PLAINS
ALL AMERICAN

March 23, 2015

Dr. Tomas Oberding
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains All American – 2014 Annual Monitoring Reports
6 Sites in Lea County, New Mexico

Dear Dr. Oberding:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

8-inch Moore to Jal #1	AP-91 (1R-0380)	Section 16, T17S, R37E, Lea County
8-inch Moore to Jal #2	AP-92 (1R-0381)	Section 16, T17S, R37E, Lea County
C.S. Cayler	AP-052	Section 06, T17S, R37E, Lea County
Hobbs Junction Mainline	AP-054	Section 26, T18S, R37E, Lea County
Kimbrough Sweet 8-inch	AP-0029	Section 03, T18S, R37E, Lea County
Lovington Deep 6-inch	AP-037	Section 06, T17S, R36E, Lea County

Talon/LPE (Talon) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Talon personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (575) 441-1099.

Sincerely,

Camille Bryant
Remediation Coordinator
Plains All American

CC: NMOCD, Hobbs, NM

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2014 ANNUAL GROUNDWATER MONITORING REPORT
8" MOORE TO JAL #2
LEA COUNTY, NEW MEXICO
SRS #2002 – 10273
NMOCD REF. # AP-92

PREPARED FOR:

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March, 2015 3.2

Recommendations

- **Continue operation and maintenance of the PSH recovery system and transfer system. Adjust pump intake port depths and controller settings to optimize PSH recovery.**
- **Add or reposition pumps as necessary to optimize PSH recovery and inhibit plume migration.**
- **Perform quarterly groundwater monitoring events in accordance with NMOCD directives.**

2014 ANNUAL GROUNDWATER MONITORING REPORT

8" MOORE TO JAL #2
LEA COUNTY, NEW MEXICO
SRS #2002 - 10273
NMOCD REF. # AP-92

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TALON/LPE PROJECT NO. 700376.045.01

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March, 2015

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NMOCD - New Mexico Oil Conservation Division
NMSLO – New Mexico State Land Office

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1.0 INTRODUCTION AND OBJECTIVES

1.1 Objectives and Site Background

The 8" Moore to Jal #2 (site) is located approximately 9.2 miles southeast of Lovington, Lea County, New Mexico, on property owned by the State of New Mexico. The site is located within the West Lovington Oil Field at 32° 49' 56.61" N, 103° 15' 08.47" W. There are no residences, groundwater wells, or surface water bodies within a 1,000-foot radius of the site. The initial release occurred from an EOTT Energy Pipeline (EOTT) steel pipeline on October 22, 2002. Subsequently, EOTT changed its name to Link Energy in October 2003, and Plains Marketing, L.P. (Plains) purchased the assets of Link Energy on April 1, 2004. Initial reports estimated that 25 barrels (bbls) of crude oil were released. Approximately 5,794 square feet of surface area was impacted by the release.

On February 5, 2007, Talon/LPE (Talon) was retained by Plains to assume remediation activities at the site. Remediation activities at the site were previously conducted by Environmental Plus, Inc. (EPI).

1.2 Site Geology

The surface deposits in Lea County are composed of Blackwater Draw (Illinoian) sediments, Ogallala sediments and undivided Quaternary alluvium, which is also termed 'cover sands'. The soil in the upper two (2) feet at the site is composed of gravelly loam that consists of 43% sand, 18% clay and 40% silt and also contains abundant eroded gravel to cobble size caliche fragments. Below the top soil is predominately unconsolidated sand to weakly cemented sandstone which has undergone calichification of varying extent.

Below the Blackwater Draw Formation is the Ogallala Formation of Miocene to Pliocene age. The Ogallala Formation was deposited from sediments eroded from the Southern Rockies and consists mostly of eolian sediments, silty to very fine sand or loess. During the middle to late Miocene, the Ogallala was deposited by fluvial mechanism as paleovalley fill composed of gravelly to sandy braided stream deposits that trended west to east across the Southern High Plains. During the late Miocene the west to east drainage was diverted (captured) by the Pecos River. Subsequently, the Pecos River basin has experienced deflation, which facilitated eolian deposition on the Southern High Plains during the Pliocene.

1.3 Previous Environmental Investigations

Currently, there are a total of twenty-three (23) groundwater monitor wells existing in the vicinity of the release (see Figure 1). With New Mexico Oil Conservation Division (NMOCD) approval and landowner concurrence, groundwater monitor well MW-1 was installed in July 2004. Subsequently, groundwater monitor wells MW-2, MW-3, and MW-4 were installed in October 2004, monitor wells MW-6 through MW-13 were installed in November 2007, MW-14 through MW-16 were installed in March of 2010 and MW-17 through MW-21 were installed in August of 2010. Replacement wells MW-3A and MW-4A,

and down-gradient monitor wells MW-22 and MW-23 were installed in December of 2013.

Phase-separated hydrocarbon (PSH) recovery operations have been performed at the site since 2004. Currently, there are five (5) total fluid pumps in operation at the site used to recover phase-separated hydrocarbon (PSH). Table 1, which summarizes historical groundwater and PSH gauging, is provided in Appendix B.

A transfer system was installed during the year 2011 that is designed to pump recovered groundwater from the site to the Rocky Smith SWD Systems, State 'E' #23 salt water disposal (SWD) (NMOCD # 307219) facility, thereby, eliminating the need to haul water to a disposal facility with a vacuum truck. The system is composed of a three (3) inch HDPE line that was installed (slip-lined) into the out of service Moore to Jal eight (8) inch pipeline from the site through the Moore to Jal #1 site to the C.S. Cayler site, where it is connected to the HDPE line that runs from the Cayler site to the afore referenced SWD. A five (5) HP transfer pump is used to impel the water down the HDPE line.

1.4 Regulatory Framework

Groundwater analytical data collected from this site is evaluated to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards outlined in the table below.

New Mexico Water Quality Control Commission (NMWQCC) groundwater standards	
Compound	**mg/L**
Benzene	0.010
Toluene	0.750
Ethylbenzene	0.750
Total Xylenes	0.620
PAH (Naphthalene)	0.030
PAH (Benzo[a]-pyrene)	0.007

2.0 SITE ACTIVITIES

The sections that follow summarize groundwater monitoring and PSH recovery activities conducted at the subject site during the year 2014. The primary function of groundwater monitoring activities is to collect depth to fluid measurements and to collect groundwater samples from monitor wells for laboratory analysis. The objective of groundwater monitoring is to evaluate the status of the dissolved-phase and PSH plumes in order to verify the effectiveness of the remediation system as to inhibiting plume migration, reducing the volume of PSH impacting the groundwater and determining if modifications to the remediation system would improve its overall performance and efficiency.

A synopsis of analytical results for the four (4) groundwater monitoring events is located in Table 2, in Appendix B, and annotated in map form on Figures 3a through 3d in Appendix A. Laboratory analytical data reports and chain of custody documentation are included in Appendix C.

2.1 Groundwater Monitoring Activities

A total of four (4) groundwater monitoring events were conducted by Talon during the year 2014. The events occurred on: March 6-7, June 18-19, September 16-18, and December 2-3. Details of the gauging, purging, and sampling activities are presented below in Section 2.2.

2.2 Groundwater Gauging, Purging, and Sampling Procedures

During each groundwater monitoring event, all monitor wells were measured with an oil/water interface probe to determine static water levels and to determine the thickness of PSH accumulations if present. The data collected from measurements was used to construct groundwater gradient maps and PSH thickness maps. The results of the measured depths to fluids collected during the four (4) events are incorporated in Table 1 – Summary of Historical Fluid Level Measurements.

Subsequent to gauging, all monitor wells were purged using a down-hole pump equipped with vinyl tubing. The pump and tubing were decontaminated with Alconox® detergent and rinsed with distilled water after each use. Recovered purge water and water used in the decontamination process was contained in 55-gallon drums. After the groundwater monitoring event, all retained water was deposited into the on-site tank and later removed via the site transfer system to the SWD. Approximately 2,780 gallons of purged groundwater and water used for decontamination was generated during the monitoring events of 2014.

Groundwater samples were collected from all monitor wells not impacted with PSH using dedicated disposable polyethylene bailers. Groundwater samples were not collected from wells impacted with PSH. All groundwater samples were contained in laboratory supplied sample vials infused with the appropriate preservative required for the requested analysis. The groundwater samples were maintained on ice, in the custody of Talon personnel, until they were delivered to TraceAnalysis, Inc. in Midland, Texas for testing. The groundwater samples collected during the all four events were quantified for benzene, toluene,

ethylbenzene, and xylene (BTEX) by EPA Method SW-846 8021B.

2.3 Phase Separated Hydrocarbon Recovery

Prior to October 2008, a mobile recovery trailer with total fluids pumps was mobilized to the site on a weekly basis to recover PSH from monitor wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-9.

On October 7, 2008, a permanent system was installed utilizing two (2) AP-4 pneumatic total fluid pumps in monitor wells MW-1 and MW-7 and four (4) skimmers in monitor wells MW-3, MW-5, MW-6, and MW-9 to recover PSH and to inhibit migration of the PSH plume. In 2013, the skimmer pumps in MW-5 and MW-6 were replaced with total fluids pumps. In 2014, the skimmer pump in MW-9 was replaced with a total fluids pump. The system of total fluids pumps are powered by a single-phase 230 volt, 7.5 HP two stage reciprocating air compressor. Fluid, recovered by the pumps, is retained in a 5,000-gallon poly tank (replaced in December, 2014). The poly tank is equipped with a high level shut off switch to prevent overflow and it is located within a secondary containment compound that is outfitted with a poly-liner. Recovered PSH is periodically removed from the recovery tank with a vacuum truck. Recovered groundwater is transported to an approved NMOCD disposal facility via the water transfer system, and removed PSH is re-introduced to the Plains' pipeline system at the Plains operated Lea Station.

Talon personnel performed a minimum of weekly maintenance to the remediation system to ensure efficient operation, to optimize PSH recovery and to minimize down time. The poly tank is gauged weekly to monitor PSH recovery volume. The system has been effective at recovering PSH from the groundwater.

During 2014 the quarterly PSH and groundwater recovery totals are as follows:

- 1st Quarter - 3.39 bbls crude oil and 10,921.24 bbls of groundwater
- 2nd Quarter – 2.83 bbls crude oil and 7318.80 bbls of groundwater
- 3rd Quarter – 4.64 bbls crude oil and 9106.19 bbls of groundwater
- 4th Quarter – 1.63 bbls crude oil and 5932.85 bbls of groundwater

During 2014 a total of 12.49 bbls of crude oil and a total of 33,279.08 bbls of groundwater were recovered by the PSH recovery system. Approximately 225.49 bbls of crude oil has been recovered at the subject site since PSH recovery activities were initiated.

2.4 Groundwater Monitoring Results

The sections that follow present the results from the four (4) groundwater monitoring events conducted at the subject site.

2.4.1 Physical Characteristics of the First Water-Bearing Zone

The primary groundwater resource under the Southern High Plains, including the site, is referred to as the Ogallala Aquifer or High Plains Aquifer. The Southern portion of the

Ogallala aquifer underlies an area of about 29,000 square miles (mi^2) in western Texas and eastern New Mexico, encompassing all or part of 31 counties in Texas and 6 counties in New Mexico.

The Ogallala Aquifer is generally unconfined and the poteniometric surface generally mirrors the land surface elevation with the regional flow direction is from the northwest to the southeast. The mean regional gradient is 15 feet per mile and the typical groundwater velocity averages seven inches per day. The regional hydraulic conductivity averages 17 gallons per day per square-foot and specific yield averages 16%.

The Ogallala Aquifer has experienced acute depletion from extensive irrigation and urban demand, which have exceeded the average annual recharge rate. Recharge of the Ogallala Aquifer on the Southern High Plains occurs predominately from rainfall runoff that accumulates in ephemeral streams and playa lakes as well as direct recharge in areas that contain permeable soils such as sand hills. Recharge rates vary depending on mechanism, but averages from 0 to 1.6 inches per year.

The composition of Ogallala groundwater is defined as mixed-cation-HCO_3, therefore, Ogallala groundwater is considered hard. Problems with scale have occurred with residential and commercial water systems that use Ogallala groundwater and often treatment strategies are employed to reduce the effects of scale. The typical total dissolved solids of Ogallala groundwater in the Hobbs-Lovington area is generally less than 1,000 mg/L (ppm) in areas not impacted by oil-field brines. The pH of Ogallala water averages 7.3.

2.4.2 Groundwater Gradient and Flow Direction

The depth to fluid measurements was collected during each of the four (4) groundwater monitoring events during the year 2014. The results of the fluid level measurements are summarized in Table 1 - Summary of Historical Fluid Level Measurements in Appendix B.

The collected data was used to construct potentiometric surface maps in order to interpret the groundwater gradient and flow direction. The maps, designated Figures 2a through 2d are presented in Appendix A.

Potentiometric surface maps were constructed from four (4) of the water level measurement data/sets:

- March 6-7, 2014
- June 18, 2014
- September 16, 2014
- December 2, 2014

These maps are Figures 2a, 2b, 2c, and 2d, respectively, and are presented in Appendix A.

The potentiometric surface map for March 6-7, 2014 is constructed using water level elevations from all wells. The water level elevations exhibit a general groundwater direction of flow to the southeast with an approximate gradient of 0.0035 feet/foot.

The potentiometric surface map for June 18, 2014 is constructed using water level elevations from all wells. The water level elevations exhibit a general groundwater direction of flow to the south with an approximate gradient of 0.0035 feet/foot.

The potentiometric surface map for September 16, 2014 is constructed using water level elevations from all wells. The water level elevations exhibit a general groundwater direction of flow to the southeast with an approximate gradient of 0.0035 feet/foot.

The potentiometric surface map for December 2, 2014 is constructed using water level elevations from all wells. The water level elevations exhibit a general groundwater direction of flow to the southeast with an approximate gradient of 0.0033 feet/foot.

Groundwater levels at the subject site have exhibited a steady decline of an average of 0.54 feet for the year. The declines in groundwater levels appear to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.

2.4.3 Phase Separated Hydrocarbon (PSH)

An oil/water interface probe was used to determine the thicknesses of PSH during the four (4) groundwater monitoring events. During the events, several wells were blocked from accurate measurements by stuck pumps. This will be denoted in Table 1 - Summary of Historical Fluid Level Measurements in Appendix B. The following summarizes the status of the PSH thicknesses observed during the four groundwater monitoring events:

- In March 2014, PSH was observed in five (5) monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.01 feet to 2.50 feet.
- In June 2014, PSH was observed in five (5) monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.01 feet to 1.53 feet.
- In September 2014, PSH was observed in five (5) monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.01 feet to 0.97 feet.
- In December 2014, PSH was observed in five (5) monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.01 feet to 0.90 feet.

In addition to potentiometric surface maps, isopleth maps were prepared depicting the measured PSH thicknesses and PSH plume geometry. PSH plume delineation and thickness maps are presented in Appendix A as Figures 3a through 3d. Currently, the PSH plume is delineated. PSH recovery operations have been performed at the site since 2004. Currently, there are a total of five (5) total fluid pumps in operation at the site. A summary of the historical groundwater and PSH gauging results is provided in Table 1 in Appendix B.

2.4.4 Groundwater Analytical Results

During the first quarter, March 2014, sampling event, groundwater samples were collected from monitor wells MW-3A, MW-4A, MW-8, and MW-10 through MW-23. Monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. Monitor well MW-2 was dry.

The following analytical results were observed from laboratory analyses:

- Benzene concentrations ranged from <0.00100 mg/L to 19.2 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-3A, MW-4A, MW-13, and MW-15.
- Toluene concentrations ranged from <0.00100 mg/L to <0.0311 mg/L. The toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.00330 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected.
- Xylene concentrations ranged from <0.00300 mg/L to 0.00900 mg/L. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in the groundwater samples collected.

During the June 2014 sampling event, groundwater samples were collected from monitor wells MW-3A, MW-4A, MW-8, and MW-10 through MW-23. Monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. Monitor well MW-2 was dry. In addition, samples were collected from monitor wells, MW-3A, MW-4A, MW-22, and MW-23 for quantification of PAHs.

Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 19.5 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-4A, MW-13, and MW-15.
- Toluene concentrations ranged from <0.100 to <0.00100 mg/L. The toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.00610 mg/L. The ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected.
- Xylene concentrations ranged from <0.00100 mg/L to <0.150 mg/L. The xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the collected groundwater samples.
- Total naphthalenes in the samples collected were all non-detectable by the lab, which did not exceed the NMWQCC groundwater standard of 0.030 mg/L.

During the September 2014 sampling event, groundwater samples were collected from monitor wells MW-3A, MW-4A, MW-8, and MW-10 through MW-23. Monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. Monitor well MW-2 was dry.

Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 1.40 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-4, MW-8, MW-11, MW-13, MW-14, and MW-15.
- Toluene concentrations ranged from <0.00100 mg/L to 0.305 mg/L. The toluene concentration did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.160 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the collected groundwater samples.
- Xylene concentrations ranged from <0.00100 mg/L to 0.179 mg/L. The xylene concentration did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the groundwater samples collected.

During the December 2014 sampling event, groundwater samples were collected from monitor wells MW-3A, MW-4A, MW-8, and MW-10 through MW-23. Monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. Monitor well MW-2 was dry.

Laboratory analytical results of the groundwater samples collected exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 24.9 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-4A, MW-11, MW-13, MW-14, MW-15 and MW-22.
- Toluene concentrations ranged from <0.00100 mg/L to 0.193 mg/L. The toluene concentration did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.226 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any collected groundwater sample.
- Xylene concentrations ranged from <0.00100 mg/L to 0.375 mg/L. The xylene concentration did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the groundwater samples collected.

Generally, dissolved-phase concentrations have declined or remained stable during the year 2014 with the most significant declines in down-gradient monitor well MW-13 indicating that the dissolved-phase plume may be contracting. Currently, the dissolved-phase groundwater plume is delineated.

3 CONCLUSIONS AND RECOMMENDATIONS

The following section presents a summary of the four groundwater monitoring events conducted at the 8" Moore to Jal #2 site and provides recommendations for future corrective actions.

3.1 Summary of Findings

- The groundwater flow direction is to the southeast at an average gradient of 0.0033 feet per foot.
- Groundwater levels at the subject site have exhibited a steady decline that appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer. Monitor well MW-2 went dry. Monitor wells MW-3 and MW-4 are replaced by MW-3A and MW-4A.
- PSH has been observed in monitor wells MW-1, MW-5, MW-6, MW-7, and MW-9.
- Generally, PSH thicknesses have remained stable or decreased from quarter to quarter during the year 2014, overall exhibiting a declining trend.
- In general, monitor wells have exhibited stable or declining concentrations of dissolved-phase contaminants. Currently, the dissolved-phase plume is delineated.
- Approximately 12.49 bbls of crude oil was recovered during the year 2014 indicating that the PSH recovery system is performing its function.

