		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 114113DEC12		Lab ID: 60135430004		Collected: 12/13/12 11:41		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		12/18/12 02:37	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 02:37	100-41-4		
Toluene	ND	ug/L	1.0	1		12/18/12 02:37	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 02:37	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	108	%	80-120	1		12/18/12 02:37	1868-53-7		
Toluene-d8 (S)	105	%	80-120	1		12/18/12 02:37	2037-26-5		
4-Bromofluorobenzene (S)	98	%	80-120	1		12/18/12 02:37	460-00-4		
1,2-Dichloroethane-d4 (S)	108	%	80-120	1		12/18/12 02:37	17060-07-0		
Preservation pH	1.0		1.0	1		12/18/12 02:37			



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 120913DEC12		Lab ID: 60135430005	Collected: 12/13/12 12:09	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	11800	ug/L	100	100		12/18/12 02:52	71-43-2	
Ethylbenzene	1270	ug/L	100	100		12/18/12 02:52	100-41-4	
Toluene	7620	ug/L	100	100		12/18/12 02:52	108-88-3	
Xylene (Total)	8910	ug/L	300	100		12/18/12 02:52	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	80-120	100		12/18/12 02:52	1868-53-7	HS
Toluene-d8 (S)	107	%	80-120	100		12/18/12 02:52	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	100		12/18/12 02:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120	100		12/18/12 02:52	17060-07-0	
Preservation pH	1.0		1.0	100		12/18/12 02:52		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 112407DEC12		Lab ID: 60135430006	Collected: 12/07/12 11:24		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 03:06	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/18/12 03:06	100-41-4	
Toluene	ND ug/L		1.0	1		12/18/12 03:06	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		12/18/12 03:06	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102 %		80-120	1		12/18/12 03:06	1868-53-7	
Toluene-d8 (S)	107 %		80-120	1		12/18/12 03:06	2037-26-5	
4-Bromofluorobenzene (S)	96 %		80-120	1		12/18/12 03:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		80-120	1		12/18/12 03:06	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 03:06		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 113607DEC12		Lab ID: 60135430007	Collected: 12/07/12 11:36	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 03:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 03:21	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 03:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 03:21	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%	80-120	1		12/18/12 03:21	1868-53-7	
Toluene-d8 (S)	110	%	80-120	1		12/18/12 03:21	2037-26-5	
4-Bromofluorobenzene (S)	99	%	80-120	1		12/18/12 03:21	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		12/18/12 03:21	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 03:21		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 114507DEC12		Lab ID: 60135430008	Collected: 12/07/12 11:45	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	5.0	5		12/18/12 19:40	71-43-2	
Ethylbenzene	38.5	ug/L	5.0	5		12/18/12 19:40	100-41-4	
Toluene	ND	ug/L	5.0	5		12/18/12 19:40	108-88-3	
Xylene (Total)	92.6	ug/L	15.0	5		12/18/12 19:40	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	80-120	5		12/18/12 19:40	1868-53-7	D3
Toluene-d8 (S)	101	%	80-120	5		12/18/12 19:40	2037-26-5	
4-Bromofluorobenzene (S)	105	%	80-120	5		12/18/12 19:40	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120	5		12/18/12 19:40	17060-07-0	
Preservation pH	1.0		1.0	5		12/18/12 19:40		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 115507DEC12		Lab ID: 60135430009	Collected: 12/07/12 11:55	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 03:50	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 03:50	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 03:50	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 03:50	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	80-120	1		12/18/12 03:50	1868-53-7	
Toluene-d8 (S)	106	%	80-120	1		12/18/12 03:50	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		12/18/12 03:50	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/18/12 03:50	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 03:50		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 120207DEC12		Lab ID: 60135430010	Collected: 12/07/12 12:02		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 04:05	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 04:05	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 04:05	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 04:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	1		12/18/12 04:05	1868-53-7	
Toluene-d8 (S)	108 %		80-120	1		12/18/12 04:05	2037-26-5	
4-Bromofluorobenzene (S)	96 %		80-120	1		12/18/12 04:05	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		12/18/12 04:05	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 04:05		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE
Pace Project No.: 60135430

