3R – 315

2014 AGWMR

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One Williams Center
P.O. Box 645
Tulsa, OK 74101-0645

April 10, 2014

Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Online Submission of 2014 Annual Groundwater Reports

Dear Mr. Von Gonten,

Williams Field Services (Williams) is electronically submitting the attached 2014 annual groundwater monitoring reports covering the period from January 1, 2014 to December 31, 2014 for the following sites:

- Davis #1 (3RP-311-0);
- Dogie East Pit (3RP-312-0);
- Florance #40 (3RP-315-0);
- Florance #47X (3RP-317-0);
- Ice Canyon Drip (3RP-322-0);
- Jicarilla Contract #147-6 (3RP-325-0); and
- Pritchard #2A (3RP-339-0).

If you have any questions regarding these reports please contact me at 918-573-4371 or Danny.Reutlinger@Williams.com or Ashley Ager with LT Environmental at 970-385-1096 or aager@ltenv.com.

Sincerely,
Williams Field Services

Danny L. Reutlinger

Danny Reutlinger
Senior Project Manager

cc:
Attachments (7)

2014 ANNUAL GROUNDWATER REPORT

FLORANCE #40
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER 3RP-315-0

APRIL 2015

Prepared for:

WILLIAMS FIELD SERVICES, LLC
TULSA, OKLAHOMA

2014 ANNUAL GROUNDWATER REPORT

FLORANCE #40
ADMINISTRATIVE/ENVIRONMENTAL ORDER NUMBER
3RP-315-0

APRIL 2015

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

TABLE OF CONTENTS

EXECUTIVE SUMMARY ii

1.0 INTRODUCTION 1

1.1 LOCATION 1
1.2 HISTORY 1

2.0 METHODOLOGY 2

2.1 WATER AND PRODUCT LEVEL MEASUREMENTS 2
2.2 GROUNDWATER SAMPLING 2
2.3 GROUNDWATER CONTOUR MAPS 3

3.0 RESULTS 3

4.0 CONCLUSIONS 3

5.0 RECOMMENDATIONS 3

FIGURES

FIGURE 1 SITE LOCATION MAP
FIGURE 2 GROUNDWATER ELEVATION & ANALYTICAL RESULTS (FEBRUARY 2014)
FIGURE 3 GROUNDWATER ELEVATION & ANALYTICAL RESULTS (JUNE 2014)
FIGURE 4 GROUNDWATER ELEVATION & ANALYTICAL RESULTS (SEPTEMBER 2014)
FIGURE 5 GROUNDWATER ELEVATION & ANALYTICAL RESULTS (DECEMBER 2014)

TABLES

TABLE 1 GROUNDWATER ELEVATION SUMMARY
TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS

APPENDICES

APPENDIX A 2014 QUARTERLY FIELD NOTES
APPENDIX B ANALYTICAL LABORATORY REPORTS

EXECUTIVE SUMMARY

Groundwater at the Florance #40 (Administrative/Environmental Order Number 3RP-315-0) (Site) is impacted by petroleum hydrocarbons due to releases from two separate source areas: a former earthen separator pit and a former dehydrator pit and. BP America Production Company (BP) is responsible for impacts from the former earthen separator pit and Williams Field Services, LLC (Williams) retains remedial responsibility for the former dehydrator pit. In 1996, Gas Company of New Mexico (GCNM), the former operator of the dehydrator pit, removed impacted soil and installed four groundwater monitoring wells between 1996 and 1997 (MW-1, MW-2, MW-3, and MW-4) to assess groundwater quality. Downgradient monitoring wells MW-5 and MW-7 were installed in 2000 and a damaged MW-2 was replaced by MW-6. Williams purchased former GCNM facilities from Public Service Company of New Mexico (PNM) in 2000 and assumed environmental liability for the former dehydrator pit, which includes water quality in groundwater monitoring wells MW-3, MW-4, MW-6, and MW-7. BP monitors groundwater quality in monitoring wells AMOCO, MW-1, and MW-5. Although MW-5 is in BP's area of responsibility, Williams utilizes the monitoring well as an upgradient monitoring point for groundwater elevations.

Since 2000, Williams has monitored groundwater quality and conducted free-phrase product removal in their monitoring wells. During 2014, Williams retained LT Environmental Inc. (LTE) to complete annual sampling requirements. Between January 2014 and December 2014, LTE conducted four groundwater monitoring events (March 2014, June 2014, September 2014, and December 2014).

Overall depth to groundwater at the Site has decreased to elevations that are below the total depths of most of the groundwater monitoring wells. Groundwater monitoring wells MW-3, MW-5, MW-6, and MW-7 were not sampled during 2014 due to insufficient water volume in the monitoring wells. Groundwater monitoring well MW-4 was sampled quarterly and benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations were compliant with the New Mexico Water Quality Control Commission groundwater standards in samples collected each quarter. Depth to groundwater data collected in 2014 indicated the groundwater flow direction was south/southwest.

Williams proposes to continue to monitor depth to groundwater and investigate presence of free-phrase product in the monitoring wells quarterly. When possible, groundwater samples will be collected from MW-3, MW-4, MW-5, MW-6, and MW-7 and analyzed for BTEX.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) on behalf of Williams Field Services, LLC (Williams) has prepared this report detailing groundwater monitoring completed from January 2014 through December 2014 at the Florance #40 (Administrative/Environmental Order Number 3RP-315-0) (Site). The scope of work for this project was continued monitoring of petroleum hydrocarbon impacts to groundwater as a result of operations of a former separator pit. LTE conducted quarterly groundwater monitoring to measure depth to groundwater, investigate phase-separated hydrocarbons (PSH), and collect groundwater samples, when possible, for laboratory analysis.

1.1 LOCATION

The Site is located at latitude 36.799827 and longitude -107.678573 in Unit G, Section 21, Township 30 North, Range 8 West. The Site is near Gobernador Canyon in the San Juan Basin in San Juan County, New Mexico (Figure 1).

1.2 HISTORY

There are two separate source areas at the Site: a former Amoco Production Company earthen separator pit that is now the responsibility of BP America Production Company (BP) and a former Public Service Company of New Mexico (PNM) dehydrator pit that is now the responsibility of Williams (Figure 2). According to a letter dated December 30, 1997, from the New Mexico Oil Conservation Division (NMOCD) to Amoco, Amoco was responsible for remediation of soil and groundwater contamination downgradient of the former earthen separator pit, and PNM was responsible for groundwater contamination downgradient of the former dehydrator pit.

In 1996, 646 cubic yards of petroleum hydrocarbon impacted soil was removed from the former dehydrator pit by PNM. The floor of the excavation was 17 feet below ground surface (bgs) and field screening indicated petroleum hydrocarbon impacted soil remained at this depth. A test hole (later converted to groundwater monitoring well MW-2) was installed 24 feet south of the former dehydrator pit. Impacts were observed from 20 feet bgs to the total depth of 50 feet bgs in soil, and groundwater sampled from the monitoring well contained 11,507 micrograms per liter (µg/L) of benzene, toluene, ethylbenzene, and total xylenes (BTEX). Groundwater monitoring well MW-1 was installed upgradient (north) of the source area and impacted soil was observed between 40 feet and 55 feet bgs.

In 1997, groundwater monitoring wells MW-3 and MW-4 were installed downgradient of the former dehydrator pit. In August 1997, the casing for groundwater monitoring well MW-2 collapsed and the well was replaced with groundwater monitoring well MW-6 in March 2000. At that same time, upgradient monitoring well MW-5 and downgradient monitoring well MW-7 were installed.

In 1998, Blagg Engineering installed groundwater monitoring well AMOCO in or adjacent to the former earthen separator pit and took over monitoring of existing monitoring wells MW-1 and MW-5.

Williams purchased the former Gas Company of New Mexico (GCNM) facilities from PNM in 2000 and assumed environmental liability for the former dehydrator pit. Between 2000 and 2012, Williams monitored groundwater. Groundwater monitoring wells MW-3 and MW-6 contained PSH at some time between 1997 and 2002; it is not known if PSH was recovered from groundwater monitoring wells during this time. A fully saturated product recovery sock was discovered in groundwater monitoring well MW-1 during the February 2013 site visit, indicating product recovery had been occurring in this well. Records regarding these activities can be found in previous groundwater reports submitted to the NMOCD. Monitoring wells AMOCO and MW-1 were sampled by Williams in February 2013 during a site re-evaluation. However, since the monitoring wells are in BP's area of responsibility, they have not been sampled since.

2.0 METHODOLOGY

Groundwater monitoring activities were conducted at the Site in March 2014, June 2014, September 2014, and December 2014. LTE measured depth to water and investigated presence of PSH in groundwater monitoring wells MW-3, MW-4, MW-6, and MW-7, as well as upgradient BP monitoring wells AMOCO, MW-1, and MW-5. Groundwater monitoring wells MW-3, MW-6, and MW-7 did not contain sufficient groundwater to sample during the 2014 sampling events. Groundwater monitoring well MW-4 was sampled quarterly for laboratory analysis.

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 PSH 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 1.