3.2 Recommendations

Based upon the results of the quarterly groundwater monitoring and PSH recovery efforts, Talon proposes the following actions:

- Continue operation and maintenance of the PSH recovery system and transfer system. Adjust pump intake port depths and controller settings to optimize PSH recovery.
- Add or reposition pumps as necessary to optimize PSH recovery and inhibit plume migration.
- Perform quarterly groundwater monitoring events in accordance with NMOCD directives.

APPENDIX A

Figures

Figure 1 - Site Plan – 03/21/2013

Figure 2a - Groundwater Gradient Map - 03/06-07/2014

Figure 2b - Groundwater Gradient Map - 06/18/2014

Figure 2c - Groundwater Gradient Map – 09/16/2014

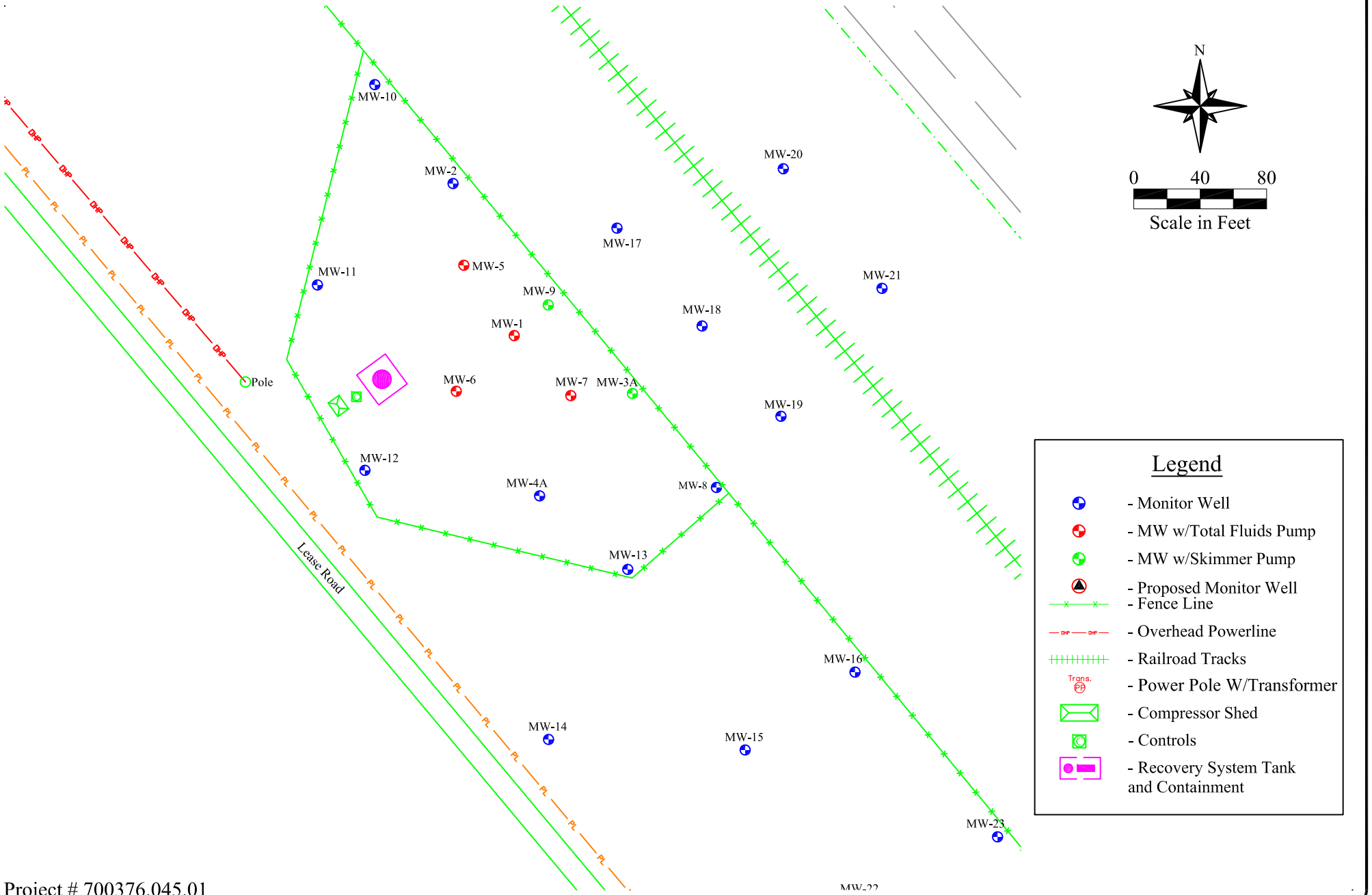
Figure 2d - Groundwater Gradient Map - 12/0/2014

Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/07/2014

Figure 3b - PSH Thickness & Groundwater Concentration Map - 06/18-19/2014

Figure 3c - PSH Thickness & Groundwater Concentration Map – 09/16/2014

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/04/2014



Project # 700376.045.01

TALON LPE

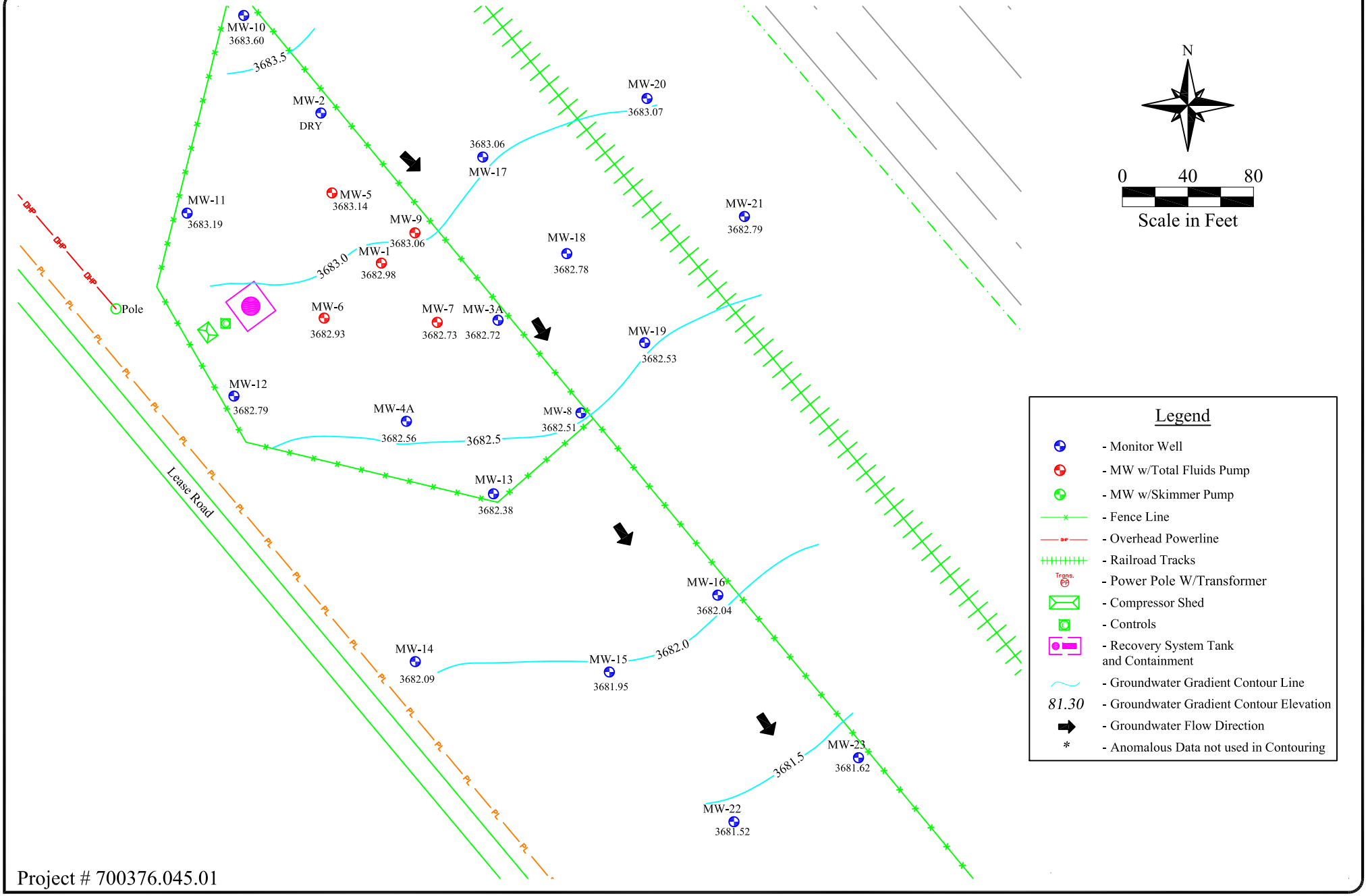
Date:	03/21/2013
Scale:	1" = 80'
Drawn By:	TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92

9.2 Miles SE of Lovington, NM, Lea County, New Mexico

Figure 1 - Site Plan



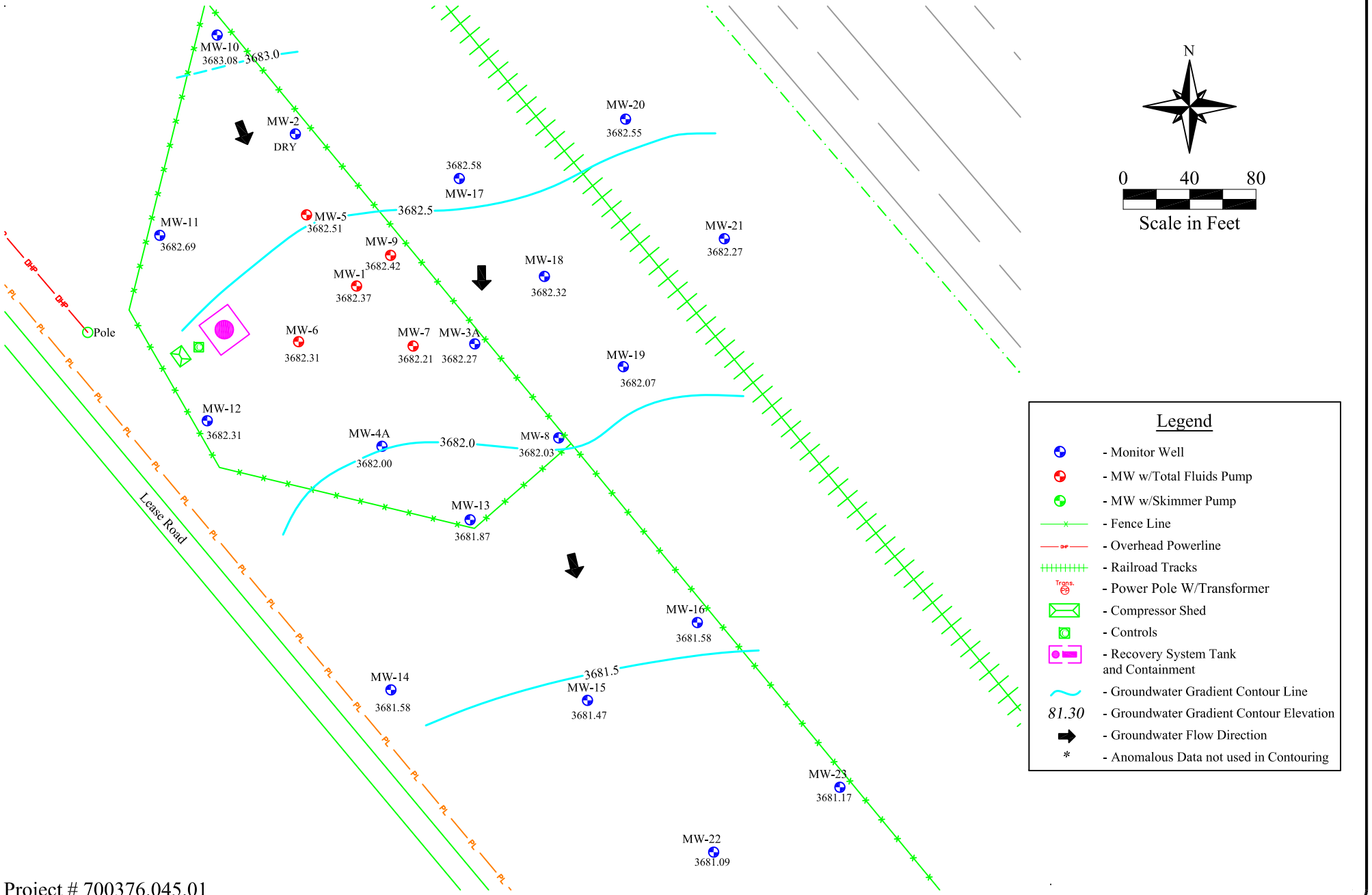
Project # 700376.045.01

TALON LPE

Date: 01/16/2015
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2a - Groundwater Gradient Map - 03/06-07/2014

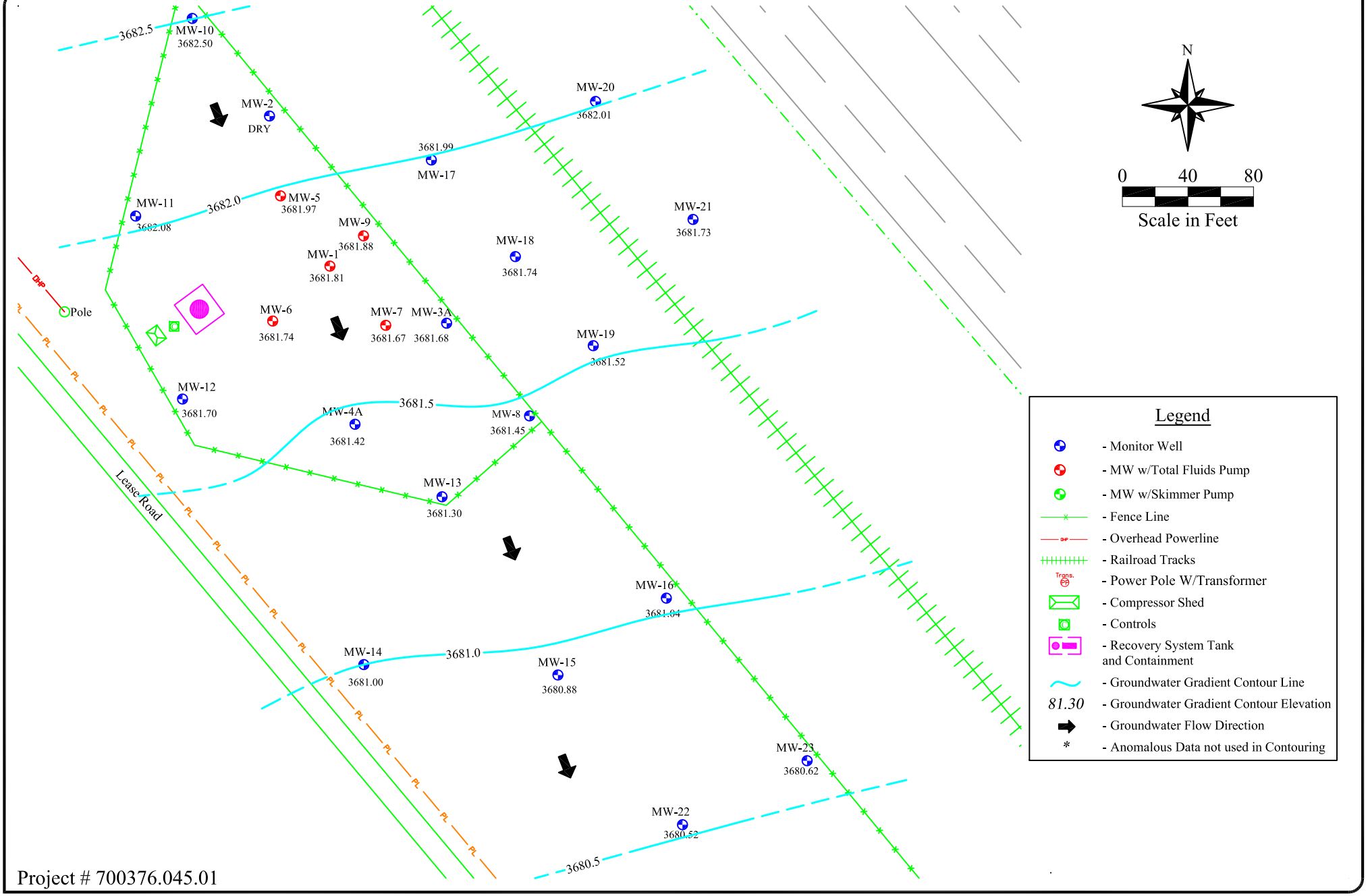


TALON LPE

Date: 07/15/2014
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2b - Groundwater Gradient Map - 06/18/2014



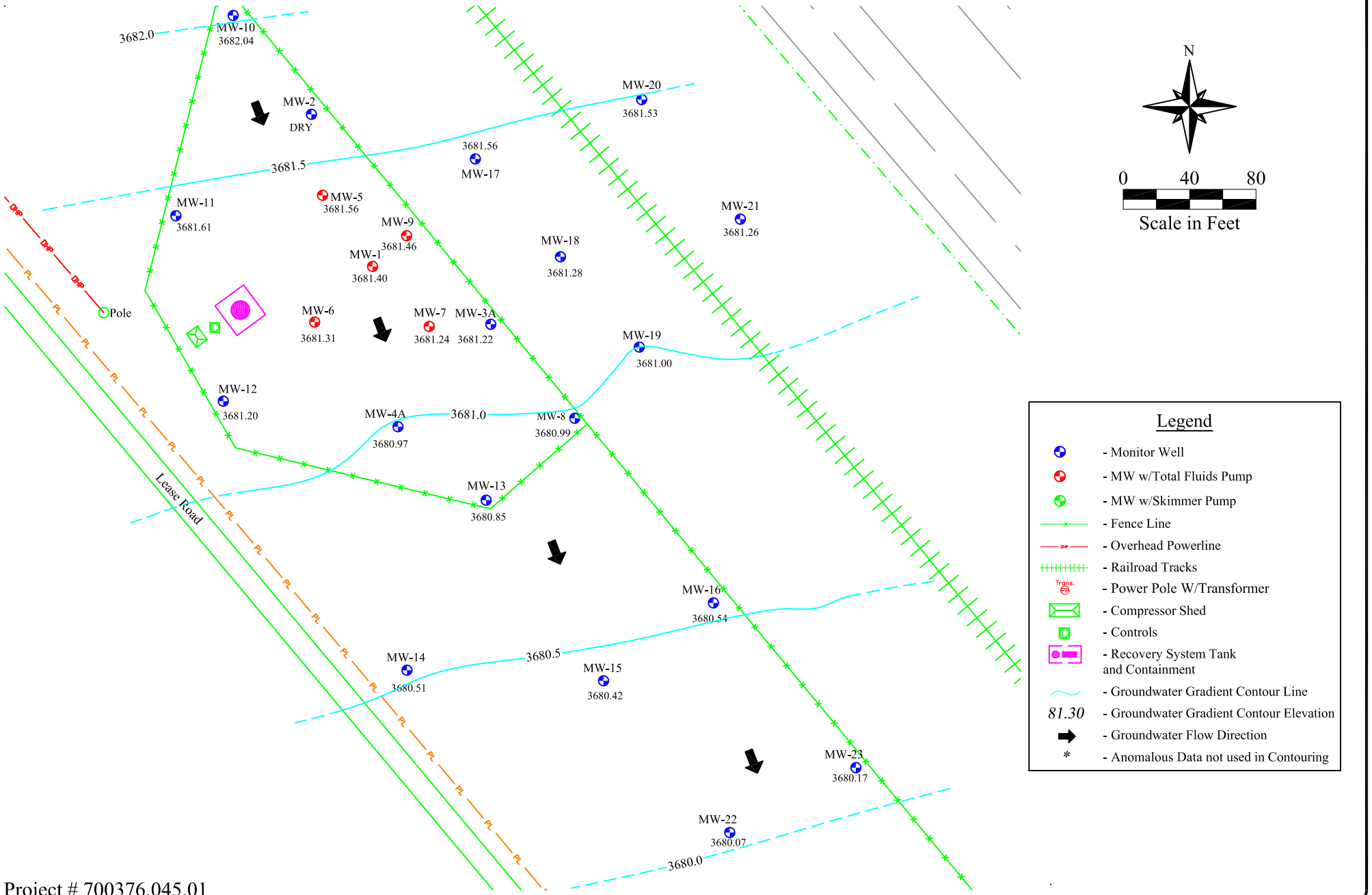
Project # 700376.045.01

TALON LPE

Date: 10/21/2014
Scale: 1" = 80'
Drawn By: SMM

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2c - Groundwater Gradient Map - 09/16/2014