Sample: 121007DEC12		Lab ID: 60135430011	Collected: 12/07/12 12:10		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 04:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 04:19	100-41-4	
Toluene	ND	ug/L	1.0	1		12/18/12 04:19	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 04:19	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	80-120	1		12/18/12 04:19	1868-53-7	
Toluene-d8 (S)	108	%	80-120	1		12/18/12 04:19	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		12/18/12 04:19	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120	1		12/18/12 04:19	17060-07-0	
Preservation pH	1.0		1.0	1		12/18/12 04:19		



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ANALYTICAL RESULTS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Sample: 122007DEC12		Lab ID: 60135430012		Collected: 12/07/12 12:20		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 04:34	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		12/18/12 04:34	100-41-4		
Toluene	ND	ug/L	1.0	1		12/18/12 04:34	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		12/18/12 04:34	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	109	%	80-120	1		12/18/12 04:34	1868-53-7		
Toluene-d8 (S)	109	%	80-120	1		12/18/12 04:34	2037-26-5		
4-Bromofluorobenzene (S)	101	%	80-120	1		12/18/12 04:34	460-00-4		
1,2-Dichloroethane-d4 (S)	103	%	80-120	1		12/18/12 04:34	17060-07-0		
Preservation pH	1.0		1.0	1		12/18/12 04:34			



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QUALITY CONTROL DATA

Project: NMGW DVS & ICE

Pace Project No.: 60135430

QC Batch: MSV/50853

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60135430001, 60135430002, 60135430003, 60135430004, 60135430005, 60135430006, 60135430007, 60135430009, 60135430010, 60135430011, 60135430012

METHOD BLANK: 1116016

Matrix: Water

Associated Lab Samples: 60135430001, 60135430002, 60135430003, 60135430004, 60135430005, 60135430006, 60135430007, 60135430009, 60135430010, 60135430011, 60135430012

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: NMGW DVS & ICE

Pace Project No.: 60135430

QC Batch: MSV/50879

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60135430008

METHOD BLANK: 1116579

Matrix: Water

Associated Lab Samples: 60135430008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/18/12 17:43	
Ethylbenzene	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	
Ethylbenzene	ug/L	20	20.3	101	76-123	
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	

QUALIFIERS

Project: NMGW DVS & ICE

Pace Project No.: 60135430

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.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NMGW DVS & ICE

Pace Project No.: 60135430

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60135430001	111513DEC12	EPA 8260	MSV/50853		
60135430002	112513DEC12	EPA 8260	MSV/50853		
60135430003	113213DEC12	EPA 8260	MSV/50853		
60135430004	114113DEC12	EPA 8260	MSV/50853		
60135430005	120913DEC12	EPA 8260	MSV/50853		
60135430006	112407DEC12	EPA 8260	MSV/50853		
60135430007	113607DEC12	EPA 8260	MSV/50853		
60135430008	114507DEC12	EPA 8260	MSV/50879		
60135430009	115507DEC12	EPA 8260	MSV/50853		
60135430010	120207DEC12	EPA 8260	MSV/50853		
60135430011	121007DEC12	EPA 8260	MSV/50853		
60135430012	122007DEC12	EPA 8260	MSV/50853		



WO#: 60135430



60135430

Client Name: Mile HighCourier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐Tracking #: 6022 4403 7960Pace 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-194 / 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	9.
Pace containers used:	☒ Yes ☐ No ☐ N/A	10.
Containers intact:	☒ Yes ☐ No ☐ N/A	11.
Unpreserved 5035A soils frozen w/in 48hrs?	☐ Yes ☐ No ☒ N/A	12.
Filtered volume received for dissolved tests?	☐ Yes ☐ No ☒ N/A	13.
Sample labels match COC:	☒ Yes ☐ No ☐ N/A	14.
Includes date/time/ID/analyses	Matrix: <u>water</u>	15.
All containers needing preservation have been checked.	☐ Yes ☐ No ☒ N/A	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐ Yes ☐ No ☒ N/A	17.
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	120913 Dec 12 2 of 2 vials w/ headspace
Pace Trip Blank lot # (if purchased):	<u>NA</u>	15.
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: 12/14/12Comments/ Resolution: Email - headspace in 120913 Dec 12 - analyze? return 12/14/12
Per Mark Harvey analyze sample return 12/14/12Project Manager Review: THWDate 12/17/12