2.2 GROUNDWATER SAMPLING

Prior to sampling groundwater, depth to groundwater and total depth of groundwater monitoring well MW-4 was measured with a Keck oil/water interface probe. The volume of water in the monitoring well was calculated, and a minimum of three well casing volumes of water was purged from the monitoring well using a new disposable polyvinyl chloride (PVC) bailer. As water was removed from the monitoring well, pH, electric conductivity, and temperature were measured. Monitoring well MW-4 was purged until these properties stabilized, indicating the purge water was representative of aquifer conditions, or until the well was purged dry. Stabilization was defined as three consecutive stable readings for each water property (plus or minus (±) 0.4 units for pH, ±10 percent for electric conductivity, and ±2 degrees (º) Celsius for temperature). Purge water was containerized and disposed of at a facility designated by Williams. A copy of the field notes are presented in Appendix A.

Once the 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. HEAL analyzed the samples for BTEX according to United States Environmental Protection Agency Method 8021.

2.3 GROUNDWATER CONTOUR MAPS

LTE used top-of-casing well elevations and depth to groundwater measurements to calculate groundwater elevations and draft groundwater contours. The contours were used to determine groundwater flow direction for the March, June, September, and December 2014 quarterly monitoring events (Figures 2 through 5).

3.0 RESULTS

Monitoring wells MW-3, MW-6, and MW-7 were dry during 2014. Using water elevations determined from the remaining monitoring wells on site, groundwater flow direction was determined to be generally south-southwest. Measurable PSH was not detected in any monitoring wells in 2014. Groundwater elevations are included in Table 1.

Laboratory analytical results indicated BTEX concentrations in groundwater monitoring well MW-4 were compliant with the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards every quarter during 2014. Table 2 summarizes the groundwater analytical results and copies of the laboratory reports are included as Appendix B.

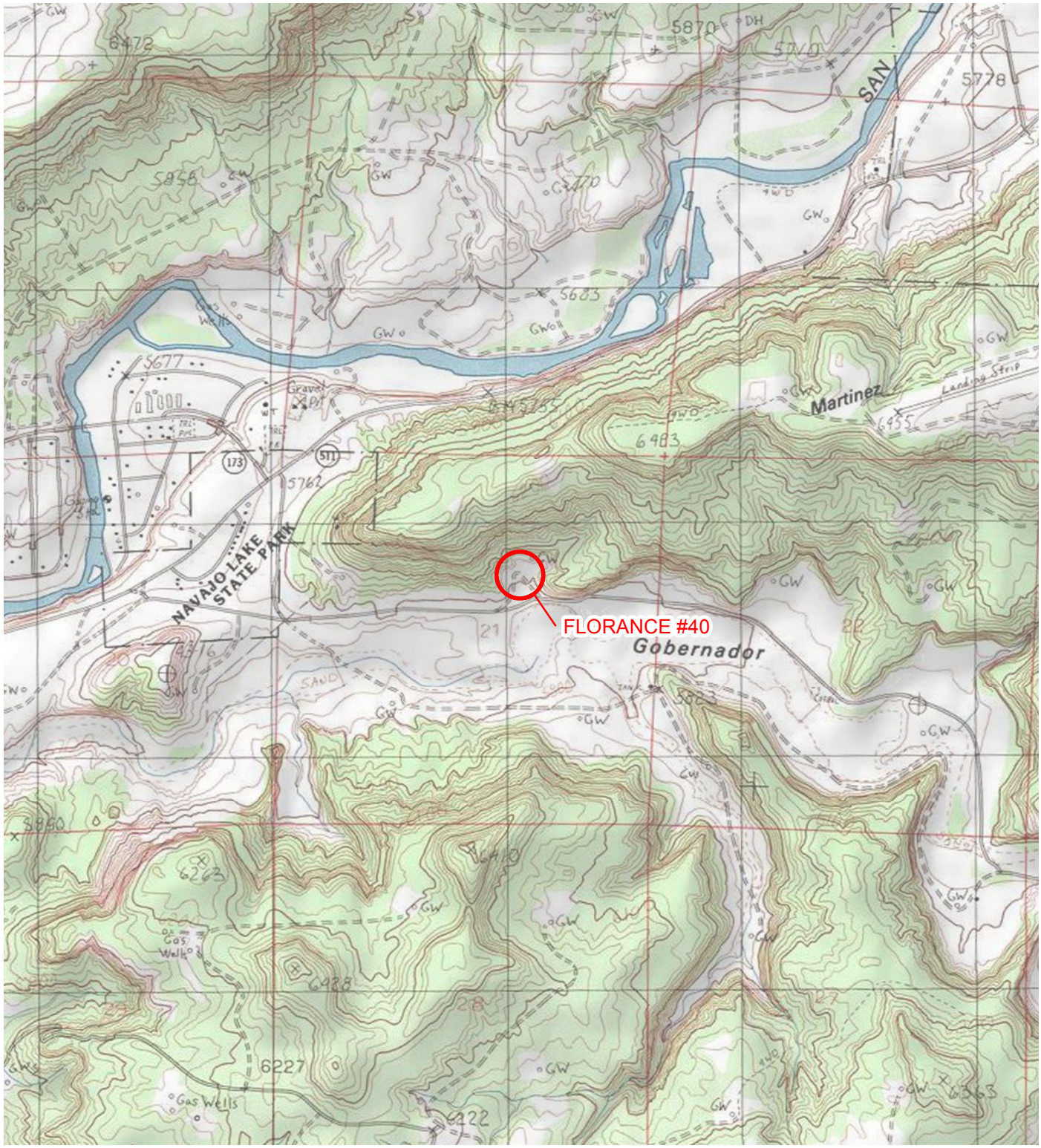
4.0 CONCLUSIONS

Groundwater in monitoring wells AMOCO and MW-1 are impacted, but are outside of Williams' area of responsibility. Within Williams' area of responsibility, the overall depth to groundwater at the Site has dropped to elevations that are below the total depths of most monitoring wells in the groundwater monitoring well network. BTEX concentrations in monitoring well MW-4 were compliant with NMWQCC groundwater standards all four quarters of 2014.

5.0 RECOMMENDATIONS

Williams proposes to continue to conduct quarterly monitoring for the presence of PSH and depth to groundwater in the seven monitoring wells including AMOCO, MW-1, and MW-5. When possible, quarterly groundwater samples will be collected from MW-3, MW-4, MW-6, and MW-7.

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/BING MAPS

0 2,000 4,000

Feet

N

FIGURE 1
SITE LOCATION MAP
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO

WILLIAMS FIELD SERVICES, LLC

P:\Williams Four Corners\GIS\MXD\034013001_FLORANCE#40\034013001_FLORANCE_#40_FIG01_SL.mxd

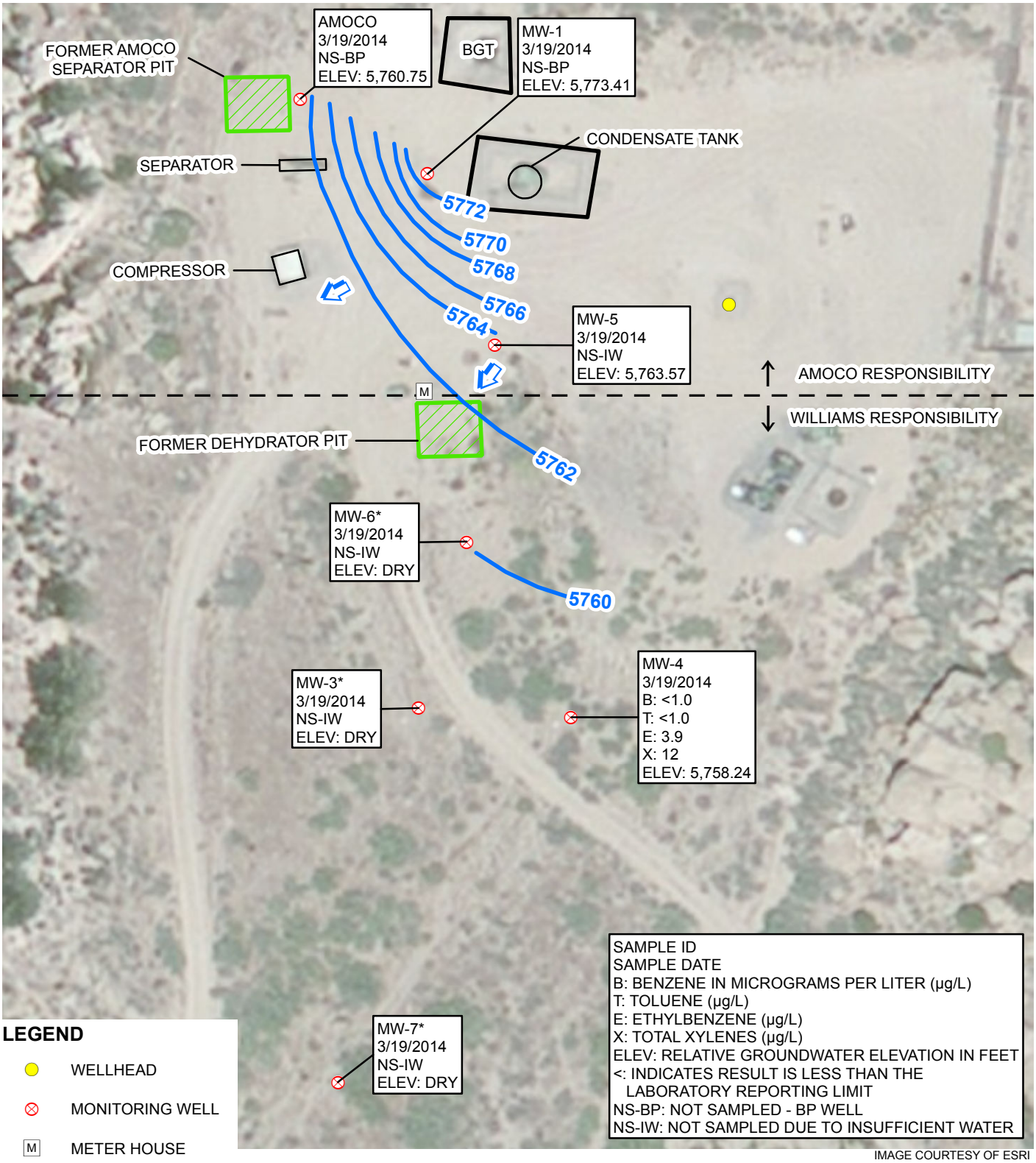


FIGURE 2
GROUNDWATER ELEVATION & ANALYTICAL RESULTS (MARCH 2014)
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FIELD SERVICES, LLC