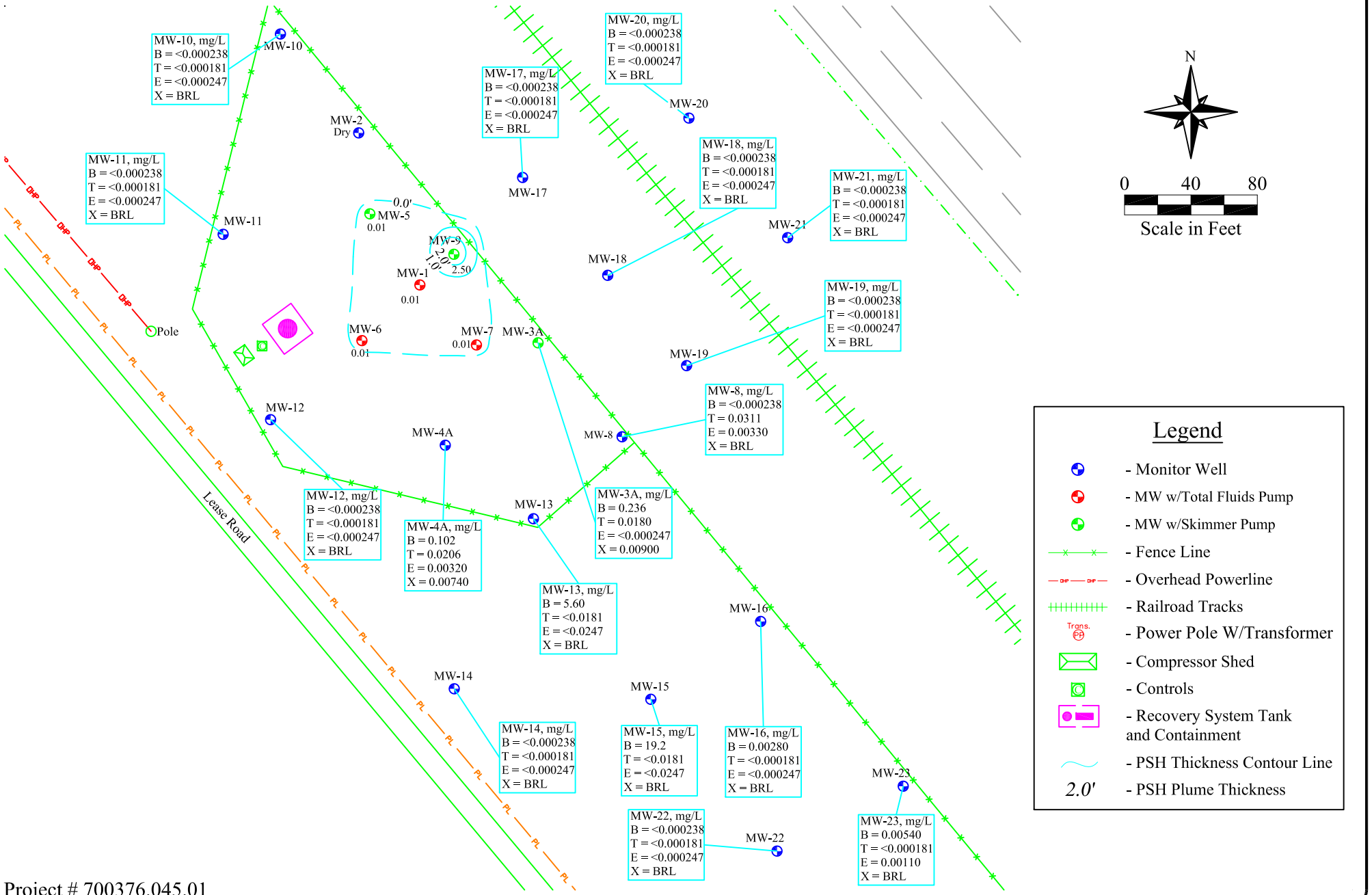
Project # 700376.045.01

TALON LPE

Date: 01/16/2015
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2d - Groundwater Gradient Map - 12/02/2014

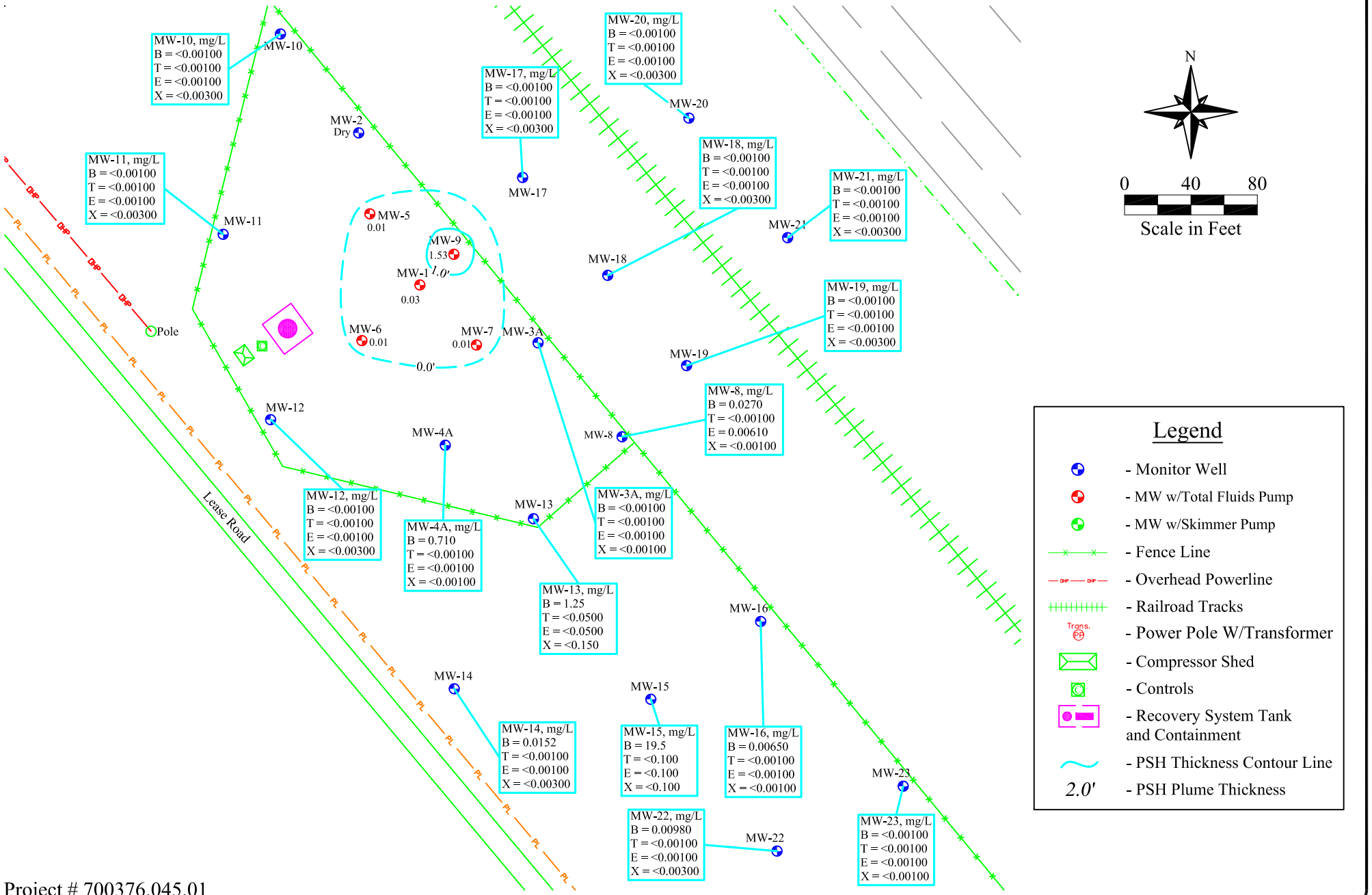


TALON LPE

Date: 04/15/2014
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 3a - PSH Thickness and Groundwater Concentration Map, - 03/07/2014

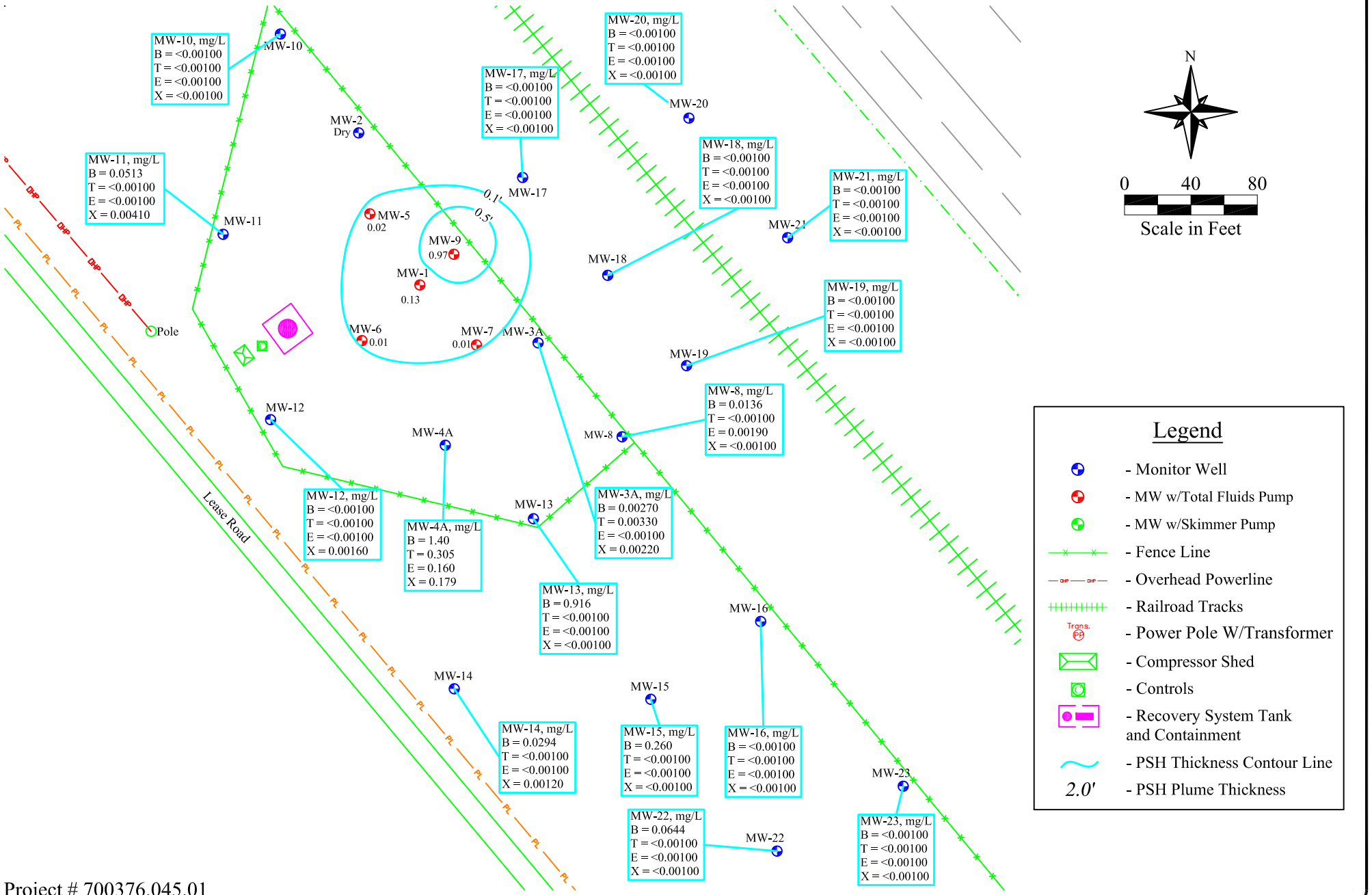


TALON LPE

Date: 07/15/2014
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 3b - PSH Thickness and Groundwater Concentration Map, - 06/18-19/2014



Project # 700376.045.01

TALON LPE

Date: 10/21/2014

Scale: 1" = 80'

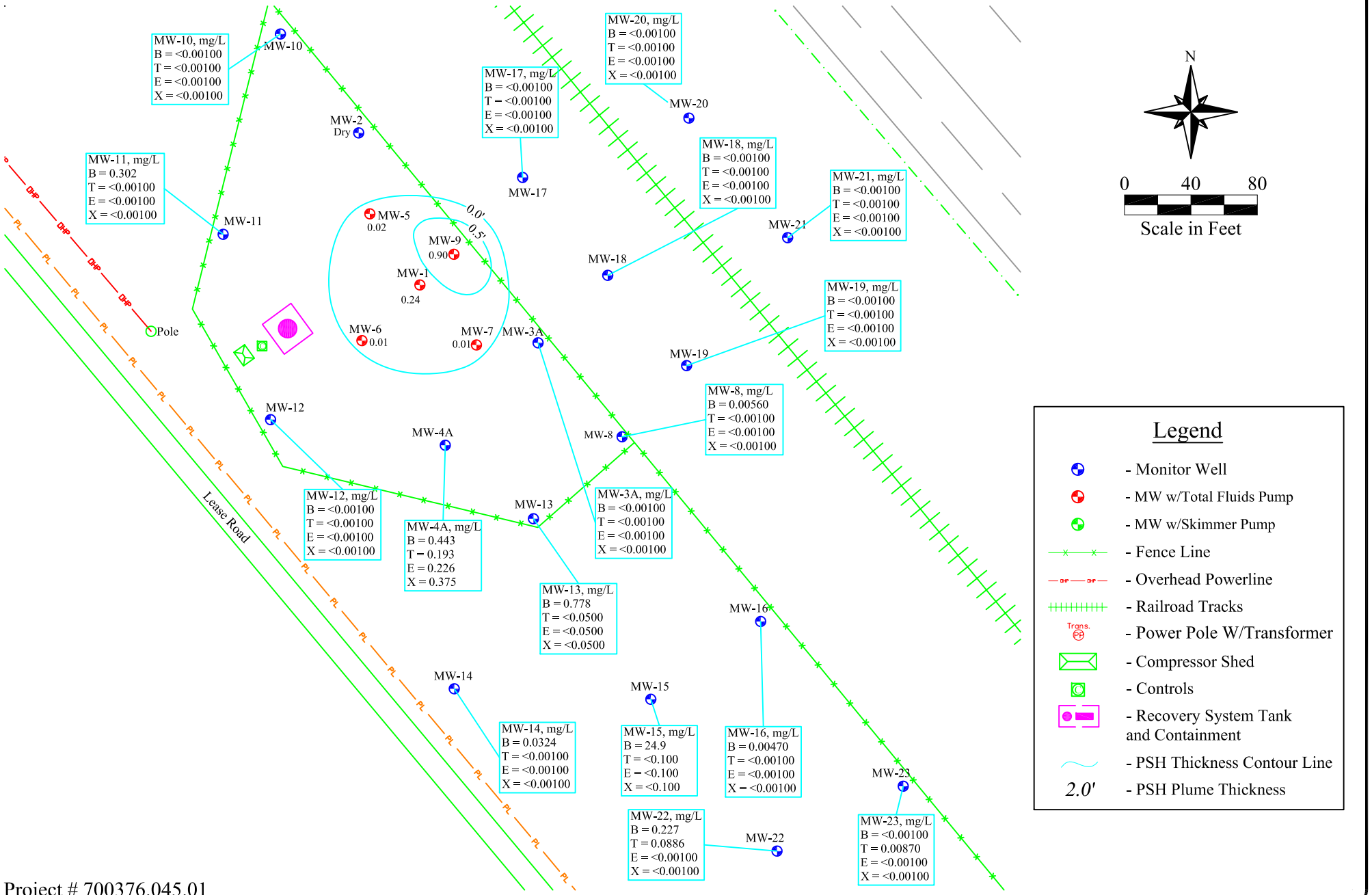
Drawn By: SMM

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92

9.2 Miles SE of Lovington, NM, Lea County, New Mexico

Figure 3c - PSH Thickness and Groundwater Concentration Map, (09/16/2014)



Project # 700376.045.01

TALON LPE

Date: 01/16/2015

Scale: 1" = 80'

Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOCD REF. # AP-92

9.2 Miles SE of Lovington, NM, Lea County, New Mexico

Figure 3d - PSH Thickness and Groundwater Concentration Map (12/03/2014)