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical
www.pacelabs.com

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	MILE HIGH	Report To:	M. HARVEY	Attention:	
Address:	221 S. MAIN AVE	Copy To:		Company Name:	
Email To:	ART@MILEHIGH.COM	Purchase Order No:		Address:	
Phone:	303-402-1458	Project Name:	NMGLW	Post Quote Reference:	
Requested Due Date/TAT:		Project Number:	DVS & ICE	Pace Project Manager:	
				Pace Profile #:	

Page: 1 of 1

1564131

REGULATORY AGENCY

NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location

STATE: NM

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE DW Drinking Water WT Waste Water WW Wastewater P Product SL Solid OL Oil WP Wipe AR Air TS Tissue OT Other	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
			COMPOSITE START	COMPOSITE END GRAB								
1	111513 DEC 12	DW			WTG		12-13-12	4:00pm		12-13-12	830	Y
2	112513 DEC 12	WT					11:25					Y
3	113213 DEC 12	WW					11:32					Y
4	114113 DEC 12	P					11:41					Y
5	120913 DEC 12	SL					12:09					Y
6	112407 DEC 12	OL					11:24					Y
7	113607 DEC 12	WP					11:36					Y
8	114507 DEC 12	AR					11:45					Y
9	115507 DEC 12	TS					11:55					Y
10	120207 DEC 12	OT					12:02					Y
11	121007 DEC 12						12:10					Y
12	122007 DEC 12						12:20					Y

ADDITIONAL COMMENTS		M. HARVEY / MILE HIGH		DATE SIGNED (MM/DD/YY): 12-13-12	
SAMPLER NAME AND SIGNATURE		M. HARVEY		DATE SIGNED (MM/DD/YY): 12-13-12	
PRINT Name of SAMPLER:		M. HARVEY		DATE SIGNED (MM/DD/YY): 12-13-12	
SIGNATURE of SAMPLER:		M. HARVEY		DATE SIGNED (MM/DD/YY): 12-13-12	
Temp in °C		1.1		Y	
Received on		Y		Y	
Sealed Cooler		Y		Y	
Custody		Y		Y	
Samples Intact		Y		Y	



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

March 11, 2013

Julie Linn

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 385-1096

FAX

RE: Ice Canyon Drip

OrderNo.: 1303300

Dear Julie Linn:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/7/2013 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1303300

Date Reported: 3/11/2013

CLIENT: LTE

Client Sample ID: MW-1

Project: Ice Canyon Drip

Collection Date: 3/4/2013 8:27:00 AM

Lab ID: 1303300-001

Matrix: AQUEOUS

Received Date: 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	3/7/2013 3:24:32 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 3:24:32 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:24:32 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 3:24:32 PM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:24:32 PM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:24:32 PM
Surr: 4-Bromofluorobenzene	90.0	69.4-129	P	%REC	1	3/7/2013 3:24:32 PM

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, Inc.

Analytical Report

Lab Order 1303300

Date Reported: 3/11/2013

CLIENT: LTE

Client Sample ID: MW-3

Project: Ice Canyon Drip

Collection Date: 3/4/2013 9:35:00 AM

Lab ID: 1303300-002

Matrix: AQUEOUS

Received Date: 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	3/7/2013 3:54:38 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 3:54:38 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:54:38 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 3:54:38 PM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:54:38 PM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 3:54:38 PM
Surr: 4-Bromofluorobenzene	93.4	69.4-129	P	%REC	1	3/7/2013 3:54:38 PM

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, Inc.

Analytical Report

Lab Order 1303300

Date Reported: 3/11/2013

CLIENT: LTE

Client Sample ID: MW-4

Project: Ice Canyon Drip

Collection Date: 3/4/2013 10:10:00 AM

Lab ID: 1303300-003

Matrix: AQUEOUS

Received Date: 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	3/7/2013 4:24:46 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 4:24:46 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:24:46 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 4:24:46 PM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:24:46 PM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:24:46 PM
Surr: 4-Bromofluorobenzene	87.2	69.4-129	P	%REC	1	3/7/2013 4:24:46 PM

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, Inc.