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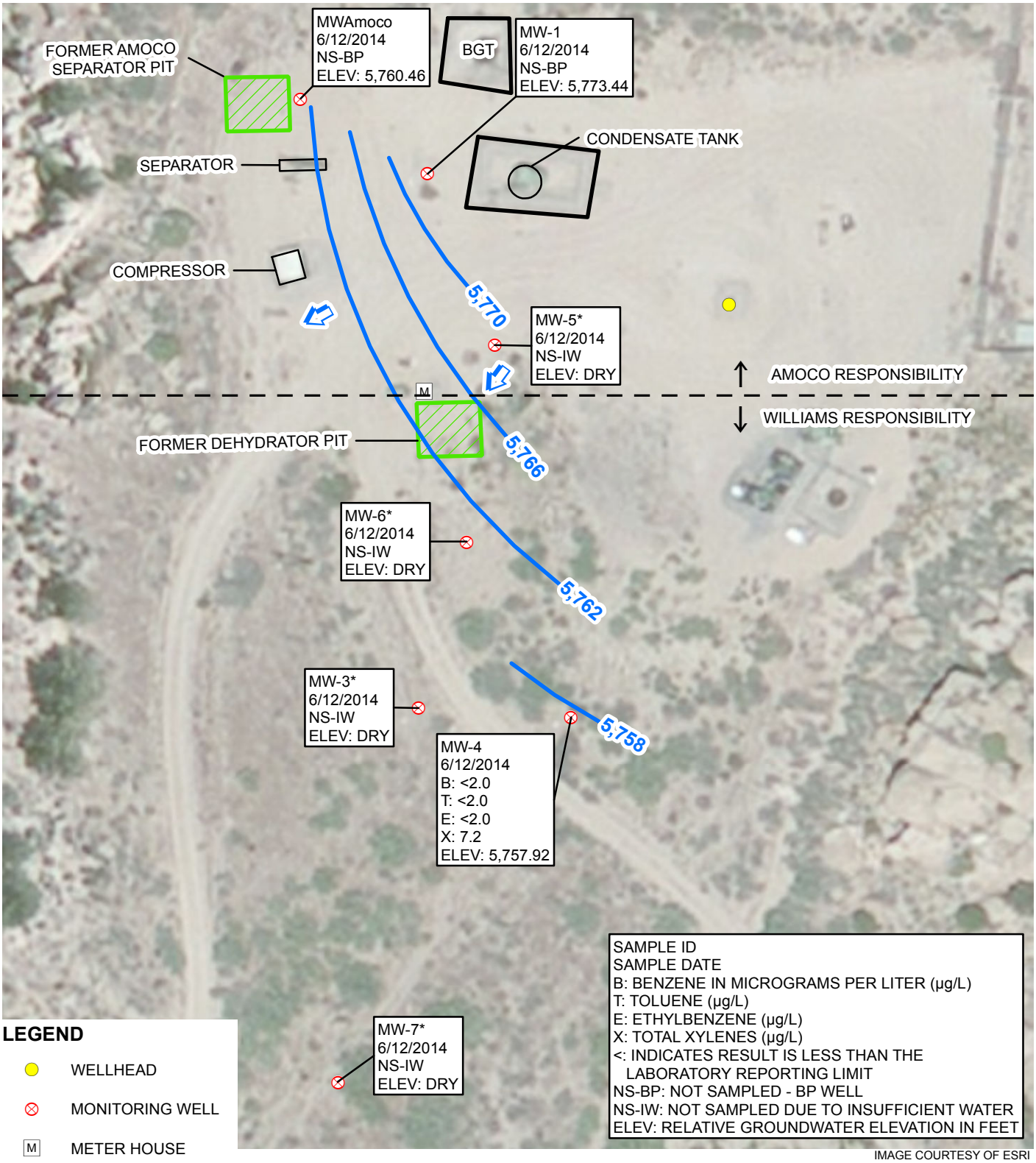

FIGURE 3
GROUNDWATER ELEVATION & ANALYTICAL RESULTS (JUNE 2014)
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FIELD SERVICES, LLC

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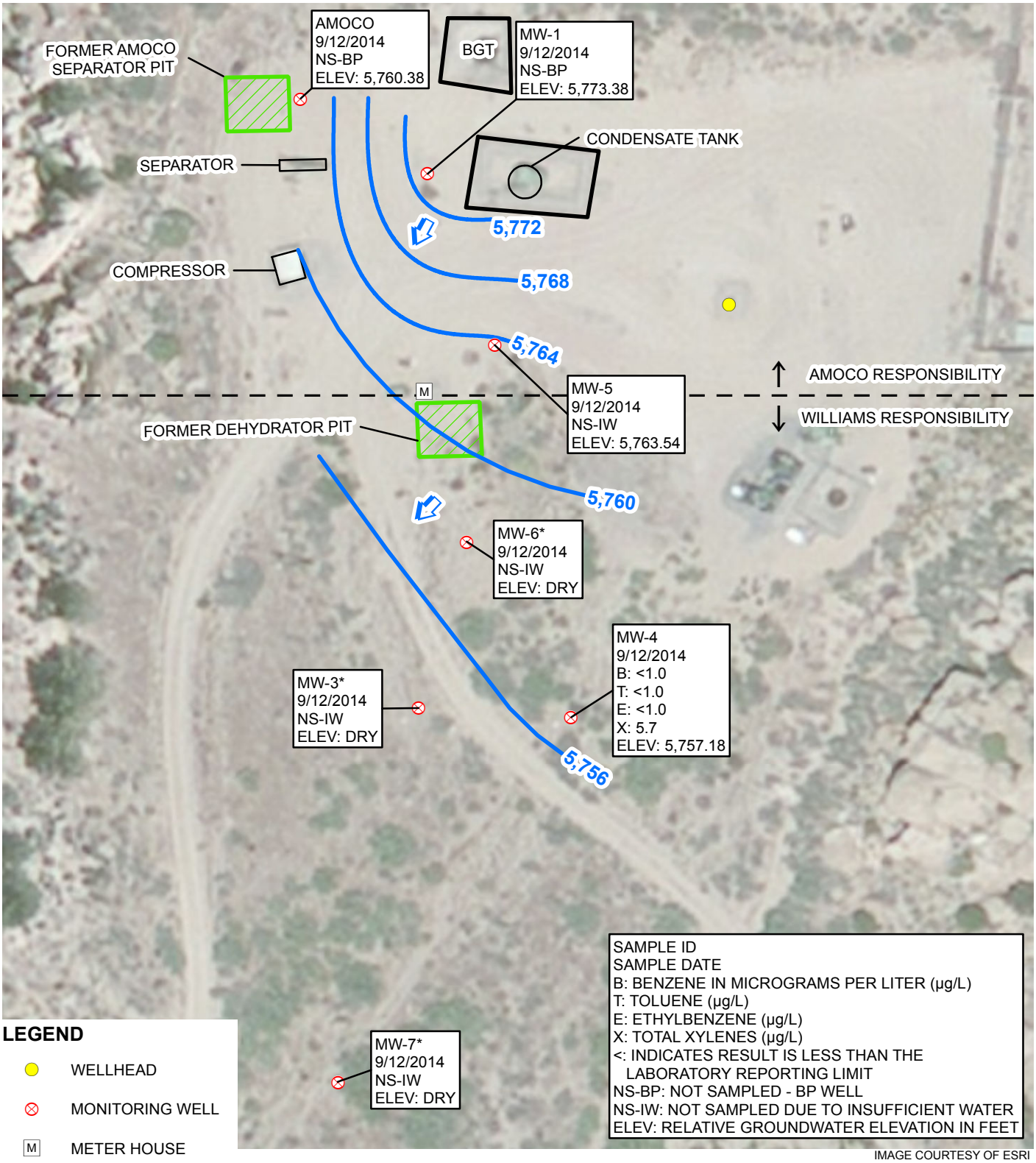

FIGURE 4
GROUNDWATER ELEVATION & ANALYTICAL RESULTS (SEPTEMBER 2014)
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FIELD SERVICES, LLC