APPENDIX B

Tables

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-1			Diameter: 4 in.	Screened Interval: 63 ft. to 83 ft.		TD: 83 ft.
	03/21/12	3773.35	89.47	86.00	3.47	3686.78
	06/12/12	3773.35	87.29	86.85	0.44	3686.43
	09/26/12	3773.35	88.70	87.15	1.55	3685.94
	12/14/12	3773.35	88.09	87.80	0.29	3685.50
	03/12/13	3773.35	88.37	88.14	0.23	3685.17
	06/20/13	3773.35	89.88	88.39	1.49	3684.71
	09/27/13	3773.35	89.89	88.11	1.78	3684.95
	12/04/13	3773.35	NG	-	-	NG
	03/06/14	3773.35	90.38	90.37	0.01	3682.98
	06/18/14	3773.35	91.01	90.98	0.03	3682.37
	09/16/14	3773.35	91.65	91.52	0.13	3681.81
	12/02/14	3773.35	92.15	91.91	0.24	3681.40
MW-2			Diameter: 2 in.	Screened Interval: 63 ft. to 82.5 ft.		TD: 82.5 ft.
	03/21/12	3772.07	85.00	-	-	3687.07
	06/12/12	3772.07	85.14	-	-	3686.93
	09/26/12	3772.07	NG	-	-	NG
	12/14/12	3772.07	86.21	-	-	3685.86
	03/12/13	3772.07	Dry	-	-	Dry
	06/20/13	3772.07	Dry	-	-	Dry
	09/27/13	3772.07	Dry	-	-	Dry
	12/04/13	3772.07	Dry	-	-	Dry
	03/06/14	3772.07	Dry	-	-	Dry
	06/18/14	3772.07	Dry	-	-	Dry
	09/16/14	3772.07	Dry	-	-	Dry
	12/02/14	3772.07	Dry	-	-	Dry
MW-3			Diameter: 2 in.	Screened Interval: 63 ft. to 83 ft.		TD: 83 ft.
	03/21/12	3772.86	Dry	-	-	Dry
	06/12/12	3772.86	Dry	-	-	Dry
	09/26/12	3772.86	Dry	-	-	Dry
	12/14/12	3772.86	Dry	-	-	Dry
	03/12/13	3772.86	Dry	-	-	Dry
	06/20/13	3772.86	Dry	-	-	Dry
	09/27/13	3772.86	Dry	-	-	Dry
	12/04/13	3772.86	Dry	-	-	Dry
	12/10/13	3772.86	P&A	-	-	P&A
MW-3A			Diameter: 4 in.	Screened Interval: 82 ft. to 112 ft.		TD: 112 ft.
	01/09/14	3773.59	90.52	-	-	3683.07
	03/07/14	3773.59	90.87	-	-	3682.72
	06/18/14	3773.59	91.32	-	-	3682.27
	09/16/14	3773.59	91.91	-	-	3681.68
	12/02/14	3773.59	92.37	-	-	3681.22
MW-4			Diameter: 2 in.	Screened Interval: 67 ft. to 87 ft.		TD: 87 ft.
	03/21/12	3773.76	87.60	87.38	0.22	3686.34
	06/12/12	3773.76	87.41	87.23	0.18	3686.50
	09/26/12	3773.76	87.69	87.60	0.09	3686.15
	12/14/12	3773.76	Dry	-	-	Dry
	03/12/13	3773.76	Dry	-	-	Dry
	06/20/13	3773.76	Dry	-	-	Dry
	09/27/13	3773.76	Dry	-	-	Dry
	12/04/13	3773.76	Dry	-	-	Dry
	12/10/13	3773.76	P&A	-	-	P&A

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-4A			Diameter: 4 in.	Screened Interval: 84 ft. to 114 ft.		TD: 114 ft.
	01/09/14	3774.27	91.47	-	-	3682.80
	03/07/14	3774.27	91.71	-	-	3682.56
	06/18/14	3774.27	92.27	-	-	3682.00
	09/16/14	3774.27	92.85	-	-	3681.42
	12/02/14	3774.27	93.30	-	-	3680.97
MW-5			Diameter: 4 in.	Screened Interval: 60 ft. to 100 ft.		TD: 100 ft.
	03/21/12	3772.08	89.62	84.21	5.41	3686.98
	06/12/12	3772.08	90.11	84.51	5.60	3686.65
	09/26/12	3772.08	90.92	84.94	5.98	3686.15
	12/14/12	3772.08	87.91	86.21	1.70	3685.59
	03/12/13	3772.08	89.18	86.20	2.98	3685.39
	06/20/13	3772.08	90.19	86.58	3.61	3684.90
	09/27/13	3772.08	90.29	86.14	4.15	3685.26
	12/04/13	3772.08	90.19	86.58	3.61	3684.90
	03/07/14	3772.08	88.95	88.94	0.01	3683.14
	06/18/14	3772.08	89.58	89.57	0.01	3682.51
	09/16/14	3772.08	90.13	90.11	0.02	3681.97
	12/02/14	3772.08	90.54	90.52	0.02	3681.56
MW-6			Diameter: 4 in.	Screened Interval: 60 ft. to 100 ft.		TD: 100 ft.
	03/21/12	3772.99	90.50	85.41	5.09	3686.74
	06/12/12	3772.99	91.48	85.61	5.87	3686.41
	09/29/12	3772.99	92.13	86.05	6.08	3685.94
	12/14/12	3772.99	89.99	86.95	3.04	3685.54
	03/12/13	3772.99	88.00	87.87	0.13	3685.10
	06/20/13	3772.99	88.76	-	-	3684.23
	09/27/13	3772.99	NG	-	-	NG
	12/04/13	3772.99	NG	-	-	NG
	03/07/14	3772.99	90.07	90.06	0.01	3682.93
	06/18/14	3772.99	90.69	90.68	0.01	3682.31
	09/16/14	3772.99	91.26	91.25	0.01	3681.74
	12/02/14	3772.99	91.69	91.68	0.01	3681.31
MW-7			Diameter: 4 in.	Screened Interval: 60 ft. to 100 ft.		TD: 100 ft.
	03/21/12	3772.92	90.17	85.53	4.64	3686.62
	06/12/12	3772.92	88.61	86.25	2.36	3686.28
	09/26/12	3772.92	92.04	86.13	5.91	3685.81
	12/14/12	3772.92	89.43	87.26	2.17	3685.30
	03/12/13	3772.92	88.01	87.90	0.11	3685.00
	06/20/13	3772.92	NG	-	-	NG
	09/27/13	3772.92	NG	-	-	NG
	12/04/13	3772.92	NG	-	-	NG
	03/07/14	3772.92	90.20	90.19	0.01	3682.73
	06/18/14	3772.92	90.72	90.71	0.01	3682.21
	09/16/14	3772.92	91.26	91.25	0.01	3681.67
	12/02/14	3772.92	91.69	91.68	0.01	3681.24

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-8			Diameter: 4 in.	Screened Interval: 64 ft. to 104 ft.		TD: 104.7 ft.
	03/21/12	3773.80	87.56	-	-	3686.24
	06/12/12	3773.80	88.80	-	-	3685.00
	09/26/12	3773.80	88.41	-	-	3685.39
	12/14/12	3773.80	88.78	-	-	3685.02
	03/12/13	3773.80	89.11	-	-	3684.69
	06/20/13	3773.80	89.56	-	-	3684.24
	09/27/13	3773.80	89.60	-	-	3684.20
	12/04/13	3773.80	90.11	-	-	3683.69
	03/07/14	3773.80	91.29	-	-	3682.51
	06/18/14	3773.80	91.77	-	-	3682.03
	09/16/14	3773.80	92.35	-	-	3681.45
	12/02/14	3773.80	92.81	-	-	3680.99
MW-9			Diameter: 4 in.	Screened Interval: 60 ft. to 100 ft.		TD: 100 ft.
	03/21/12	3771.79	88.98	84.15	4.83	3686.84
	06/12/12	3771.79	89.81	84.38	5.43	3686.51
	09/26/12	3771.79	90.43	84.80	5.63	3686.06
	12/14/12	3771.79	86.54	86.10	0.44	3685.62
	03/12/13	3771.79	87.85	86.27	1.58	3685.26
	06/20/13	3771.79	88.98	86.59	2.39	3684.81
	09/27/13	3771.79	88.97	86.12	2.85	3685.20
	12/04/13	3771.79	88.98	87.11	1.87	3684.37
	03/07/14	3771.79	90.82	88.32	2.50	3683.06
	06/18/14	3771.79	90.65	89.12	1.53	3682.42
	09/16/14	3771.79	90.72	89.75	0.97	3681.88
	12/02/14	3771.79	91.08	90.18	0.90	3681.46
MW-10			Diameter: 4 in.	Screened Interval: 61 ft. to 101 ft.		TD: 101 ft.
	03/21/12	3771.90	NG	-	-	NG
	06/12/12	3771.90	84.69	-	-	3687.21
	09/26/12	3771.90	84.30	-	-	3687.60
	12/14/12	3771.90	85.40	-	-	3686.50
	03/12/13	3771.90	86.09	-	-	3685.81
	06/20/13	3771.90	86.59	-	-	3685.31
	09/27/13	3771.90	86.97	-	-	3684.93
	12/04/13	3771.90	87.91	-	-	3683.99
	03/07/14	3771.90	88.30	-	-	3683.60
	06/18/14	3771.90	88.82	-	-	3683.08
	09/16/14	3771.90	89.40	-	-	3682.50
	12/02/14	3771.90	89.86	-	-	3682.04
MW-11			Diameter: 4 in.	Screened Interval: 65 ft. to 105 ft.		TD: 105 ft.
	03/21/12	3772.97	85.99	-	-	3686.98
	06/12/12	3772.97	86.12	-	-	3686.85
	09/26/12	3772.97	86.75	-	-	3686.22
	03/12/13	3772.97	87.51	-	-	3685.46
	06/20/13	3772.97	88.93	-	-	3684.04
	09/27/13	3772.97	88.91	-	-	3684.06
	12/04/13	3772.97	89.17	-	-	3683.80
	03/07/14	3772.97	89.78	-	-	3683.19
	06/18/14	3772.97	90.28	-	-	3682.69
	09/16/14	3772.97	90.89	-	-	3682.08
	12/02/14	3772.97	91.36	-	-	3681.61

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-12			Diameter: 4 in.	Screened Interval: 65 ft. to 105 ft.		TD: 105 ft.
	03/21/12	3773.80	87.23	-	-	3686.57
	06/12/12	3773.80	87.36	-	-	3686.44
	09/26/12	3773.80	88.00	-	-	3685.80
	12/14/12	3773.80	88.41	-	-	3685.39
	03/12/13	3773.80	88.75	-	-	3685.05
	06/20/13	3773.80	89.64	-	-	3684.16
	09/27/13	3773.80	89.76	-	-	3684.04
	12/04/13	3773.80	90.86	-	-	3682.94
	03/07/14	3773.80	91.01	-	-	3682.79
	06/18/14	3773.80	91.49	-	-	3682.31
	09/16/14	3773.80	92.10	-	-	3681.70
	12/02/14	3773.80	92.60	-	-	3681.20
MW-13			Diameter: 4 in.	Screened Interval: 65 ft. to 105 ft.		TD: 105 ft.
	03/21/12	3774.36	88.29	-	-	3686.07
	06/12/12	3774.36	88.43	-	-	3685.93
	09/26/12	3774.36	89.08	-	-	3685.28
	12/14/12	3774.36	89.45	-	-	3684.91
	03/12/13	3774.36	89.80	-	-	3684.56
	06/20/13	3774.36	90.25	-	-	3684.11
	09/27/13	3774.36	90.14	-	-	3684.22
	12/04/13	3774.36	90.86	-	-	3683.50
	03/07/14	3774.36	91.98	-	-	3682.38
	06/18/14	3774.36	92.49	-	-	3681.87
	09/16/14	3774.36	93.06	-	-	3681.30
	12/02/14	3774.36	93.51	-	-	3680.85
MW-14			Diameter: 4 in.	Screened Interval: 66 ft. to 106 ft.		TD: 106 ft.
	03/21/12	3774.40	89.14	-	-	3685.26
	06/12/12	3774.40	88.73	-	-	3685.67
	09/26/12	3774.40	89.45	-	-	3684.95
	12/14/12	3774.40	89.90	-	-	3684.50
	03/12/13	3774.40	90.11	-	-	3684.29
	06/20/13	3774.40	90.59	-	-	3683.81
	09/27/13	3774.40	90.50	-	-	3683.90
	12/04/13	3774.40	91.48	-	-	3682.92
	03/07/14	3774.40	92.31	-	-	3682.09
	06/18/14	3774.40	92.82	-	-	3681.58
	09/16/14	3774.40	93.40	-	-	3681.00
	12/02/14	3774.40	93.89	-	-	3680.51
MW-15			Diameter: 4 in.	Screened Interval: 67 ft. to 107 ft.		TD: 107 ft.
	03/21/12	3774.03	88.48	-	-	3685.55
	06/12/12	3774.03	88.59	-	-	3685.44
	09/26/12	3774.03	89.26	-	-	3684.77
	12/14/12	3774.03	89.61	-	-	3684.42
	03/12/13	3774.03	89.93	-	-	3684.10
	06/20/13	3774.03	90.39	-	-	3683.64
	09/27/13	3774.03	90.41	-	-	3683.62
	12/04/13	3774.03	91.99	-	-	3682.04
	03/07/14	3774.03	92.08	-	-	3681.95
	06/18/14	3774.03	92.56	-	-	3681.47
	09/16/14	3774.03	93.15	-	-	3680.88
	12/02/14	3774.03	93.61	-	-	3680.42

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-16			Diameter: 4 in.	Screened Interval: 67 ft. to 107 ft.		TD: 107 ft.
	03/21/12	3773.95	88.83	-	-	3685.12
	06/12/12	3773.95	88.43	-	-	3685.52
	09/26/12	3773.95	89.09	-	-	3684.86
	12/14/12	3773.95	84.50	-	-	3689.45
	03/12/13	3773.95	89.76	-	-	3684.19
	06/20/13	3773.95	91.23	-	-	3682.72
	09/27/13	3773.95	91.20	-	-	3682.75
	12/04/13	3773.95	92.13	-	-	3681.82
	03/07/14	3773.95	91.91	-	-	3682.04
	06/18/14	3773.95	92.37	-	-	3681.58
	09/16/14	3773.95	92.91	-	-	3681.04
	12/02/14	3773.95	93.41	-	-	3680.54
MW-17			Diameter: 4 in.	Screened Interval: 64 ft. to 104 ft.		TD: 104 ft.
	03/21/12	3771.29	84.51	-	-	3686.78
	06/12/12	3771.29	85.82	-	-	3685.47
	09/26/12	3771.29	85.33	-	-	3685.96
	12/14/12	3771.29	85.68	-	-	3685.61
	03/12/13	3771.29	86.05	-	-	3685.24
	06/20/13	3771.29	86.49	-	-	3684.80
	09/27/13	3771.29	86.44	-	-	3684.85
	12/04/13	3771.29	87.76	-	-	3683.53
	03/07/14	3771.29	88.23	-	-	3683.06
	06/18/14	3771.29	88.71	-	-	3682.58
	09/16/14	3771.29	89.30	-	-	3681.99
	12/02/14	3771.29	89.73	-	-	3681.56
MW-18			Diameter: 4 in.	Screened Interval: 64 ft. to 104 ft.		TD: 104 ft.
	03/21/12	3772.41	85.91	-	-	3686.50
	06/12/12	3772.41	86.26	-	-	3686.15
	09/26/12	3772.41	86.75	-	-	3685.66
	12/14/12	3772.41	87.08	-	-	3685.33
	03/12/13	3772.41	87.45	-	-	3684.96
	06/20/13	3772.41	87.90	-	-	3684.51
	09/27/13	3772.41	87.96	-	-	3684.45
	12/04/13	3772.41	87.91	-	-	3684.50
	03/07/14	3772.41	89.63	-	-	3682.78
	06/18/14	3772.41	90.09	-	-	3682.32
	09/16/14	3772.41	90.67	-	-	3681.74
	12/02/14	3772.41	91.13	-	-	3681.28
MW-19			Diameter: 4 in.	Screened Interval: 65 ft. to 105 ft.		TD: 105 ft.
	03/21/12	3773.63	87.39	-	-	3686.24
	06/12/12	3773.63	87.71	-	-	3685.92
	09/26/12	3773.63	88.24	-	-	3685.39
	12/14/12	3773.63	88.57	-	-	3685.06
	03/12/13	3773.63	88.91	-	-	3684.72
	06/20/13	3773.63	89.36	-	-	3684.27
	09/27/13	3773.63	89.40	-	-	3684.23
	12/04/13	3773.63	90.16	-	-	3683.47
	03/07/14	3773.63	91.10	-	-	3682.53
	06/18/14	3773.63	91.56	-	-	3682.07
	09/16/14	3773.63	92.11	-	-	3681.52
	12/02/14	3773.63	92.63	-	-	3681.00

Summary of Fluid Level Measurements
Moore to Jal #2
SRS #2002-10273

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-20			Diameter: 4 in.	Screened Interval: 63 ft. to 103 ft.		TD: 103 ft.
	03/21/12	3770.92	84.23	-	-	3686.69
	06/12/12	3770.92	84.58	-	-	3686.34
	09/26/12	3770.92	85.00	-	-	3685.92
	12/14/12	3770.92	85.37	-	-	3685.55
	03/12/13	3770.92	85.72	-	-	3685.20
	06/20/13	3770.92	86.36	-	-	3684.56
	09/27/13	3770.92	86.38	-	-	3684.54
	12/04/13	3770.92	87.56	-	-	3683.36
	03/07/14	3770.92	87.85	-	-	3683.07
	06/18/14	3770.92	88.37	-	-	3682.55
	09/16/14	3770.92	88.91	-	-	3682.01
	12/02/14	3770.92	89.39	-	-	3681.53
MW-21			Diameter: 4 in.	Screened Interval: 64 ft. to 104 ft.		TD: 104 ft.
	03/21/12	3773.30	86.91	-	-	3686.39
	06/12/12	3773.30	87.28	-	-	3686.02
	09/26/12	3773.30	87.67	-	-	3685.63
	12/14/12	3773.30	88.02	-	-	3685.28
	03/12/13	3773.30	88.38	-	-	3684.92
	06/20/13	3773.30	88.85	-	-	3684.45
	09/27/13	3773.30	88.91	-	-	3684.39
	12/04/13	3773.30	90.21	-	-	3683.09
	03/07/14	3773.30	90.51	-	-	3682.79
	06/18/14	3773.30	91.03	-	-	3682.27
	09/16/14	3773.30	91.57	-	-	3681.73
	12/02/14	3773.30	92.04	-	-	3681.26
MW-22			Diameter: 2 in.	Screened Interval: 80 ft. to 110 ft.		TD: 110 ft.
	01/09/14	3772.92	91.04	-	-	3681.88
	03/07/14	3772.92	91.40	-	-	3681.52
	06/18/14	3772.92	91.83	-	-	3681.09
	09/16/14	3772.92	92.40	-	-	3680.52
	12/02/14	3772.92	92.85	-	-	3680.07
MW-23			Diameter: 2 in.	Screened Interval: 84 ft. to 114 ft.		TD: 114 ft.
	01/09/14	3773.87	91.91	-	-	3681.96
	03/07/14	3773.87	92.25	-	-	3681.62
	06/18/14	3773.87	92.70	-	-	3681.17
	09/16/14	3773.87	93.25	-	-	3680.62
	12/02/14	3773.87	93.70	-	-	3680.17

Specific Gravity: 0.835

NG - Not Gauged
NSch - Not scheduled to be gauged
Block - Well blocked/obstructed
Locate - Can not locate/find well
Dry - Well is dry
P&A - Plug and Abandon
WD - Well Destroyed