Analytical Report

Lab Order 1303300

Date Reported: 3/11/2013

CLIENT: LTE

Client Sample ID: MW-7

Project: Ice Canyon Drip

Collection Date: 3/4/2013 11:40:00 AM

Lab ID: 1303300-004

Matrix: AQUEOUS

Received Date: 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	3/7/2013 4:54:46 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 4:54:46 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:54:46 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 4:54:46 PM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:54:46 PM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 4:54:46 PM
Surr: 4-Bromofluorobenzene	87.6	69.4-129	P	%REC	1	3/7/2013 4:54:46 PM

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, Inc.

Analytical Report

Lab Order 1303300

Date Reported: 3/11/2013

CLIENT: LTE

Client Sample ID: MW-8

Project: Ice Canyon Drip

Collection Date: 3/4/2013 11:35:00 AM

Lab ID: 1303300-005

Matrix: AQUEOUS

Received Date: 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	2.0	P	µg/L	2	3/7/2013 5:24:54 PM
Toluene	ND	2.0	P	µg/L	2	3/7/2013 5:24:54 PM
Ethylbenzene	ND	2.0	P	µg/L	2	3/7/2013 5:24:54 PM
Xylenes, Total	ND	4.0	P	µg/L	2	3/7/2013 5:24:54 PM
1,2,4-Trimethylbenzene	ND	2.0	P	µg/L	2	3/7/2013 5:24:54 PM
1,3,5-Trimethylbenzene	ND	2.0	P	µg/L	2	3/7/2013 5:24:54 PM
Surr: 4-Bromofluorobenzene	89.4	69.4-129	P	%REC	2	3/7/2013 5:24:54 PM

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#: 1303300

11-Mar-13

Client: LTE

Project: Ice Canyon Drip

Sample ID	5ML RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBW	Batch ID: R9057		RunNo: 9057						
Prep Date:		Analysis Date: 3/7/2013		SeqNo: 258308		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								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	19		20.00		96.6	69.4	129			

Sample ID	100NG BTEX LCS	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID: R9057			RunNo: 9057					
Prep Date:	Analysis Date: 3/7/2013			SeqNo: 258309		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.2	80	120			
Toluene	19	1.0	20.00	0	95.6	80	120			
Ethylbenzene	19	1.0	20.00	0	96.6	80	120			
Xylenes, Total	59	2.0	60.00	0	98.8	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	94.3	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	98.5	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	69.4	129			

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 87106
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE

Work Order Number: 1303300

Received by/date: *LG*

Logged By: Lindsay Mangin

03/07/13
3/7/2013 9:56:00 AM

Completed By: Lindsay Mangin

3/7/2013 12:46:36 PM

Reviewed By: *TO*

03/07/2013

Chain of Custody

1. Were seals intact?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes No Not Present ☒

Yes ☒ No Not Present

Client *COUVER* *JP* *03/07/13*

Log In

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

Yes ☒ No NA

Yes ☒ No NA

Yes ☒ No NA

Yes ☒ No

Yes ☒ No

Yes ☒ No

Yes No ☒ NA

Yes ☒ No No VOA Vials

Yes No ☒

Yes ☒ No # of preserved bottles checked for pH:

Yes ☒ No (<2 or >12 unless noted)

Yes ☒ No Adjusted?

Yes ☒ No

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

APPENDIX B
MARCH 2013 FIELD NOTES



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>8:27</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>46.75</u>	TD of Well	<u>48.21</u>
Time	<u>8:00</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>1.46 * 0.16 = 0.23 * 3 = 0.70</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 (µs)	Comments
8:17	0.15	0.15	6.59	14.4	2.26	Clear with black flecks, roots, no odor, no sheen
						Bailed Dry

Comments: _____

Describe Deviations from SOP: Well bailed dry immediately. Was able to collect enough groundwater to fill 3 VOAs

Signature: Brooke Herb Date: 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-2</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>NA</u>	TD of Well	<u>NA</u>
Time	<u>8:45</u>	Depth to Product	<u>NA</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 (µs)	Comments

Comments: Obstruction in well at 30.52 feet. Was unable to get probe past it.
Water was not encountered.

Describe Deviations from SOP: _____

Signature: Brooke Herb **Date:** 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>9:35</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-3</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>40.66</u>	TD of Well	<u>46.12</u>
Time	<u>9:00</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>5.46 * 0.16 = 0.87 * 3 = 2.62</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 (µs)	Comments
9:10	0.25	0.25	6.83	14.2	1,571	Brown, silty
	0.25	0.50	7.02	14.5	1,538	Darker brown, more silt
	0.25	0.75	7.07	14.4	1,563	More silt
	0.25	1.00	7.16	14.2	1,548	No change
	1.00	2.00	7.14	14.5	1,554	No change
	0.25	2.25	7.21	14.6	1,530	No change
	0.25	2.50	7.23	14.4	1,529	No change
	0.25	2.75	7.23	14.4	1,534	No change
9:33	0.25	3.00	7.23	14.4	1,532	No change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>10:10</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>40.45</u>	TD of Well	<u>46.29</u>
Time	<u>9:45</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>$5.84 * 0.16 = 0.93 * 3 = 2.80$</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 (µs)	Comments
9:50	0.25	0.25	7.00	15.5	1,522	Clear with a light brown tint
	0.25	0.50	6.89	15.4	1,549	No change
	0.25	0.75	6.93	15.7	1,518	more silt
	0.25	1.00	6.98	15.5	1,534	No change
	1.00	2.00	7.16	15.0	1,499	More silt, dark grayish brown
	0.25	2.25	7.20	14.9	1,530	Very silty
	0.25	2.50	7.19	15.0	1,531	No change
	0.25	2.75	7.27	15.0	1,542	No change
	0.25	3.00	7.25	15.0	1,532	No change
10:10	0.25	3.25	7.25	15.1	1538	No change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</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>36.83</u>	TD of Well	<u>NM</u>
Time	<u>11:00</u>	Depth to Product	<u>36.82</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 (µs)	Comments

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

Describe Deviations from SOP: _____

Signature: Brooke Herb **Date:** 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-6</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>DRY</u>	TD of Well	<u>37.52</u>
Time	<u>10:50</u>	Depth to Product	<u>NA</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 (µs)	Comments

Comments: Well dry at 37.52 feet bgs.

No surface completion; PVC locked.

Describe Deviations from SOP: _____

Signature: _____

Brooke Herb

Date: _____

3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>11:40</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-7</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>38.28</u>	TD of Well	<u>43.78</u>
Time	<u>9:45</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>$5.5 * 0.16 = 0.88 * 3 = 2.64$</u> <u>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</u>		
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 (µs)	Comments
10:30	0.25	0.25	7.25	13.7	1,482	clear, no silt, odor
	0.25	0.50	7.31	13.9	1,534	no change
	0.25	0.75	7.30	13.7	1,525	minor silt
	0.25	1.00	7.37	13.6	1,512	no change
10:40						Bailed Dry

Comments: Returned to collect sample at 11:40

Describe Deviations from SOP: Well bailed dry before 3 casing volumes were purged.

Signature: _____

Brooke Herb

Date: _____

3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>11:35</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-8</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>34.69</u>	TD of Well	<u>42.05</u>
Time	<u>11:00</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>7.36 * 0.16 = 1.17 * 3 = 3.53</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 (µs)	Comments
11:15	0.25	0.25	7.30	15.0	1,555	very silty, dark grayish brown
	0.25	0.50	7.28	15.2	1,566	no change
	0.25	0.75	7.27	15.2	1,561	no change
	0.25	1.00	7.31	15.1	1,580	no change
	1.00	2.00	7.32	15.1	1,585	no change
	0.50	2.50	7.33	15.1	1,597	no change
	0.25	2.75	7.34	15.1	1,583	no change
	0.25	3.00	7.34	15.1	1,580	no change
	0.25	3.25	7.35	15.0	1,578	no change
11:35	0.25	3.50	7.35	15.0	1,581	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb **Date:** 3/4/2013



Water Sample Collection Form

Sample Location	<u>Ice Canyon Drip</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/4/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>SVE-4"</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>42.73</u>	TD of Well	<u>NM</u>
Time	<u>8:35</u>	Depth to Product	<u>42.72</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 (µs)	Comments

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

Product recovery sock in well; returned to well after DTW and DTP data were gathered.

Describe Deviations from SOP: _____

Signature: Brooke Herb **Date:** 3/4/2013