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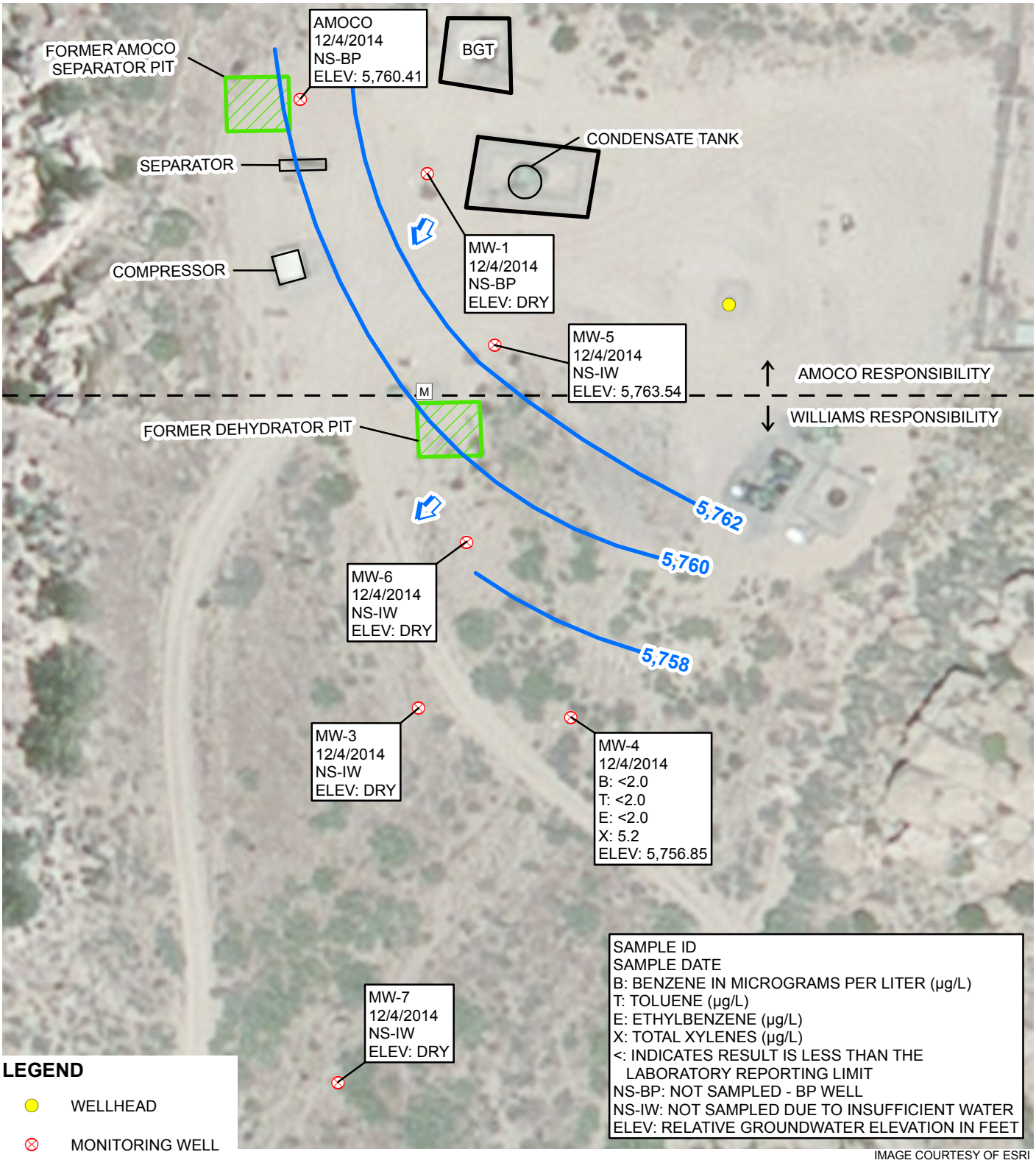

FIGURE 5
GROUNDWATER ELEVATION &
ANALYTICAL RESULTS (DECEMBER 2014)
FLORANCE #40
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FIELD SERVICES, LLC

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TABLES

TABLE 1

GROUNDWATER ELEVATION SUMMARY
FLORANCE #40
WILLIAMS FIELD SERVICES, LLC

Well ID	Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
AMOCO	1/3/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	4/2/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	6/13/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	10/2/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	12/6/2012	6,234.87	UNK	UNK	UNK	UNK
AMOCO	2/28/2013	6,234.87	61.27	NP	NP	6,173.60
AMOCO	6/24/2013	5,822.11*	61.63	NP	NP	5,760.48
AMOCO	9/26/2013	5,822.11	61.64	NP	NP	5,760.47
AMOCO	12/6/2013	5,822.11	61.31	NP	NP	5,760.80
AMOCO	3/19/2014	5,822.11	61.36	NP	NP	5,760.75
AMOCO	6/12/2014	5,822.11	61.65	NP	NP	5,760.46
AMOCO	9/12/2014	5,822.11	61.73	NP	NP	5,760.38
AMOCO	12/4/2014	5,822.11	61.70	NP	NP	5,760.41
MW-1	1/3/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	4/2/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	6/13/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	10/2/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1	12/6/2012	6,231.60	UNK	UNK	UNK	UNK
MW-1**	2/28/2013	6,231.60	45.92	45.90	0.02	6,185.70
MW-1**	6/24/2013	5,818.84*	46.00	NP	NP	5,772.84
MW-1**	9/26/2013	5,818.84	45.35	NP	NP	5,773.49
MW-1**	12/6/2013	5,818.84	45.42	45.40	0.02	5,773.44
MW-1	3/19/2014	5,818.84	45.43	NP	NP	5,773.41
MW-1	6/12/2014	5,818.84	45.40	NP	NP	5,773.44
MW-1	9/12/2014	5,818.84	45.46	NP	NP	5,773.38
MW-1	12/4/2014	5,818.84	DRY	DRY	DRY	DRY
MW-3	1/3/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	4/2/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	6/13/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	10/2/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	12/6/2012	6,219.05	UNK	UNK	UNK	UNK
MW-3	2/28/2013	6,219.05	DRY	DRY	DRY	DRY
MW-3	6/24/2013	5,806.34*	DRY	DRY	DRY	DRY
MW-3	9/26/2013	5,806.34	DRY	DRY	DRY	DRY
MW-3	12/6/2013	5,806.34	DRY	DRY	DRY	DRY
MW-3	3/19/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	6/12/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	9/12/2014	5,806.34	DRY	DRY	DRY	DRY
MW-3	12/4/2014	5,806.34	DRY	DRY	DRY	DRY
MW-4	1/3/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	4/2/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	6/13/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	10/2/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	12/6/2012	6,219.64	UNK	UNK	UNK	UNK
MW-4	2/28/2013	6,219.64	46.61	46.59	0.02	6,173.05
MW-4	6/24/2013	5,806.56*	46.72	46.71	0.01	5,759.85
MW-4	9/26/2013	5,806.56	48.28	48.25	0.03	5,758.30
MW-4	12/6/2013	5,806.56	48.44	48.42	0.02	5,758.14
MW-4	3/19/2014	5,806.56	48.32	NP	NP	5,758.24
MW-4	6/12/2014	5,806.56	48.64	NP	NP	5,757.92
MW-4	9/12/2014	5,806.56	49.38	NP	NP	5,757.18
MW-4	12/4/2014	5,806.56	49.71	NP	NP	5,756.85
MW-5	1/3/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	4/2/2012	6,228.57	UNK	UNK	UNK	UNK

TABLE 1

GROUNDWATER ELEVATION SUMMARY
FLORANCE #40
WILLIAMS FIELD SERVICES, LLC

Well ID	Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-5	6/13/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	10/2/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	12/6/2012	6,228.57	UNK	UNK	UNK	UNK
MW-5	2/28/2013	6,228.57	52.16	NP	NP	6,176.41
MW-5	6/24/2013	5,815.74*	52.12	NP	NP	5,763.62
MW-5	9/26/2013	5,815.74	52.23	NP	NP	5,763.51
MW-5	12/6/2013	5,815.74	DRY	NP	NP	DRY
MW-5	3/19/2014	5,815.74	52.17	NP	NP	5,763.57
MW-5	6/12/2014	5,815.74	DRY	NP	NP	DRY
MW-5	9/12/2014	5,815.74	52.20	NP	NP	5,763.54
MW-5	12/4/2014	5,815.74	52.20	NP	NP	5,763.54
MW-6	1/3/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	4/2/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	6/13/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	10/2/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	12/6/2012	6,221.28	UNK	UNK	UNK	UNK
MW-6	3/6/2013	6,221.28	DRY	DRY	DRY	DRY
MW-6	6/24/2013	5,808.50*	DRY	DRY	DRY	DRY
MW-6	9/26/2013	5,808.50	44.37	NP	NP	5,764.13
MW-6	12/6/2013	5,808.50	44.39	NP	NP	5,764.11
MW-6	3/19/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	6/12/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	9/12/2014	5,808.50	DRY	DRY	DRY	DRY
MW-6	12/4/2014	5,808.50	DRY	DRY	DRY	DRY
MW-7	1/3/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	4/2/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	6/13/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	10/2/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	12/6/2012	6,211.30	UNK	UNK	UNK	UNK
MW-7	2/28/2013	6,211.30	DRY	DRY	DRY	DRY
MW-7	6/24/2013	5,798.73*	DRY	DRY	DRY	DRY
MW-7	9/26/2013	5,798.73	DRY	DRY	DRY	DRY
MW-7	12/6/2013	5,798.73	DRY	DRY	DRY	DRY
MW-7	3/19/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	6/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	9/12/2014	5,798.73	DRY	DRY	DRY	DRY
MW-7	12/4/2014	5,798.73	DRY	DRY	DRY	DRY