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-1	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	09/27/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	A
	03/21/13	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	A
MW-2	03/21/12	0.00890	0.0112	<0.00146	0.0124	-	-	-
	06/13/12	<0.00186	<0.00174	<0.00163	0.00550	-	-	-
	09/26/12	-	-	-	-	-	-	I
	12/14/12	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	I
	12/30/13	-	-	-	-	-	-	I
	03/07/14	-	-	-	-	-	-	I
	06/18/14	-	-	-	-	-	-	I
	09/17/14	-	-	-	-	-	-	I
	12/03/14	-	-	-	-	-	-	I
MW-3	03/21/12	-	-	-	-	-	-	I
	06/12/12	-	-	-	-	-	-	I
	09/26/12	-	-	-	-	-	-	I
	12/14/12	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	I
	12/17/13	-	-	-	-	-	-	J

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-3A	03/07/14	0.0236	0.0180	<0.000247	0.00900	-	-	-
	06/19/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	09/17/14	0.00270	0.00330	<0.00100	0.00220	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-4	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	I
	12/17/13	-	-	-	-	-	-	J
MW-4A	03/07/14	0.102	0.0206	0.00320	0.00740	-	-	-
	06/19/14	0.710	<0.0500	<0.0500	<0.0500	-	-	-
	09/18/14	1.40	0.305	0.160	0.179	-	-	-
	12/03/14	0.443	0.193	0.226	0.375	-	-	-
MW-5	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	A

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-6	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	A
MW-7	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	A

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-8	03/21/12	12.2	<0.0130	0.192	0.155	-	-	-
	06/13/12	6.18	<0.0347	0.380	BRL	-	-	-
	09/27/12	3.50	<0.0174	0.401	BRL	-	<0.0477	-
	12/14/12	0.210	<0.000347	0.0317	0.00200	-	-	-
	03/21/13	0.584	<0.0232	<0.0221	BRL	-	-	-
	06/20/13	0.0360	<0.00100	0.0120	U	0.0480	-	-
	10/09/13	0.00730	<0.000518	<0.000518	BRL	-	-	-
	12/30/13	0.00790	<0.000465	0.00150	BRL	-	-	-
	03/07/14	<0.000238	0.0311	0.00330	BRL	-	-	-
	06/18/14	0.0270	<0.00100	0.00610	<0.00100	-	-	-
	09/17/14	0.0136	<0.00100	0.00190	<0.00100	-	-	-
	12/03/14	0.00560	<0.00100	<0.00100	<0.00100	-	-	-
MW-9	03/21/12	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	A

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-10	03/21/12	0.00130	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	09/26/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000567	<0.000518	<0.000518	BRL	-	-	-
	12/30/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-11	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	09/26/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000567	<0.000518	<0.000518	BRL	-	-	-
	12/30/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	0.0513	<0.00100	<0.00100	0.00410	-	-	-
	12/03/14	0.302	<0.00100	<0.00100	<0.00100	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-12	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	09/26/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000310	0.00140	<0.000291	0.00100	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	0.0106	0.00727	<0.000700	U	0.0179	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/30/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	<0.00100	<0.00100	<0.00100	0.00160	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-13	03/21/12	33.2	<0.0518	0.409	0.540	-	-	-
	06/13/12	33.6	<0.0694	<0.0652	0.286	-	-	-
	09/27/12	17.1	<0.0174	0.102	0.187	-	<0.0477	-
	12/14/12	10.7	<0.0130	0.0690	BRL	-	-	-
	03/21/13	18.2	<0.0232	<0.0221	BRL	-	-	-
	06/20/13	17.6	<0.0500	0.118	U	17.7	-	-
	09/27/13	16.7	<0.0232	<0.0221	BRL	-	-	-
	12/30/13	18.5	<0.0232	<0.0221	BRL	-	-	-
	03/07/14	5.60	<0.0181	<0.0247	BRL	-	-	-
	06/19/14	1.25	<0.0500	<0.0500	<0.150	-	-	-
	09/18/14	0.916	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	0.778	<0.0500	<0.0500	<0.0500	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-14	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	09/27/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/30/13	<0.000567	<0.000518	<0.000518	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	0.0152	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	0.0294	<0.00100	<0.00100	0.00120	-	-	-
	12/03/14	0.0324	<0.00100	<0.00100	<0.00100	-	-	-
MW-15	03/21/12	1.05	<0.00259	<0.00291	0.0252	-	-	-
	06/13/12	3.14	<0.0259	<0.0291	BRL	-	-	-
	09/27/12	7.89	<0.0174	0.141	0.113	-	<0.0477	-
	12/14/12	9.63	<0.0130	0.122	0.279	-	-	-
	03/21/13	15.2	<0.0232	0.0921	0.0904	-	-	-
	06/20/13	30.2	<0.100	0.427	U	30.6	-	-
	09/27/13	24.2	<0.0930	<0.0884	BRL	-	-	-
	12/30/13	30.7	<0.104	<0.104	BRL	-	-	-
	03/07/14	19.2	<0.0181	<0.0247	BRL	-	-	-
	06/18/14	19.5	<0.100	<0.100	<0.100	-	-	-
	09/17/14	0.260	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	24.9	<0.100	<0.100	<0.100	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-16	03/21/12	0.0675	<0.000259	<0.000291	0.00380	-	-	-
	06/13/12	0.0162	<0.000259	<0.000291	BRL	-	-	-
	09/27/12	0.0114	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	0.0546	<0.000259	<0.000291	0.00420	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	0.0679	<0.00100	<0.000700	0.00185	0.0698	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/30/13	0.00560	<0.000518	<0.000518	BRL	-	-	-
	03/07/14	0.00280	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	0.00650	<0.00100	<0.00100	<0.00100	-	-	-
	09/17/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	0.00470	<0.00100	<0.00100	<0.00100	-	-	-
MW-17	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	09/27/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000310	0.00120	<0.000291	0.00240	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/30/13	<0.000567	<0.000518	<0.000518	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/16/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-18	03/21/12	<0.000310	<0.000259	<0.000291	0.00390	-	-	-
	06/12/12	0.0696	<0.000347	<0.000326	0.00750	-	-	-
	09/27/12	0.308	<0.000347	<0.000326	0.0226	-	<0.000954	-
	12/14/12	0.0465	<0.000259	<0.000291	0.00410	-	-	-
	03/21/13	0.282	<0.000465	0.00260	0.00310	-	-	-
	06/20/13	0.0972	<0.00100	<0.000700	0.00296	0.100	-	-
	09/27/13	0.00270	<0.000465	0.00210	0.00250	-	-	-
	12/31/13	0.00390	<0.000465	0.00230	0.00350	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/16/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-19	03/21/12	0.0341	<0.000259	<0.000291	0.00100	-	-	-
	06/12/12	0.0393	<0.000347	<0.000326	0.00170	-	-	-
	09/27/12	0.0501	<0.000259	<0.000291	0.00260	-	<0.000331	-
	12/14/12	0.00980	<0.000259	<0.000291	BRL	-	-	-
	03/21/13	0.0320	<0.000518	<0.000518	0.00620	-	-	-
	06/20/13	0.00343	<0.00100	<0.000700	U	0.00343	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/31/13	0.00140	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/16/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-20	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	0.0121	<0.000347	<0.000326	BRL	-	-	-
	09/26/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/31/13	0.00190	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-21	03/21/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	06/12/12	<0.000371	<0.000347	<0.000326	BRL	-	-	-
	09/26/12	<0.000371	<0.000347	<0.000326	BRL	-	<0.000954	-
	12/14/12	<0.000310	<0.000259	<0.000291	BRL	-	-	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	06/20/13	<0.000500	<0.00100	<0.000700	U	U	-	-
	09/27/13	<0.000387	<0.000465	<0.000442	BRL	-	-	-
	12/31/13	0.00100	<0.000465	<0.000442	BRL	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/18/14	<0.00100	<0.00100	<0.00100	<0.00300	-	-	-
	09/17/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
MW-22	01/10/14	<0.00100	0.00180	0.00180	0.00640	-	-	-
	01/14/14	-	-	-	0.00640	-	-	-
	03/07/14	<0.000238	<0.000181	<0.000247	BRL	-	-	-
	06/19/14	0.00980	<0.00100	<0.00100	<0.00300	-	-	-
	09/16/14	0.0644	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	0.227	0.0886	<0.00100	<0.00100	-	-	-

Summary of Groundwater Analytical Data
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)						
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	Notes
MW-23	01/10/14	0.00100	0.00670	0.00390	0.0178	-	-	-
	01/14/14	0.00100	0.00670	0.00390	0.0178	-	-	-
	03/07/14	0.00540	<0.000181	0.00110	BRL	-	-	-
	06/19/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	09/16/14	<0.00100	<0.00100	<0.00100	<0.00100	-	-	-
	12/03/14	<0.00100	0.00870	<0.00100	<0.00100	-	-	-

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes, analyzed by EPA Method 8021

C6-C12, >C12-C28, >C28-C35, and C6-C35 analyzed by Method TX1005

A = Not sampled due to PSH

I = Not sampled - well dry

J = Well plugged

U = Analyte was not detected

Summary of Groundwater Analytical Data - PAH Supplement
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)																			
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Notes
MW-1	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/21/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
MW-2	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I

Summary of Groundwater Analytical Data - PAH Supplement
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)																			
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Notes
MW-3	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/17/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	J
MW-3A	06/19/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	-
MW-4	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
	12/17/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	J
MW-4A	06/19/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	-

Summary of Groundwater Analytical Data - PAH Supplement
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)																			
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Notes
MW-5	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
MW-6	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A

Summary of Groundwater Analytical Data - PAH Supplement
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)																			
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Notes
MW-7	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
MW-9	03/21/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/12/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/26/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/14/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/20/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/27/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/30/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	03/07/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	06/18/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	09/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
	12/03/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
MW-17	12/14/12	<0.000108	<0.0000908	<0.000121	<0.0000995	<0.0000787	<0.000100	<0.0000697	<0.0000809	<0.0000794	<0.0000786	<0.0000765	<0.0000847	<0.000107	<0.000123	<0.0000995	<0.0000766	<0.000120	<0.0000820	<0.0000688	-
MW-18	12/14/12	0.00182	0.000825	<0.000121	<0.0000995	<0.0000787	<0.000100	<0.0000697	<0.0000809	<0.0000794	<0.0000786	<0.0000765	<0.0000847	<0.000107	<0.000123	<0.0000995	<0.0000766	0.00253	<0.0000820	<0.0000688	-
MW-19	12/14/12	<0.000109	<0.0000913	<0.000122	<0.000100	<0.0000791	<0.000101	<0.0000701	<0.0000813	<0.0000798	<0.0000790	<0.0000769	<0.0000851	<0.000108	<0.000124	<0.000100	<0.0000770	<0.000121	<0.0000824	<0.0000691	-
MW-22	06/19/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	-
MW-23	06/19/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	-

Summary of Groundwater Analytical Data - PAH Supplement
Moore to Jal #2
SRS #2002-10273

Sample Designation	Date Sampled	Concentration (mg/L)																		
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Notes

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes, analyzed by EPA Method 8021

C6-C12, >C12-C28, >C28-C35, and C6-C35 analyzed by Method TX1005

A = Not sampled due to PSH

I = Not sampled - well dry

J = Well plugged

U = Analyte was not detected

APPENDIX C

Laboratory Analytical Data Reports and Chains of Custody Documentation

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: March 17, 2014

Work Order: 14031014

Project Location: Hobbs, NM
Project Name: Jal #2
Project Number: 700376.045.01
SRS #: 2002-10273

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
357277	MW 3A	water	2014-03-07	15:20	2014-03-10
357278	MW 4A	water	2014-03-07	15:05	2014-03-10
357279	MW 8	water	2014-03-07	14:05	2014-03-10
357280	MW 10	water	2014-03-07	12:20	2014-03-10
357281	MW 11	water	2014-03-07	12:00	2014-03-10
357282	MW 12	water	2014-03-07	12:15	2014-03-10
357283	MW 13	water	2014-03-07	14:20	2014-03-10
357284	MW 14	water	2014-03-07	13:35	2014-03-10
357285	MW 15	water	2014-03-07	14:40	2014-03-10
357286	MW 16	water	2014-03-07	13:45	2014-03-10
357287	MW 17	water	2014-03-07	12:30	2014-03-10
357288	MW 18	water	2014-03-07	13:00	2014-03-10
357289	MW 19	water	2014-03-07	13:10	2014-03-10
357290	MW 20	water	2014-03-07	14:20	2014-03-10
357291	MW 21	water	2014-03-07	14:35	2014-03-10
357292	MW 22	water	2014-03-07	12:05	2014-03-10
357293	MW 23	water	2014-03-07	11:55	2014-03-10

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2014-03-10 and assigned to work order 14031014. Samples for work order 14031014 were received intact without headspace and at a temperature of 3.2 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	93074	2014-03-12 at 10:10	110106	2014-03-12 at 10:11
BTEX	S 8021B	93153	2014-03-13 at 10:00	110171	2014-03-14 at 07:48

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14031014 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 357277 - MW 3A

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**0.0236**	mg/L	1	0.00100
Toluene		1	**0.0180**	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene		1	**0.00900**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0929	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0832	mg/L	1	0.100	83	70 - 130

Sample: 357278 - MW 4A

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**0.102**	mg/L	1	0.00100
Toluene		1	**0.0206**	mg/L	1	0.00100
Ethylbenzene		1	**0.00320**	mg/L	1	0.00100
Xylene		1	**0.00740**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0956	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0828	mg/L	1	0.100	83	70 - 130

Sample: 357279 - MW 8

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene		1	**0.0311**	mg/L	1	0.00100
Ethylbenzene		1	**0.00330**	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0958	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0882	mg/L	1	0.100	88	70 - 130

Sample: 357280 - MW 10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0973	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0832	mg/L	1	0.100	83	70 - 130

Sample: 357281 - MW 11

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0956	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0825	mg/L	1	0.100	82	70 - 130

Sample: 357282 - MW 12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0948	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0833	mg/L	1	0.100	83	70 - 130

Sample: 357283 - MW 13

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**5.60**	mg/L	100	0.00100
Toluene	Qr,U	1	<0.100	mg/L	100	0.00100
Ethylbenzene	Qr,U	1	<0.100	mg/L	100	0.00100
Xylene	Qr,U	1	<0.300	mg/L	100	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.48	mg/L	100	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			8.25	mg/L	100	10.0	82	70 - 130

Sample: 357284 - MW 14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0932	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0818	mg/L	1	0.100	82	70 - 130

Sample: 357285 - MW 15

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**19.2**	mg/L	100	0.00100
Toluene	Qr,U	1	<0.100	mg/L	100	0.00100
Ethylbenzene	Qr,U	1	<0.100	mg/L	100	0.00100
Xylene	Qr,U	1	<0.300	mg/L	100	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.48	mg/L	100	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			8.43	mg/L	100	10.0	84	70 - 130

Sample: 357286 - MW 16

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**0.00280**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0996	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0902	mg/L	1	0.100	90	70 - 130

Sample: 357287 - MW 17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0868	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0816	mg/L	1	0.100	82	70 - 130

Sample: 357288 - MW 18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0948	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0829	mg/L	1	0.100	83	70 - 130

Sample: 357289 - MW 19

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0977	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0844	mg/L	1	0.100	84	70 - 130

Sample: 357290 - MW 20

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0974	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0850	mg/L	1	0.100	85	70 - 130

Sample: 357291 - MW 21

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0953	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0841	mg/L	1	0.100	84	70 - 130

Sample: 357292 - MW 22

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0978	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0891	mg/L	1	0.100	89	70 - 130

Sample: 357293 - MW 23

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1	**0.00540**	mg/L	1	0.00100
Toluene	Qr,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr	1	**0.00110**	mg/L	1	0.00100
Xylene	Qr,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0975	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0884	mg/L	1	0.100	88	70 - 130

Method Blanks

Method Blank (1) QC Batch: 110106

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000238	mg/L	0.001
Toluene		1	<0.000181	mg/L	0.001
Ethylbenzene		1	<0.000247	mg/L	0.001
Xylene		1	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0961	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0829	mg/L	1	0.100	83	70 - 130

Method Blank (1) QC Batch: 110171

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000238	mg/L	0.001
Toluene		1	<0.000181	mg/L	0.001
Ethylbenzene		1	<0.000247	mg/L	0.001
Xylene		1	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0970	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0885	mg/L	1	0.100	88	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0912	mg/L	1	0.100	<0.000238	91	70 - 130
Toluene		1	0.109	mg/L	1	0.100	<0.000181	109	70 - 130
Ethylbenzene		1	0.116	mg/L	1	0.100	<0.000247	116	70 - 130
Xylene		1	0.351	mg/L	1	0.300	<0.000189	117	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0844	mg/L	1	0.100	<0.000238	84	70 - 130	8	20
Toluene		1	0.101	mg/L	1	0.100	<0.000181	101	70 - 130	8	20
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000247	106	70 - 130	9	20
Xylene		1	0.325	mg/L	1	0.300	<0.000189	108	70 - 130	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0995	0.0997	mg/L	1	0.100	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.102	0.103	mg/L	1	0.100	102	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0916	mg/L	1	0.100	<0.000238	92	70 - 130
Toluene		1	0.0976	mg/L	1	0.100	<0.000181	98	70 - 130
Ethylbenzene		1	0.0966	mg/L	1	0.100	<0.000247	97	70 - 130
Xylene		1	0.294	mg/L	1	0.300	<0.000189	98	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0948	mg/L	1	0.100	<0.000238	95	70 - 130	3	20
Toluene		1	0.102	mg/L	1	0.100	<0.000181	102	70 - 130	4	20
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000247	102	70 - 130	5	20
Xylene		1	0.310	mg/L	1	0.300	<0.000189	103	70 - 130	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0989	0.0982	mg/L	1	0.100	99	98	70 - 130
4-Bromofluorobenzene (4-BFB)	0.102	0.104	mg/L	1	0.100	102	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 356907

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0834	mg/L	1	0.100	<0.000238	83	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000181	101	70 - 130
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000247	104	70 - 130
Xylene		1	0.320	mg/L	1	0.300	<0.000189	107	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr 1	0.103	mg/L	1	0.100	<0.000238	103	70 - 130	21	20
Toluene		1	0.107	mg/L	1	0.100	<0.000181	107	70 - 130	6	20
Ethylbenzene		1	0.108	mg/L	1	0.100	<0.000247	108	70 - 130	4	20
Xylene		1	0.327	mg/L	1	0.300	<0.000189	109	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.100	0.103	mg/L	1	0.1	100	103	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.104	mg/L	1	0.1	103	104	70 - 130

Matrix Spike (MS-1) Spiked Sample:

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000238	103	70 - 130
Toluene		1	0.110	mg/L	1	0.100	<0.000181	110	70 - 130
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000247	109	70 - 130
Xylene		1	0.331	mg/L	1	0.300	<0.000189	110	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr	1	0.0793	mg/L	1	0.100	<0.000238	79	70 - 130	26	20
Toluene	Qr	Qr	1	0.0829	mg/L	1	0.100	<0.000181	83	70 - 130	28	20
Ethylbenzene	Qr	Qr	1	0.0822	mg/L	1	0.100	<0.000247	82	70 - 130	28	20
Xylene	Qr	Qr	1	0.250	mg/L	1	0.300	<0.000189	83	70 - 130	28	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0999	0.0998	mg/L	1	0.1	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.107	0.104	mg/L	1	0.1	107	104	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0882	88	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.109	109	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.333	111	80 - 120	2014-03-12

Standard (CCV-2)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0843	84	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.0968	97	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.306	102	80 - 120	2014-03-12

Standard (CCV-3)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0889	89	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.106	106	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.320	107	80 - 120	2014-03-12

Standard (CCV-1)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0954	95	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.316	105	80 - 120	2014-03-14

Standard (CCV-2)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0934	93	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.303	101	80 - 120	2014-03-14

Standard (CCV-3)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.107	107	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.107	107	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.325	108	80 - 120	2014-03-14

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: July 7, 2014

Work Order: 14062007

Project Location: Hobbs, NM
Project Name: Jal #2
Project Number: 700376.045.01
SRS #: 2002-10273

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
366319	MW-3A	water	2014-06-19	11:50	2014-06-20
366320	MW-4A	water	2014-06-19	12:20	2014-06-20
366321	MW-8	water	2014-06-18	13:40	2014-06-20
366322	MW-10	water	2014-06-18	10:20	2014-06-20
366323	MW-11	water	2014-06-18	10:40	2014-06-20
366324	MW-12	water	2014-06-18	13:20	2014-06-20
366325	MW-13	water	2014-06-19	10:20	2014-06-20
366326	MW-14	water	2014-06-18	11:00	2014-06-20
366327	MW-15	water	2014-06-18	14:20	2014-06-20
366328	MW-16	water	2014-06-18	14:00	2014-06-20
366329	MW-17	water	2014-06-18	12:20	2014-06-20
366330	MW-18	water	2014-06-18	12:40	2014-06-20
366331	MW-19	water	2014-06-18	13:00	2014-06-20
366332	MW-20	water	2014-06-18	11:20	2014-06-20
366333	MW-21	water	2014-06-18	11:45	2014-06-20
366334	MW-22	water	2014-06-19	11:20	2014-06-20
366335	MW-23	water	2014-06-19	10:50	2014-06-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 31 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2014-06-20 and assigned to work order 14062007. Samples for work order 14062007 were received intact without headspace and at a temperature of 3.8 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	95578	2014-06-23 at 08:29	113105	2014-06-25 at 11:17
BTEX	S 8021B	95651	2014-06-25 at 11:39	113134	2014-06-26 at 07:37
BTEX	S 8021B	95731	2014-06-27 at 13:20	113215	2014-06-28 at 07:55
PAH	S 8270D	95870	2014-06-26 at 15:00	113361	2014-07-03 at 12:57

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14062007 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 366319 - MW-3A

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0915	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0971	mg/L	1	0.100	97	70 - 130

Sample: 366319 - MW-3A

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	113361	Date Analyzed:	2014-07-03	Analyzed By:	MN
Prep Batch:	95870	Sample Preparation:	2014-06-26	Prepared By:	MN

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Naphthalene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
2-Methylnaphthalene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
1-Methylnaphthalene	U	1	<0.000186	mg/L	0.93	0.000200
Acenaphthylene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Acenaphthene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Dibenzofuran	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Fluorene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Anthracene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Phenanthrene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Fluoranthene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Pyrene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Benzo(a)anthracene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200
Chrysene	U	1,2,3,4,6	<0.000186	mg/L	0.93	0.000200

continued ...

sample 366319 continued . . .

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzo(b)fluoranthene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200
Benzo(a)pyrene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,6	<0.000186		mg/L	0.93	0.000200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	Qsr	Qsr		0.00380	mg/L	0.93	0.0800	5	10 - 121
2-Fluorobiphenyl				0.0328	mg/L	0.93	0.0800	41	20.5 - 120
Terphenyl-d14				0.0649	mg/L	0.93	0.0800	81	26.4 - 120

Sample: 366320 - MW-4A

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene		5	**0.710**		mg/L	50	0.00100
Toluene	U	5	<0.0500		mg/L	50	0.00100
Ethylbenzene	U	5	<0.0500		mg/L	50	0.00100
Xylene	U	5	<0.0500		mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.78	mg/L	50	5.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			4.87	mg/L	50	5.00	97	70 - 130

Sample: 366320 - MW-4A

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	113361	Date Analyzed:	2014-07-03	Analyzed By:	MN
Prep Batch:	95870	Sample Preparation:	2014-06-26	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
2-Methylnaphthalene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
1-Methylnaphthalene	U	1	<0.000188	mg/L	0.939	0.000200
Acenaphthylene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Acenaphthene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Dibenzofuran	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Fluorene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Anthracene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Phenanthrene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Fluoranthene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Pyrene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Benzo(a)anthracene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Chrysene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Benzo(a)pyrene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,6	<0.000188	mg/L	0.939	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0421	mg/L	0.939	0.0800	53	10 - 121
2-Fluorobiphenyl			0.0502	mg/L	0.939	0.0800	63	20.5 - 120
Terphenyl-d14			0.0603	mg/L	0.939	0.0800	75	26.4 - 120

Sample: 366321 - MW-8

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**0.0270**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene		5	**0.00610**	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0936	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.105	mg/L	1	0.100	105	70 - 130

Sample: 366322 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0842	mg/L	1	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0713	mg/L	1	0.100	71	70 - 130

Sample: 366323 - MW-11

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0861	mg/L	1	0.100	86	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			0.0718	mg/L	1	0.100	72	70 - 130

Sample: 366324 - MW-12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0820	mg/L	1	0.100	82	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0730	mg/L	1	0.100	73	70 - 130

Sample: 366325 - MW-13

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**1.25**	mg/L	50	0.00100
Toluene	U	5	<0.0500	mg/L	50	0.00100
Ethylbenzene	U	5	<0.0500	mg/L	50	0.00100
Xylene	U	5	<0.150	mg/L	50	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.35	mg/L	50	5.00	87	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			3.60	mg/L	50	5.00	72	70 - 130

Sample: 366326 - MW-14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**0.0152**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0876	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0736	mg/L	1	0.100	74	70 - 130

Sample: 366327 - MW-15

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**19.5**	mg/L	100	0.00100
Toluene	U	5	<0.100	mg/L	100	0.00100
Ethylbenzene	U	5	<0.100	mg/L	100	0.00100
Xylene	U	5	<0.100	mg/L	100	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.60	mg/L	100	10.0	86	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			9.58	mg/L	100	10.0	96	70 - 130

Sample: 366328 - MW-16

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**0.00650**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	70 - 130

Sample: 366329 - MW-17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113215	Date Analyzed:	2014-06-28	Analyzed By:	AK
Prep Batch:	95731	Sample Preparation:	2014-06-27	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	Qs,U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0967	mg/L	1	0.100	97	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			0.0947	mg/L	1	0.100	95	70 - 130

Sample: 366330 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113215	Date Analyzed:	2014-06-28	Analyzed By:	AK
Prep Batch:	95731	Sample Preparation:	2014-06-27	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	Qs,U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0955	mg/L	1	0.100	96	70 - 130

Sample: 366331 - MW-19

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0862	mg/L	1	0.100	86	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			0.0753	mg/L	1	0.100	75	70 - 130

Sample: 366332 - MW-20

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0876	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0730	mg/L	1	0.100	73	70 - 130

Sample: 366333 - MW-21

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0823	mg/L	1	0.100	82	70 - 130

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			0.0706	mg/L	1	0.100	71	70 - 130

Sample: 366334 - MW-22

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113105	Date Analyzed:	2014-06-25	Analyzed By:	AK
Prep Batch:	95578	Sample Preparation:	2014-06-23	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**0.00980**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0850	mg/L	1	0.100	85	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0740	mg/L	1	0.100	74	70 - 130

Sample: 366334 - MW-22

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	113361	Date Analyzed:	2014-07-03	Analyzed By:	MN
Prep Batch:	95870	Sample Preparation:	2014-06-26	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
2-Methylnaphthalene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
1-Methylnaphthalene	U	1	<0.000190	mg/L	0.948	0.000200
Acenaphthylene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Acenaphthene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Dibenzofuran	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Fluorene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Anthracene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Phenanthrene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200
Fluoranthene	U	1,2,3,4,6	<0.000190	mg/L	0.948	0.000200

continued . . .

sample 366334 continued . . .

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(a)anthracene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Chrysene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(a)pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0294	mg/L	0.948	0.0800	37	10 - 121
2-Fluorobiphenyl			0.0385	mg/L	0.948	0.0800	48	20.5 - 120
Terphenyl-d14			0.0508	mg/L	0.948	0.0800	64	26.4 - 120

Sample: 366335 - MW-23

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	113134	Date Analyzed:	2014-06-26	Analyzed By:	AK
Prep Batch:	95651	Sample Preparation:	2014-06-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	5	<0.00100		mg/L	1	0.00100
Toluene	U	5	<0.00100		mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100		mg/L	1	0.00100
Xylene	U	5	<0.00100		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0938	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0994	mg/L	1	0.100	99	70 - 130

Sample: 366335 - MW-23

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	113361	Date Analyzed:	2014-07-03	Analyzed By:	MN
Prep Batch:	95870	Sample Preparation:	2014-06-26	Prepared By:	MN

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Naphthalene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
2-Methylnaphthalene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
1-Methylnaphthalene	U	1	<0.000190		mg/L	0.948	0.000200
Acenaphthylene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Acenaphthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Dibenzofuran	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Fluorene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Anthracene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Phenanthrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Fluoranthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(a)anthracene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Chrysene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(a)pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,6	<0.000190		mg/L	0.948	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0288	mg/L	0.948	0.0800	36	10 - 121
2-Fluorobiphenyl			0.0325	mg/L	0.948	0.0800	41	20.5 - 120
Terphenyl-d14			0.0464	mg/L	0.948	0.0800	58	26.4 - 120

Method Blanks

Method Blank (1) QC Batch: 113105

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK
Prep Batch: 95578 | QC Preparation: 2014-06-23 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000238	mg/L	0.001
Toluene		5	<0.000181	mg/L	0.001
Ethylbenzene		5	<0.000247	mg/L	0.001
Xylene		5	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0947	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0860	mg/L	1	0.100	86	70 - 130

Method Blank (1) QC Batch: 113134

QC Batch: 113134 | Date Analyzed: 2014-06-26 | Analyzed By: AK
Prep Batch: 95651 | QC Preparation: 2014-06-25 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0941	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0945	mg/L	1	0.100	94	70 - 130

Method Blank (1) QC Batch: 113215

QC Batch: 113215 | Date Analyzed: 2014-06-28 | Analyzed By: AK
Prep Batch: 95731 | QC Preparation: 2014-06-27 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000238	mg/L	0.001
Toluene		5	<0.000181	mg/L	0.001
Ethylbenzene		5	<0.000247	mg/L	0.001
Xylene		5	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0976	mg/L	1	0.100	98	70 - 130

Method Blank (1) QC Batch: 113361

QC Batch: 113361 | Date Analyzed: 2014-07-03 | Analyzed By: MN
Prep Batch: 95870 | QC Preparation: 2014-06-26 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1,2,3,4,6	<0.0000708	mg/L	0.0002
2-Methylnaphthalene		1,2,3,4,6	<0.0000834	mg/L	0.0002
1-Methylnaphthalene		1	<0.000107	mg/L	0.0002
Acenaphthylene		1,2,3,4,6	<0.0000823	mg/L	0.0002
Acenaphthene		1,2,3,4,6	<0.0000888	mg/L	0.0002
Dibenzofuran		1,2,3,4,6	<0.0000787	mg/L	0.0002
Fluorene		1,2,3,4,6	<0.0000670	mg/L	0.0002
Anthracene		1,2,3,4,6	<0.0000838	mg/L	0.0002
Phenanthrene		1,2,3,4,6	<0.000106	mg/L	0.0002
Fluoranthene		1,2,3,4,6	<0.0000885	mg/L	0.0002
Pyrene		1,2,3,4,6	<0.000149	mg/L	0.0002
Benzo(a)anthracene		1,2,3,4,6	<0.000146	mg/L	0.0002
Chrysene		1,2,3,4,6	<0.000157	mg/L	0.0002
Benzo(b)fluoranthene		1,2,3,4,6	<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		1,2,3,4,6	<0.000152	mg/L	0.0002
Benzo(a)pyrene		1,2,3,4,6	<0.000141	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	<0.000160	mg/L	0.0002
Dibenzo(a,h)anthracene		1,2,3,4,6	<0.000127	mg/L	0.0002
Benzo(g,h,i)perylene		1,2,3,4,6	<0.000175	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0382	mg/L	1	0.0800	48	10 - 121
2-Fluorobiphenyl			0.0445	mg/L	1	0.0800	56	20.5 - 120

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Terphenyl-d14			0.0440	mg/L	1	0.0800	55	26.4 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK
Prep Batch: 95578 | QC Preparation: 2014-06-23 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.101	mg/L	1	0.100	<0.000238	101	70 - 130
Toluene		5	0.104	mg/L	1	0.100	<0.000181	104	70 - 130
Ethylbenzene		5	0.101	mg/L	1	0.100	<0.000247	101	70 - 130
Xylene		5	0.306	mg/L	1	0.300	<0.000189	102	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.102	mg/L	1	0.100	<0.000238	102	70 - 130	1	20
Toluene		5	0.104	mg/L	1	0.100	<0.000181	104	70 - 130	0	20
Ethylbenzene		5	0.101	mg/L	1	0.100	<0.000247	101	70 - 130	0	20
Xylene		5	0.307	mg/L	1	0.300	<0.000189	102	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0964	0.0950	mg/L	1	0.100	96	95	70 - 130
4-Bromofluorobenzene (4-BFB)	0.110	0.106	mg/L	1	0.100	110	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113134 | Date Analyzed: 2014-06-26 | Analyzed By: AK
Prep Batch: 95651 | QC Preparation: 2014-06-25 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0955	mg/L	1	0.100	<0.000299	96	70 - 130
Toluene		5	0.0941	mg/L	1	0.100	<0.000247	94	70 - 130
Ethylbenzene		5	0.0944	mg/L	1	0.100	<0.000423	94	70 - 130
Xylene		5	0.280	mg/L	1	0.300	<0.000552	93	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0933	mg/L	1	0.100	<0.000299	93	70 - 130	2	20
Toluene		5	0.0910	mg/L	1	0.100	<0.000247	91	70 - 130	3	20
Ethylbenzene		5	0.0918	mg/L	1	0.100	<0.000423	92	70 - 130	3	20
Xylene		5	0.273	mg/L	1	0.300	<0.000552	91	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0920	0.0900	mg/L	1	0.100	92	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.103	mg/L	1	0.100	103	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113215 | Date Analyzed: 2014-06-28 | Analyzed By: AK
Prep Batch: 95731 | QC Preparation: 2014-06-27 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0942	mg/L	1	0.100	<0.000238	94	70 - 130
Toluene		5	0.0905	mg/L	1	0.100	<0.000181	90	70 - 130
Ethylbenzene		5	0.0895	mg/L	1	0.100	<0.000247	90	70 - 130
Xylene		5	0.269	mg/L	1	0.300	<0.000189	90	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0953	mg/L	1	0.100	<0.000238	95	70 - 130	1	20
Toluene		5	0.0914	mg/L	1	0.100	<0.000181	91	70 - 130	1	20
Ethylbenzene		5	0.0901	mg/L	1	0.100	<0.000247	90	70 - 130	1	20
Xylene		5	0.271	mg/L	1	0.300	<0.000189	90	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0937	0.0933	mg/L	1	0.100	94	93	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0966	0.0955	mg/L	1	0.100	97	96	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113361 | Date Analyzed: 2014-07-03 | Analyzed By: MN
Prep Batch: 95870 | QC Preparation: 2014-06-26 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,6	0.0550	mg/L	1	0.0800	<0.0000708	69	33.4 - 120
2-Methylnaphthalene		1,2,3,4,6	0.0539	mg/L	1	0.0800	<0.0000834	67	36.7 - 120
1-Methylnaphthalene		1	0.0536	mg/L	1	0.0800	<0.000107	67	37.7 - 120
Acenaphthylene		1,2,3,4,6	0.0571	mg/L	1	0.0800	<0.0000832	71	39.7 - 120
Acenaphthene		1,2,3,4,6	0.0539	mg/L	1	0.0800	<0.0000888	67	10 - 120
Dibenzofuran		1,2,3,4,6	0.0565	mg/L	1	0.0800	<0.0000787	71	27.5 - 120
Fluorene		1,2,3,4,6	0.0599	mg/L	1	0.0800	<0.0000670	75	32.7 - 120
Anthracene		1,2,3,4,6	0.0557	mg/L	1	0.0800	<0.0000838	70	23.6 - 120
Phenanthrene		1,2,3,4,6	0.0566	mg/L	1	0.0800	<0.000106	71	26.7 - 120
Fluoranthene		1,2,3,4,6	0.0561	mg/L	1	0.0800	<0.0000885	70	19.2 - 120
Pyrene		1,2,3,4,6	0.0553	mg/L	1	0.0800	<0.000149	69	34.1 - 120
Benzo(a)anthracene		1,2,3,4,6	0.0576	mg/L	1	0.0800	<0.000146	72	43.4 - 120
Chrysene		1,2,3,4,6	0.0606	mg/L	1	0.0800	<0.000157	76	10 - 176
Benzo(b)fluoranthene		1,2,3,4,6	0.0495	mg/L	1	0.0800	<0.000146	62	18.4 - 120
Benzo(k)fluoranthene		1,2,3,4,6	0.0545	mg/L	1	0.0800	<0.000152	68	22 - 124
Benzo(a)pyrene		1,2,3,4,6	0.0447	mg/L	1	0.0800	<0.000141	56	25.1 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	0.0487	mg/L	1	0.0800	<0.000160	61	21.3 - 120
Dibenzo(a,h)anthracene		1,2,3,4,6	0.0670	mg/L	1	0.0800	<0.000127	84	10 - 173
Benzo(g,h,i)perylene		1,2,3,4,6	0.0438	mg/L	1	0.0800	<0.000175	55	10.7 - 128

