

3R - 312

2012 AGWMR

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COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.

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April 10, 2013

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

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

Dear Mr. von Goten:

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

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

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kyla Vaughan
Environmental Compliance Specialist

cc: Williams Field Services, LLC

2012 ANNUAL GROUNDWATER REPORT

DOGIE EAST PIT

ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-312-0

APRIL 2013

Prepared for:

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



2012 ANNUAL GROUNDWATER REPORT
DOGIE EAST PIT
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-312-0

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 Dogie East Pit (Administrative/Environmental Order Number 3RP-312-0) (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 dehydrator pit. Williams Field Services, LLC (Williams) conducted groundwater monitoring activities at the Site between April 2012 and December 2012. In January 2013, LT Environmental Inc., (LTE) was retained by Williams to visit the Site and evaluate the status of all groundwater monitoring wells, complete annual sampling requirements, and recommend improvements to the groundwater remediation program.

Between April 2012 and March 2013, five groundwater monitoring events were conducted (April 2012, June 2012, 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 northeast.

Groundwater monitoring well MW-4 was not sampled between June 2012 and March 2013; it was observed to have been destroyed during the March 2013 site visit. It will not be replaced due to the current configuration of the BTEX impacts in groundwater. Groundwater monitoring well MW-6 was not sampled in April 2012, June 2012, October 2012, or December 2012. In March 2013, groundwater monitoring well MW-6 was not sampled due to the presence of 0.73 feet of free-phase hydrocarbons.

Benzene in groundwater monitoring well MW-7 exceeded the NMWQCC groundwater standard during all five groundwater monitoring events, and toluene and total xylenes exceeded the NMWQCC groundwater standards during the March 2013 groundwater monitoring event. Benzene and total xylenes exceeded the NMWQCC groundwater standard in groundwater monitoring well MW-3 during the September 2012 and December 2012 groundwater monitoring events; however, no other BTEX results exceeded the NMWQCC groundwater between April 2012 and March 2013. Groundwater monitoring wells MW-1, MW-2, MW-5, MW-8, MW-9, and SVE-4" were monitored periodically between April 2012 and March 2013; BTEX concentrations were below NMWQCC groundwater standards in those wells.

Williams proposes to plug and abandon groundwater monitoring well MW-9 and cease collection of groundwater samples for BTEX analysis at monitoring wells MW-1, MW-2, and SVE-4" since these wells have either been compliant with NMWQCC standards for at least eight consecutive quarters or have demonstrated long term results below NMWQCC groundwater standards and Williams will cease monitoring of monitoring well MW-4 since it has been destroyed and due to its location in relation to the former Williams source area. Williams will continue to collect groundwater samples from monitoring wells MW-3, MW-5, MW-7, and MW-8, when possible in addition to recovering free-phase hydrocarbons from monitoring well MW-6. Williams will consider installation of two additional groundwater monitoring wells northwest of monitoring wells MW-6 and MW-7. Additional research into the groundwater flow regime is necessary to determine the fate and transport of the BTEX impacts to groundwater at the Site.

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 Dogie East Pit (Administrative/Environmental Order Number 3RP-312-0) (Site) (Figure 1). The scope of work for this project was continued monitoring of petroleum hydrocarbon impacts to groundwater as a result of operations 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 36.435003 and longitude -107.479499 in Unit D, Section 4, Township 25 North, Range 6 West. The Site is on the west flank of Largo Wash in the San Juan Basin in Rio Arriba County, New Mexico.

1.2 HISTORY

The source of impacted groundwater is a former lined pit to collect drip gas and water from a condensate tank. Williams removed 526 cubic yards of petroleum hydrocarbon impacted soil in July 1997 and an additional 4,888 cubic yards of petroleum hydrocarbon impacted soil in October 1997. Groundwater was encountered at 14 feet below ground surface (bgs) and groundwater samples contained BTEX concentrations in excess of NMWQCC standards. The excavation was left open through March 1998 and sampled again, at which time benzene, sulfate, and chloride concentrations exceeded the NMWQCC standards. The excavation was subsequently backfilled and in May 1998 groundwater monitoring wells MW-1, MW-2, MW-3, and MW-4 were installed. Impacted soil was observed in the borehole at MW-3 at approximately 12 feet bgs. In December 1998, monitoring well MW-5 and a 4-inch SVE well were installed and a pilot test was conducted; however, SVE was never implemented at the Site. In September 1999, monitoring wells MW-6, MW-7, and MW-8 were installed. The installation date of groundwater monitoring well MW-9 is not known, however, MW-9 was sampled between at least March 2010 and December 2012.

Between September 1999 and December 2012, groundwater at the Site was monitored. Groundwater monitoring well MW-6 contained free phase hydrocarbons between September 1999 and December 2012; it is not known if free-phase hydrocarbons were recovered from groundwater monitoring well MW-6 during this time. 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

The April 2012 through December 2012 monitoring events were conducted by a third-party consultant and the methodology used is not known. Water level measurements were not available for the April 2012 through December 2012 monitoring events. Table 1 provides a cross-reference to match the sample identifier with the appropriate groundwater monitoring well for the April 2012 through December 2012 monitoring events. The first quarter 2013 monitoring event was conducted by LTE; the methodology used by LTE is discussed below.

2.1 WATER AND PRODUCT LEVEL MEASUREMENTS

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

2.2 GROUNDWATER SAMPLING

Prior to sampling groundwater, depth to groundwater and total depth of monitoring wells were measured with a Keck oil/water interface probe. Groundwater monitoring wells containing measurable free-phase petroleum hydrocarbons were not sampled. The volume of water in each 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 monitoring 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 $\pm 2^\circ$ 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 is summarized on Table 2. Groundwater flow direction was determined to be to the northeast (Figure 2). Groundwater monitoring well MW-9 was not used for the groundwater contour map due to its distance from the other wells and the source area. The groundwater flow regime appears to be somewhat complex; possibly influenced by a paleochannel or some other factor.

Concentrations of BTEX in groundwater monitoring wells MW-2, MW-9, and SVE-4" were compliant with the NMWQCC groundwater standards. Groundwater monitoring well MW-9 did not have any surface completion and did not have a J-plug; the well was not secured or locked. Concentrations of BTEX in monitoring wells MW-1 and MW-5 during December 2012 and March 2013 were compliant with NMWQCC groundwater standards. Groundwater monitoring well MW-4 was sampled in April 2012 and BTEX concentrations were not detected; however, this well was not located and presumed destroyed in March 2013. Groundwater monitoring well MW-8 is obstructed and only a small diameter bailer will fit in the well. Groundwater samples collected in March 2013 indicated BTEX concentrations were below the laboratory reporting detection limits. Benzene and total xylenes concentrations in monitoring well MW-3 exceeded the NMWQCC groundwater standards during the September 2012 and December 2012 monitoring events. Groundwater in monitoring well MW-7 contained benzene exceeding the NMWQCC groundwater standard during all monitoring events and toluene and total xylenes exceeding the NMWQCC groundwater standards during the March 2013 monitoring event. Groundwater monitoring well MW-6 was not sampled during any of the monitoring events; in March 2013, 0.73 feet of free-phase hydrocarbons was observed in the well. There is no surface completion around MW-6 to protect the PVC stickup. Table 3 summarizes the groundwater analytical results and copies of the laboratory reports can be found in Appendix A.

4.0 CONCLUSIONS

The groundwater plume appears to be migrating and the groundwater flow regime is not well understood at this time, primarily due to the lack of depth to groundwater data for the monitoring events prior to 2013. Impacts to groundwater in the source area in monitoring well MW-2 appear to have either attenuated or have migrated as BTEX concentrations have been below the laboratory reporting detection limits since at least January 2012. Groundwater monitoring well MW-6 contained free-phase hydrocarbons during the March 2013 monitoring event; it is likely this is the reason for not sampling monitoring well MW-6 during the April 2012 through December 2012 sampling events.

5.0 RECOMMENDATIONS

Due to the distance of groundwater monitoring well MW-9 in relation to the source area and current groundwater impacts, Williams proposes to cease all monitoring activities at this well. Williams will cease collection of groundwater samples for BTEX analysis at monitoring wells

MW-2 and SVE-4” due to at least eight consecutive quarters of BTEX concentrations compliant with NMWQCC standards and monitoring well MW-1 due to its location upgradient from the source area and BTEX concentrations have been compliant with NMWQCC groundwater standards; depth to groundwater data will still be collected from these wells. Williams will continue to collect groundwater samples for BTEX analysis from groundwater monitoring wells, MW-3, MW-5, MW-7, MW-8, quarterly until eight consecutive quarters of results indicate BTEX concentrations are less than the NMWQCC groundwater standards; at which time, depth to groundwater data will still be collected from the well. Groundwater monitoring well MW-4 has likely been destroyed; Williams does not intend to replace this well due to its location in relation to the former source area and the absence of BTEX impacts in the source area groundwater monitoring well, MW-2. Williams will investigate the obstruction in groundwater monitoring well MW-8 and determine if any action needs to be taken to rectify this situation. Williams will pursue options for recovering free-phase hydrocarbon from groundwater monitoring well MW-6 and will continue to monitor depth to product and depth to groundwater in this well. Williams will plug and abandon monitoring well MW-9. Lastly, Williams proposes to install two additional groundwater monitoring wells northwest of monitoring wells MW-6 and MW-7. Upon completion of these wells, they will be incorporated into the quarterly groundwater monitoring program and monitored quarterly for depth to groundwater, depth to product (if present), and collection of samples for BTEX analysis. Additional research into the groundwater flow regime is necessary to determine the fate and transport of the BTEX impacts to groundwater at the Site.