Notes:

* Top of casing elevation was resurveyed on 6/20/13

** Product recovery sock was present in well

Groundwater elevation calculation in wells with product: (Top of Casing Elevation - Depth to Water) + (Product Thickness * 0.8)
AMSL - Above Mean Sea Level
BTOC - Below Top of Casing
DEST - well has been destroyed
NP - No Product
UNK - data is not known

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #40
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**
AMOCO	11/15/2000	**966**	64.4	**1,070**	**12,700**
AMOCO	1/22/2001	**1,210**	299	**1,750**	**19,400**
AMOCO	4/30/2001	**1,080**	71	**1,030**	**11,600**
AMOCO	10/16/2001	**930**	13	**1,100**	**12,000**
AMOCO	3/30/2002	**610**	**790**	**1,100**	**13,000**
AMOCO	6/16/2002	**740**	ND	**3,400**	**22,000**
AMOCO	12/13/2002	**570**	ND	670	**8,400**
AMOCO	12/3/2003	**440**	<100	**760**	**8,600**
AMOCO	3/10/2004	**200**	56	430	**7,400**
AMOCO	6/27/2004	**270**	150	600	**6,600**
AMOCO	9/20/2004	**210**	61	430	**3,900**
AMOCO	12/6/2004	**1,000**	100	**750**	**7,800**
AMOCO	3/8/2005	**330**	94	730	**5,900**
AMOCO	11/30/2005	**325**	59.7	**809**	**11,400**
AMOCO	7/18/2006	**375**	<20.0	**1,100**	**9,010**
AMOCO	3/27/2008	**168**	<25.0	**1,800**	**10,200**
AMOCO	3/27/2008	**183**	<25.0	**3,920**	**11,000**
AMOCO	6/4/2008	**211**	<25.0	**1,350**	**8,170**
AMOCO	9/18/2008	**169**	<50.0	**2,110**	**17,500**
AMOCO	12/5/2008	**134**	<100	**1,280**	**10,900**
AMOCO	3/28/2009	**130**	<100	**1760**	**15,800**
AMOCO	7/8/2009	**220**	<50.0	**2,350**	**16,400**
AMOCO	9/11/2009	**133**	<100	**2,880**	**20,700**
AMOCO	12/20/2019	**106**	<10.0	**823**	**5,450**
AMOCO	3/29/2010	**114**	<100	**1,230**	**8,840**
AMOCO	6/23/2010	**116**	<25.0	**3,400**	**19,000**
AMOCO	9/10/2010	**112**	<50.0	**2,980**	**22,000**
AMOCO	12/4/2010	**103**	<50.0	**1,710**	**10,900**
AMOCO	3/11/2011	**78.1**	23.3	**1,130**	**6,350**
AMOCO	6/14/2011	**88.1**	<10	**1,980**	**14,200**
AMOCO	9/12/2011	**75.6**	<1.0	670	**3,710**
AMOCO	1/3/2012	**73.8**	<5.0	732	**3,380**
AMOCO	4/2/2012	NS	NS	NS	NS
AMOCO	6/13/2012	**81.8**	30.5	**966**	**4,480**
AMOCO	10/2/2012	**71.6**	<5.0	**881**	**4,320**
AMOCO	12/6/2012	**80.4**	<5.0	**952**	**3,730**
AMOCO	2/28/2013	**60**	<50	650	**4,200**
AMOCO	6/24/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/26/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	12/6/2013	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	3/19/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	9/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
AMOCO	12/4/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	1/2/1997	**357**	**1,550**	**1,060**	**5,830**
MW-1	5/8/1997	**3,643**	**11,525**	**1,097**	**16,005**
MW-1	8/13/1997	**3,653**	**12,785**	**1,160**	**16,191**
MW-1	11/25/1997	**3,942**	**14,574**	**1,262**	**17,568**
MW-1	1/23/1998	**4,421**	**15,035**	**1,181**	**19,184**
MW-1	4/28/1998	**4,000**	**13,000**	**1,000**	**18,800**
MW-1	8/7/1998	**3,600**	**11,000**	**970**	**15,400**

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #40
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	12/15/1998	**3,800**	**7,200**	**670**	**17,900**
MW-1	2/9/1999	**3,400**	**5,300**	**1,100**	**18,900**
MW-1	4/21/1999	**3,500**	**3,500**	**810**	**16,500**
MW-1	7/28/1999	**2,700**	**1,800**	**220**	**15,300**
MW-1	11/1/1999	**3,200**	**1,100**	**910**	**17,600**
MW-1	7/13/2006	**16**	6	**<1.0**	**57**
MW-1	1/3/2012	NS	NS	NS	NS
MW-1	4/2/2012	NS	NS	NS	NS
MW-1	6/13/2012	NS	NS	NS	NS
MW-1	10/2/2012	NS	NS	NS	NS
MW-1	12/6/2012	**1,670**	<10.0	**1,300**	**995**
MW-1	2/28/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	6/24/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/12/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	12/6/2013	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	3/19/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	6/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	9/12/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-1	12/4/2014	NS-BP	NS-BP	NS-BP	NS-BP
MW-3	2/6/1997	**171.0**	735	149	**1,572**
MW-3	5/8/1997	**97**	27	115	302
MW-3	11/1/1999	**1,600**	**820**	640	**6,400**
MW-3	7/13/2006	**57**	6.3	<1.0	8
MW-3	1/3/2012	NS	NS	NS	NS
MW-3	4/2/2012	NS	NS	NS	NS
MW-3	6/13/2012	NS	NS	NS	NS
MW-3	10/2/2012	NS	NS	NS	NS
MW-3	12/6/2012	NS	NS	NS	NS
MW-3	2/28/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-3	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-4	5/8/1997	<0.2	0.3	<0.2	0.5
MW-4	8/13/1997	<1.0	<1.0	<1.0	<1.0
MW-4	11/25/1997	<0.2	<0.2	<0.2	<0.4
MW-4	1/23/1998	<0.2	<0.2	<0.2	<0.4
MW-4	11/15/2000	<1.0	<1.0	<1.0	<1.0
MW-4	1/22/2001	**15.1**	46.1	14.7	306
MW-4	4/30/2001	**103**	3.85	2.38	42.5
MW-4	10/16/2001	<2.0	<2.0	<2.0	<2.0
MW-4	3/30/2002	**42**	13	19	150
MW-4	6/16/2002	**56**	32	68	470
MW-4	9/25/2002	**170**	85	170	**1,200**
MW-4	12/13/2002	**130**	39	180	**990**
MW-4	3/8/2005	**17**	15	170	**1,100**
MW-4	7/18/2006	**<20.0**	<20.0	230	**1,640**

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #40
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-4	3/27/2008	<10.0	<10.0	285	**2,390**
MW-4	6/4/2008	<1.0	<10.0	232	**1,830**
MW-4	9/18/2008	<5.0	16.1	218	**1,640**
MW-4	12/5/2008	<5.0	<5.0	55.6	410
MW-4	3/28/2009	<5.0	<5.0	111	**732**
MW-4	7/8/2009	6.1	<5.0	91.2	587
MW-4	9/11/2009	<1.0	<1.0	39.9	199
MW-4	12/20/2009	<1.0	<1.0	28.1	145
MW-4	3/29/2010	<5.0	7.1	65.5	360
MW-4	6/23/2010	<5.0	<5.0	70.1	439
MW-4	9/10/2010	<1.0	<1.0	11.8	110
MW-4	12/4/2010	<5.0	<5.0	15.8	152
MW-4	3/11/2011	<5.0	<5.0	18.1	167
MW-4	6/14/2011	<1.0	<1.0	4.9	33.3
MW-4	9/12/2011	<1.0	<1.0	<1.0	7.9
MW-4	1/3/2012	<1.0	<1.0	<1.0	3.6
MW-4	4/2/2012	NS	NS	NS	NS
MW-4	6/13/2012	<1.0	<1.0	<1.0	<3.0
MW-4	10/2/2012	<5.0	<5.0	<5.0	<15.0
MW-4	12/6/2012	<1.0	<1.0	<1.0	<3.0
MW-4	2/28/2013	NSP	NSP	NSP	NSP
MW-4	6/24/2013	NSP	NSP	NSP	NSP
MW-4	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-4	12/6/2013	NSP	NSP	NSP	NSP
MW-4	3/19/2014	<1.0	<1.0	3.9	12
MW-4	6/12/2014	<2.0	<2.0	<2.0	7.2
MW-4	9/12/2014	<1.0	<1.0	<1.0	5.7
MW-4	12/4/2014	<2.0	<2.0	<2.0	5.2
MW-5	5/8/1997	<2.0	0.3	<0.2	0.4
MW-5	8/13/1997	**3,683**	**12,739**	**1,143**	**16,086**
MW-5	11/25/1997	<0.2	<0.2	<0.2	<0.4
MW-5	1/23/1998	**4,299**	**14,477**	**1,120**	**18,281**
MW-5	2/9/1999	**3,500**	**5,100**	**100**	**17,700**
MW-5	4/21/1999	**3,300**	**3,400**	**790**	**16,400**
MW-5	3/21/2000	**730**	**220**	**1,200**	**11,600**
MW-5	6/14/2000	**800**	**33**	**980**	**5,890**
MW-5	11/15/2000	**953**	65	**1,600**	**8,010**
MW-5	1/22/2001	**818**	<1	**1,390**	**7,530**
MW-5	4/30/2001	**873**	124	**1,450**	**4,320**
MW-5	10/16/2001	**770**	73	**1,300**	**8,000**
MW-5	3/30/2002	**350**	12	**540**	**440**
MW-5	6/16/2002	**300**	ND	**290**	**110**
MW-5	9/25/2002	**250**	15	**110**	**330**
MW-5	12/13/2002	**100**	ND	**48**	**150**
MW-5	7/13/2006	**22**	8	<1.0	**45**
MW-5	1/3/2012	<1.0	<1.0	<1.0	3.6
MW-5	4/2/2012	NS	NS	NS	NS
MW-5	6/13/2012	<1.0	<1.0	<1.0	<3.0
MW-5	10/2/2012	<5.0	<5.0	<5.0	<15.0
MW-5	12/6/2012	<1.0	<1.0	<1.0	<3.0
MW-5	2/28/2013	NS-IW	NS-IW	NS-IW	NS-IW

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #40
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-5	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-5	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	3/21/2000	**4,200**	**12,000**	**1,300**	**15,200**
MW-6	6/14/2000	**4,400**	**11,000**	**1,200**	**15,200**
MW-6	7/13/2006	**795**	**1,480**	**285**	**2,450**
MW-6	3/27/2008	**3,670**	**2,150**	**1,210**	**14,300**
MW-6	6/4/2008	**2,380**	**1,370**	580	**11,900**
MW-6	9/18/2008	**3,600**	278	**1,290**	**18,100**
MW-6	12/5/2008	**1,580**	85.3	**828**	**10,100**
MW-6	3/28/2009	**1,790**	95	**886**	**15,300**
MW-6	9/11/2009	**1,200**	95	523	**3,580**
MW-6	6/23/2010	**815**	75.3	32.3	**3,090**
MW-6	9/10/2010	**674**	129	28.7	**4,010**
MW-6	1/3/2012	NS	NS	NS	NS
MW-6	4/2/2012	**86.7**	28	**799**	**4,240**
MW-6	6/13/2012	NS	NS	NS	NS
MW-6	10/2/2012	NS	NS	NS	NS
MW-6	12/6/2012	NS	NS	NS	NS
MW-6	3/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-6	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	3/21/2000	<0.5	<0.5	<0.5	5.9
MW-7	6/14/2000	<0.5	<0.5	<0.5	<1.5
MW-7	11/15/2000	<1.0	<1.0	<1.0	<1.0
MW-7	1/22/2001	<1.0	5.79	1.51	42.4
MW-7	4/30/2001	<1.0	<1.0	<1.0	<1.0
MW-7	10/16/2001	<1.0	<2.0	<2.0	3.2
MW-7	12/3/2003	<2.0	<2.0	<2.0	<5.0
MW-7	3/10/2004	ND	ND	ND	ND
MW-7	6/27/2004	ND	ND	ND	ND
MW-7	9/20/2004	ND	ND	ND	ND
MW-7	12/6/2004	<2.0	<2.0	<2.0	<5.0
MW-7	3/8/2005	<2.0	<2.0	<2.0	5.7
MW-7	6/19/2005	<2.0	<2.0	<2.0	<5.0
MW-7	9/15/2005	<2.0	<2.0	<2.0	<5.0
MW-7	11/30/2005	<2.0	<2.0	<2.0	<5.0
MW-7	7/13/2006	<1.0	<1.0	<1.0	<3.0
MW-7	3/27/2008	<1.0	<1.0	<1.0	<3.0

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS
FLORANCE #40
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-7	6/4/2008	<1.0	<1.0	<1.0	<3.0
MW-7	9/18/2008	<1.0	<1.0	<1.0	<3.0
MW-7	12/5/2008	<1.0	<1.0	<1.0	<3.0
MW-7	3/28/2009	<1.0	<1.0	<1.0	<3.0
MW-7	7/8/2009	<1.0	<1.0	<1.0	<3.0
MW-7	9/11/2009	<1.0	<1.0	<1.0	<3.0
MW-7	12/20/2009	<1.0	<1.0	<1.0	<3.0
MW-7	3/29/2010	<5.0	<5.0	<5.0	<15.0
MW-7	6/23/2010	<1.0	<1.0	<1.0	<3.0
MW-7	9/10/2010	<1.0	<1.0	<1.0	<3.0
MW-7	12/4/2010	<1.0	<1.0	<1.0	<3.0
MW-7	3/11/2011	<1.0	<1.0	<1.0	<3.0
MW-7	6/14/2011	<1.0	<1.0	<1.0	<3.0
MW-7	9/12/2011	<1.0	<1.0	<1.0	<3.0
MW-7	1/3/2012	<1.0	<1.0	<1.0	<3.0
MW-7	4/2/2012	<1.0	<1.0	<1.0	<3.0
MW-7	6/13/2012	NS	NS	NS	NS
MW-7	10/2/2012	NS	NS	NS	NS
MW-7	12/6/2012	NS	NS	NS	NS
MW-7	2/28/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	6/24/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/26/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	12/6/2013	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	3/19/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	6/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	9/12/2014	NS-IW	NS-IW	NS-IW	NS-IW
MW-7	12/4/2014	NS-IW	NS-IW	NS-IW	NS-IW

Notes:
Bold - indicates sample exceeds NMWQCC standard
< - indicates result is less than laboratory reporting detection limit
µg/L - micrograms per liter
ND - Analyte not detected
NMWQCC - New Mexico Water Quality Control Commission
NS - Not sampled
NS- BP - not sampled,monitoring well is BP's responsiblility
NS-IW - Not sampled - Insufficient water
NSP - not sampled due to the presence of free phase hydrocarbons in the well

APPENDIX A

2014 QUARTERLY FIELD NOTES

Water Sample Collection Form

Sample Location	Florance 40	Client	Williams Field Services
Sample Date	3/19/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	MW-3	Sampler	Daniel Nauman
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	DRY	TD of Well	40.11
Time	1000	Depth to Product	N/A
Vol. of H2O to purge	DRY		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging ~~PVC Bailer~~ DN NONE

Method of Sampling ~~PVC Bailer~~ DN NONE

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments

3/19/14

Comments: DRY NO SAMPLE

Describe Deviations from SOP: N/A

Signature: _____ **Date:** 3/19/14

Water Sample Collection Form

Sample Location	Florance 40	Client	Williams Field Services
Sample Date	3/19/14	Project Name	San Juan Basin Remediation
Sample Time	1030	Project #	034013010
Sample ID	~~MW-5~~ MW-4	Sampler	Daniel Newman
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	48.32	TD of Well	55.06
Time	930	Depth to Product	N/A

Vol. of H2O to purge: 55.06 - 48.32 = 6.74 x 0.1631 = 1.09 x 3 = 3.29

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (°F)	Conductivity (us or ms)	Comments	PPB
930	0.25	0.25	6.57	62.6	4.15	clear, cloudy, no odor, no sheen	208
	0.25	0.50	6.75	63.0	4.27	cloudy, lite brown sediment, no sheen	209
	0.25	0.75	6.79	62.8	4.13	No change	209
	0.25	1.00	6.81	63.0	4.11	slight odor, cloudy, brown, sediment	205
955	0.10	1.10	6.85	63.0	4.13	gray, lots of sed, lt odor, bailing dry ~~sample dry~~	204

Comments: ~~bailing dry @ 955 sample GRAB~~ DN wait for Recharge came back to well & sampled @ 1030 3 HCL VOA

Describe Deviations from SOP: WAS unable to Purge 3 casings volume before well bailed dry

Signature: [signature] **Date:** 3/19/14

Water Sample Collection Form

Sample Location	Florance 40	Client	Williams Field Services
Sample Date	3/19/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	~~MW-4~~ MW-5	Sampler	Daniel Neuman
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	52.17	TD of Well	52.24
Time	910	Depth to Product	N/A
Vol. of H2O to purge	N/A		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging ~~PVC Bailer~~ or N/A

Method of Sampling ~~PVC Bailer~~ or N/A

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments

3/19/14

Comments: IN SUFFICIENT H_2O TO SAMPLE

Describe Deviations from SOP: N/A

Signature: _____ **Date:** 3/19/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	6/12/14	Project Name	San Juan Basin Remediation
Sample Time	1200	Project #	034013010
Sample ID	MW-4	Sampler	BTEMO
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	48.64	TD of Well	55.06
Time	11:15	Depth to Product	NA
Vol. of H2O to purge	6.42 X .1631 = 1.047 x 3 = 3.14		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. BH(C)F°	Conductivity (us or ms)	Comments
1135	0.25	0.25	6.60	70.3	4.36	Clear, no sediment, no odor, no sheen
	0.25	0.50	6.51	66.6	4.21	no change
	0.25	0.75	6.56	66.4	4.29	very slight light yellow hue
	0.25	1.00	6.55	67.1	4.22	no change

Comments: Bailed dry after 1 gallon was able to fill 3 HCL vials. Sample water was gray and contained a lot of sediment.

Describe Deviations from SOP: Did not bail 3 casing volumes before sampling due to bailing dry.

Signature: [signature] **Date:** 6/12/14

Water Sample Collection Form

Sample Location	Florance 40	Client	Williams Field Services
Sample Date	3/19/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	MW-6	Sampler	Daniel Newman
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	DRY	TD of Well	4435
Time	1015	Depth to Product	N/A
Vol. of H2O to purge	N/A		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging ~~PVC Bailer~~ DN NONE

Method of Sampling ~~PVC Bailer~~ DN NONE

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments

3/19/14

Comments: DRY NO SAMPLE

Describe Deviations from SOP: N/A

Signature: **Date:** 3/19/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	9/12/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	MW-3	Sampler	Alex Crooks
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	Dry	TD of Well	40.11
Time	833	Depth to Product	N/A
Vol. of H2O to purge	Dry		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				Ae 9/12/14		

Comments: Dry mSample

Describe Deviations from SOP: N/A

Signature: Alex Crooks **Date:** 9/12/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	9/12/14	Project Name	San Juan Basin Remediation
Sample Time	0945	Project #	034013010
Sample ID	MW-4	Sampler	Alex Crooks
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	49.38	TD of Well	55.06
Time	0915	Depth to Product	N/A

Vol. of H2O to purge: 55.06 - 49.38 = 5.68 x .1631 = .92 x 3 = 2.78

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
0918	.25	.25	6.27	66.2	1.86	Clear, Slight odor
0920	.25	.50	6.10	66.0	1.04	Clear, cloudy, Slight odor
0922	.25	.75	6.43	66.2	1.95	Water well going dry
0945						Took sample
						light brown, cloudy, slight odor

Comments: Water well went dry at 0922 - came back and took sample

Describe Deviations from SOP: Sampled before three well volumes

Signature: Alex Crooks **Date:** 9/12/14

LTE

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	9/12/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	MW-5	Sampler	Alex Crooks
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	~~Dry~~ 52.20	TD of Well	52.24
Time	0905	Depth to Product	

Vol. of H2O to purge: Not enough water

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				AC		
					9/12/14	

Comments: Not enough water to Sample

Describe Deviations from SOP: N/A

Signature: Alex Crooks **Date:** 9/12/14

LTE

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	9/12/14	Project Name	San Juan Basin Remediation
Sample Time	N/A	Project #	034013010
Sample ID	MW-6	Sampler	Alex Crooks
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Hand delivery
Depth to Water	DRY	TD of Well	44.35
Time	0845	Depth to Product	N/A
Vol. of H2O to purge	DRY		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
					DC	
						9/12/14

Comments: DRY no Sample

Describe Deviations from SOP: N/A

Signature: Alex Crooks **Date:** 9/12/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	12/4/14	Project Name	San Juan Basin Remediation
Sample Time	NA	Project #	034013010
Sample ID	MW-3	Sampler	~~Daniel Newman~~ AC
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Christine
Depth to Water	DRY	TD of Well	40.11
Time	0840	Depth to Product	NA
Vol. of H2O to purge	NA		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				AC		
			12/4/14			

Comments:

Describe Deviations from SOP: Not enough water for Sample

Signature: Alex Crook **Date:** 12/4/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	12/4/14	Project Name	San Juan Basin Remediation
Sample Time	MA	Project #	034013010
Sample ID	MW-6	Sampler	~~Daniel Newman~~ AC
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Christine
Depth to Water	DY	TD of Well	44.35
Time	0830	Depth to Product	NA
Vol. of H2O to purge	MA		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				AC		
				12/4/14		

Comments: N/A

Describe Deviations from SOP: Not enough water for Sample

Signature: Alex Crook **Date:** 12/4/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	12/4/14	Project Name	San Juan Basin Remediation
Sample Time	0920	Project #	034013010
Sample ID	MW-4	Sampler	~~Daniel Newman~~ AC
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Christine
Depth to Water	49.71	TD of Well	55.06
Time	0845	Depth to Product	N/A

Vol. of H2O to purge: 55.06 - 49.71 = 5.35 x .1631 = .87 x 3 = 2.62

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C or F)	Conductivity (us or ms)	Comments
0852	.25	.25	6.49	62.8	1.93	Clear / odor / not cloudy
0857	.40	.65	6.59	63.1	1.04	Gray / odor / Slightly cloudy
0859	.10	.75	6.52	62.8	1.62	Black / odor / cloudy
0902						well went dry
0920						Took Sample
			AC			
			12/4/14			

Comments: well went dry at 0902 - came back to take Sample

Describe Deviations from SOP: well went dry at 0902 after .75 gal purged came back took Sample at 0920

Signature: Alex Cook **Date:** 12/4/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	12/4/14	Project Name	San Juan Basin Remediation
Sample Time	NA	Project #	034013010
Sample ID	MW-5	Sampler	~~Daniel Newman~~ AC
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Christine
Depth to Water	52.20	TD of Well	52.24
Time	0815	Depth to Product	N/A

Vol. of H2O to purge: Not enough water

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				AC 12/4/14		

Comments: Not enough water to Sample

Describe Deviations from SOP: N/A

Signature: Alex Crooks **Date:** 12/4/14

Water Sample Collection Form

Sample Location	Florance #40	Client	Williams Field Services
Sample Date	12/4/14	Project Name	San Juan Basin Remediation
Sample Time	NA	Project #	034013010
Sample ID	MW-7	Sampler	~~Daniel Newman~~ AC
Analyses	BTEX 8021		
Matrix	Groundwater	Laboratory	Hall Environmental
Turn Around Time	Standard	Shipping Method	Christine
Depth to Water	DRY	TD of Well	
Time	0915	Depth to Product	NA
Vol. of H2O to purge	N/A		

*(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols*

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

Time	Vol. Removed (gal.)	Total Vol H2O removed (gal.)	pH (std. units)	Temp. (C)	Conductivity (us or ms)	Comments
				12/4/14		
				AC		

Comments:

Describe Deviations from SOP: Not enough water for Sample

Signature: Ally Crooker **Date:** 12/4/14

APPENDIX B

ANALYTICAL LABORATORY REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 27, 2014

Ashley Ager
LTE
2243 Main Ave Suite 3
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: San Juan Basin Remediation Florance 40 OrderNo.: 1403913

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/21/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued March 27, 2014.

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.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: MW-4
Project: San Juan Basin Remediation Florance 40
Collection Date: 3/19/2014 10:30:00 AM
Lab ID: 1403913-001
Matrix: AQUEOUS
Received Date: 3/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	3/25/2014 2:56:41 PM	R17568
Toluene	ND	1.0		µg/L	1	3/25/2014 2:56:41 PM	R17568
Ethylbenzene	3.9	1.0		µg/L	1	3/25/2014 2:56:41 PM	R17568
Xylenes, Total	12	2.0		µg/L	1	3/25/2014 2:56:41 PM	R17568
Surr: 4-Bromofluorobenzene	142	82.9-139	S	%REC	1	3/25/2014 2:56:41 PM	R17568

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: Trip Blank
Project: San Juan Basin Remediation Florance 40
Collection Date:
Lab ID: 1403913-002
Matrix: AQUEOUS
Received Date: 3/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0	P	µg/L	1	3/25/2014 12:21:24 AM	R17539
Toluene	ND	1.0	P	µg/L	1	3/25/2014 12:21:24 AM	R17539
Ethylbenzene	ND	1.0	P	µg/L	1	3/25/2014 12:21:24 AM	R17539
Xylenes, Total	ND	2.0	P	µg/L	1	3/25/2014 12:21:24 AM	R17539
Surr: 4-Bromofluorobenzene	88.1	82.9-139	P	%REC	1	3/25/2014 12:21:24 AM	R17539

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403913**

27-Mar-14

Client: LTE

Project: San Juan Basin Remediation Florance 40

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R17539**	RunNo:	**17539**					
Prep Date:		Analysis Date:	**3/24/2014**	SeqNo:	**505125**	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		94.9	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R17539**	RunNo:	**17539**					
Prep Date:		Analysis Date:	**3/24/2014**	SeqNo:	**505126**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	20	1.0	20.00	0	100	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	82.9	139			

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R17568**	RunNo:	**17568**					
Prep Date:		Analysis Date:	**3/25/2014**	SeqNo:	**506039**	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		95.4	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R17568**	RunNo:	**17568**					
Prep Date:		Analysis Date:	**3/25/2014**	SeqNo:	**506040**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	80	120			
Toluene	19	1.0	20.00	0	95.6	80	120			
Ethylbenzene	19	1.0	20.00	0	92.8	80	120			
Xylenes, Total	58	2.0	60.00	0	96.5	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.4	82.9	139			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE | Work Order Number: 1403913 | RcptNo: 1

Received by/date: MS 03/21/14

Logged By: **Michelle Garcia** 3/21/2014 10:00:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 3/21/2014 10:49:49 AM Michelle Garcia

Reviewed By: 03/21/14

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks: Trip Blank was made and provided by Client. 03/21/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: LT ENVIRONMENTAL

Mailing Address: 2243 MAIN AVE Durango CO 81301

Phone #: 970-385-1096

email or Fax#: aager@ltenv.com

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

Accreditation: ☐ NELAP ☐ Other ____

☐ EDD (Type) ____

Turn-Around Time: ☒ Standard ☐ Rush ____

Project Name: San Juan Basin Remediation Florance 40

Project #: 034013010

Project Manager: Ashley Ager

Sampler: DANIEL NEWMAN

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403913	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
3/19/14	1030	GW	MW-4	3/VOA	HCL	-001	X															
3/19/14			TRIP BLANK	2/VOA	Cool	-002	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/20/14	1200		Christine Walker	3/20/14	1206
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/20/14	1744	Christine Walker		03/21/14	1000

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 20, 2014

Brook Herb
LTE
2243 Main Ave Suite 3
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: Florance #40 OrderNo.: 1406678

Dear Brook Herb:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/14/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1406678**
Date Reported: **6/20/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: MW-4
Project: Florance #40
Collection Date: 6/12/2014 12:00:00 PM
Lab ID: 1406678-001
Matrix: AQUEOUS
Received Date: 6/14/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	2.0		µg/L	2	6/18/2014 3:39:30 PM	R19363
Toluene	ND	2.0		µg/L	2	6/18/2014 3:39:30 PM	R19363
Ethylbenzene	ND	2.0		µg/L	2	6/18/2014 3:39:30 PM	R19363
Xylenes, Total	7.2	4.0		µg/L	2	6/18/2014 3:39:30 PM	R19363
Surr: 4-Bromofluorobenzene	116	82.9-139		%REC	2	6/18/2014 3:39:30 PM	R19363

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: Trip Blank
Project: Florance #40
Collection Date:
Lab ID: 1406678-002
Matrix: AQUEOUS
Received Date: 6/14/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	6/16/2014 11:14:24 PM	R19307
Toluene	ND	1.0		µg/L	1	6/16/2014 11:14:24 PM	R19307
Ethylbenzene	ND	1.0		µg/L	1	6/16/2014 11:14:24 PM	R19307
Xylenes, Total	ND	2.0		µg/L	1	6/16/2014 11:14:24 PM	R19307
Surr: 4-Bromofluorobenzene	108	82.9-139		%REC	1	6/16/2014 11:14:24 PM	R19307

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406678**

20-Jun-14

Client: LTE

Project: Florance #40

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R19307**	RunNo:	**19307**					
Prep Date:		Analysis Date:	**6/16/2014**	SeqNo:	**558173**	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	23		20.00		113	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R19307**	RunNo:	**19307**					
Prep Date:		Analysis Date:	**6/16/2014**	SeqNo:	**558174**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	20	1.0	20.00	0	100	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		120	82.9	139			

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R19316**	RunNo:	**19316**					
Prep Date:		Analysis Date:	**6/17/2014**	SeqNo:	**559069**	Units:	**%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	20		20.00		102	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R19316**	RunNo:	**19316**					
Prep Date:		Analysis Date:	**6/17/2014**	SeqNo:	**559070**	Units:	**%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22		20.00		109	82.9	139			

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R19363**	RunNo:	**19363**					
Prep Date:		Analysis Date:	**6/18/2014**	SeqNo:	**560010**	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								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406678**

20-Jun-14

Client: LTE

Project: Florance #40

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R19363**	RunNo:	**19363**					
Prep Date:		Analysis Date:	**6/18/2014**	SeqNo:	**560010**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene		21		20.00		106	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R19363**	RunNo:	**19363**					
Prep Date:		Analysis Date:	**6/18/2014**	SeqNo:	**560011**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		22	1.0	20.00	0	112	80	120			
Toluene		22	1.0	20.00	0	109	80	120			
Ethylbenzene		22	1.0	20.00	0	111	80	120			
Xylenes, Total		66	2.0	60.00	0	110	80	120			
Surr: 4-Bromofluorobenzene		22		20.00		109	82.9	139			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE | Work Order Number: 1406678 | RcptNo: 1

Received by/date: AG 06/14/14

Logged By: **Michelle Garcia** 6/14/2014 10:00:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 6/16/2014 9:14:12 AM Michelle Garcia

Reviewed By: 06/16/14

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: LT Environmental

Mailing Address: 2243 Main Ave #3 Durango CO 81301

Phone #: 970 385 1096

email or Fax#: bherb@ltenv.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Florance #40

Project #: 034013010

Project Manager: Brooke Herb

Sampler: Brooke Herb

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406678	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/12/14	1000	GW	MW-4	VOA/3	HCl	-001	X															
			Trip Blank	VOA/2	HCl	-002	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/13/14	1500		Christa Wade	6/13/14	1500
6/13/14	2030			06/14/14	1000

Remarks:

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

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

September 24, 2014

Brooke Herb
LTE
2243 Main Ave Suite 3
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: Florance #40 OrderNo.: 1409638

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/13/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409638**
Date Reported: **9/24/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: MW-4
Project: Florance #40
Collection Date: 9/12/2014 9:45:00 AM
Lab ID: 1409638-001
Matrix: AQUEOUS
Received Date: 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	9/17/2014 11:59:15 AM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 11:59:15 AM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 11:59:15 AM	R21267
Xylenes, Total	5.7	2.0		µg/L	1	9/17/2014 11:59:15 AM	R21267
Surr: 4-Bromofluorobenzene	115	66.6-167		%REC	1	9/17/2014 11:59:15 AM	R21267

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: Trip Blank
Project: Florance #40
Collection Date:
Lab ID: 1409638-002
Matrix: TRIP BLANK
Received Date: 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	9/17/2014 12:29:27 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 12:29:27 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 12:29:27 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 12:29:27 PM	R21267
Surr: 4-Bromofluorobenzene	109	66.6-167		%REC	1	9/17/2014 12:29:27 PM	R21267

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409638**

24-Sep-14

Client: LTE

Project: Florance #40

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R21267**	RunNo:	**21267**					
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620423**	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	21		20.00		104	66.6	167			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R21267**	RunNo:	**21267**					
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620424**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	80	120			
Toluene	20	1.0	20.00	0	98.3	80	120			
Ethylbenzene	20	1.0	20.00	0	98.1	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.8	66.6	167			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE | Work Order Number: 1409638 | RcptNo: 1

Received by/date: 09/13/14

Logged By: **Lindsay Mangin** 9/13/2014 8:00:00 AM

Completed By: **Lindsay Mangin** 9/13/2014 8:51:18 AM

Reviewed By: IO 09/15/14

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: LT environmental

Mailing Address: 2243 Main Ave #3
Durango Co 81301

Phone #: 970-385-1896

email or Fax#: Bherb@Henv.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
Florance #40

Project #:
03401B010

Project Manager:
Brooke Herb

Sampler: Alex Crooks

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409638	Analysis Request: BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
9/12	0945	GW	MW-4	3 VOA	HCl	-001	X														
			Trip Blank	3 VOA	HCl	-002	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/12	1005	Alex Crooks	Christen Walters	9/12/14	1005
9/12/14	1800	Christen Walters		09/13/14	0800

Remarks:

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

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

December 11, 2014

Ashley Ager
LTE
2243 Main Ave Suite 3
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: Florance #40 OrderNo.: 1412300

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/5/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1412300**
Date Reported: **12/11/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Project: Florance #40
Lab Order: 1412300

Lab ID: 1412300-001 **Collection Date:** 12/4/2014 9:20:00 AM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	2.0		µg/L	2	12/8/2014 11:44:50 PM	R2299E
Toluene	ND	2.0		µg/L	2	12/8/2014 11:44:50 PM	R2299E
Ethylbenzene	ND	2.0		µg/L	2	12/8/2014 11:44:50 PM	R2299E
Xylenes, Total	5.2	4.0		µg/L	2	12/8/2014 11:44:50 PM	R2299E
Surr: 4-Bromofluorobenzene	109	66.6-167		%REC	2	12/8/2014 11:44:50 PM	R2299E

Lab ID: 1412300-002 **Collection Date:**
Client Sample ID: Trip Blank **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/9/2014 12:12:10 AM	R2299E
Toluene	ND	1.0		µg/L	1	12/9/2014 12:12:10 AM	R2299E
Ethylbenzene	ND	1.0		µg/L	1	12/9/2014 12:12:10 AM	R2299E
Xylenes, Total	ND	2.0		µg/L	1	12/9/2014 12:12:10 AM	R2299E
Surr: 4-Bromofluorobenzene	111	66.6-167		%REC	1	12/9/2014 12:12:10 AM	R2299E

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1412300**

11-Dec-14

Client: LTE

Project: Florance #40

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R22998**	RunNo: **22998**
Prep Date:	Analysis Date: **12/8/2014**	SeqNo: **679367** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		105	66.6	167			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R22998**	RunNo: **22998**
Prep Date:	Analysis Date: **12/8/2014**	SeqNo: **679368** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	106	67.4	147			
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	22	1.0	20.00	0	111	80	120			
Ethylbenzene	22	1.0	20.00	0	111	80	120			
Xylenes, Total	67	2.0	60.00	0	112	80	120			
1,2,4-Trimethylbenzene	22	1.0	20.00	0	111	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	111	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		114	66.6	167			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE | Work Order Number: 1412300 | RcptNo: 1

Received by/date: LM 12/05/14

Logged By: **Celina Sessa** 12/5/2014 7:45:00 AM Celina Sessa

Completed By: **Celina Sessa** 12/5/2014 10:50:47 AM Celina Sessa

Reviewed By: IO 12/05/2014

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Not Present			

Chain-of-Custody Record

Client: LT Environmental

Mailing Address: 2243 main Ave #3
Durango Co 81301

Phone #: 970-385-1096

email or Fax#: Ager@ltenv.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: FLORANCE #40

Project #: 034013D LC

Project Manager: Ashley Ager

Sampler: Daniel Newman

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1412300	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/4	0920	GW	MW-4	3 VOA	HCl	-001	X															
			Trip Blank	1 VOA	HCl	-002	X															
			12/05/14																			

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/4	1235			12/4/14	1235
12/4/14	1844			12/05/14	0745

Remarks:

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