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1,2,3,4,6	0.0562	mg/L	1	0.0800	<0.0000708	70	33.4 - 120	2	20
2-Methylnaphthalene		1,2,3,4,6	0.0556	mg/L	1	0.0800	<0.0000834	70	36.7 - 120	3	20
1-Methylnaphthalene		1	0.0554	mg/L	1	0.0800	<0.000107	69	37.7 - 120	3	20
Acenaphthylene		1,2,3,4,6	0.0578	mg/L	1	0.0800	<0.0000832	72	39.7 - 120	1	20
Acenaphthene		1,2,3,4,6	0.0552	mg/L	1	0.0800	<0.0000888	69	10 - 120	2	20
Dibenzofuran		1,2,3,4,6	0.0571	mg/L	1	0.0800	<0.0000787	71	27.5 - 120	1	20
Fluorene		1,2,3,4,6	0.0598	mg/L	1	0.0800	<0.0000670	75	32.7 - 120	0	20
Anthracene		1,2,3,4,6	0.0552	mg/L	1	0.0800	<0.0000838	69	23.6 - 120	1	20
Phenanthrene		1,2,3,4,6	0.0566	mg/L	1	0.0800	<0.000106	71	26.7 - 120	0	20
Fluoranthene		1,2,3,4,6	0.0555	mg/L	1	0.0800	<0.0000885	69	19.2 - 120	1	20
Pyrene		1,2,3,4,6	0.0564	mg/L	1	0.0800	<0.000149	70	34.1 - 120	2	20
Benzo(a)anthracene		1,2,3,4,6	0.0585	mg/L	1	0.0800	<0.000146	73	43.4 - 120	2	20
Chrysene		1,2,3,4,6	0.0612	mg/L	1	0.0800	<0.000157	76	10 - 176	1	20
Benzo(b)fluoranthene		1,2,3,4,6	0.0497	mg/L	1	0.0800	<0.000146	62	18.4 - 120	0	20
Benzo(k)fluoranthene		1,2,3,4,6	0.0546	mg/L	1	0.0800	<0.000152	68	22 - 124	0	20
Benzo(a)pyrene		1,2,3,4,6	0.0438	mg/L	1	0.0800	<0.000141	55	25.1 - 120	2	20

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control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	0.0481	mg/L	1	0.0800	<0.000160	60	21.3 - 120	1	20
Dibenzo(a,h)anthracene		1,2,3,4,6	0.0652	mg/L	1	0.0800	<0.000127	82	10 - 173	3	20
Benzo(g,h,i)perylene		1,2,3,4,6	0.0432	mg/L	1	0.0800	<0.000175	54	10.7 - 128	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0508	0.0514	mg/L	1	0.0800	64	64	10 - 121
2-Fluorobiphenyl	0.0580	0.0583	mg/L	1	0.0800	72	73	20.5 - 120
Terphenyl-d14	0.0588	0.0602	mg/L	1	0.0800	74	75	26.4 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 366317

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK
Prep Batch: 95578 | QC Preparation: 2014-06-23 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		[5]	0.0953	mg/L	1	0.100	<0.000238	95	70 - 130
Toluene		[5]	0.0970	mg/L	1	0.100	<0.000181	97	70 - 130
Ethylbenzene		[5]	0.0895	mg/L	1	0.100	<0.000247	90	70 - 130
Xylene		[5]	0.272	mg/L	1	0.300	<0.000189	91	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		[5]	0.102	mg/L	1	0.100	<0.000238	102	70 - 130	7	20
Toluene		[5]	0.105	mg/L	1	0.100	<0.000181	105	70 - 130	8	20
Ethylbenzene		[5]	0.100	mg/L	1	0.100	<0.000247	100	70 - 130	11	20
Xylene		[5]	0.302	mg/L	1	0.300	<0.000189	101	70 - 130	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0889	0.0897	mg/L	1	0.1	89	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0977	0.100	mg/L	1	0.1	98	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 366327

QC Batch: 113134 | Date Analyzed: 2014-06-26 | Analyzed By: AK
Prep Batch: 95651 | QC Preparation: 2014-06-25 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		[5]	30.2	mg/L	100	10.0	19.5	107	70 - 130
Toluene		[5]	9.25	mg/L	100	10.0	<0.0247	92	70 - 130
Ethylbenzene		[5]	9.34	mg/L	100	10.0	<0.0423	93	70 - 130
Xylene		[5]	27.6	mg/L	100	30.0	<0.0552	92	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	29.7	mg/L	100	10.0	19.5	102	70 - 130	2	20
Toluene		5	9.21	mg/L	100	10.0	<0.0247	92	70 - 130	0	20
Ethylbenzene		5	9.36	mg/L	100	10.0	<0.0423	94	70 - 130	0	20
Xylene		5	27.9	mg/L	100	30.0	<0.0552	93	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	8.99	9.04	mg/L	100	10	90	90	70 - 130
4-Bromofluorobenzene (4-BFB)	10.4	10.7	mg/L	100	10	104	107	70 - 130

Matrix Spike (MS-1) Spiked Sample: 366962

QC Batch: 113215 | Date Analyzed: 2014-06-28 | Analyzed By: AK
Prep Batch: 95731 | QC Preparation: 2014-06-27 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0898	mg/L	1	0.100	<0.000238	90	70 - 130
Toluene		5	0.0789	mg/L	1	0.100	<0.000181	79	70 - 130
Ethylbenzene		5	0.0695	mg/L	1	0.100	<0.000247	70	70 - 130
Xylene	Qs	Qs 5	0.204	mg/L	1	0.300	<0.000189	68	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0924	mg/L	1	0.100	<0.000238	92	70 - 130	3	20
Toluene		5	0.0818	mg/L	1	0.100	<0.000181	82	70 - 130	4	20
Ethylbenzene		5	0.0738	mg/L	1	0.100	<0.000247	74	70 - 130	6	20
Xylene		5	0.218	mg/L	1	0.300	<0.000189	73	70 - 130	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0859	0.0895	mg/L	1	0.1	86	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0821	0.0885	mg/L	1	0.1	82	88	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.107	107	80 - 120	2014-06-25
Toluene		5	mg/L	0.100	0.109	109	80 - 120	2014-06-25
Ethylbenzene		5	mg/L	0.100	0.107	107	80 - 120	2014-06-25
Xylene		5	mg/L	0.300	0.324	108	80 - 120	2014-06-25

Standard (CCV-2)

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0976	98	80 - 120	2014-06-25
Toluene		5	mg/L	0.100	0.0982	98	80 - 120	2014-06-25
Ethylbenzene		5	mg/L	0.100	0.0913	91	80 - 120	2014-06-25
Xylene		5	mg/L	0.300	0.273	91	80 - 120	2014-06-25

Standard (CCV-3)

QC Batch: 113105 | Date Analyzed: 2014-06-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.102	102	80 - 120	2014-06-25
Toluene		5	mg/L	0.100	0.103	103	80 - 120	2014-06-25
Ethylbenzene		5	mg/L	0.100	0.0948	95	80 - 120	2014-06-25
Xylene		5	mg/L	0.300	0.284	95	80 - 120	2014-06-25

Standard (CCV-1)

QC Batch: 113134 | Date Analyzed: 2014-06-26 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0897	90	80 - 120	2014-06-26
Toluene		5	mg/L	0.100	0.0883	88	80 - 120	2014-06-26
Ethylbenzene		5	mg/L	0.100	0.0869	87	80 - 120	2014-06-26
Xylene		5	mg/L	0.300	0.259	86	80 - 120	2014-06-26

Standard (CCV-2)

QC Batch: 113134 | Date Analyzed: 2014-06-26 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0916	92	80 - 120	2014-06-26
Toluene		5	mg/L	0.100	0.0893	89	80 - 120	2014-06-26
Ethylbenzene		5	mg/L	0.100	0.0876	88	80 - 120	2014-06-26
Xylene		5	mg/L	0.300	0.259	86	80 - 120	2014-06-26

Standard (CCV-2)

QC Batch: 113215 | Date Analyzed: 2014-06-28 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0973	97	80 - 120	2014-06-28
Toluene		5	mg/L	0.100	0.0921	92	80 - 120	2014-06-28
Ethylbenzene		5	mg/L	0.100	0.0903	90	80 - 120	2014-06-28
Xylene		5	mg/L	0.300	0.270	90	80 - 120	2014-06-28

Standard (CCV-3)

QC Batch: 113215 | Date Analyzed: 2014-06-28 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0955	96	80 - 120	2014-06-28
Toluene		5	mg/L	0.100	0.0899	90	80 - 120	2014-06-28
Ethylbenzene		5	mg/L	0.100	0.0878	88	80 - 120	2014-06-28
Xylene		5	mg/L	0.300	0.261	87	80 - 120	2014-06-28

Standard (CCV-1)

QC Batch: 113361 Date Analyzed: 2014-07-03 Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,6	mg/L	60.0	63.7	106	80 - 120	2014-07-03
2-Methylnaphthalene		1,2,3,4,6	mg/L	60.0	64.8	108	80 - 120	2014-07-03
1-Methylnaphthalene		1	mg/L	60.0	65.2	109	80 - 120	2014-07-03
Acenaphthylene		1,2,3,4,6	mg/L	60.0	63.4	106	80 - 120	2014-07-03
Acenaphthene		1,2,3,4,6	mg/L	60.0	63.2	105	80 - 120	2014-07-03
Dibenzofuran		1,2,3,4,6	mg/L	60.0	63.6	106	80 - 120	2014-07-03
Fluorene		1,2,3,4,6	mg/L	60.0	65.7	110	80 - 120	2014-07-03
Anthracene		1,2,3,4,6	mg/L	60.0	64.3	107	80 - 120	2014-07-03
Phenanthrene		1,2,3,4,6	mg/L	60.0	63.5	106	80 - 120	2014-07-03
Fluoranthene		1,2,3,4,6	mg/L	60.0	65.9	110	80 - 120	2014-07-03
Pyrene		1,2,3,4,6	mg/L	60.0	63.1	105	80 - 120	2014-07-03
Benzo(a)anthracene		1,2,3,4,6	mg/L	60.0	62.6	104	80 - 120	2014-07-03
Chrysene		1,2,3,4,6	mg/L	60.0	62.6	104	80 - 120	2014-07-03
Benzo(b)fluoranthene		1,2,3,4,6	mg/L	60.0	61.2	102	80 - 120	2014-07-03
Benzo(k)fluoranthene		1,2,3,4,6	mg/L	60.0	62.6	104	80 - 120	2014-07-03
Benzo(a)pyrene		1,2,3,4,6	mg/L	60.0	51.6	86	80 - 120	2014-07-03
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	mg/L	60.0	54.6	91	80 - 120	2014-07-03
Dibenzo(a,h)anthracene		1,2,3,4,6	mg/L	60.0	56.5	94	80 - 120	2014-07-03
Benzo(g,h,i)perylene		1,2,3,4,6	mg/L	60.0	53.6	89	80 - 120	2014-07-03

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			55.3	mg/L	1	60.0	92	-
2-Fluorobiphenyl			62.6	mg/L	1	60.0	104	-
Terphenyl-d14			63.0	mg/L	1	60.0	105	-

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2013-083	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 1406 2007

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
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1 (800) 378-1296

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Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: Talon IPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349, Midland, TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, Cjbryant@PaalP.com
Invoice to: (If different from above) SRS# 2002-10273 (Plains)
Project #: 700376.045.01
Project Name: Moore to Jal #2
Project Location (including state): Hobbs, NM
Sampler Signature: Jake Munsey

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: Time DATE	Date 2014 TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
366319	MW 3A	3	40mL	X				X				X		1150	6-19-14		X																							
~~320~~	MW 3A	1	1L	X								X		1150	6-19-14					X																				
320	MW 4A	3	40mL	X				X				X		1220	6-19-14		X																							
~~322~~	MW 4A	1	1L	X								X		1220	6-19-14					X																				
321 ~~323~~	MW 8	3	40mL	X				X				X		1340	6-18		X																							
322 ~~324~~	MW 10	3	40mL	X				X				X		1020	6-18																									
323 ~~325~~	MW 11	3	40mL	X				X				X		1040	6-18																									
324 ~~326~~	MW 12	3	40mL	X				X				X		1320	6-18																									
325 ~~327~~	MW 13	3	40mL	X				X				X		1020	6-19-14																									
326 ~~328~~	MW 14	3	40mL	X				X				X		1100	6-18																									
327	MW 15	3	40mL	X				X				X		1420	6-18																									

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Munsey		6-20-2014			TA	6/20/14	8:57	INST 1.2 °C
Jake Munsey	Talon IPE		8:50					OBS 3.8 °C
								COR 3.8 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	TA	6/23/14	15:30					INST ____ °C
								OBS ____ °C
								COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
				Brenda Ward	TA	6/24/14	~~8:00~~ BW	INST 1.3 °C
								OBS 4.4 °C
								COR 3.8 °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Carrier # LS ZR 350339

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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LAB Order ID # 1406 2007

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Company Name: Talon IPE
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Address: (Street, City, Zip) 2901 St Hwy 349, Midland, TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, cjbryant @ paalp.com
Invoice to: (If different from above) SRS # 2002-10273 (plains all american pipeline)
Project #: 700376.045.01
Project Name: Moore to Jal #2
Project Location (including state): Hobbs, NM
Sampler Signature: Jake Munsey

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE (2014)	TIME
328	MW 16	3	40mL	X				X				X		6-18	1400
329	MW 17	3	40mL	X				X				X		6-18	1220
330	MW 18	3	40mL	X				X				X		6-18	1240
331	MW 19	3	40mL	X				X				X		6-18	1300
332	MW 20	3	40mL	X				X				X		6-18	1120
333	MW 21	3	40mL	X				X				X		6-18	1145
334	MW 22	1	1L	X								X		6-19	1120
	MW 22	3	40mL	X				X				X		6-19	1120
335	MW 23	1	1L	X								X		6-19-14	1050
	MW 23	3	40mL	X				X				X		6-19-14	1050

ANALYSIS REQUEST	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
328		X																							
329		X																							
330		X																							
331		X																							
332		X																							
333		X																							
334					X																				
		X																							
335					X																				
		X																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Munsey		6-20-2014						INST 4
Jake Munsey	Talon IPE		8:55		TA	6/20/14	815	OBS 38 °C
								COR 38 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____
								OBS ____ °C
								COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST IR 3
				Brenda Ward	TA Lubbock	6/24/14	9:45	OBS 4.4 °C
								COR 3.8 °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Carrier # Fedex 2S 2R 350339

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: September 29, 2014

Work Order: 14092215

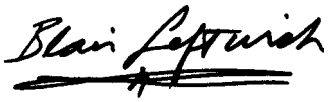
Project Location: Hobbs, NM
Project Name: Jal #2
Project Number: 700376.045.01
SRS #: 2002-10273

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
375029	MW-3A	water	2014-09-17	13:05	2014-09-22
375030	MW-4	water	2014-09-18	11:10	2014-09-22
375031	MW-8	water	2014-09-17	13:40	2014-09-22
375032	MW-10	water	2014-09-17	12:40	2014-09-22
375033	MW-11	water	2014-09-17	12:16	2014-09-22
375034	MW-12	water	2014-09-17	13:25	2014-09-22
375035	MW-13	water	2014-09-18	11:30	2014-09-22
375036	MW-14	water	2014-09-17	15:00	2014-09-22
375037	MW-15	water	2014-09-17	14:50	2014-09-22
375038	MW-16	water	2014-09-17	14:40	2014-09-22
375039	MW-17	water	2014-09-16	14:00	2014-09-22
375040	MW-18	water	2014-09-16	14:10	2014-09-22
375041	MW-19	water	2014-09-16	14:30	2014-09-22
375042	MW-20	water	2014-09-17	11:20	2014-09-22
375043	MW-21	water	2014-09-17	11:40	2014-09-22
375044	MW-22	water	2014-09-16	13:20	2014-09-22
375045	MW-23	water	2014-09-16	13:00	2014-09-22

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 25 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2014-09-22 and assigned to work order 14092215. Samples for work order 14092215 were received intact without headspace and at a temperature of 5.3 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	97898	2014-09-24 at 07:41	115757	2014-09-25 at 07:42
BTEX	S 8021B	97941	2014-09-25 at 07:35	115808	2014-09-26 at 07:35
BTEX	S 8021B	97974	2014-09-26 at 14:45	115848	2014-09-29 at 08:15

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14092215 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 375029 - MW-3A

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115757	Date Analyzed:	2014-09-25	Analyzed By:	AK
Prep Batch:	97898	Sample Preparation:	2014-09-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.00270**	mg/L	1	0.00100
Toluene		5	**0.00330**	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene		5	**0.00220**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0920	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0740	mg/L	1	0.100	74	70 - 130

Sample: 375030 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115848	Date Analyzed:	2014-09-29	Analyzed By:	AK
Prep Batch:	97974	Sample Preparation:	2014-09-26	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**1.40**	mg/L	50	0.00100
Toluene		5	**0.305**	mg/L	50	0.00100
Ethylbenzene		5	**0.160**	mg/L	50	0.00100
Xylene		5	**0.179**	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.61	mg/L	50	5.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			4.57	mg/L	50	5.00	91	70 - 130

Sample: 375031 - MW-8

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115757	Date Analyzed:	2014-09-25	Analyzed By:	AK
Prep Batch:	97898	Sample Preparation:	2014-09-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.0136**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene		5	**0.00190**	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0899	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0792	mg/L	1	0.100	79	70 - 130

Sample: 375032 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115757	Date Analyzed:	2014-09-25	Analyzed By:	AK
Prep Batch:	97898	Sample Preparation:	2014-09-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0912	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0730	mg/L	1	0.100	73	70 - 130

Sample: 375033 - MW-11

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.0513**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene		5	**0.00410**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0915	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0722	mg/L	1	0.100	72	70 - 130

Sample: 375034 - MW-12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene		5	**0.00160**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0893	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0727	mg/L	1	0.100	73	70 - 130

Sample: 375035 - MW-13

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.916**	mg/L	50	0.00100
Toluene	U	5	<0.0500	mg/L	50	0.00100
Ethylbenzene	U	5	<0.0500	mg/L	50	0.00100
Xylene	U	5	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.50	mg/L	50	5.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			3.62	mg/L	50	5.00	72	70 - 130

Sample: 375036 - MW-14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.0294**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene		5	**0.00120**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0884	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0724	mg/L	1	0.100	72	70 - 130

Sample: 375037 - MW-15

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		5	**0.260**	mg/L	100	0.00100
Toluene	U	5	<0.100	mg/L	100	0.00100
Ethylbenzene	U	5	<0.100	mg/L	100	0.00100
Xylene	U	5	<0.100	mg/L	100	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.92	mg/L	100	10.0	89	70 - 130
4-Bromofluorobenzene (4-BFB)			6.96	mg/L	100	10.0	70	70 - 130

Sample: 375038 - MW-16

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0878	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0724	mg/L	1	0.100	72	70 - 130

Sample: 375039 - MW-17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0890	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0732	mg/L	1	0.100	73	70 - 130

Sample: 375040 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0889	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0728	mg/L	1	0.100	73	70 - 130

Sample: 375041 - MW-19

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0904	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0715	mg/L	1	0.100	72	70 - 130

Sample: 375042 - MW-20

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0892	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0715	mg/L	1	0.100	72	70 - 130

Sample: 375043 - MW-21

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0888	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0706	mg/L	1	0.100	71	70 - 130

Sample: 375044 - MW-22

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115808	Date Analyzed:	2014-09-26	Analyzed By:	AK
Prep Batch:	97941	Sample Preparation:	2014-09-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	**0.0644**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0884	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0699	mg/L	1	0.100	70	70 - 130