FIGURES



LEGEND

 SITE LOCATION

IMAGE COURTESY OF ESRI/BING MAPS

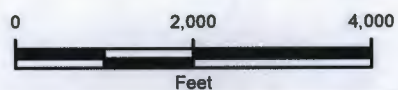
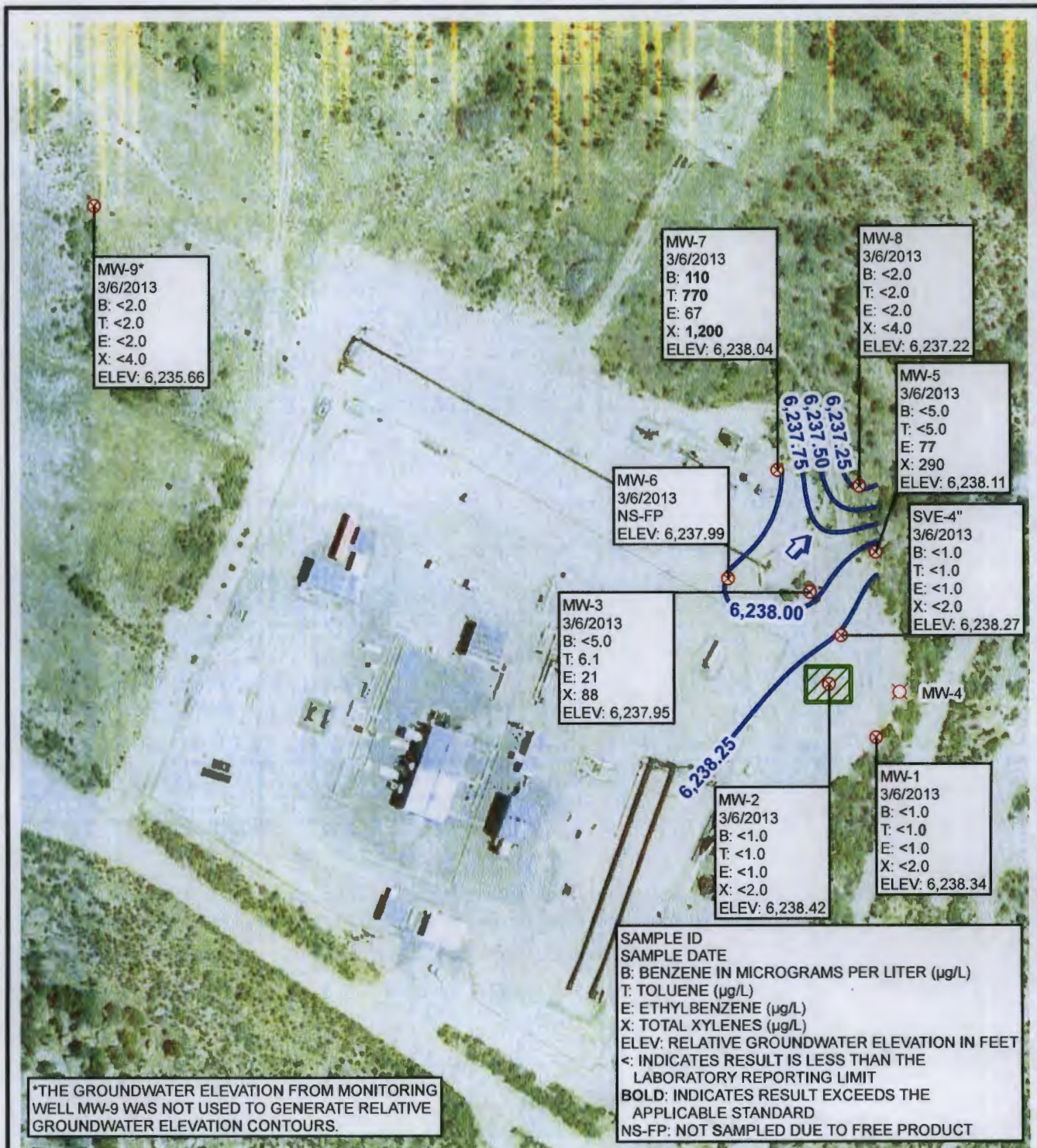


FIGURE 1
SITE LOCATION MAP
DOGIE EAST PIT
RIO ARRIBA COUNTY, NEW MEXICO

WILLIAMS FIELD SERVICES, LLC





LEGEND

- ⊗ MONITORING WELL
- ⊠ DESTROYED MONITORING WELL
- ↑ ESTIMATED GROUNDWATER FLOW DIRECTION
- RELATIVE GROUNDWATER ELEVATION CONTOUR
- CONTOUR INTERVAL = 0.25 FEET

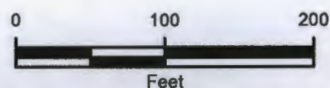


FIGURE 2
GROUNDWATER ELEVATION & ANALYTICAL RESULTS
DOGIE EAST PIT
RIO ARriba COUNTY, NEW MEXICO
WILLIAMS FIELD SERVICES, LLC



TABLES

TABLE 1

**CROSS REFERENCE WELL NAME AND SAMPLE IDENTIFIER
APRIL 2012 THROUGH DECEMBER 2012 SAMPLE DATES
DOGIE EAST PIT
WILLIAMS FIELD SERVICES, LLC**

Sample Identifier	Well Name	Sample Date
144207DEC12	MW-1	12/7/2012
164306APR12	MW-2	4/6/2012
132814JUN12	MW-2	6/12/2012
155327SEP12	MW-2	9/27/2012
144607DEC12	MW-2	12/7/2012
170706 APR12	MW-3	4/6/2012
134114JUN12	MW-3	6/12/2012
160627SEP12	MW-3	9/27/2012
145107DEC12	MW-3	12/7/2012
165406APR12	MW-4	4/6/2012
150107DEC12	MW-5	12/7/2012
171906APR12	MW-7	4/6/2012
134914JUN12	MW-7	6/12/2012
162227SEP12	MW-7	9/27/2012
150607DEC12	MW-7	12/7/2012
171906APR12	MW-9	4/6/2012
141114JUN12	MW-9	6/12/2012
164127SEP12	MW-9	9/27/2012
151907DEC12	MW-9	12/7/2012
133414JUN12	SVE-4	6/12/2012
160027SEP12	SVE-4	9/27/2012

Note:

Samples summarized in this table were not collected by LTE



TABLE 2
GROUNDWATER ELEVATION SUMMARY
DOGIE EAST PIT
WILLIAMS FIELD SERVICES

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	6/12/2012	UNK	UNK	UNK	UNK
MW-1	9/27/2012	UNK	UNK	UNK	UNK
MW-1	12/7/2012	UNK	UNK	UNK	UNK
MW-1	3/6/2013	NP	NP	15.45	6238.34

MW-2	4/6/2012	UNK	UNK	UNK	UNK
MW-2	6/12/2012	UNK	UNK	UNK	UNK
MW-2	9/27/2012	UNK	UNK	UNK	UNK
MW-2	12/7/2012	UNK	UNK	UNK	UNK
MW-2	3/6/2013	NP	NP	15.50	6238.42

MW-3	4/6/2012	UNK	UNK	UNK	UNK
MW-3	6/12/2012	UNK	UNK	UNK	UNK
MW-3	9/27/2012	UNK	UNK	UNK	UNK
MW-3	12/7/2012	UNK	UNK	UNK	UNK
MW-3	3/6/2013	NP	NP	15.40	6237.95

MW-4	4/6/2012	UNK	UNK	UNK	UNK
MW-4	6/12/2012	UNK	UNK	UNK	UNK
MW-4	9/27/2012	UNK	UNK	UNK	UNK
MW-4	12/7/2012	UNK	UNK	UNK	UNK
MW-4	3/6/2013	DEST	DEST	DEST	DEST

MW-5	4/6/2012	UNK	UNK	UNK	UNK
MW-5	6/12/2012	UNK	UNK	UNK	UNK
MW-5	9/27/2012	UNK	UNK	UNK	UNK
MW-5	12/7/2012	UNK	UNK	UNK	UNK
MW-5	3/6/2013	NP	NP	14.60	6238.11

MW-6	4/6/2012	UNK	UNK	UNK	UNK
MW-6	6/12/2012	UNK	UNK	UNK	UNK
MW-6	9/27/2012	UNK	UNK	UNK	UNK
MW-6	12/7/2012	UNK	UNK	UNK	UNK
MW-6	3/6/2013	15.95	0.73	16.68	6237.99

TABLE 2

**GROUNDWATER ELEVATION SUMMARY
DOGIE EAST PIT
WILLIAMS FIELD SERVICES**

Well ID	Date	Depth to Product (feet BTOC)	Product Thickness (feet)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW-7	4/6/2012	UNK	UNK	UNK	UNK
MW-7	6/12/2012	UNK	UNK	UNK	UNK
MW-7	9/27/2012	UNK	UNK	UNK	UNK
MW-7	12/7/2012	UNK	UNK	UNK	UNK
MW-7	3/6/2013	NP	NP	12.61	6238.04
MW-8	4/6/2012	UNK	UNK	UNK	UNK
MW-8	6/12/2012	UNK	UNK	UNK	UNK
MW-8	9/27/2012	UNK	UNK	UNK	UNK
MW-8	12/7/2012	UNK	UNK	UNK	UNK
MW-8	3/6/2013	NP	NP	11.88	6237.22
MW-9	4/6/2012	UNK	UNK	UNK	UNK
MW-9	6/12/2012	UNK	UNK	UNK	UNK
MW-9	9/27/2012	UNK	UNK	UNK	UNK
MW-9	12/7/2012	UNK	UNK	UNK	UNK
MW-9	3/6/2013	NP	NP	8.01	6235.66
SVE-4"	4/6/2012	UNK	UNK	UNK	UNK
SVE-4"	6/12/2012	UNK	UNK	UNK	UNK
SVE-4"	9/27/2012	UNK	UNK	UNK	UNK
SVE-4"	12/7/2012	UNK	UNK	UNK	UNK
SVE-4"	3/6/2013	NP	NP	15.14	6238.27

Notes:

BTOC - Below Top of Casing

AMSL - Above Mean Sea Level

DEST - well has been destroyed

NP - No Product

UNK - data is not known

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

TABLE 3
GROUNDWATER LABORATORY ANALYTICAL RESULTS
DOGIE EAST PIT
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	NS	NS	NS	NS
MW-1	6/12/2012	NS	NS	NS	NS
MW-1	9/27/2012	NS	NS	NS	NS
MW-1	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-1	3/6/2013	<1.0	<1.0	<1.0	<2.0
MW-2	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-2	6/12/2012	<1.0	<1.0	<1.0	<3.0
MW-2	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-2	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-2	3/6/2013	<1.0	<1.0	<1.0	<2.0
MW-3	4/6/2012	5.0	98.3	4.4	255
MW-3	6/12/2012	4.8	122	13.4	344
MW-3	9/27/2012	11.7	248	12.0	867
MW-3	12/7/2012	11.4	403	16.4	1,250
MW-3	3/6/2013	<5.0	6.1	21	88
MW-4	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-4	6/12/2012	NS	NS	NS	NS
MW-4	9/27/2012	NS	NS	NS	NS
MW-4	12/7/2012	NS	NS	NS	NS
MW-4	3/6/2013	DEST	DEST	DEST	DEST
MW-5	4/6/2012	NS	NS	NS	NS
MW-5	6/12/2012	NS	NS	NS	NS
MW-5	9/27/2012	NS	NS	NS	NS
MW-5	12/7/2012	<1.0	14.2	1.3	49.7
MW-5	3/6/2013	<5.0	<5.0	77	290

TABLE 3

GROUNDWATER LABORATORY ANALYTICAL RESULTS
DOGIE EAST PIT
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	4/6/2012	NS	NS	NS	NS
MW-6	6/12/2012	NS	NS	NS	NS
MW-6	9/27/2012	NS	NS	NS	NS
MW-6	12/7/2012	NS	NS	NS	NS
MW-6	3/6/2013	NSP	NSP	NSP	NSP
MW-7	4/6/2012	88.8	3.7	<1.0	4.4
MW-7	6/12/2012	22.0	<1.0	4.1	<3.0
MW-7	9/27/2012	37.7	2.5	21.0	11.8
MW-7	12/7/2012	64.0	3.4	12.6	18.2
MW-7	3/6/2013	110	770	67	1,200
MW-8	4/6/2012	NS	NS	NS	NS
MW-8	6/12/2012	NS	NS	NS	NS
MW-8	9/27/2012	NS	NS	NS	NS
MW-8	12/7/2012	NS	NS	NS	NS
MW-8	3/6/2013	<2.0	<2.0	<2.0	<4.0
MW-9	4/6/2012	<1.0	<1.0	<1.0	<3.0
MW-9	6/12/2012	<1.0	<1.0	<1.0	<3.0
MW-9	9/27/2012	<1.0	<1.0	<1.0	<3.0
MW-9	12/7/2012	<1.0	<1.0	<1.0	<3.0
MW-9	3/6/2013	<2.0	<2.0	<2.0	<4.0



TABLE 3

**GROUNDWATER LABORATORY ANALYTICAL RESULTS
DOGIE EAST PIT
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
SVE-4"	4/6/2012	NS	NS	NS	NS
SVE-4"	6/12/2012	<1.0	<1.0	<1.0	<3.0
SVE-4"	9/27/2012	<1.0	<1.0	<1.0	<3.0
SVE-4"	12/7/2012	NS	NS	NS	NS
SVE-4"	3/6/2013	<1.0	<1.0	<1.0	<2.0

Notes:

NMWQCC - New Mexico Water Quality Control Commission

NS- not sampled

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

DEST - well has been destroyed

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.: 60119146

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



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

CERTIFICATIONS

Project: NM GW
Pace Project No.: 60119146

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
Pace Project No.: 60119146

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60119146001	164306APR12	Water	04/06/12 16:43	04/10/12 10:00
60119146002	165406APR12	Water	04/06/12 16:54	04/10/12 10:00
60119146003	170706APR12	Water	04/06/12 17:07	04/10/12 10:00
60119146004	171906APR12	Water	04/06/12 17:19	04/10/12 10:00
60119146005	173006APR12	Water	04/06/12 17:30	04/10/12 10:00
60119146006	145104APR12	Water	04/04/12 14:51	04/10/12 10:00
60119146007	150704APR12	Water	04/04/12 15:07	04/10/12 10:00
60119146008	152404APR12	Water	04/04/12 15:24	04/10/12 10:00
60119146009	153704APR12	Water	04/04/12 15:37	04/10/12 10:00
60119146010	132602APR12	Water	04/02/12 13:26	04/10/12 10:00
60119146011	135202APR12	Water	04/02/12 13:52	04/10/12 10:00
60119146012	133702APR12	Water	04/02/12 13:37	04/10/12 10:00

REPORT OF LABORATORY ANALYSIS



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SAMPLE ANALYTE COUNT

Project: NM GW
Pace Project No.: 60119146

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60119146001	164306APR12	EPA 8260	RNS	9
60119146002	165406APR12	EPA 8260	RNS	9
60119146003	170706APR12	EPA 8260	JDM	9
60119146004	171906APR12	EPA 8260	RNS	9
60119146005	173006APR12	EPA 8260	RNS	9
60119146006	145104APR12	EPA 8260	RNS	9
60119146007	150704APR12	EPA 8260	RNS	9
60119146008	152404APR12	EPA 8260	RNS	9
60119146009	153704APR12	EPA 8260	RNS	9
60119146010	132602APR12	EPA 8260	RNS	9
60119146011	135202APR12	EPA 8260	JDM	9
60119146012	133702APR12	EPA 8260	RNS	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 164306APR12		Lab ID: 60119146001	Collected: 04/06/12 16:43		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 16:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 16:36	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 16:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 16:36	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	86-112	1		04/12/12 16:36	1868-53-7	
Toluene-d8 (S)	96	%	90-110	1		04/12/12 16:36	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-113	1		04/12/12 16:36	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	82-119	1		04/12/12 16:36	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 16:36		



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ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60119146

Sample: 165406APR12		Lab ID: 60119146002	Collected: 04/06/12 16:54		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 16:51	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 16:51	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 16:51	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 16:51	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103 %		86-112	1		04/12/12 16:51	1868-53-7	
Toluene-d8 (S)	96 %		90-110	1		04/12/12 16:51	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	1		04/12/12 16:51	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		82-119	1		04/12/12 16:51	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 16:51		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 170706APR12		Lab ID: 60119146003	Collected: 04/06/12 17:07	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	5.0 ug/L		1.0	1		04/13/12 21:33	71-43-2	
Ethylbenzene	98.3 ug/L		1.0	1		04/13/12 21:33	100-41-4	
Toluene	4.4 ug/L		1.0	1		04/13/12 21:33	108-88-3	
Xylene (Total)	255 ug/L		3.0	1		04/13/12 21:33	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		86-112	1		04/13/12 21:33	1868-53-7	
Toluene-d8 (S)	101 %		90-110	1		04/13/12 21:33	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113	1		04/13/12 21:33	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		82-119	1		04/13/12 21:33	17060-07-0	
Preservation pH	1.0		1.0	1		04/13/12 21:33		

ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60119146

Sample: 171906APR12		Lab ID: 60119146004	Collected: 04/06/12 17:19	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	88.8	ug/L	1.0	1		04/12/12 17:21	71-43-2	
Ethylbenzene	3.7	ug/L	1.0	1		04/12/12 17:21	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 17:21	108-88-3	
Xylene (Total)	4.4	ug/L	3.0	1		04/12/12 17:21	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	86-112	1		04/12/12 17:21	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		04/12/12 17:21	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	1		04/12/12 17:21	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	82-119	1		04/12/12 17:21	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 17:21		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 173006APR12		Lab ID: 60119146005	Collected: 04/06/12 17:30		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 17:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 17:36	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 17:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 17:36	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	86-112	1		04/12/12 17:36	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		04/12/12 17:36	2037-26-5	
4-Bromofluorobenzene (S)	99	%	87-113	1		04/12/12 17:36	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	82-119	1		04/12/12 17:36	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 17:36		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 145104APR12		Lab ID: 60119146006		Collected: 04/04/12 14:51		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 17:51	71-43-2	
Ethylbenzene		ND	ug/L	1.0	1		04/12/12 17:51	100-41-4	
Toluene		ND	ug/L	1.0	1		04/12/12 17:51	108-88-3	
Xylene (Total)		ND	ug/L	3.0	1		04/12/12 17:51	1330-20-7	
Surrogates									
Dibromofluoromethane (S)		100	%	86-112	1		04/12/12 17:51	1868-53-7	
Toluene-d8 (S)		96	%	90-110	1		04/12/12 17:51	2037-26-5	
4-Bromofluorobenzene (S)		98	%	87-113	1		04/12/12 17:51	460-00-4	
1,2-Dichloroethane-d4 (S)		103	%	82-119	1		04/12/12 17:51	17060-07-0	
Preservation pH		1.0		1.0	1		04/12/12 17:51		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 150704APR12		Lab ID: 60119146007	Collected: 04/04/12 15:07	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 18:06	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/12 18:06	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/12 18:06	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/12 18:06	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103 %		86-112	1		04/12/12 18:06	1868-53-7	
Toluene-d8 (S)	97 %		90-110	1		04/12/12 18:06	2037-26-5	
4-Bromofluorobenzene (S)	98 %		87-113	1		04/12/12 18:06	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		82-119	1		04/12/12 18:06	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 18:06		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 152404APR12		Lab ID: 60119146008		Collected: 04/04/12 15:24		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 18:21	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 18:21	100-41-4		
Toluene	ND	ug/L	1.0	1		04/12/12 18:21	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 18:21	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	101	%	86-112	1		04/12/12 18:21	1868-53-7		
Toluene-d8 (S)	98	%	90-110	1		04/12/12 18:21	2037-26-5		
4-Bromofluorobenzene (S)	99	%	87-113	1		04/12/12 18:21	460-00-4		
1,2-Dichloroethane-d4 (S)	103	%	82-119	1		04/12/12 18:21	17060-07-0		
Preservation pH	1.0		1.0	1		04/12/12 18:21			

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 153704APR12		Lab ID: 60119146009	Collected: 04/04/12 15:37	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 18:37	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 18:37	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/12 18:37	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 18:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	86-112	1		04/12/12 18:37	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		04/12/12 18:37	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-113	1		04/12/12 18:37	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	82-119	1		04/12/12 18:37	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/12 18:37		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 132602APR12		Lab ID: 60119146010		Collected: 04/02/12 13:26		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 18:52	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		04/12/12 18:52	100-41-4		
Toluene	ND	ug/L	1.0	1		04/12/12 18:52	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		04/12/12 18:52	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	103	%	86-112	1		04/12/12 18:52	1868-53-7		
Toluene-d8 (S)	96	%	90-110	1		04/12/12 18:52	2037-26-5		
4-Bromofluorobenzene (S)	103	%	87-113	1		04/12/12 18:52	460-00-4		
1,2-Dichloroethane-d4 (S)	106	%	82-119	1		04/12/12 18:52	17060-07-0		
Preservation pH	2.0		1.0	1		04/12/12 18:52			



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 135202APR12		Lab ID: 60119146011	Collected: 04/02/12 13:52		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		04/13/12 21:49	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/13/12 21:49	100-41-4	
Toluene	ND ug/L		1.0	1		04/13/12 21:49	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/13/12 21:49	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		86-112	1		04/13/12 21:49	1868-53-7	
Toluene-d8 (S)	112 %		90-110	1		04/13/12 21:49	2037-26-5	P2,S0
4-Bromofluorobenzene (S)	105 %		87-113	1		04/13/12 21:49	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		82-119	1		04/13/12 21:49	17060-07-0	
Preservation pH	1.0		1.0	1		04/13/12 21:49		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60119146

Sample: 133702APR12		Lab ID: 60119146012	Collected: 04/02/12 13:37	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	86.7	ug/L	20.0	20		04/12/12 19:22	71-43-2	
Ethylbenzene	799	ug/L	20.0	20		04/12/12 19:22	100-41-4	
Toluene	28.0	ug/L	20.0	20		04/12/12 19:22	108-88-3	
Xylene (Total)	4240	ug/L	60.0	20		04/12/12 19:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	86-112	20		04/12/12 19:22	1868-53-7	
Toluene-d8 (S)	103	%	90-110	20		04/12/12 19:22	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-113	20		04/12/12 19:22	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	82-119	20		04/12/12 19:22	17060-07-0	
Preservation pH	1.0		1.0	20		04/12/12 19:22		

QUALITY CONTROL DATA

Project: NM GW
Pace Project No.: 60119146

QC Batch: MSV/44894 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60119146001, 60119146002, 60119146004, 60119146005, 60119146006, 60119146007, 60119146008, 60119146009, 60119146010, 60119146012

METHOD BLANK: 980837 Matrix: Water
Associated Lab Samples: 60119146001, 60119146002, 60119146004, 60119146005, 60119146006, 60119146007, 60119146008, 60119146009, 60119146010, 60119146012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/12/12 15:35	
Ethylbenzene	ug/L	ND	1.0	04/12/12 15:35	
Toluene	ug/L	ND	1.0	04/12/12 15:35	
Xylene (Total)	ug/L	ND	3.0	04/12/12 15:35	
1,2-Dichloroethane-d4 (S)	%	100	82-119	04/12/12 15:35	
4-Bromofluorobenzene (S)	%	100	87-113	04/12/12 15:35	
Dibromofluoromethane (S)	%	97	86-112	04/12/12 15:35	
Toluene-d8 (S)	%	95	90-110	04/12/12 15:35	

LABORATORY CONTROL SAMPLE: 980838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.7	98	82-117	
Ethylbenzene	ug/L	20	18.4	92	79-121	
Toluene	ug/L	20	23.5	118	80-120	
Xylene (Total)	ug/L	60	55.5	93	79-120	
1,2-Dichloroethane-d4 (S)	%			99	82-119	
4-Bromofluorobenzene (S)	%			101	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			95	90-110	

QUALITY CONTROL DATA

Project: NM GW
Pace Project No.: 60119146

QC Batch: MSV/44932 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60119146003, 60119146011

METHOD BLANK: 981755 Matrix: Water

Associated Lab Samples: 60119146003, 60119146011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/13/12 21:17	
Ethylbenzene	ug/L	ND	1.0	04/13/12 21:17	
Toluene	ug/L	ND	1.0	04/13/12 21:17	
Xylene (Total)	ug/L	ND	3.0	04/13/12 21:17	
1,2-Dichloroethane-d4 (S)	%	100	82-119	04/13/12 21:17	
4-Bromofluorobenzene (S)	%	100	87-113	04/13/12 21:17	
Dibromofluoromethane (S)	%	98	86-112	04/13/12 21:17	
Toluene-d8 (S)	%	100	90-110	04/13/12 21:17	

LABORATORY CONTROL SAMPLE: 981756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.6	98	82-117	
Ethylbenzene	ug/L	20	20.4	102	79-121	
Toluene	ug/L	20	19.5	97	80-120	
Xylene (Total)	ug/L	60	60.4	101	79-120	
1,2-Dichloroethane-d4 (S)	%			98	82-119	
4-Bromofluorobenzene (S)	%			101	87-113	
Dibromofluoromethane (S)	%			100	86-112	
Toluene-d8 (S)	%			101	90-110	

QUALIFIERS

Project: NM GW
Pace Project No.: 60119146

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/44894

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

Batch: MSV/44932

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

ANALYTE QUALIFIERS

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

S0 Surrogate recovery outside laboratory control limits.



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW
Pace Project No.: 60119146

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60119146001	164306APR12	EPA 8260	MSV/44894		
60119146002	165406APR12	EPA 8260	MSV/44894		
60119146003	170706APR12	EPA 8260	MSV/44932		
60119146004	171906APR12	EPA 8260	MSV/44894		
60119146005	173006APR12	EPA 8260	MSV/44894		
60119146006	145104APR12	EPA 8260	MSV/44894		
60119146007	150704APR12	EPA 8260	MSV/44894		
60119146008	152404APR12	EPA 8260	MSV/44894		
60119146009	153704APR12	EPA 8260	MSV/44894		
60119146010	132602APR12	EPA 8260	MSV/44894		
60119146011	135202APR12	EPA 8260	MSV/44932		
60119146012	133702APR12	EPA 8260	MSV/44894		

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	MILE HIGH SERVICES	Report To:	MARK HARVEY	Attention:	
Address:	811 B. WEST APACHE	Copy To:		Company Name:	
	FARMINGTON, NM	Purchase Order No.:		Address:	
Email To:	mark@milehighservices.com	Project Name:	NM GW	Pace Quota Reference:	
Phone:	505-326-5422	Requested Due Date/TAT:		Pace Project Manager:	
Requested Due Date/TAT:		Project Number:	DOGE + DVS + FLR 40	Pace Profile #:	
Regulatory Agency		Requested Analysis Filtered (Y/N)		State: NM	
NPDES ☒ GROUND WATER ☐ DRINKING WATER					
UST ☐ RCRA ☐ OTHER ☐					
Site Location					

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION		DATE		ACCEPTED BY / AFFILIATION	DATE		TIME	SAMPLE CONDITIONS
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME	DATE	TIME		DATE	TIME		
1	164306 APR 12	DW	4-6-12 16:43		WTG		4-9-12 3:50	4-9-12	3:50	FEQ-EX		4-9-12			
2	165406 APR 12	WT	4-6-12 16:54									4-9-12			
3	170706 APR 12	WW	4-6-12 17:07									4-9-12			
4	171906 APR 12	P	4-6-12 17:19									4-9-12			
5	173006 APR 12	SL	4-6-12 17:30									4-9-12			
6	145104 APR 12	OL	4-4-12 14:51									4-9-12			
7	150704 APR 12	WP	4-4-12 15:07									4-9-12			
8	152404 APR 12	AR	4-4-12 15:24									4-9-12			
9	153704 APR 12	TS	4-4-12 15:37									4-9-12			
10	132602 APR 12	OT	4-2-12 13:26									4-9-12			
11	135202 APR 12		4-2-12 13:52									4-9-12			
12	145002 APR 12		4-2-12 14:50									4-9-12			

Section E Additional Comments		Section F Signatures	
M. HARVEY / MISE HIGH		M. HARVEY	
DATE: 4-9-12		DATE: 4-9-12	
TIME: 3:50		TIME: 3:50	
SIGNATURE OF SAMPLER: M. HARVEY		SIGNATURE OF SAMPLER: M. HARVEY	
PRINT NAME OF SAMPLER: M. HARVEY		PRINT NAME OF SAMPLER: M. HARVEY	
DATE SIGNED (MM/DD/YYYY): 4-9-12		DATE SIGNED (MM/DD/YYYY): 4-9-12	



Sample Condition Upon Receipt

Client Name: mileHigh

Project # 00119146

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other
Tracking #: 9001 10205172 Pace Shipping Label Used? ☐ Yes ☒ No
Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No

Optional
Proj. Due Date: 4/17/12
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: 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. Did not received 145002 APR 12
Correct containers used:	☒ Yes ☐ No ☐ N/A	9. but received 133702 APR 12 not on chain 4/2/12 13:37
-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:

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

Person Contacted: Date/Time:

Comments/ Resolution: Emailed mark Harvey about mismatched folders

Per Mark Harvey use bottle ID 4/11/12

Project Manager Review: AMW

Date: 4/12/12

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)

June 25, 2012

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

RE: Project: NM GW JIC & DOGE
Pace Project No.: 60123510

Dear Mr. Harvey:

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

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

Sincerely,



Heather Wilson

heather.wilson@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

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 JIC & DOGE
Pace Project No.: 60123510

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60123510001	115214JUN12	Water	06/12/12 11:52	06/16/12 08:45
60123510002	120014JUN12	Water	06/12/12 12:00	06/16/12 08:45
60123510003	121014JUN12	Water	06/12/12 12:10	06/16/12 08:45
60123510004	121914JUN12	Water	06/12/12 12:19	06/16/12 08:45
60123510005	123214JUN12	Water	06/12/12 12:32	06/16/12 08:45
60123510006	124414JUN12	Water	06/12/12 12:44	06/16/12 08:45
60123510007	132814JUN12	Water	06/12/12 13:28	06/16/12 08:45
60123510008	133414JUN12	Water	06/12/12 13:34	06/16/12 08:45
60123510009	134114JUN12	Water	06/12/12 13:41	06/16/12 08:45
60123510010	134914JUN12	Water	06/12/12 13:49	06/16/12 08:45
60123510011	141114JUN12	Water	06/12/12 14:11	06/16/12 08:45
60123510012	EDD	Water		06/18/12 10:18

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60123510001	115214JUN12	EPA 8260	JTK	9
60123510002	120014JUN12	EPA 8260	JTK	9
60123510003	121014JUN12	EPA 8260	JTK	9
60123510004	121914JUN12	EPA 8260	JTK	9
60123510005	123214JUN12	EPA 8260	JTK	9
60123510006	124414JUN12	EPA 8260	HNS	9
60123510007	132814JUN12	EPA 8260	HNS	9
60123510008	133414JUN12	EPA 8260	HNS	9
60123510009	134114JUN12	EPA 8260	RNS	9
60123510010	134914JUN12	EPA 8260	HNS	9
60123510011	141114JUN12	EPA 8260	HNS	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 115214JUN12		Lab ID: 60123510001	Collected: 06/12/12 11:52	Received: 06/16/12 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		06/18/12 21:05	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/18/12 21:05	100-41-4	
Toluene	ND ug/L		1.0	1		06/18/12 21:05	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/18/12 21:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		86-112	1		06/18/12 21:05	1868-53-7	
Toluene-d8 (S)	104 %		90-110	1		06/18/12 21:05	2037-26-5	
4-Bromofluorobenzene (S)	104 %		87-113	1		06/18/12 21:05	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		82-119	1		06/18/12 21:05	17060-07-0	
Preservation pH	7.0		1.0	1		06/18/12 21:05		pH



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 120014JUN12		Lab ID: 60123510002		Collected: 06/12/12 12:00		Received: 06/16/12 08:45		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260							
Benzene	ND ug/L	1.0	1			06/18/12 21:22	71-43-2		
Ethylbenzene	ND ug/L	1.0	1			06/18/12 21:22	100-41-4		
Toluene	ND ug/L	1.0	1			06/18/12 21:22	108-88-3		
Xylene (Total)	ND ug/L	3.0	1			06/18/12 21:22	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	99 %	86-112	1			06/18/12 21:22	1868-53-7		
Toluene-d8 (S)	101 %	90-110	1			06/18/12 21:22	2037-26-5		
4-Bromofluorobenzene (S)	103 %	87-113	1			06/18/12 21:22	460-00-4		
1,2-Dichloroethane-d4 (S)	96 %	82-119	1			06/18/12 21:22	17060-07-0		
Preservation pH	7.0	1.0	1			06/18/12 21:22			pH



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 121014JUN12		Lab ID: 60123510003	Collected: 06/12/12 12:10	Received: 06/16/12 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	2.5 ug/L		1.0	1		06/18/12 21:39	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/18/12 21:39	100-41-4	
Toluene	ND ug/L		1.0	1		06/18/12 21:39	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/18/12 21:39	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100 %		86-112	1		06/18/12 21:39	1868-53-7	
Toluene-d8 (S)	102 %		90-110	1		06/18/12 21:39	2037-26-5	
4-Bromofluorobenzene (S)	103 %		87-113	1		06/18/12 21:39	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		82-119	1		06/18/12 21:39	17060-07-0	
Preservation pH	1.0		1.0	1		06/18/12 21:39		



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 121914JUN12		Lab ID: 60123510004		Collected: 06/12/12 12:19		Received: 06/16/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV UST, Water									
Analytical Method: EPA 8260									
Benzene	2700	ug/L	50.0	50		06/19/12 19:54	71-43-2		
Ethylbenzene	203	ug/L	10.0	10		06/18/12 21:56	100-41-4		
Toluene	4990	ug/L	50.0	50		06/19/12 19:54	108-88-3		
Xylene (Total)	2890	ug/L	30.0	10		06/18/12 21:56	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	98	%	86-112	10		06/18/12 21:56	1868-53-7		
Toluene-d8 (S)	98	%	90-110	10		06/18/12 21:56	2037-26-5		
4-Bromofluorobenzene (S)	105	%	87-113	10		06/18/12 21:56	460-00-4		
1,2-Dichloroethane-d4 (S)	94	%	82-119	10		06/18/12 21:56	17060-07-0		
Preservation pH	1.0		1.0	10		06/18/12 21:56			



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 123214JUN12		Lab ID: 60123510005	Collected: 06/12/12 12:32		Received: 06/16/12 08:45	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	13000	ug/L	200	200		06/18/12 22:13	71-43-2	
Ethylbenzene	406	ug/L	200	200		06/18/12 22:13	100-41-4	
Toluene	1010	ug/L	200	200		06/18/12 22:13	108-88-3	
Xylene (Total)	1560	ug/L	600	200		06/18/12 22:13	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	110	%	86-112	200		06/18/12 22:13	1868-53-7	
Toluene-d8 (S)	105	%	90-110	200		06/18/12 22:13	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	200		06/18/12 22:13	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	82-119	200		06/18/12 22:13	17060-07-0	
Preservation pH	8.0		1.0	200		06/18/12 22:13		pH

ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 124414JUN12		Lab ID: 60123510006	Collected: 06/12/12 12:44	Received: 06/16/12 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/20/12 14:08	71-43-2	
Ethylbenzene	2.1	ug/L	1.0	1		06/20/12 14:08	100-41-4	
Toluene	ND	ug/L	1.0	1		06/20/12 14:08	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/20/12 14:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%	86-112	1		06/20/12 14:08	1868-53-7	
Toluene-d8 (S)	94	%	90-110	1		06/20/12 14:08	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-113	1		06/20/12 14:08	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	82-119	1		06/20/12 14:08	17060-07-0	
Preservation pH	7.0		1.0	1		06/20/12 14:08		pH



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 132814JUN12		Lab ID: 60123510007	Collected: 06/12/12 13:28		Received: 06/16/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/20/12 14:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/20/12 14:25	100-41-4	
Toluene	ND	ug/L	1.0	1		06/20/12 14:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/20/12 14:25	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	86-112	1		06/20/12 14:25	1868-53-7	
Toluene-d8 (S)	94	%	90-110	1		06/20/12 14:25	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113	1		06/20/12 14:25	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	82-119	1		06/20/12 14:25	17060-07-0	
Preservation pH	7.0		1.0	1		06/20/12 14:25		pH



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 133414JUN12		Lab ID: 60123510008	Collected: 06/12/12 13:34		Received: 06/16/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/20/12 14:41	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/20/12 14:41	100-41-4	
Toluene	ND	ug/L	1.0	1		06/20/12 14:41	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/20/12 14:41	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	86-112	1		06/20/12 14:41	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		06/20/12 14:41	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113	1		06/20/12 14:41	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	82-119	1		06/20/12 14:41	17060-07-0	
Preservation pH	7.0		1.0	1		06/20/12 14:41		pH



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 134114JUN12		Lab ID: 60123510009	Collected: 06/12/12 13:41		Received: 06/16/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	4.8 ug/L		1.0	1		06/21/12 22:03	71-43-2	
Ethylbenzene	122 ug/L		1.0	1		06/21/12 22:03	100-41-4	
Toluene	13.4 ug/L		1.0	1		06/21/12 22:03	108-88-3	
Xylene (Total)	344 ug/L		3.0	1		06/21/12 22:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		86-112	1		06/21/12 22:03	1868-53-7	
Toluene-d8 (S)	100 %		90-110	1		06/21/12 22:03	2037-26-5	
4-Bromofluorobenzene (S)	101 %		87-113	1		06/21/12 22:03	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		82-119	1		06/21/12 22:03	17060-07-0	
Preservation pH	1.0		1.0	1		06/21/12 22:03		



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 134914JUN12		Lab ID: 60123510010		Collected: 06/12/12 13:49		Received: 06/16/12 08:45		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV UST, Water		Analytical Method: EPA 8260							
Benzene	22.0	ug/L	1.0	1		06/20/12 15:13	71-43-2		
Ethylbenzene	ND	ug/L	1.0	1		06/20/12 15:13	100-41-4		
Toluene	4.1	ug/L	1.0	1		06/20/12 15:13	108-88-3		
Xylene (Total)	ND	ug/L	3.0	1		06/20/12 15:13	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	103	%	86-112	1		06/20/12 15:13	1868-53-7		
Toluene-d8 (S)	95	%	90-110	1		06/20/12 15:13	2037-26-5		
4-Bromofluorobenzene (S)	104	%	87-113	1		06/20/12 15:13	460-00-4		
1,2-Dichloroethane-d4 (S)	99	%	82-119	1		06/20/12 15:13	17060-07-0		
Preservation pH	1.0		1.0	1		06/20/12 15:13			



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ANALYTICAL RESULTS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

Sample: 141114JUN12		Lab ID: 60123510011	Collected: 06/12/12 14:11		Received: 06/16/12 08:45	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/20/12 15:30	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/20/12 15:30	100-41-4	
Toluene	ND	ug/L	1.0	1		06/20/12 15:30	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/20/12 15:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	86-112	1		06/20/12 15:30	1868-53-7	
Toluene-d8 (S)	98	%	90-110	1		06/20/12 15:30	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-113	1		06/20/12 15:30	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	82-119	1		06/20/12 15:30	17060-07-0	
Preservation pH	7.0		1.0	1		06/20/12 15:30		pH



QUALITY CONTROL DATA

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

QC Batch: MSV/46444 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60123510001, 60123510002, 60123510003, 60123510004, 60123510005

METHOD BLANK: 1015987

Matrix: Water

Associated Lab Samples: 60123510001, 60123510002, 60123510003, 60123510004, 60123510005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/18/12 20:48	
Ethylbenzene	ug/L	ND	1.0	06/18/12 20:48	
Toluene	ug/L	ND	1.0	06/18/12 20:48	
Xylene (Total)	ug/L	ND	3.0	06/18/12 20:48	
1,2-Dichloroethane-d4 (S)	%	95	82-119	06/18/12 20:48	
4-Bromofluorobenzene (S)	%	103	87-113	06/18/12 20:48	
Dibromofluoromethane (S)	%	110	86-112	06/18/12 20:48	
Toluene-d8 (S)	%	99	90-110	06/18/12 20:48	

LABORATORY CONTROL SAMPLE: 1015988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.5	97	82-117	
Ethylbenzene	ug/L	20	20.1	101	79-121	
Toluene	ug/L	20	20.6	103	80-120	
Xylene (Total)	ug/L	60	59.0	98	79-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			103	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			102	90-110	



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QUALITY CONTROL DATA

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

QC Batch: MSV/46450

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60123510006, 60123510007, 60123510008, 60123510010, 60123510011

METHOD BLANK: 1016008

Matrix: Water

Associated Lab Samples: 60123510006, 60123510007, 60123510008, 60123510010, 60123510011

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

LABORATORY CONTROL SAMPLE: 1016009

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

QUALITY CONTROL DATA

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

QC Batch: MSV/46486

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60123510004

METHOD BLANK: 1016544

Matrix: Water

Associated Lab Samples: 60123510004

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

LABORATORY CONTROL SAMPLE: 1016545

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.6	93	82-117	
Toluene	ug/L	20	20.2	101	80-120	
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	



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QUALITY CONTROL DATA

Project: NM GW JIC & DOGE
Pace Project No.: 60123510

QC Batch:	MSV/46544	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60123510009		

METHOD BLANK: 1017866 Matrix: Water

Associated Lab Samples: 60123510009

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

LABORATORY CONTROL SAMPLE: 1017867

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

QUALIFIERS

Project: NM GW JIC & DOGE

Pace Project No.: 60123510

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/46444

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

Batch: MSV/46450

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

Batch: MSV/46486

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

Batch: MSV/46544

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

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 JIC & DOGE
Pace Project No.: 60123510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60123510001	115214JUN12	EPA 8260	MSV/46444		
60123510002	120014JUN12	EPA 8260	MSV/46444		
60123510003	121014JUN12	EPA 8260	MSV/46444		
60123510004	121914JUN12	EPA 8260	MSV/46444		
60123510004	121914JUN12	EPA 8260	MSV/46486		
60123510005	123214JUN12	EPA 8260	MSV/46444		
60123510006	124414JUN12	EPA 8260	MSV/46450		
60123510007	132814JUN12	EPA 8260	MSV/46450		
60123510008	133414JUN12	EPA 8260	MSV/46450		
60123510009	134114JUN12	EPA 8260	MSV/46544		
60123510010	134914JUN12	EPA 8260	MSV/46450		
60123510011	141114JUN12	EPA 8260	MSV/46450		



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	MILC-HIGH SERVICES	Report To:	MARK HARVEY	Attention:	
Address:	8110 WEST APACHE	Copy To:		Company Name:	
	PARMUNICATED, NM 87401			Address:	
Email To:		Purchase Order No.:		Face Quote Reference:	
Phone:		Project Name:	NM GW	Price Project Manager:	
Fax:	855-336-5422	Project Number:	JIC + DOGE	Face Profile #:	
Requested Due Date/TAT:					

Page: 1 of 1
 1372652
 REGULATORY AGENCY
☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER
 Site Location
 STATE: NM

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED			SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION			ACCEPTED BY / AFFILIATION			Requested Analysis Filtered (Y/N)			Pace Project No./ Lab I.D.	
			COMPOSITE START	COMPOSITE END/GRAB	DATE			TIME	DATE	TIME	DATE	TIME	DATE	TIME	Y/N	Analysis Test		Residual Chlorine (Y/N)
1	115214 JUN 12	2064H			6-12	11:52	G										JTC147-1	
2	120014 JUN 12				"	12:00											JTC147-2	
3	121014 JUN 12				"	12:10											JTC147-8	
4	121914 JUN 12				"	12:19											JTC147-3	
5	123214 JUN 12				"	12:32											JTC147-6	
6	124414 JUN 12	1084H			"	12:44											JTC147-9	
7	132814 JUN 12				"	13:28											D066-2	
8	133414 JUN 12				"	13:34											D066-5V6	
9	134114 JUN 12	2084H			"	13:41											D066-3	
10	134914 JUN 12				"	13:49											D066-7	
11	141114 JUN 12				"	14:11											D066-9	
12																		

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***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 # 60123510

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

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

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

Thermometer Used: T-19 / T-194

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

Cooler Temperature: 11.3

Temperature should be above freezing to 6°C

Comments:

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

Chain of Custody present:	☒ Yes ☐ No ☐ N/A	1. Out of temp, not enough ice to
Chain of Custody filled out:	☒ Yes ☐ No ☐ N/A	2. keep it cold.
Chain of Custody relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler name & signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples arrived within holding time:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time analyses (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time requested:	☐ Yes ☒ No ☐ N/A	7.
Sufficient volume:	☒ Yes ☐ No ☐ N/A	8.
Correct containers used:	☒ Yes ☐ No ☐ N/A	9.
-Pace containers used:	☒ Yes ☐ No ☐ N/A	
Containers intact:	☒ Yes ☐ No ☐ N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐ Yes ☐ No ☒ N/A	11.
Filtered volume received for dissolved tests	☐ Yes ☐ No ☒ N/A	12.
Sample labels match COC:	☒ Yes ☐ No ☐ N/A	13.
-Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	☐ Yes ☐ No ☒ N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐ Yes ☐ No ☒ N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	☒ Yes ☐ No	Initial when completed _____ Lot # of added preservative _____
Trip Blank present:	☐ Yes ☒ No ☐ N/A	15.
Pace Trip Blank lot # (if purchased):		
Headspace in VOA vials (>6mm):	☐ Yes ☒ No ☐ N/A	16.
Project sampled in USDA Regulated Area:	☐ Yes ☐ No ☒ N/A	17. List State: <u>Q</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 & muw 6/18/12
Per mark Harvey analyze analyze samples & muw 6/18/12

Project Manager Review: & muw

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 DOGE & FLR40
Pace Project No.: 60130506

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 DOGE & FLR40
Pace Project No.: 60130506

Kansas Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60130506001	155327SEP12	Water	09/27/12 15:53	10/04/12 08:20
60130506002	160027SEP12	Water	09/27/12 16:00	10/04/12 08:20
60130506003	160627SEP12	Water	09/27/12 16:06	10/04/12 08:20
60130506004	162227SEP12	Water	09/27/12 16:22	10/04/12 08:20
60130506005	164127SEP12	Water	09/27/12 16:41	10/04/12 08:20
60130506006	123502OCT12	Water	10/02/12 12:35	10/04/12 08:20
60130506007	125602OCT12	Water	10/02/12 12:56	10/04/12 08:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW DOGE & FLR40
Pace Project No.: 60130506

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60130506001	155327SEP12	EPA 8260	JTK	9
60130506002	160027SEP12	EPA 8260	JTK	9
60130506003	160627SEP12	EPA 8260	JTK	9
60130506004	162227SEP12	EPA 8260	JTK	9
60130506005	164127SEP12	EPA 8260	JTK	9
60130506006	123502OCT12	EPA 8260	JTK	9
60130506007	125602OCT12	EPA 8260	JTK	9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40
Pace Project No.: 60130506

Sample: 155327SEP12		Lab ID: 60130506001	Collected: 09/27/12 15:53		Received: 10/04/12 08:20		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/06/12 09:22	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 09:22	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 09:22	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 09:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	80-120	1		10/06/12 09:22	1868-53-7	
Toluene-d8 (S)	104	%	80-120	1		10/06/12 09:22	2037-26-5	
4-Bromofluorobenzene (S)	99	%	80-120	1		10/06/12 09:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120	1		10/06/12 09:22	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 09:22		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 160027SEP12		Lab ID: 60130506002	Collected: 09/27/12 16:00		Received: 10/04/12 08:20	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/06/12 09:38	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 09:38	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 09:38	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 09:38	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	1		10/06/12 09:38	1868-53-7	
Toluene-d8 (S)	96 %		80-120	1		10/06/12 09:38	2037-26-5	
4-Bromofluorobenzene (S)	108 %		80-120	1		10/06/12 09:38	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		10/06/12 09:38	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 09:38		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 160627SEP12		Lab ID: 60130506003	Collected: 09/27/12 16:06		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	11.7	ug/L	5.0	5		10/06/12 09:53	71-43-2	
Ethylbenzene	248	ug/L	5.0	5		10/06/12 09:53	100-41-4	
Toluene	12.0	ug/L	5.0	5		10/06/12 09:53	108-88-3	
Xylene (Total)	867	ug/L	15.0	5		10/06/12 09:53	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	94	%	80-120	5		10/06/12 09:53	1868-53-7	
Toluene-d8 (S)	102	%	80-120	5		10/06/12 09:53	2037-26-5	
4-Bromofluorobenzene (S)	95	%	80-120	5		10/06/12 09:53	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120	5		10/06/12 09:53	17060-07-0	
Preservation pH	1.0		1.0	5		10/06/12 09:53		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 162227SEP12		Lab ID: 60130506004	Collected: 09/27/12 16:22		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	37.7	ug/L	1.0	1		10/06/12 10:09	71-43-2	
Ethylbenzene	2.5	ug/L	1.0	1		10/06/12 10:09	100-41-4	
Toluene	21.0	ug/L	1.0	1		10/06/12 10:09	108-88-3	
Xylene (Total)	11.8	ug/L	3.0	1		10/06/12 10:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	80-120	1		10/06/12 10:09	1868-53-7	
Toluene-d8 (S)	104	%	80-120	1		10/06/12 10:09	2037-26-5	
4-Bromofluorobenzene (S)	93	%	80-120	1		10/06/12 10:09	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120	1		10/06/12 10:09	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 10:09		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 164127SEP12		Lab ID: 60130506005	Collected: 09/27/12 16:41	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 10:24	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/06/12 10:24	100-41-4	
Toluene	ND	ug/L	1.0	1		10/06/12 10:24	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/06/12 10:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	1		10/06/12 10:24	1868-53-7	
Toluene-d8 (S)	102 %		80-120	1		10/06/12 10:24	2037-26-5	
4-Bromofluorobenzene (S)	95 %		80-120	1		10/06/12 10:24	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-120	1		10/06/12 10:24	17060-07-0	
Preservation pH	1.0		1.0	1		10/06/12 10:24		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 123502OCT12		Lab ID: 60130506006	Collected: 10/02/12 12:35	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	71.6	ug/L	5.0	5		10/08/12 00:59	71-43-2	
Ethylbenzene	881	ug/L	5.0	5		10/08/12 00:59	100-41-4	
Toluene	ND	ug/L	5.0	5		10/08/12 00:59	108-88-3	
Xylene (Total)	4320	ug/L	15.0	5		10/08/12 00:59	1330-20-7	ES
Surrogates								
Dibromofluoromethane (S)	94	%	80-120	5		10/08/12 00:59	1868-53-7	P2
Toluene-d8 (S)	219	%	80-120	5		10/08/12 00:59	2037-26-5	S2
4-Bromofluorobenzene (S)	178	%	80-120	5		10/08/12 00:59	460-00-4	S2
1,2-Dichloroethane-d4 (S)	96	%	80-120	5		10/08/12 00:59	17060-07-0	
Preservation pH	1.0		1.0	5		10/08/12 00:59		



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ANALYTICAL RESULTS

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Sample: 125602OCT12		Lab ID: 60130506007	Collected: 10/02/12 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	5.0	5		10/08/12 01:14	71-43-2	
Ethylbenzene	ND	ug/L	5.0	5		10/08/12 01:14	100-41-4	
Toluene	ND	ug/L	5.0	5		10/08/12 01:14	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		10/08/12 01:14	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103 %		80-120	5		10/08/12 01:14	1868-53-7	D3
Toluene-d8 (S)	104 %		80-120	5		10/08/12 01:14	2037-26-5	
4-Bromofluorobenzene (S)	99 %		80-120	5		10/08/12 01:14	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-120	5		10/08/12 01:14	17060-07-0	
Preservation pH	1.0		1.0	5		10/08/12 01:14		

QUALITY CONTROL DATA

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

QC Batch: MSV/49039

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60130506001, 60130506002, 60130506003, 60130506004, 60130506005

METHOD BLANK: 1074538

Matrix: Water

Associated Lab Samples: 60130506001, 60130506002, 60130506003, 60130506004, 60130506005

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

LABORATORY CONTROL SAMPLE: 1074539

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



QUALITY CONTROL DATA

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

QC Batch: MSV/49051

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60130506006, 60130506007

METHOD BLANK: 1075346

Matrix: Water

Associated Lab Samples: 60130506006, 60130506007

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

LABORATORY CONTROL SAMPLE: 1075347

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

QUALIFIERS

Project: NM GW DOGE & FLR40
Pace Project No.: 60130506

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PRL - Pace Reporting Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/49039

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

Batch: MSV/49051

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

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
ES The reported result is estimated because one or more of the constituent results are qualified as such.
P2 Re-extraction or re-analysis could not be performed due to insufficient sample amount.
S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW DOGE & FLR40

Pace Project No.: 60130506

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60130506001	155327SEP12	EPA 8260	MSV/49039		
60130506002	160027SEP12	EPA 8260	MSV/49039		
60130506003	160627SEP12	EPA 8260	MSV/49039		
60130506004	162227SEP12	EPA 8260	MSV/49039		
60130506005	164127SEP12	EPA 8260	MSV/49039		
60130506006	123502OCT12	EPA 8260	MSV/49051		
60130506007	125602OCT12	EPA 8260	MSV/49051		



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

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	M. HARVEY	10-3-12	10:30	FED-EX	9-3	10:30							
				<i>[Signature]</i>	10/4	0820				3.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	M. HARVEY
SIGNATURE of SAMPLER:	<i>[Signature]</i>
DATE Signed (MM/DD/YYYY):	10-3-12



Client Name: mile High Project # 100130804

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

Tracking #: 960092844088 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 2PK

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: 10/1/12

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), Phonetics	☒ Yes ☐ No	Initial when completed
Trip Blank present:	☐ Yes ☒ No ☐ N/A	15.
Pace Trip Blank lot # (if purchased):		Lot # of added preservative
Headspace in VOA vials (>6mm):	☐ Yes ☒ No ☐ N/A	16.
Project sampled in USDA Regulated Area:	☐ Yes ☐ No ☒ N/A	17. List State:

Client Notification/ Resolution:

Copy COC to Client?

☒ Y ☐ N

Field Data Required?

☐ Y ☐ N

Person Contacted:

Date/Time:

Comments/ Resolution:

Project Manager Review: cmw

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 21, 2012

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

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

Dear Mr. Harvey:

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

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

Sincerely,

Heather Wilson

heather.wilson@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NM GW
Pace Project No.: 60135460

Kansas Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NM GW
Pace Project No.: 60135460

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NM GW
Pace Project No.: 60135460

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

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

Sample: 144207DEC12		Lab ID: 60135460002	Collected: 12/07/12 14:42	Received: 12/14/12 08:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/20/12 13:47	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 13:47	100-41-4	
Toluene	ND	ug/L	1.0	1		12/20/12 13:47	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/20/12 13:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102 %		80-120	1		12/20/12 13:47	1868-53-7	
Toluene-d8 (S)	99 %		80-120	1		12/20/12 13:47	2037-26-5	
4-Bromofluorobenzene (S)	99 %		80-120	1		12/20/12 13:47	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-120	1		12/20/12 13:47	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 13:47		

ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60135460

Sample: 144607DEC12		Lab ID: 60135460003	Collected: 12/07/12 14:46	Received: 12/14/12 08:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/20/12 14:02	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/20/12 14:02	100-41-4	
Toluene	ND	ug/L	1.0	1		12/20/12 14:02	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/20/12 14:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97 %		80-120	1		12/20/12 14:02	1868-53-7	
Toluene-d8 (S)	99 %		80-120	1		12/20/12 14:02	2037-26-5	
4-Bromofluorobenzene (S)	102 %		80-120	1		12/20/12 14:02	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		12/20/12 14:02	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 14:02		



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

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

ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60135460

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

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

Sample: 150607DEC12		Lab ID: 60135460006		Collected: 12/07/12 15:06		Received: 12/14/12 08:30		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260							
Benzene	64.0	ug/L	1.0	1			12/20/12 14:47	71-43-2	
Ethylbenzene	3.4	ug/L	1.0	1			12/20/12 14:47	100-41-4	
Toluene	12.6	ug/L	1.0	1			12/20/12 14:47	108-88-3	
Xylene (Total)	18.2	ug/L	3.0	1			12/20/12 14:47	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	97	%	80-120	1			12/20/12 14:47	1868-53-7	
Toluene-d8 (S)	100	%	80-120	1			12/20/12 14:47	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	1			12/20/12 14:47	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1			12/20/12 14:47	17060-07-0	
Preservation pH	1.0		1.0	1			12/20/12 14:47		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

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



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

Sample: 125106DEC12		Lab ID: 60135460008	Collected: 12/06/12 12:51	Received: 12/14/12 08:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	80.4	ug/L	5.0	5		12/20/12 15:47	71-43-2	
Ethylbenzene	952	ug/L	5.0	5		12/20/12 15:47	100-41-4	
Toluene	ND	ug/L	5.0	5		12/20/12 15:47	108-88-3	
Xylene (Total)	3730	ug/L	150	50		12/20/12 11:17	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	80-120	5		12/20/12 15:47	1868-53-7	
Toluene-d8 (S)	106	%	80-120	5		12/20/12 15:47	2037-26-5	
4-Bromofluorobenzene (S)	110	%	80-120	5		12/20/12 15:47	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120	5		12/20/12 15:47	17060-07-0	
Preservation pH	1.0		1.0	5		12/20/12 15:47		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

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



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ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

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

ANALYTICAL RESULTS

Project: NM GW

Pace Project No.: 60135460

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

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

Sample: 135706DEC12		Lab ID: 60135460012	Collected: 12/06/12 13:57	Received: 12/14/12 08:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	35.4 ug/L		1.0	1		12/20/12 12:18	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		12/20/12 12:18	100-41-4	
Toluene	2.7 ug/L		1.0	1		12/20/12 12:18	108-88-3	
Xylene (Total)	30.6 ug/L		3.0	1		12/20/12 12:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98 %		80-120	1		12/20/12 12:18	1868-53-7	
Toluene-d8 (S)	101 %		80-120	1		12/20/12 12:18	2037-26-5	
4-Bromofluorobenzene (S)	102 %		80-120	1		12/20/12 12:18	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		80-120	1		12/20/12 12:18	17060-07-0	
Preservation pH	1.0		1.0	1		12/20/12 12:18		

ANALYTICAL RESULTS

Project: NM GW
Pace Project No.: 60135460

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

QUALITY CONTROL DATA

Project: NM GW
Pace Project No.: 60135460

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

METHOD BLANK: 1116780 Matrix: Water
Associated Lab Samples: 60135460002, 60135460003, 60135460004, 60135460005, 60135460006, 60135460007, 60135460008, 60135460009, 60135460010, 60135460011, 60135460012, 60135460013

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

LABORATORY CONTROL SAMPLE: 1116781

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

QUALIFIERS

Project: NM GW

Pace Project No.: 60135460

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/50893

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NM GW
Pace Project No.: 60135460

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



WO#: 60135460



60135460

Client Name: Mile HighCourier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐Tracking #: 6022 4483 7980Pace Shipping Label Used? Yes ☐ No ☒Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐Packing Material: Bubble Wrap ☒ Bubble Bags ☐ Foam ☐ None ☐ Other ☐Thermometer Used: T-191 / T-194Type of Ice: Wet Blue ☐ None ☐ Samples received on ice, cooling process has begun.
(circle one)Cooler Temperature: 1.1

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 12/14/12 lhp

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

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: APF for lhpDate: 12/14/12

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	MILE HIGH	Report To:	M. HANVELY	Attention:	
Address:		Copy To:		Company Name:	
Email To:				Address:	
Phone:	505-402-1958	Purchase Order No.:		Pace Quote Reference:	
Fax:		Project Name:	NM GW	Pace Project Manager:	
Requested Due Date/TAT:		Project Number:		Pace Profile #:	
Page: / of /		1564133		REGULATORY AGENCY	
☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER		Site Location		STATE: NM	

[illegible]

SAMPLER NAME AND SIGNATURE				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: M. Hansen SIGNATURE of SAMPLER: <i>M. Hansen</i>							
M. Hansen / M. Hansen	12-13-12	4:00p	FED-EX	12/14/12	630	1.1	Y



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

March 12, 2013

Julie Linn

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 385-1096

FAX

RE: Dogie East Pit

OrderNo.: 1303303

Dear Julie Linn:

Hall Environmental Analysis Laboratory received 8 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

Analytical Report

Lab Order 1303303

Date Reported: 3/12/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** LTE**Client Sample ID:** MW-1**Project:** Dogie East Pit**Collection Date:** 3/6/2013 9:55:00 AM**Lab ID:** 1303303-001**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 5:54:59 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 5:54:59 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 5:54:59 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 5:54:59 PM
Surr: 4-Bromofluorobenzene	89.6	69.4-129	P	%REC	1	3/7/2013 5:54:59 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 1303303

Date Reported: 3/12/2013

CLIENT: LTE

Client Sample ID: MW-2

Project: Dogie East Pit

Collection Date: 3/6/2013 10:45:00 AM

Lab ID: 1303303-002

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 6:25:05 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 6:25:05 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 6:25:05 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 6:25:05 PM
Surr: 4-Bromofluorobenzene	88.5	69.4-129	P	%REC	1	3/7/2013 6:25:05 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 1303303

Date Reported: 3/12/2013

CLIENT: LTE

Client Sample ID: SVE-4"

Project: Dogie East Pit

Collection Date: 3/6/2013 11:30:00 AM

Lab ID: 1303303-003

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 10:26:03 PM
Toluene	ND	1.0	P	µg/L	1	3/7/2013 10:26:03 PM
Ethylbenzene	ND	1.0	P	µg/L	1	3/7/2013 10:26:03 PM
Xylenes, Total	ND	2.0	P	µg/L	1	3/7/2013 10:26:03 PM
Surr: 4-Bromofluorobenzene	89.1	69.4-129	P	%REC	1	3/7/2013 10:26:03 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 1303303

Date Reported: 3/12/2013

CLIENT: LTE

Client Sample ID: MW-3

Project: Dogie East Pit

Collection Date: 3/6/2013 12:10:00 PM

Lab ID: 1303303-004

Matrix: AQUEOUS

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

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	5.0		µg/L	5	3/8/2013 4:19:01 PM
Toluene	6.1	5.0		µg/L	5	3/8/2013 4:19:01 PM
Ethylbenzene	21	5.0		µg/L	5	3/8/2013 4:19:01 PM
Xylenes, Total	88	10		µg/L	5	3/8/2013 4:19:01 PM
Surr: 4-Bromofluorobenzene	98.7	69.4-129		%REC	5	3/8/2013 4:19:01 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

Analytical Report

Lab Order 1303303

Date Reported: 3/12/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** LTE**Client Sample ID:** MW-5**Project:** Dogie East Pit**Collection Date:** 3/6/2013 12:45:00 PM**Lab ID:** 1303303-005**Matrix:** AQUEOUS**Received Date:** 3/7/2013 9:56:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	5.0		µg/L	5	3/8/2013 4:49:09 PM
Toluene	ND	5.0		µg/L	5	3/8/2013 4:49:09 PM
Ethylbenzene	77	5.0		µg/L	5	3/8/2013 4:49:09 PM
Xylenes, Total	290	10		µg/L	5	3/8/2013 4:49:09 PM
Surr: 4-Bromofluorobenzene	110	69.4-129		%REC	5	3/8/2013 4:49:09 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

Analytical Report

Lab Order 1303303

Date Reported: 3/12/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** LTE**Client Sample ID:** MW-8**Project:** Dogie East Pit**Collection Date:** 3/6/2013 1:15:00 PM**Lab ID:** 1303303-006**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 11:56:07 PM
Toluene	ND	2.0	P	µg/L	2	3/7/2013 11:56:07 PM
Ethylbenzene	ND	2.0	P	µg/L	2	3/7/2013 11:56:07 PM
Xylenes, Total	ND	4.0	P	µg/L	2	3/7/2013 11:56:07 PM
Surr: 4-Bromofluorobenzene	89.3	69.4-129	P	%REC	2	3/7/2013 11:56:07 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 1303303

Date Reported: 3/12/2013

CLIENT: LTE

Client Sample ID: MW-7

Project: Dogie East Pit

Collection Date: 3/6/2013 2:00:00 PM

Lab ID: 1303303-007

Matrix: AQUEOUS

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

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	110	50		µg/L	50	3/11/2013 12:18:21 PM
Toluene	770	50		µg/L	50	3/11/2013 12:18:21 PM
Ethylbenzene	67	50		µg/L	50	3/11/2013 12:18:21 PM
Xylenes, Total	1200	100		µg/L	50	3/11/2013 12:18:21 PM
Surr: 4-Bromofluorobenzene	98.0	69.4-129		%REC	50	3/11/2013 12:18:21 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 1303303

Date Reported: 3/12/2013

CLIENT: LTE

Client Sample ID: MW-9

Project: Dogie East Pit

Collection Date: 3/6/2013 3:00:00 PM

Lab ID: 1303303-008

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	3/8/2013 12:56:30 AM
Toluene	ND	2.0	P	µg/L	2	3/8/2013 12:56:30 AM
Ethylbenzene	ND	2.0	P	µg/L	2	3/8/2013 12:56:30 AM
Xylenes, Total	ND	4.0	P	µg/L	2	3/8/2013 12:56:30 AM
Surr: 4-Bromofluorobenzene	89.7	69.4-129	P	%REC	2	3/8/2013 12:56:30 AM

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1303303

12-Mar-13

Client: LTE
Project: Dogie East Pit

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								
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			
Surr: 4-Bromofluorobenzene	20		20.00		101	69.4	129			

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R9094	RunNo:	9094					
Prep Date:		Analysis Date:	3/8/2013	SeqNo:	259025	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.2	69.4	129			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R9094	RunNo:	9094					
Prep Date:		Analysis Date:	3/8/2013	SeqNo:	259028	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	66	2.0	60.00	0	109	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	69.4	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1303303

12-Mar-13

Client: LTE
Project: Dogie East Pit

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R9109	RunNo:	9109					
Prep Date:		Analysis Date:	3/11/2013	SeqNo:	259376	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.5	69.4	129			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R9109	RunNo:	9109					
Prep Date:		Analysis Date:	3/11/2013	SeqNo:	259379	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.8	80	120			
Toluene	20	1.0	20.00	0	98.4	80	120			
Ethylbenzene	20	1.0	20.00	0	98.7	80	120			
Xylenes, Total	60	2.0	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		102	69.4	129			

Qualifiers:

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



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

Sample Log-In Check List

Client Name: LTE

Work Order Number: 1303303

Received by/date: *KG* *03/07/13*

Logged By: Lindsay Mangin

3/7/2013 9:56:00 AM

Completed By: Lindsay Mangin

3/7/2013 12:54:17 PM

Reviewed By: *IO*

03/07/2013

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ (<2 or >12 unless noted)
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted? ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

☒ Standard ☐ Rush

Project Name:

Doyle East Pit

Project Manager: Julie

Sampler: Brooke Herbo
 On ice: ☒ Yes ☐ No
 Sample Temperature: 17.0

Container Type and #	Preservative Type	HEALING No.
		13033602

V _{OX} / 3 Cool	
-001	
-002	
-003	
-004	
-005	
-006	
-007	
-008	

Received by:	Date	Time
<i>Christine Wasta</i>	<i>3/6/13</i>	<i>1765</i>
Received by:	Date	Time

Received by: AR Date 03/07/13 Time 0950

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX B
MARCH 2013 FIELD NOTES



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>9:55</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>15.45</u>	TD of Well	<u>20.54</u>
Time	<u>9:30</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>5.09 * 0.16 = 0.81 * 3 = 2.44</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
9:38	0.25	0.25	7.67	12.4	3.28	clear with black silt
	0.25	0.50	7.68	11.8	3.28	clearish-black, minor silt
	0.25	0.75	7.69	11.9	3.21	no change
	0.25	1.00	7.72	12.0	3.29	darker, more silt
	0.50	1.50	7.70	11.8	3.29	more silt, roots
	0.25	1.75	7.71	12.0	3.26	no change
	0.25	2.00	7.72	11.9	3.26	darker, more silt
	0.25	2.25	7.75	12.0	3.29	bailing down
9:50	0.25	2.50	7.75	12.0	3.28	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>10:45</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-2</u>	Sampler	<u>Brooke Herb</u>
Analyses	<u>BTEX 8021</u>		
Matrix	<u>Groundwater</u>	Laboratory	<u>Hall Environmental</u>
Turn Around Time	<u>Standard</u>	Shipping Method	<u>Hand delivery</u>
Depth to Water	<u>15.50</u>	TD of Well	<u>20.68</u>
Time	<u>10:20</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>5.18 * 0.16 = 0.83 * 3 = 2.49</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
10:25	0.25	0.25	7.42	13.3	3.37	yellow, no odor, no sheen
	0.25	0.50	7.50	13.1	3.37	minor silt
	0.25	0.75	7.53	13.1	3.34	yellowish gray
	0.25	1.00	7.54	13.0	3.29	no change
	0.50	1.50	7.57	12.9	3.38	no change
	0.25	1.75	7.70	13.0	3.30	gray with black particles
	0.25	2.00	7.69	13.0	3.32	no change
	0.25	2.25	7.72	12.9	3.31	no change
10:45	0.25	2.50	7.71	12.9	3.31	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>12:10</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>15.40</u>	TD of Well	<u>20.78</u>
Time	<u>11:40</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>$5.38 * 0.16 = 0.86 * 3 = 2.58$</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
11:50	0.25	0.25	7.75	13.5	3.62	clearish-black with black particles, very strong HC odor
	0.25	0.50	7.50	13.2	3.61	jet black, minor sheen
	0.25	0.75	7.52	13.2	3.56	no change
	0.25	1.00	7.54	13.3	3.55	no change
	0.75	1.75	7.60	12.8	3.55	no change
	0.25	2.00	7.65	12.8	3.55	no change
	0.25	2.25	7.60	12.9	3.56	no change
	0.25	2.50	7.65	12.9	3.56	no change
12:10	0.25	2.75	7.66	12.9	3.54	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: _____

Brooke Herb

Date: _____

3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>NA</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-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>NA</u>	TD of Well	<u>NA</u>
Time	<u>10:00</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 (ms)	Comments

Comments: This well could not be located; presume it has been destroyed.

Describe Deviations from SOP: _____

Signature: _____

Brooke Herb

Date: _____

3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>12:45</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-5</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>14.6</u>	TD of Well	<u>18.51</u>
Time	<u>12:20</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>$3.1 * 0.16 = 0.63 * 3 = 1.88$</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
12:30	0.25	0.25	7.92	13.1	3.78	clear
	0.25	0.50	7.94	12.8	3.80	clearish-gray, HC odor
	0.25	0.75	7.96	12.9	3.76	very minor sheen
	0.25	1.00	7.97	12.8	3.85	no change
	0.25	1.25	8.02	12.5	3.87	no change
	0.25	1.50	8.02	12.5	3.85	darker gray
	0.25	1.75	8.02	12.5	3.85	darker, minor silt
12:45	0.25	2.00	8.02	12.4	3.86	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</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>16.68</u>	TD of Well	<u>NM</u>
Time	<u>14:20</u>	Depth to Product	<u>15.95</u>
Vol. of H2O to purge	<u>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</u>		
Method of Purging	<u>NA</u>		
Method of Sampling	<u>NA</u>		

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

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

Describe Deviations from SOP: _____

Signature: Brooke Herb **Date:** 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie Compressor Station</u>	Client	<u>Williams Four Corners, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>14:00</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>12.61</u>	TD of Well	<u>21.00</u>
Time	<u>13:30</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>8.39 * 0.16 = 1.34 * 3 = 4.03</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
13:40	0.25	0.25	7.77	13.3	4.14	gray, minor silt, HC odor
	0.25	0.50	7.80	13.2	4.05	darker black
	0.25	0.75	7.83	13.2	4.11	no change
	0.25	1.00	7.83	12.8	4.14	no change
	1.00	2.00	7.77	12.8	4.19	black, some silt, HC odor, minor sheen
	1.00	3.00	7.81	12.9	4.20	no change
	0.25	3.25	7.85	12.8	4.18	no change
	0.25	3.50	7.84	12.9	4.16	no change
	0.25	3.75	7.85	12.9	4.14	no change
	0.25	4.00	7.83	12.9	4.12	no change
14:00	0.25	4.25	7.84	13.0	4.14	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>13:15</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>11.88</u>	TD of Well	<u>21.85</u>
Time	<u>12:55</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>9.97 * 0.16 = 1.59 * 3 = 4.79</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	Volume Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
13:10	0.016	0.016	8.24	14.7	4.28	brownish-clear, minor silt and debris

Comments Obstruction in well. Cannot get 2" bailer down well. Was able to fit little bailer down the well. Little bailer only filling half-way, was able to collect enough groundwater for 3 VOAs.

Describe Deviations from SOP: See Above

Signature: Brooke Herb **Date:** 3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>15:00</u>	Project #	<u>034013001</u>
Sample ID	<u>MW-9</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>8.01</u>	TD of Well	<u>14.71</u>
Time	<u>14:30</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>6.70* 0.16 = 1.07* 3 = 3.22</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
14:40	0.25	0.25	7.68	11.6	5.43	clear, no odor, no sheen
	0.25	0.50	7.71	11.3	5.42	minor brown tint, minor silt
	0.25	0.75	7.75	11.0	5.40	more silt
	0.25	1.00	7.83	10.6	5.47	brown, sitly
	1.00	2.00	7.84	11.2	5.38	cloudier
	0.25	2.25	7.85	11.1	5.48	no change
	0.25	2.50	7.85	11.3	5.46	no change
	0.25	2.75	7.84	11.0	5.43	no change
	0.25	3.00	7.84	11.0	5.43	no change
15:00	0.25	3.25	7.83	11.0	5.41	no change

Comments:

PVC well casing; no surface completion. No J-plug present, well was not locked.
PVC casing open to the atmosphere.

Describe Deviations from SOP:

Signature: _____

Brooke Herb

Date: _____

3/6/2013



Water Sample Collection Form

Sample Location	<u>Dogie East Pit</u>	Client	<u>Williams Field Services, LLC</u>
Sample Date	<u>3/6/2013</u>	Project Name	<u>Historical Groundwater</u>
Sample Time	<u>11:30</u>	Project #	<u>034013001</u>
Sample ID	<u>SVE-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>15.14</u>	TD of Well	<u>23.16</u>
Time	<u>10:55</u>	Depth to Product	<u>NA</u>
Vol. of H2O to purge	<u>8.02* 0.65 = 5.213* 3 = 15.64</u> <i>(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols</i>		
Method of Purging	<u>PVC Bailer</u>		
Method of Sampling	<u>PVC Bailer</u>		

Time	Vol. Removed (gallons)	Total Vol H2O removed (gallons)	pH (standard units)	Temp. (°C)	Conductivity (ms)	Comments
11:00	1.00	1.00	7.72	12.4	2.63	clear with black particles
	1.00	2.00	7.65	12.3	2.64	light brown, minor silt
	1.00	3.00	7.63	12.0	2.61	more silt
	1.00	4.00	7.65	12.0	2.65	brown very silty
	4.00	8.00	7.67	12.1	2.64	no change
	4.00	12.00	7.69	12.5	2.64	very dark gray, very silty
	1.00	13.00	7.70	12.2	2.62	bailing down
	1.00	14.00	7.75	12.3	2.64	cloudy dark brownish-gray
	1.00	15.00	7.74	12.4	2.63	no change
11:30	1.00	16.00	7.75	12.4	2.64	no change

Comments: _____

Describe Deviations from SOP: _____

Signature: Brooke Herb Date: 3/6/2013