Sample: 375045 - MW-23

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115757	Date Analyzed:	2014-09-25	Analyzed By:	AK
Prep Batch:	97898	Sample Preparation:	2014-09-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	5	<0.00100		mg/L	1	0.00100
Toluene	U	5	<0.00100		mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100		mg/L	1	0.00100
Xylene	U	5	<0.00100		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0892	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0771	mg/L	1	0.100	77	70 - 130

Method Blanks

Method Blank (1) QC Batch: 115757

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK
Prep Batch: 97898 | QC Preparation: 2014-09-24 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0868	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0769	mg/L	1	0.100	77	70 - 130

Method Blank (1) QC Batch: 115808

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK
Prep Batch: 97941 | QC Preparation: 2014-09-25 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0886	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0729	mg/L	1	0.100	73	70 - 130

Method Blank (1) QC Batch: 115848

QC Batch: 115848 | Date Analyzed: 2014-09-29 | Analyzed By: AK
Prep Batch: 97974 | QC Preparation: 2014-09-26 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0910	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0931	mg/L	1	0.100	93	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK
Prep Batch: 97898 | QC Preparation: 2014-09-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.102	mg/L	1	0.100	<0.000299	102	70 - 130
Toluene		5	0.0995	mg/L	1	0.100	<0.000247	100	70 - 130
Ethylbenzene		5	0.105	mg/L	1	0.100	<0.000423	105	70 - 130
Xylene		5	0.320	mg/L	1	0.300	<0.000552	107	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.104	mg/L	1	0.100	<0.000299	104	70 - 130	2	20
Toluene		5	0.102	mg/L	1	0.100	<0.000247	102	70 - 130	2	20
Ethylbenzene		5	0.106	mg/L	1	0.100	<0.000423	106	70 - 130	1	20
Xylene		5	0.326	mg/L	1	0.300	<0.000552	109	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0863	0.0897	mg/L	1	0.100	86	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0841	0.0850	mg/L	1	0.100	84	85	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK
Prep Batch: 97941 | QC Preparation: 2014-09-25 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.101	mg/L	1	0.100	<0.000299	101	70 - 130
Toluene		5	0.102	mg/L	1	0.100	<0.000247	102	70 - 130
Ethylbenzene		5	0.106	mg/L	1	0.100	<0.000423	106	70 - 130
Xylene		5	0.325	mg/L	1	0.300	<0.000552	108	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.104	mg/L	1	0.100	<0.000299	104	70 - 130	3	20
Toluene		5	0.104	mg/L	1	0.100	<0.000247	104	70 - 130	2	20
Ethylbenzene		5	0.108	mg/L	1	0.100	<0.000423	108	70 - 130	2	20
Xylene		5	0.332	mg/L	1	0.300	<0.000552	111	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0924	0.0920	mg/L	1	0.100	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0818	0.0821	mg/L	1	0.100	82	82	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115848 | Date Analyzed: 2014-09-29 | Analyzed By: AK
Prep Batch: 97974 | QC Preparation: 2014-09-26 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0979	mg/L	1	0.100	<0.000299	98	70 - 130
Toluene		5	0.100	mg/L	1	0.100	<0.000247	100	70 - 130
Ethylbenzene		5	0.0983	mg/L	1	0.100	<0.000423	98	70 - 130
Xylene		5	0.302	mg/L	1	0.300	<0.000552	101	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0954	mg/L	1	0.100	<0.000299	95	70 - 130	3	20
Toluene		5	0.0977	mg/L	1	0.100	<0.000247	98	70 - 130	2	20
Ethylbenzene		5	0.0972	mg/L	1	0.100	<0.000423	97	70 - 130	1	20
Xylene		5	0.298	mg/L	1	0.300	<0.000552	99	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0958	0.0947	mg/L	1	0.100	96	95	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.103	mg/L	1	0.100	103	103	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 375048

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK
Prep Batch: 97898 | QC Preparation: 2014-09-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		[5]	0.104	mg/L	1	0.100	<0.000299	104	70 - 130
Toluene		[5]	0.102	mg/L	1	0.100	<0.000247	102	70 - 130
Ethylbenzene		[5]	0.103	mg/L	1	0.100	<0.000423	103	70 - 130
Xylene		[5]	0.306	mg/L	1	0.300	<0.000552	102	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		[5]	0.106	mg/L	1	0.100	<0.000299	106	70 - 130	2	20
Toluene		[5]	0.104	mg/L	1	0.100	<0.000247	104	70 - 130	2	20
Ethylbenzene		[5]	0.108	mg/L	1	0.100	<0.000423	108	70 - 130	5	20
Xylene		[5]	0.326	mg/L	1	0.300	<0.000552	109	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0897	0.0916	mg/L	1	0.1	90	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0831	0.0841	mg/L	1	0.1	83	84	70 - 130

Matrix Spike (MS-1) Spiked Sample: 375033

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK
Prep Batch: 97941 | QC Preparation: 2014-09-25 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		[5]	0.164	mg/L	1	0.100	0.0513	113	70 - 130
Toluene		[5]	0.100	mg/L	1	0.100	<0.000247	100	70 - 130
Ethylbenzene		[5]	0.104	mg/L	1	0.100	<0.000423	104	70 - 130
Xylene		[5]	0.321	mg/L	1	0.300	0.0041	106	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.160	mg/L	1	0.100	0.0513	109	70 - 130	2	20
Toluene		5	0.101	mg/L	1	0.100	<0.000247	101	70 - 130	1	20
Ethylbenzene		5	0.105	mg/L	1	0.100	<0.000423	105	70 - 130	1	20
Xylene		5	0.326	mg/L	1	0.300	0.0041	107	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0899	0.0919	mg/L	1	0.1	90	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0823	0.0818	mg/L	1	0.1	82	82	70 - 130

Matrix Spike (MS-1) Spiked Sample: 375300

QC Batch: 115848 | Date Analyzed: 2014-09-29 | Analyzed By: AK
Prep Batch: 97974 | QC Preparation: 2014-09-26 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0999	mg/L	1	0.100	<0.000299	100	70 - 130
Toluene		5	0.100	mg/L	1	0.100	<0.000247	100	70 - 130
Ethylbenzene		5	0.0973	mg/L	1	0.100	<0.000423	97	70 - 130
Xylene		5	0.297	mg/L	1	0.300	<0.000552	99	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0976	mg/L	1	0.100	<0.000299	98	70 - 130	2	20
Toluene		5	0.0988	mg/L	1	0.100	<0.000247	99	70 - 130	1	20
Ethylbenzene		5	0.0973	mg/L	1	0.100	<0.000423	97	70 - 130	0	20
Xylene		5	0.298	mg/L	1	0.300	<0.000552	99	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0944	0.0932	mg/L	1	0.1	94	93	70 - 130
4-Bromofluorobenzene (4-BFB)	0.101	0.100	mg/L	1	0.1	101	100	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.107	107	80 - 120	2014-09-25
Toluene		5	mg/L	0.100	0.104	104	80 - 120	2014-09-25
Ethylbenzene		5	mg/L	0.100	0.106	106	80 - 120	2014-09-25
Xylene		5	mg/L	0.300	0.324	108	80 - 120	2014-09-25

Standard (CCV-2)

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.103	103	80 - 120	2014-09-25
Toluene		5	mg/L	0.100	0.0996	100	80 - 120	2014-09-25
Ethylbenzene		5	mg/L	0.100	0.101	101	80 - 120	2014-09-25
Xylene		5	mg/L	0.300	0.312	104	80 - 120	2014-09-25

Standard (CCV-3)

QC Batch: 115757 | Date Analyzed: 2014-09-25 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.101	101	80 - 120	2014-09-25
Toluene		5	mg/L	0.100	0.100	100	80 - 120	2014-09-25
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-25
Xylene		5	mg/L	0.300	0.311	104	80 - 120	2014-09-25

Standard (CCV-1)

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.101	101	80 - 120	2014-09-26
Toluene		5	mg/L	0.100	0.100	100	80 - 120	2014-09-26
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-26
Xylene		5	mg/L	0.300	0.311	104	80 - 120	2014-09-26

Standard (CCV-2)

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.103	103	80 - 120	2014-09-26
Toluene		5	mg/L	0.100	0.101	101	80 - 120	2014-09-26
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-26
Xylene		5	mg/L	0.300	0.312	104	80 - 120	2014-09-26

Standard (CCV-3)

QC Batch: 115808 | Date Analyzed: 2014-09-26 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-26
Toluene		5	mg/L	0.100	0.0994	99	80 - 120	2014-09-26
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-26
Xylene		5	mg/L	0.300	0.310	103	80 - 120	2014-09-26

Standard (CCV-1)

QC Batch: 115848 | Date Analyzed: 2014-09-29 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0952	95	80 - 120	2014-09-29
Toluene		5	mg/L	0.100	0.0969	97	80 - 120	2014-09-29
Ethylbenzene		5	mg/L	0.100	0.0941	94	80 - 120	2014-09-29
Xylene		5	mg/L	0.300	0.289	96	80 - 120	2014-09-29

Standard (CCV-2)

QC Batch: 115848 Date Analyzed: 2014-09-29 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0897	90	80 - 120	2014-09-29
Toluene		5	mg/L	0.100	0.0960	96	80 - 120	2014-09-29
Ethylbenzene		5	mg/L	0.100	0.0949	95	80 - 120	2014-09-29
Xylene		5	mg/L	0.300	0.290	97	80 - 120	2014-09-29

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 140922215

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
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5002 Basin Street, Suite A1
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200 East Sunset Rd., Suite E
El Paso, Texas 79922
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Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: Talon LPE
Phone #: 940-329-0641
Address: (Street, City, Zip) 2901 St Hwy 349, Midland TX 79707
Fax #:
Contact Person: Brad Ivy Camille Bryant, BIvy@talonlpe.com Cjbryant@PaulP.com
E-mail:
Invoice to: (If different from above) SRS# 2002-10273
Project #: 700376.045.01
Project Name: Moore to Jal #2
Project Location (including state): Hobb NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
040	MW 18	3	40/ml	X				X				X		9/16	1420		✓																						
041	MW 19													9/16	1430																								
042	MW 20													9/17	1120																								
043	MW 21													9/17	1140																								
044	MW 22													9/16	1320																								
045	MW 23													9/16	1300																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Mercy	Talon LPE	9-22-14	11:10		TA	9/22/14	11:10	INST 5.4 °C OBS 5.4 °C COR 5.3 °C
								INST ____ °C OBS ____ °C COR ____ °C
								INST ____ °C OBS ____ °C COR ____ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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LAB Order ID # 14092805

Page 1 of 1

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Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349, Midland TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant, bivy@talonlpe.com, cjbryant@paalp.com
E-mail:
Invoice to: (If different from above) SRS# 2000-10757 (Plains)
Project #: 700376.050.01
Project Name: Kimbrough Sweet 8"
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
375046	MW 1A	3	40mL	X				X				X		9-11-14	1200
047	MW 4	3	40mL	X				X				X		9-11-14	1300
048	MW 10	3	40mL	X				X				X		9-11-14	1330
049	MW 14	6	40mL	X				X				X		9-11-14	1430
050	MW 15	6	40m	X				X				X		9-11-14	1500

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC							Turn Around Time if different from standard	Hold
	X																									
	X																									
	X																									
3X			3X																							
3X			3X																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon LPE	9-22-14	11:10		A	9/22/14	11:10	INST N/A °C OBS 5.4 °C COR 5.3 °C
								INST ____ °C OBS ____ °C COR ____ °C
								INST ____ °C OBS ____ °C COR ____ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier # Carry

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: January 9, 2015

Work Order: 15010512

Project Location: Hobbs, NM
Project Name: Moore to Jal #2
Project Number: 700376.045.01
SRS #: 2002-10273

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
383619	Excavated Dirt #1	soil	2014-12-29	14:30	2015-01-05

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Moore to Jal #2 were received by TraceAnalysis, Inc. on 2015-01-05 and assigned to work order 15010512. Samples for work order 15010512 were received intact at a temperature of 4.3 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	100155	2015-01-06 at 16:48	118450	2015-01-07 at 09:26
TPH GRO	S 8015 D	100163	2015-01-07 at 11:20	118546	2015-01-09 at 12:46

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15010512 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 383619 - Excavated Dirt #1

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118450	Date Analyzed:	2015-01-07	Analyzed By:	SC
Prep Batch:	100155	Sample Preparation:	2015-01-06	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	**2550**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	182	mg/Kg	1	100	182	70 - 130

Sample: 383619 - Excavated Dirt #1

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	Sample Preparation:	2015-01-07	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	5	**60.2**	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.50	mg/Kg	2	4.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	6.60	mg/Kg	2	4.00	165	70 - 130

Method Blanks

Method Blank (1) QC Batch: 118450

QC Batch:	118450	Date Analyzed:	2015-01-07	Analyzed By:	SC
Prep Batch:	100155	QC Preparation:	2015-01-06	Prepared By:	SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.1	mg/Kg	1	100	98	70 - 130

Method Blank (1) QC Batch: 118546

QC Batch:	118546	Date Analyzed:	2015-01-09	Analyzed By:	AK
Prep Batch:	100163	QC Preparation:	2015-01-07	Prepared By:	AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.76	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 118450 | Date Analyzed: 2015-01-07 | Analyzed By: SC
Prep Batch: 100155 | QC Preparation: 2015-01-06 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		[5]	217	mg/Kg	1	250	<7.41	87	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		[5]	212	mg/Kg	1	250	<7.41	85	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	95.4	96.9	mg/Kg	1	100	95	97	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		[5]	14.3	mg/Kg	1	20.0	<2.32	72	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		[5]	16.3	mg/Kg	1	20.0	<2.32	82	70 - 130	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.62	1.77	mg/Kg	1	2.00	81	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.96	mg/Kg	1	2.00	97	98	70 - 130

Matrix Spikes

Matrix Spike (xMS-1) Spiked Sample: 383651

QC Batch: 118450 | Date Analyzed: 2015-01-07 | Analyzed By: SC
Prep Batch: 100155 | QC Preparation: 2015-01-06 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	203	mg/Kg	1	250	<7.41	81	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	205	mg/Kg	1	250	<7.41	82	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	92.5	89.5	mg/Kg	1	100	92	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 383703

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK
Prep Batch: 100163 | QC Preparation: 2015-01-07 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs 5	13.0	mg/Kg	1	20.0	<2.32	65	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	15.6	mg/Kg	1	20.0	<2.32	78	70 - 130	18	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.65	1.72	mg/Kg	1	2	82	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.81	1.82	mg/Kg	1	2	90	91	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 118450 | Date Analyzed: 2015-01-07 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	212	85	80 - 120	2015-01-07

Standard (CCV-2)

QC Batch: 118450 | Date Analyzed: 2015-01-07 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	210	84	80 - 120	2015-01-07

Standard (CCV-2)

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.928	93	80 - 120	2015-01-09

Standard (CCV-3)

QC Batch: 118546 | Date Analyzed: 2015-01-09 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.980	98	80 - 120	2015-01-09

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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Please note, each attachment may consist of more than one page.

LAB Order ID # 15010512

Page 1 of 1

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Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349 Midland, TX
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: CJ bryant@paalp.com bivy@talonlpe.com
Invoice to: (If different from above) SRS # 2002-10273 (Plains)
Project #: 700376.045.01
Project Name: Moore to Jal #2
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
383619	Excavated Dirt #1	1	4oz		✓							✓		12-29	1430

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
			✓																		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Munsey	Talon LPE	1-5-15	1037	[signature]	TA	1.5.15	10:37	INST 1R OBS 4.4 °C COR 4.3 °C
								INST ____ OBS ____ °C COR ____ °C
								INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY
Intact (Y) N
Headspace Y / N / (NA)
Log-in-Review ____

REMARKS:

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # carry in

ORIGINAL COPY

APPENDIX D

NMOCD C-141

EOTT Site Information and Metrics	Incident Date: **10-22-02 @ 5:00 Pm**	NMOCD Notified: 10-23-02 @ 7:00 AM

SITE: 8" Moore to Jal #2	Assigned Site Reference #: 2002-10273
Company: EOTT	
Street Address: PO Box 1660	
Mailing Address: 5805 East Highway 80	
City, State, Zip: Midland, Texas 79702	
Representative: Frank Hernandez	
Representative Telephone: 915.638.3799	
Telephone:	
Fluid volume released (bbls): 25 bbls	Recovered (bbls): 0 bbls
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: 8" Moore to Jal #2	
Source of contamination: 8" Steel Pipeline	
Land Owner, i.e., BLM, ST, Fee, Other: State of New Mexico	
LSP Dimensions ~160' x 40'	
LSP Area: 5,794 sqft ft^2	
Location of Reference Point (RP)	
Location distance and direction from RP	
Latitude: 32 49' 56.61"N	
Longitude: 103 15' 08.47"W	
Elevation above mean sea level:	
Feet from South Section Line	
Feet from West Section Line	
Location- Unit or ¼¼: NW¼ of the SE¼	Unit Letter: J
Location- Section: 16	
Location- Township: T17S	
Location- Range: R37E	
Surface water body within 1000 ' radius of site: none	
Surface water body within 1000 ' radius of site:	
Domestic water wells within 1000' radius of site: none	
Domestic water wells within 1000' radius of site:	
Agricultural water wells within 1000' radius of site: none	
Agricultural water wells within 1000' radius of site:	
Public water supply wells within 1000' radius of site: none	
Public water supply wells within 1000' radius of site:	
Depth from land surface to ground water (DG) ~66'bgs	
Depth of contamination (DC) – ?	
Depth to ground water (DG – DC = DtGW) - 0	

1. Ground Water	**2. Wellhead Protection Area**	**3. Distance to Surface Water Body**
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Ground water Score = 20	*Wellhead Protection Area Score= 0*	*Surface Water Score= 0*
Site Rank (1+2+3) = 20		

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	10-19	0-9
Benzene[1]	10 ppm	10 ppm	10 ppm
BTEX[1]	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **EOTT**	Contact **Frank Hernandez**
Address PO Box 1660 5805 East Highway 80 Midland, Texas 79702	Telephone No. 915.638.3799
Facility Name 8" Moore to Jal #2	Facility Type 8" Steel Pipeline

Surface Owner State of New Mexico	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	
16	16	T17S	R37E					County: Lea Lat. 32 49' 56.61"N Lon. 103 15' 08.47"W

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 25 bbls barrels	Volume Recovered 0 bbls barrels
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence EOTT	Date and Hour of Discovery 10-22-02 @ 7:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson	
By Whom? Pat McCasland, EPI	Date and Hour 10-23-02 @ 7:00 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
8" Steel Pipeline Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of.

Describe Area Affected and Cleanup Action Taken.*
5,794 sqft ~160' x 40' Site will be delineated to determine the vertical and horizontal extents of contamination. Co ntaminated soil will be blended on site or disposed of. Remedial Goals: TPH 8015m = 100 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	**OIL CONSERVATION DIVISION**	
Printed Name: Frank Hernandez	Approved by District Supervisor:	
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: October 23, 2003 Phone: 915.638.3799	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary