TALON LPE

April 20, 2017

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

RE: 2016 Annual Groundwater Monitoring Report
8" Moore to Jal #1
Lea County, New Mexico
SRS No. 2002-10270
NMOCD Ref. No. AP-91

Dr. Oberding:

Talon/LPE, on behalf of Plains Pipeline, L.P., is pleased to submit this Annual Groundwater Monitoring Report to document the results of all groundwater monitoring events completed at the 8" Moor to Jal #1 site in Lea County, New Mexico during 2016.

Talon/LPE recommends **the installation of up to three (3) additional monitoring wells down-and-cross gradient of MW-37 and MW-38** to delineate the extent of the dissolved-phase plume. The locations of the proposed wells are shown in Figure 4 in Appendix A of the report. In addition, wells that have exhibited BTEX concentrations below laboratory method detection limits for eight (8) consecutive quarters are **proposed to be sampled semi-annually**. A reduced sampling schedule is proposed as follows:

- Semi-annually – MW-18, MW-19, MW-20, MW-21, MW-26 and MW-27
- Quarterly – All other monitor wells that do not exhibit measurable PSH.

Should you have any questions relating to any technical aspects of this report, please contact the undersigned at (210) 265-8025 or Camille Bryant at (575) 441-1099.

Respectfully,
Talon/LPE

Paul Santos, P.E.
Senior Engineer

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TALON LPE

2016 ANNUAL GROUNDWATER MONITORING REPORT

8” MOORE TO JAL #1
LEA COUNTY, NEW MEXICO
SRS #2002—10270
NMOCD REF. # AP-91

Prepared For:
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TALON/LPE PROJECT NO. 700376.044.03

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

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APPENDICES

1.0 INTRODUCTION AND OBJECTIVES

1.1 Site Background

The 8" Moore to Jal #1 release site is located approximately 9.2 miles southeast of Lovington, in Lea County, New Mexico. The site is located within the West Lovington Oil Field on land owned by the State of New Mexico. No residence or surface water features are located within a 1,000-foot radius of the site.

The site is situated in a physio-geographic area that is on the extreme south-western portion of the Southern High Plains as it grades into the Edwards Plateau to the south and southeast and the Chihuahuan Desert of the Trans-Pecos Region to the southwest.

The topography proximal to the site is typical of the Southern High Plains, essentially flat with shallow depressions, or playa lakes, dotting the landscape. The prominent surface features on the Southern High Plains are the approximately 19,250 ephemeral playa lakes; however, the density of the playa lakes diminishes toward the southern extent of the Southern High Plains. During periods of rainfall, the playas accumulate sheet runoff from watershed areas ranging in size from less than one square mile to several square miles. Only a small portion of drainage from rainfall occurs by streams. Playa lakes that collect storm water runoff can act as a recharge mechanism for groundwater.

The average elevation of the site and surrounding area is approximately 3,770-feet above mean sea level with a slight slope to the southeast. The regional slope of the land surface in the Southern High Plains is approximately 100 feet per mile in a southeasterly direction.

In October 2002, a release of approximately 200 barrels (bbls) occurred from a Plains Pipeline, L.P. (Plains) pipeline at the site. Approximately 8,000 square feet of surface area was impacted by the release. Soil excavation and over-excavation activities were initiated in October 2002 and that activity is documented in the "Soil Over-Excavation Report and Backfill Workplan," dated May 23, 2006.

Talon/LPE (Talon) has been retained by Plains to conduct quarterly groundwater monitoring activities and operation and maintenance of the phase separated hydrocarbon (PSH) recovery system.

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 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 paleo-valley 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, a total of 38 monitor wells have been installed proximal to the release point (see Figure 1). The first monitor well (MW-1), installed July 2004, was completed with a screened interval below the potentiometric surface. The second monitor well (MW-1A) was installed in September 2004, and phase-separated hydrocarbon (PSH) entered the casing immediately upon completion of the well. Subsequently, three (3) additional monitor wells (MW-2, MW-3, and MW-4) were installed in October of 2004, and PSH entered the casing on those wells.

In November 2007, 16 additional groundwater monitor wells were installed as proposed in the "Monitor Well Installation Workplan Moore to Jal #1", dated January 26, 2007. The purpose of the 16 monitor wells (MW-5 through MW-20) was to further delineate the extent of the PSH and dissolved phase plumes. In addition to the new monitor well installations, monitor wells MW-1 and MW-4 were plugged and abandoned (P&A'd) on March 14, 2007, and re-drilled as a new groundwater monitor wells, MW-1A and MW-4A. Of the sixteen monitor wells that were installed, ten (10), (MW-4A, MW-5 through MW-12, and MW-15), were impacted with PSH.

During the year 2010, a total of 11 specific gravity skimmers with bladder pumps were in operation in monitor wells MW-2, MW-3, MW-5, MW-7 through MW-13, and MW-15. In addition, a total of three (3) total fluids pumps were operating in monitor wells MW-1A, MW-4A, and MW-6. Also during 2010, 16 monitor wells were installed at the site (MW-21 through MW-36) to further delineate the PSH and dissolved-phase plumes. Monitor wells MW-24, MW-25, and MW-30 through MW-31 were impacted with PSH. Two (2) skimmers were added to the system in monitor wells MW-24 and MW-25 in October of 2010.

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 8-inch pipeline from the Moore to Jal #2 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.

During the year 2011, a total of 13 specific gravity skimmers and bladder pumps operated in monitor wells MW-2, MW-3, MW-5, MW-7 through MW-13, MW-15, MW-24, and MW-25. In addition, a total of three (3) total fluids pumps operated in monitor wells MW-1A, MW-4A, and MW-6 during 2011.

During the year 2012, a total of 12 specific gravity skimmers and bladder pumps operated in monitor wells MW-2, MW-3, MW-5, MW-8 through MW-13, MW-15, MW-24, and MW-25. In addition, a total of seven (7) total fluids pumps operated in monitor wells MW-1A, MW-4A, MW-6, MW-7, MW-30, MW-31, and MW-33 during 2012.

During 2013, two (2) additional monitor wells were installed at the site (MW-37 and MW-38) to further delineate the dissolved-phase plume. Additional total fluids pumps were installed in monitor wells MW-5, MW-7, MW-8, MW-9, MW-12, MW-15, MW-16, MW-24, MW-25, MW-30, MW-31, MW-32 and MW-33. Currently, the PSH recovery system is composed of six (6) specific gravity skimmers with bladder pumps, seven (7) pneumatic total fluid pumps, and eight (8) electric total fluids pumps.

PSH recovery operations have been performed at the site since 2004. During 2016 approximately 249 bbls of crude oil and 85,510 bbls of water were recovered by the system and approximately 1,722 bbls of crude oil has been recovered by the system to date.

1.4 Regulatory Framework

Groundwater analytical data collected from this site was 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

The sections that follow provide summaries of the four quarterly groundwater monitoring events conducted at the subject site as well as analytical results from each groundwater sampling event of 2016. Analytical results for the four (4) sampling events are summarized in Table 2 in Appendix B, and Figures 3a through 3d in Appendix A. Laboratory analytical data reports and chain of custody documentation are included in Appendix C. Historic fluid level measurements are included on Table 1 in Appendix B and gradient maps are provided as Figures 2a through 2d in Appendix A.

2.0 SITE ACTIVITIES

The sections that follow summarize groundwater monitoring and PSH recovery activities conducted at the subject site during 2016. The primary focus of groundwater monitoring activities is to measure depth to fluid measurements and 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 performance and efficiency.

2.1 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 each of 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 on-site 55-gallon drums. After the groundwater monitoring event, all retained water was deposited into recovery tank, and sent to the disposal facility via the onsite transfer system. Approximately 2,550 gallons of purged groundwater and decontamination water were collected and disposed of during the monitoring events of 2016.

Groundwater samples were collected from all monitor wells that were not impacted with PSH using dedicated disposable polyethylene bailers. The groundwater samples were contained in laboratory supplied 40-ml VOA sample vials with the appropriate preservative required for the analysis requested. The groundwater samples were maintained on ice, in the custody of Talon personnel, until they were delivered to TraceAnalysis, Inc. in Midland, Texas for analyses.

The groundwater samples collected during all four events were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method SW-846 8021B. Groundwater samples collected from MW-28, MW-29, MW-34 through MW-38 during March 2016 were also analyzed for polyaromatic hydrocarbons (PAH) by EPA Method 8270D.

2.2 Phase Separated Hydrocarbon Recovery

PSH recovery has been conducted at the site since 2004, initially by hand bailing and then by using pneumatic pumps. In October of 2008, Talon installed a pneumatic skimmer system at the site.

During the year 2016, a total of six (6) specific gravity skimmers and bladder pumps operated in monitor wells MW-1A, MW-2, MW-3, MW-10, MW-11 and MW-13.
In addition, a total of 15 total fluids pumps operated in monitor wells MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-12, MW-15, MW-16, MW-24, MW-25 and MW-30 through MW-33 during 2016.

The discharge and recharge cycles for the total fluids pumps were set on timers in order to maximize PSH recovery in relation to groundwater volumes recovered. The system has been effective for increasing PSH recovery and inhibiting PSH plume and dissolved-phase migration. Talon personnel performed a minimum of weekly maintenance to the remediation system to ensure efficient operation and to minimize down time.

PSH recovered by the skimmer system and total fluids pumps was discharged to an on-site 350-barrel frac tank, which is monitored for the accumulation of water and PSH on a weekly basis. PSH is removed from the recovery tank periodically using a vacuum truck and is re-introduced to the Plains' pipeline system at the Plains operated Lea Station. Water is also removed from the recovery tank periodically with a vacuum truck and transferred to a disposal facility.

During 2016, the quarterly PSH and groundwater recovery totals are as follows:

- 1st Quarter – 60 bbls crude oil and 15,758 bbls of groundwater
- 2nd Quarter – 135 bbls crude oil and 15,272 bbls of groundwater
- 3rd Quarter – 28.2 bbls crude oil and 30,687 bbls of groundwater
- 4th Quarter – 26.2 bbls of crude oil and 23,793 bbls of groundwater

A total of approximately 1,722 bbls of PSH have been recovered at the subject site to date by both hand bailing and from the PSH recovery system since PSH recovery was initiated.

3.0 GROUNDWATER MONITORING RESULTS

The results of the laboratory analyses are summarized in Table 2 – Summary of Groundwater Analytical Data in Appendix B. Laboratory analytical data reports and chains of custody documentation are provided in Appendix C.

3.1 Groundwater Monitoring Results

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

3.1.1 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 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 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 Ogallala Aquifer is generally unconfined and the poteniometric surface generally mirrors the land surface elevation with the regional flow direction 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 depth to groundwater at the site has historically ranged from 64 to 72 feet below ground surface, and the groundwater flow direction is to the southeast at an average of 20 feet per mile.

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 with an average pH of 7.3.

3.1.2 Groundwater Gradient and Flow Direction

The depth to fluid measurements were collected during each of the four (4) groundwater monitoring events during the year 2016. The results of the fluid level measurements are summarized in Table 1 - Summary of Historical Fluid Level Measurements in Appendix B.

The collected data were 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.

The potentiometric surface maps constructed for each of the four (4) groundwater monitoring events indicate that the groundwater flow direction is to the southeast at an average gradient of 0.004 feet/foot. Groundwater levels at the subject site have exhibited a steady decline of an average of 1.53 feet for the year 2016. The decline in groundwater levels appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.

3.1.3 Phase Separated Hydrocarbon (PSH)

An oil/water interface probe was used to determine the thicknesses of PSH during the four (4) groundwater monitoring events. The following summarizes the status of the PSH thicknesses observed during the four groundwater monitoring events:

- In March 2016, PSH was observed in 19 monitor wells MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-24, MW-25, MW-30, MW-31, and MW-32. PSH thicknesses ranged from 0.28 feet to 9.05 feet. Monitor well MW-1A, and MW-33 were blocked.
- In June 2016, PSH was observed in 20 monitor wells MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-24, MW-25, MW-30, MW-31, MW-32, and MW-33. PSH thicknesses ranged from 0.01 feet to 8.47 feet. Monitor well MW-1A is blocked.
- In September 2016, PSH was observed in 18 monitor wells MW-2, MW-3, MW-4A, and MW-5 through MW-12, MW-16, MW-24, MW-25, and MW-30 through 33. PSH thicknesses ranged from 0.29 feet to 8.54 feet. Monitor well MW-1A is blocked.
- In December 2016, PSH was observed in 17 monitor wells MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-16, MW-24, MW-30, MW-31, MW-32, and MW-33. MW-13 and MW-15 were not sampled due to the presence of a hydrocarbon sheen. PSH thicknesses ranged from 0.04 feet to 7.91 feet. Monitor wells MW-1A and MW-25 were blocked.

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. As Figure 3d illustrates, the PSH plume is currently delineated by the current monitor well array.

3.1.4 Groundwater Analytical Results

During the March 2016 event, groundwater samples were collected from seventeen (17) monitor wells: MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, MW-37, and MW-38. Groundwater samples were not collected from twenty-one (21) monitor wells due to the presence of PSH (MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-24, MW-25, MW-30, MW-31, and MW-32) or blockage (MW-1A and MW-33).

- Benzene concentrations ranged from less than the laboratory method detection limit (MDL) in most wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-34, MW-36, and MW-37) to 20.0 in MW-29. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-14, MW-28, MW-29, and MW-38.

- Toluene concentrations ranged from less than the laboratory MDL in most wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-36, MW-37, and MW-38) to 0.0051 mg/L in MW-35. Toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled during the quarter.
- Ethylbenzene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-36, MW-37, and MW-38) to 0.0029 mg/L in MW-35. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled during the quarter.
- Xylene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-36, and MW-37) to 0.104 mg/L in MW-38. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the monitor wells sampled during the quarter.

During the June 2016 event, groundwater samples were collected from seventeen (17) monitor wells: MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, MW-37, and MW-38. Groundwater samples were not collected from twenty-one (21) monitor wells due to the presence of PSH (MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-24, MW-25, MW-30, MW-31, MW-32, and MW-33) or blockage (MW-1A).

- Benzene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-36, and MW-37) to 6.81 mg/L in MW-29. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-28, MW-29, and MW-38.
- Toluene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-35, MW-36, MW-37, and MW-38) to 0.0016 mg/L in MW-34. Toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled during the quarter.
- Ethylbenzene concentrations were below the laboratory MDL in all wells sampled during the quarter, and therefore below NMWQCC groundwater standard of 0.750 mg/L.
- Xylene concentrations were less than the laboratory MDL in all the wells sampled with the exception of monitoring well MW-38 which exhibited a xylene concentration 0.0427 mg/L. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the monitor well sampled this quarter.

During the September 2016 event, groundwater samples were collected from seventeen (17) monitor wells: MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, MW-37, and MW-38. Groundwater samples were not collected from nineteen (19) monitor wells due to the presence of PSH (MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10,

MW-11, MW-12, MW-16, MW-24, MW-25, MW-30, MW-31, MW-32, and MW-33) or blockage (MW-1A).

- Benzene concentrations ranged from less than the laboratory MDL in most wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-34, MW-35, and MW-36) to 4.77 mg/L in MW-29. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-29, MW-37, and MW-38.
- Toluene concentrations were below the laboratory MDL in all wells sampled during the quarter, and therefore below NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, and MW-37) to 0.126 mg/L in MW-38. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled during the quarter.
- Xylene concentrations ranged from less than the laboratory MDL in most wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, and MW-37) to 0.417 mg/L in MW-38. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the monitor wells sampled during the quarter.

During the December 2016 event, groundwater samples were collected from seventeen (17) monitor wells: MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-34, MW-35, MW-36, MW-37, and MW-38. Groundwater samples were not collected from twenty-one (21) monitor wells due to the presence of PSH (MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-16, MW-24, MW-30, MW-31, MW-32, and MW-33), hydrocarbon sheen (MW-13 and MW-15), or blockage (MW-1A and MW-25).

- Benzene concentrations ranged from less than the laboratory MDL in most wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-34, MW-35, and MW-36) to 6.92 mg/L in MW-29. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor well MW-14, MW-29, MW-37, and MW-38.
- Toluene concentrations were below the laboratory MDL in all wells sampled during the quarter, and therefore below NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-27, MW-28, MW-29, MW-35, MW-36, and MW-37) to 0.045 mg/L in MW-38. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled during the quarter.
- Xylene concentrations ranged from less than the laboratory MDL in most wells (MW-14, MW-17, MW-19, MW-20, MW-22, MW-23, MW-26, MW-27, MW-28, MW-34, and MW-37) to 0.053 mg/L in MW-29. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the monitor wells sampled during the quarter.

Laboratory analyses are summarized in Table 3 – Summary of Groundwater Analytical Results in Appendix B. Laboratory analytical data reports and chain of custody documentation for all samples are provided in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following section presents a summary of findings in regards to the four (4) groundwater monitoring events and provides recommendations for future corrective action.

4.1 Summary of Findings

- The groundwater flow direction is to southeast at an approximate gradient of 0.004 feet/foot.
- Groundwater levels at the subject site have exhibited a steady decline for the year 2016 that appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer. Groundwater elevations have decreased by an average of 1.53 feet across the site.
- Generally, PSH thicknesses demonstrated declining trends during the year 2016.
- Currently, the PSH plume is delineated by the existing monitor well field.
- Currently, the actionable dissolved-phase plume is delineated, except at the leading edge of the plume. Dissolved-phase concentrations increased slightly in monitor well MW-38.
- 15 total fluids pumps and 6 skimmer pumps are currently in use. The PSH recovery system removed 249 bbls of crude oil from the groundwater during 2016 indicating that the system is performing its function.

4.2 Recommendations

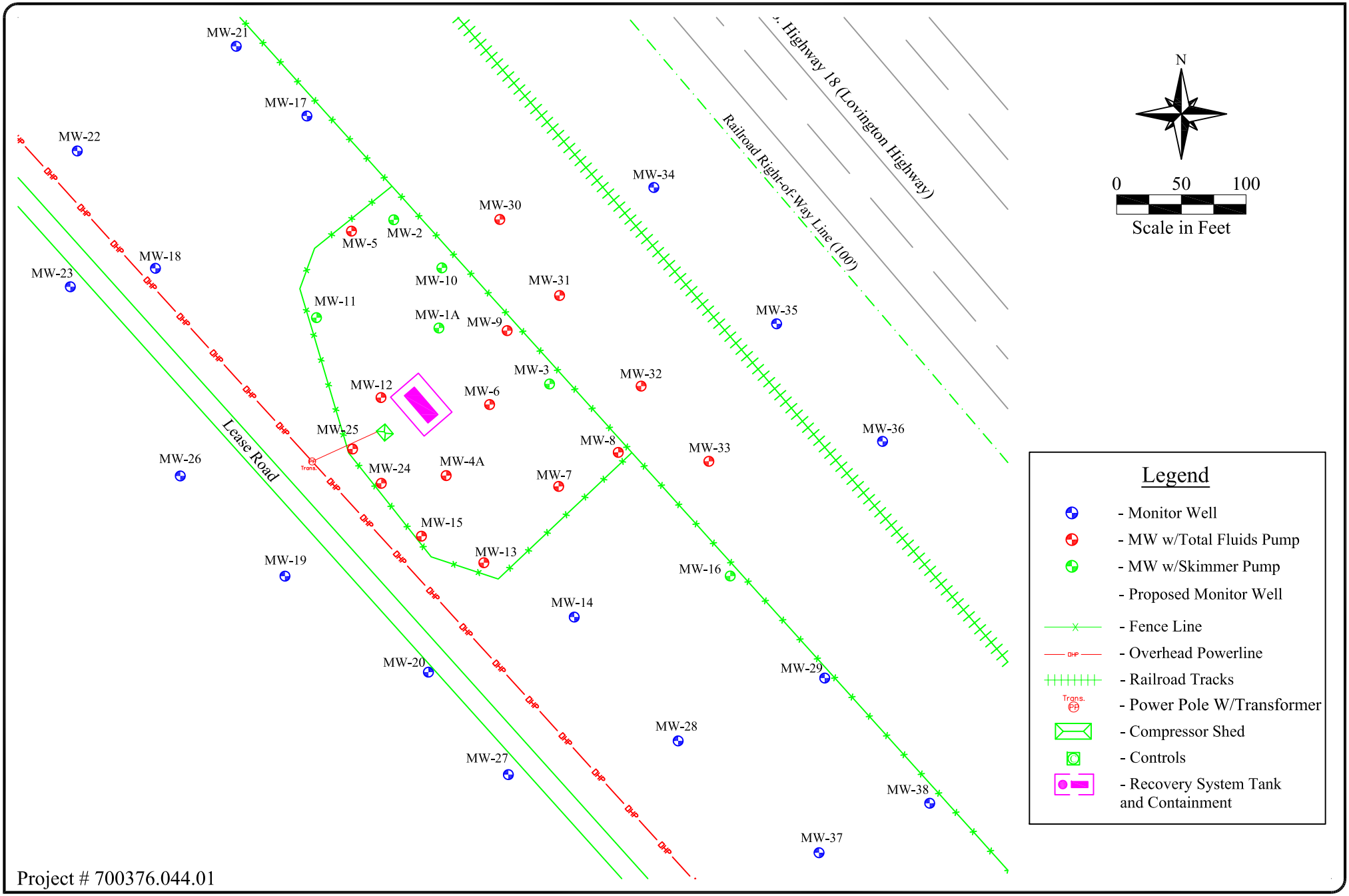
Based upon the results of the four (4) quarterly groundwater monitoring events and PSH recovery efforts, Talon proposes the following actions:

- Continue operation and maintenance of the skimmer/bladder pump and total fluids pumps recovery system. Monitor the system on a weekly basis to optimize PSH recovery efficiency.
- Add or reposition pumps as necessary to optimize PSH recovery and inhibit plume migration.
- Perform quarterly groundwater monitoring events in accordance with NMOCD directives.
- Install up to three (3) additional monitoring wells down-and-cross gradient of MW-37 and MW-38 to delineate the extent of the dissolved-phase plume. The locations of the proposed wells are shown in Figure 4 in Appendix A.
- Wells that have exhibited BTEX concentrations below laboratory method detection limits for eight (8) consecutive quarters are proposed to be sampled semi-annually. A reduced sampling schedule is proposed as follows:

    - Semi-annually – MW-18, MW-19, MW-20, MW-21, MW-26 and MW-27
    - Quarterly – All other monitor wells that do not exhibit measurable PSH.

APPENDIX A

Figures



TALON LPE

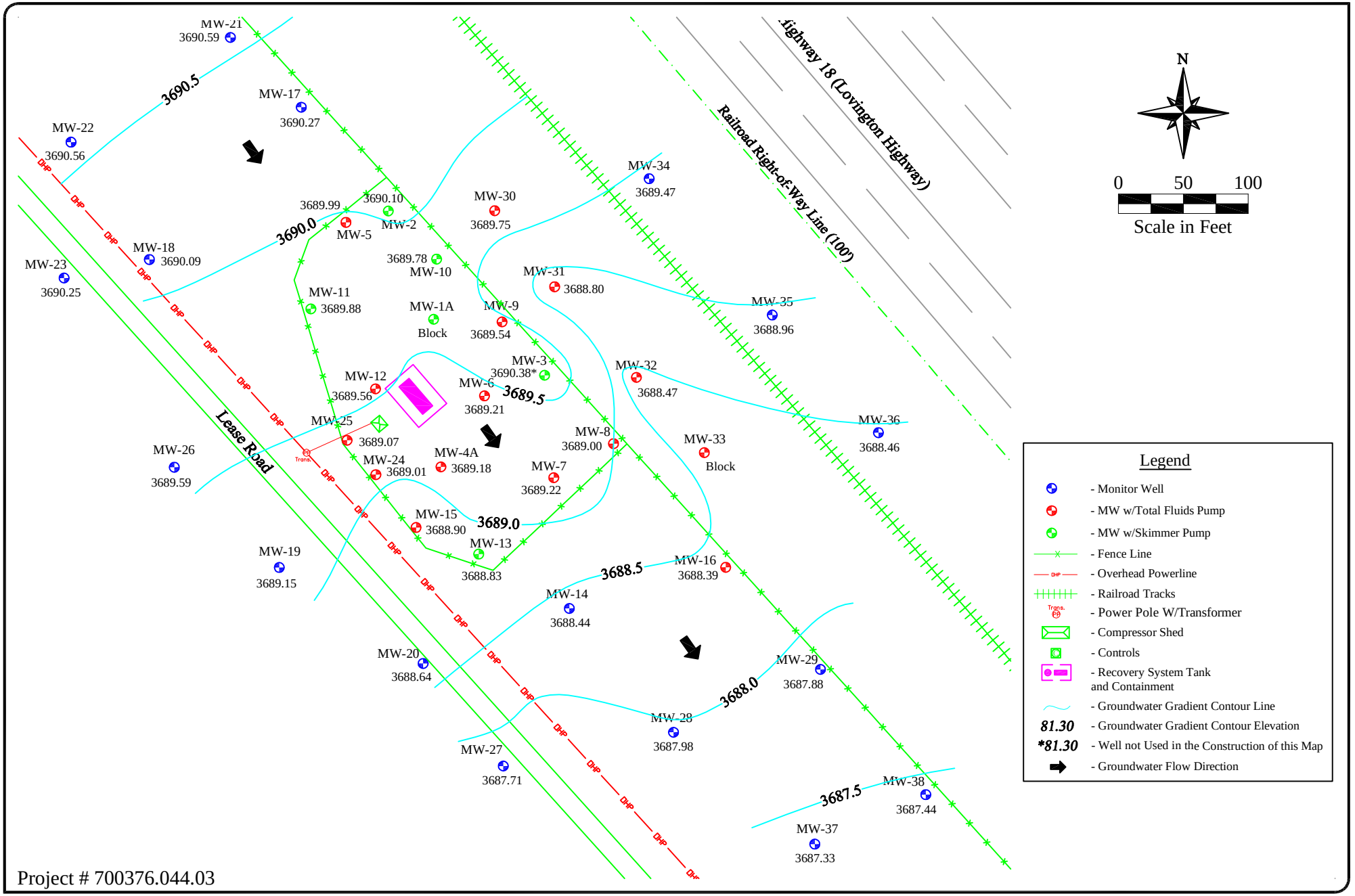
Date:	07/26/2016
Scale:	1" = 100'
Drawn By:	BJA

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91

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

Figure 1 - Site Plan



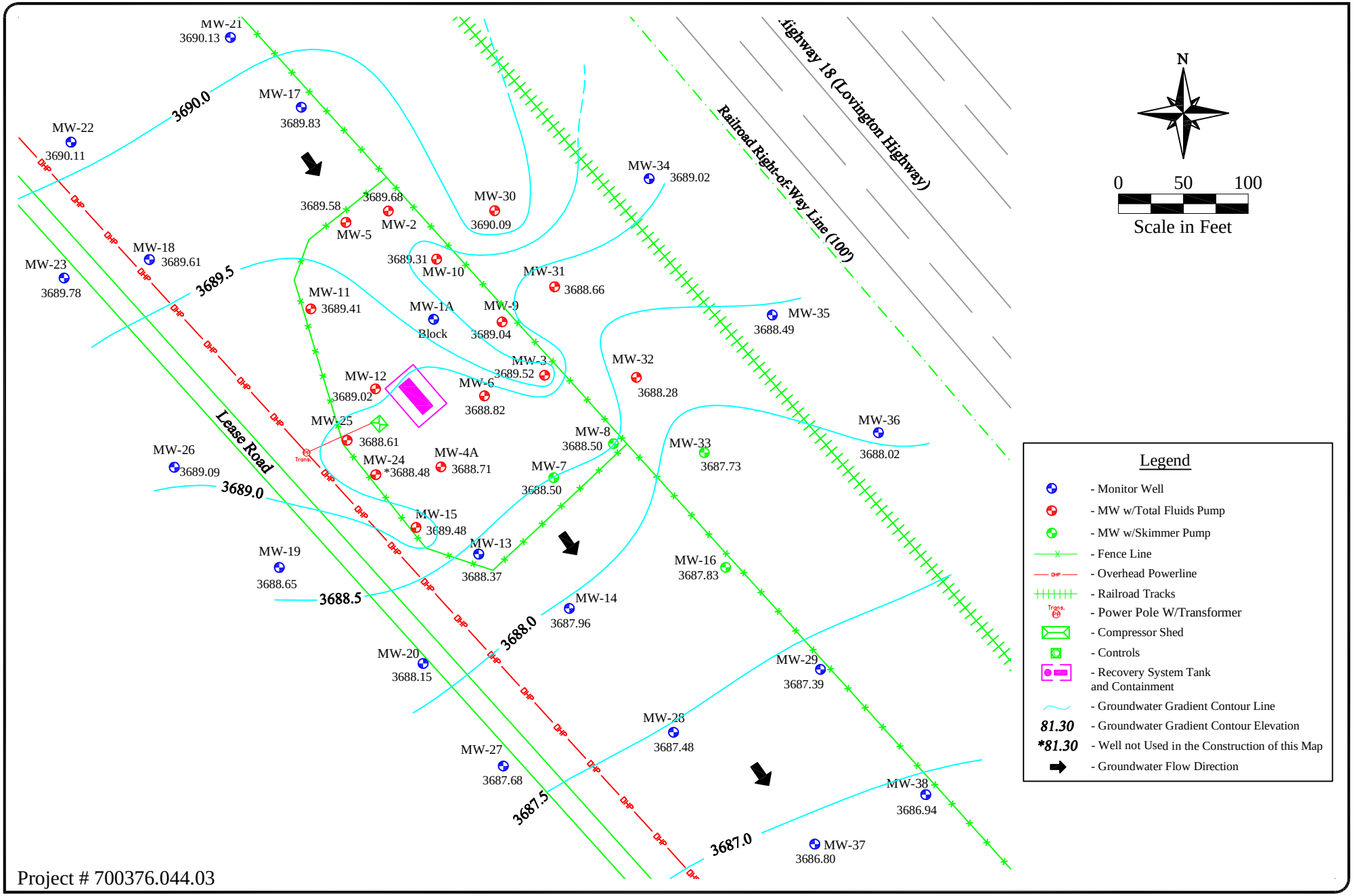
Project # 700376.044.03

TALON LPE

Date: 04/22/2016
Scale: 1" = 100'
Drawn By: SMM

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2a - Groundwater Gradient Map - 03/28/2016



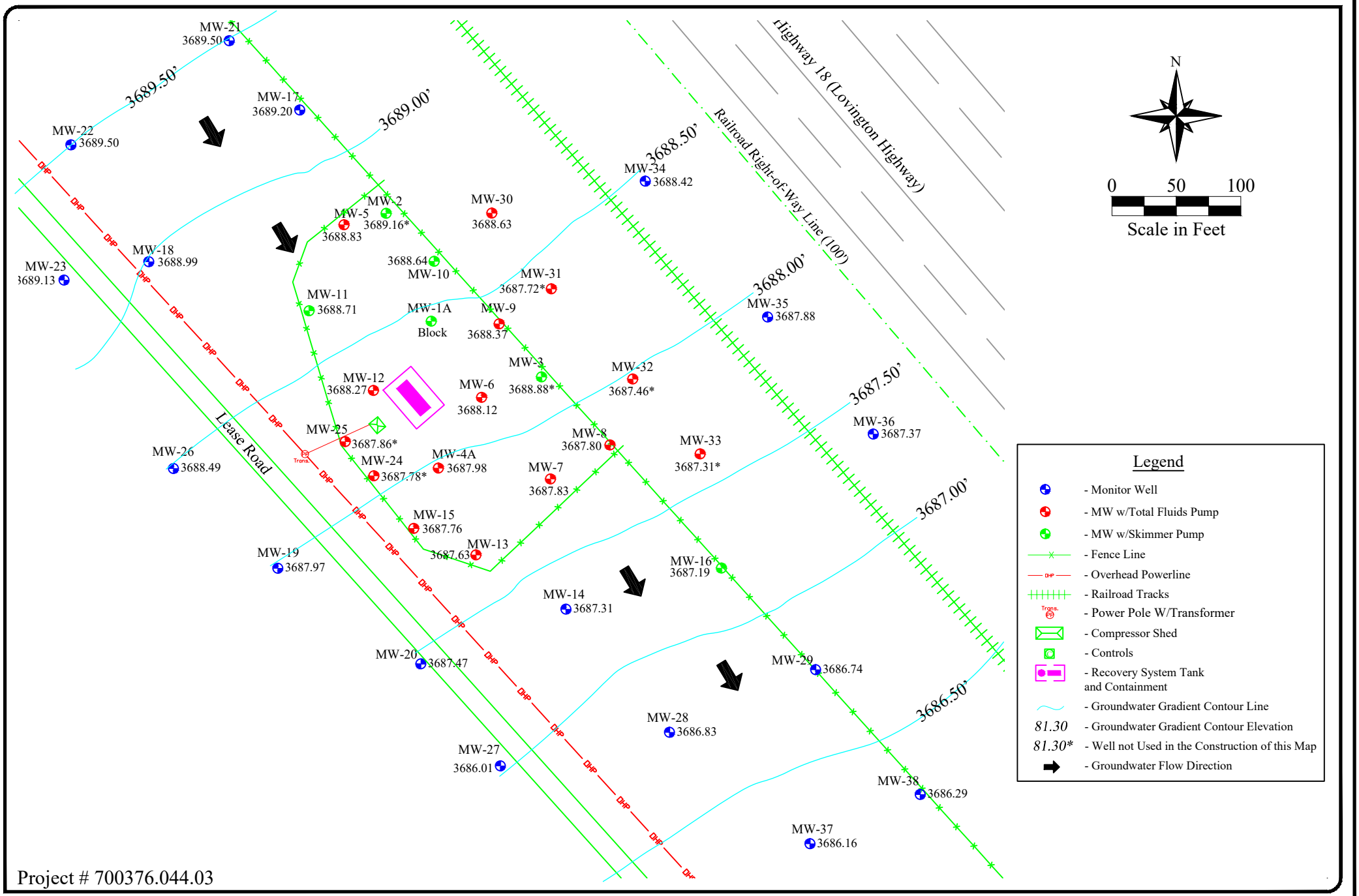
Project # 700376.044.03

TALON LPE

Date: 03/29/2017
Scale: 1" = 100'
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2b - Groundwater Gradient Map - 06/20/2016



Project # 700376.044.03

TALON LPE

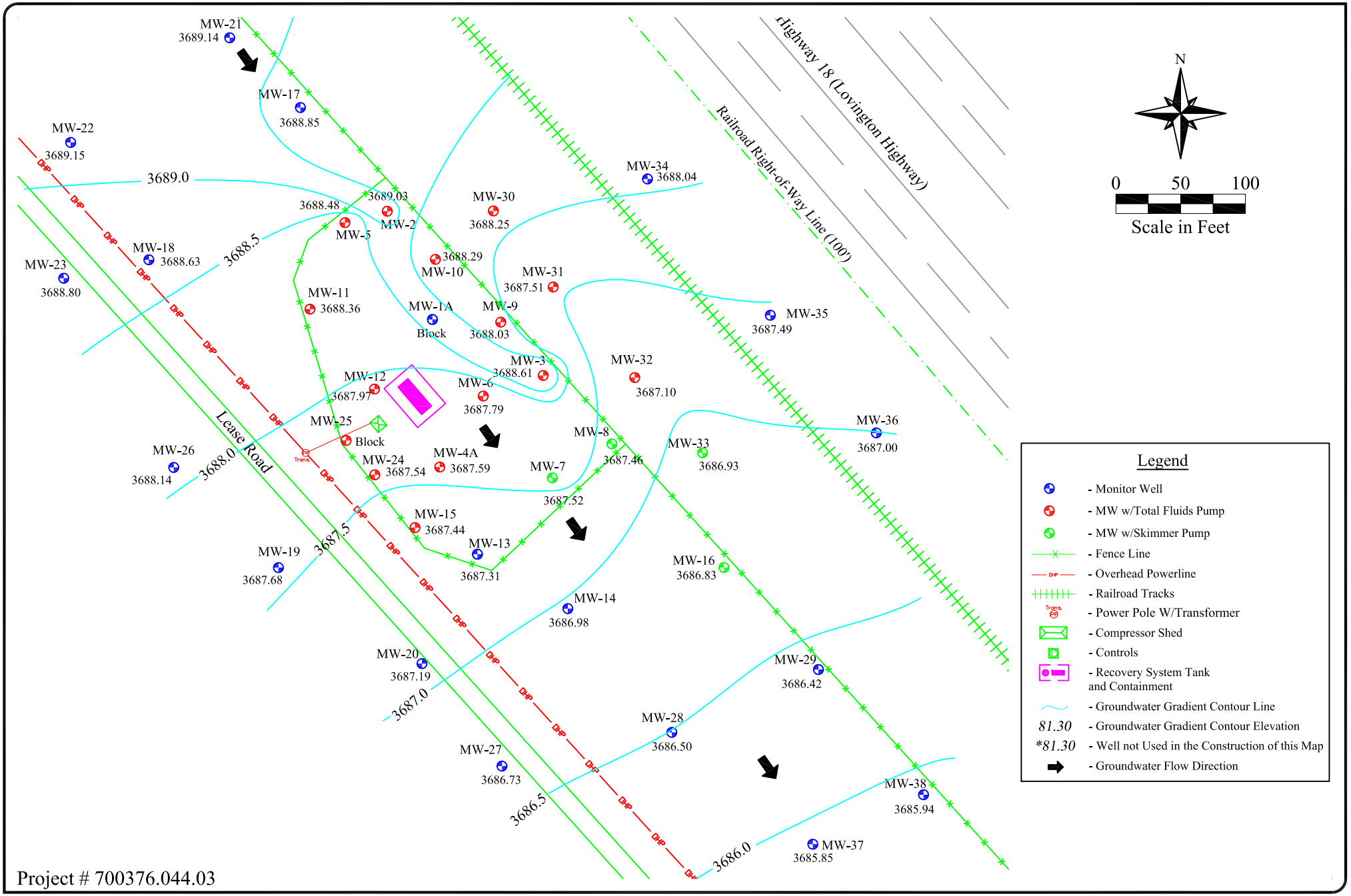
Date:	10/17/2016
Scale:	1" = 100'
Drawn By:	BJA

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91

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

Figure 2c - Groundwater Gradient Map - 09/28/2016



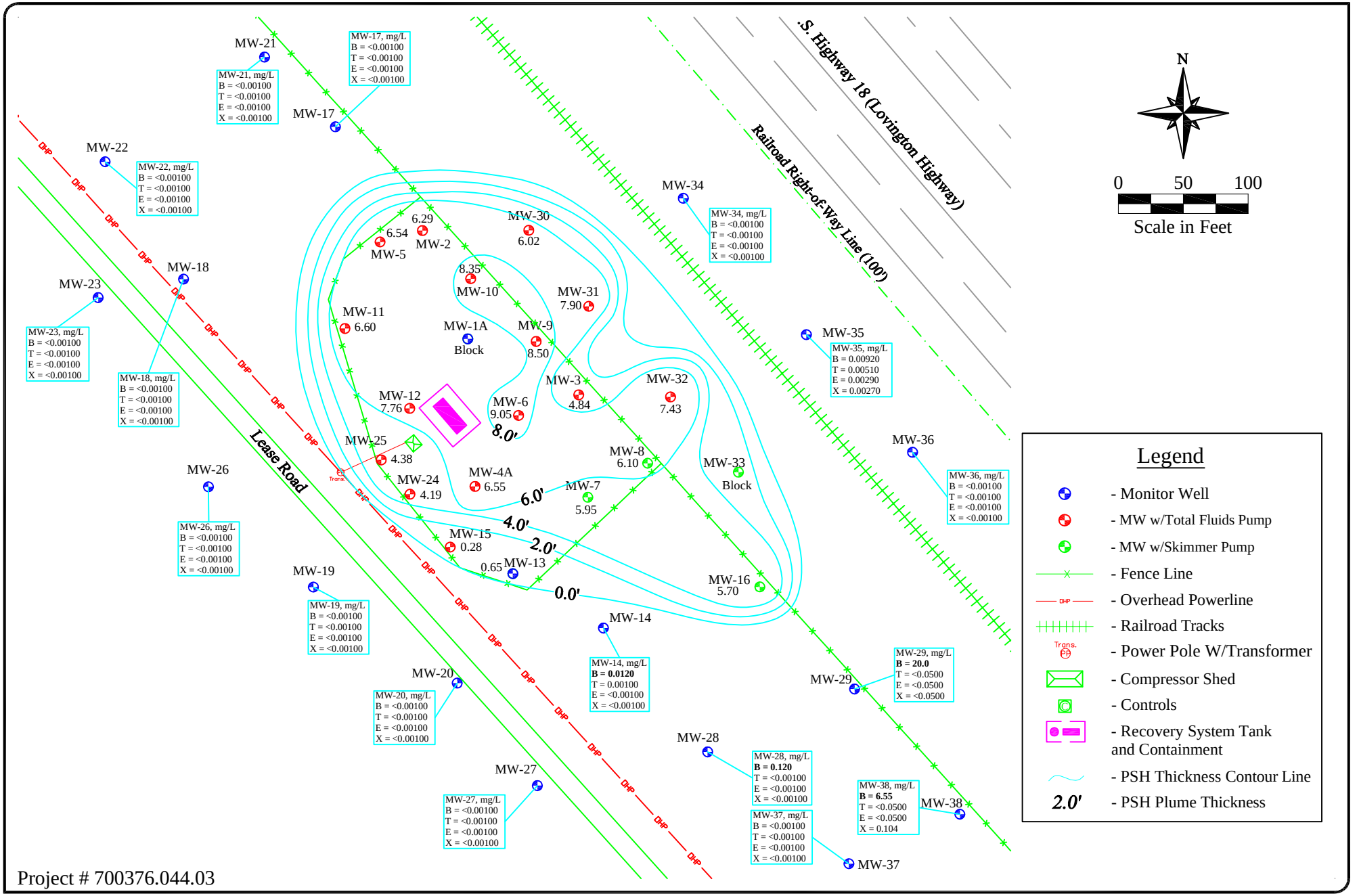
Project # 700376.044.03

TALON LPE

Date: 03/29/2017
Scale: 1" = 100'
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 2d - Groundwater Gradient Map - 12/13/2016



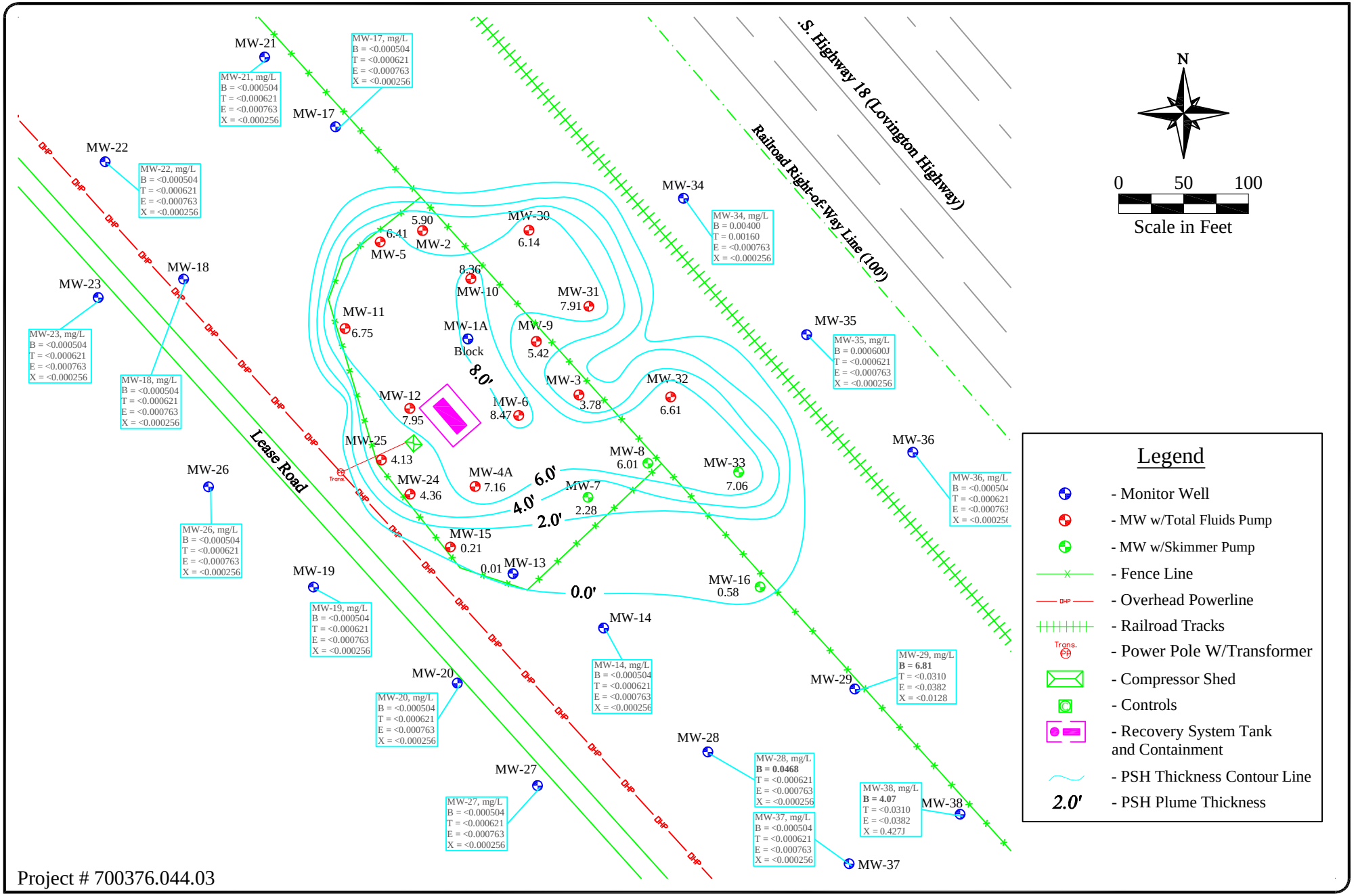
Project # 700376.044.03

TALON LPE

Date: 03/28/2017
Scale: 1" = 100'
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91
9.2 Miles SE of Lovington, NM, Lea County, New Mexico
Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/24-28/2016



Project # 700376.044.03

TALON LPE

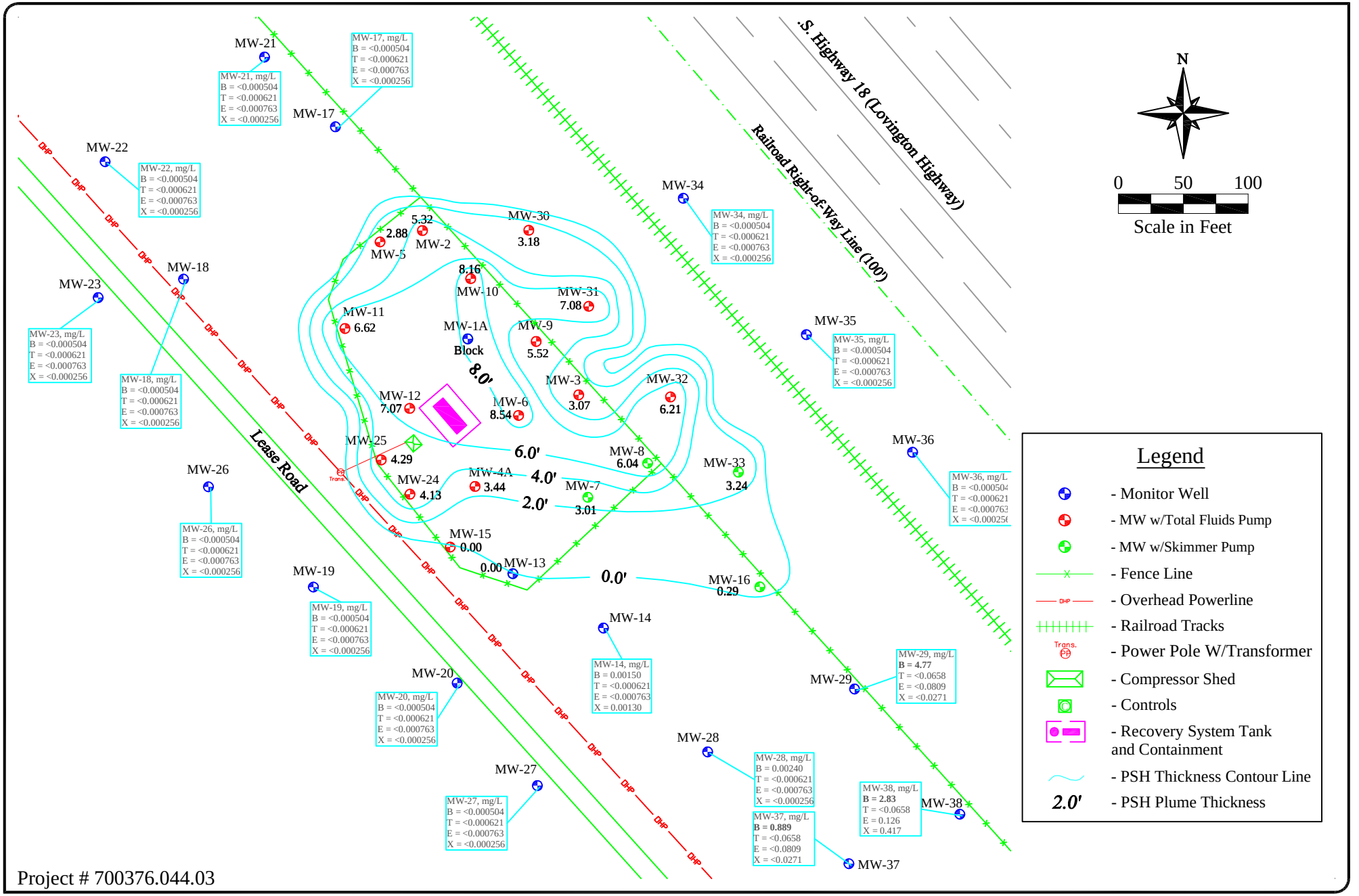
Date: 03/28/2017
Scale: 1" = 100'
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91

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

Figure 3b - PSH Thickness & Groundwater Concentration Map - 06/20/2016



Project # 700376.044.03

TALON LPE

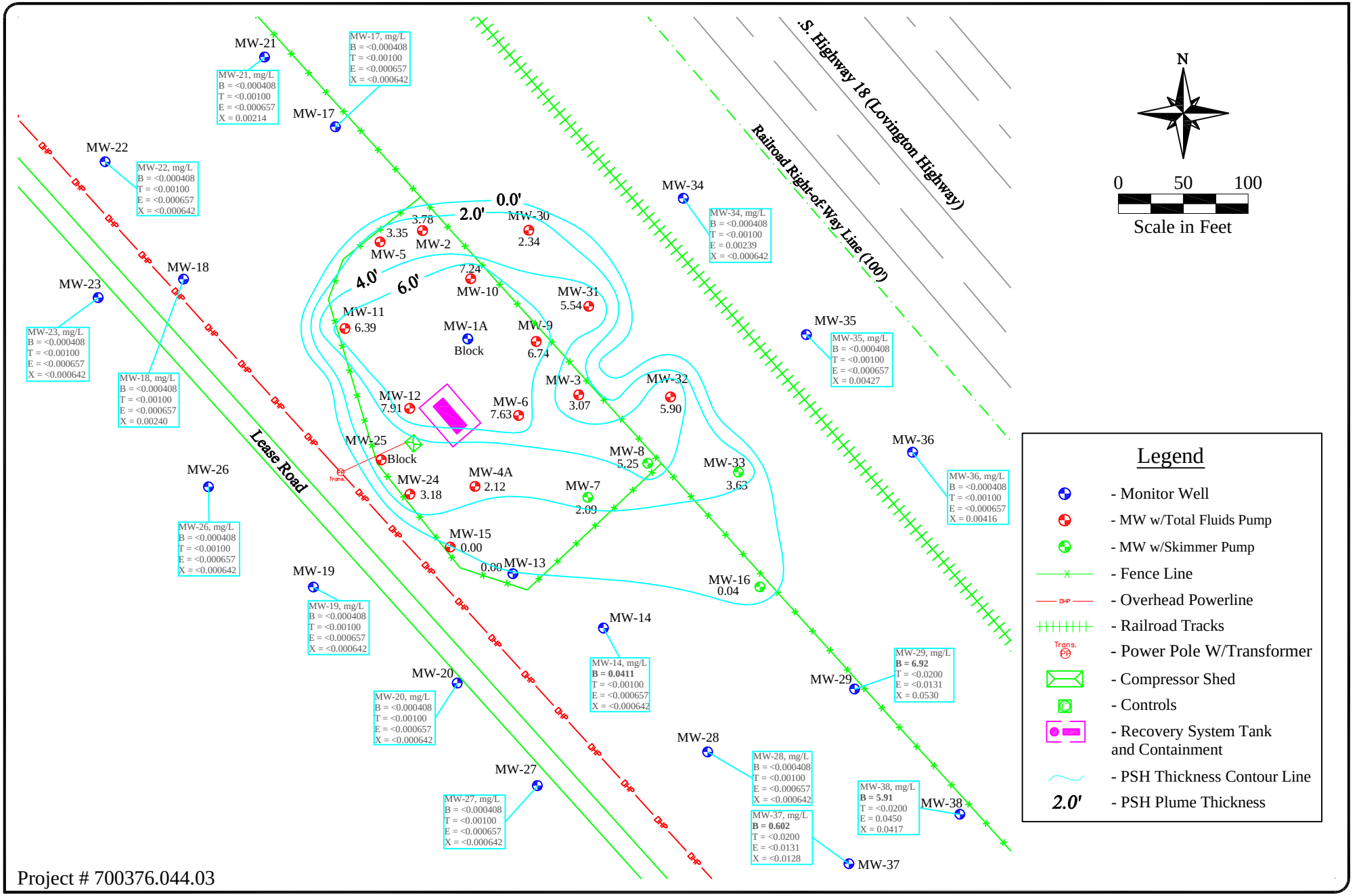
Date: 03/28/2017
Scale: 1" = 100'
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91

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

Figure 3c - PSH Thickness & Groundwater Concentration Map - 09/28/2016



Project # 700376.044.03

TALON LPE

Date: 03/28/2017

Scale: 1" = 100'

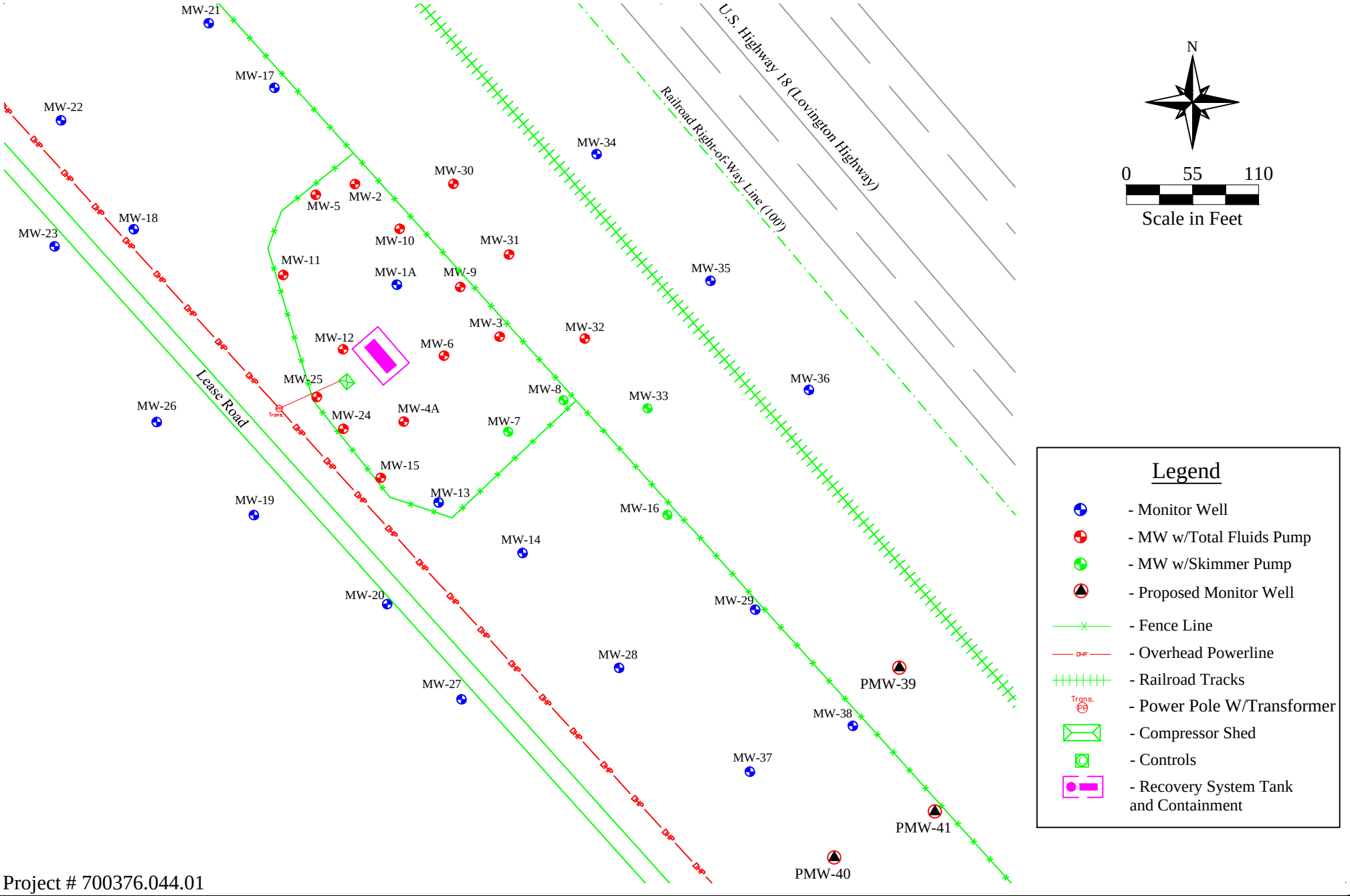
Drawn By: KLW

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91

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

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/13-14/2016



Project # 700376.044.01

TALON LPE

Date: 01/26/2017
Scale: 1" = 110'
Drawn By: BJA

8" Moore to Jal #1

SRS # 2002-10270, NMOCD REF. # AP-91
9.2 Miles SE of Lovington, NM, Lea County, New Mexico

Figure 4 - Proposed Monitor Well Locations

APPENDIX B

Tables

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-1A			Diameter: 4 in.	Screened Interval: 63 ft. to 83 ft.		TD: 83 ft.
	03/18/14	3768.36	73.82	73.81	0.01	3694.55
	06/11/14	3768.36	Dry	-	-	Dry
	09/19/14	3768.36	Dry	-	-	Dry
	12/10/14	3768.36	Block	-	-	Block
	03/25/15	3768.36	Block	-	-	Block
	06/23/15	3768.36	Dry	-	-	Dry
	09/16/15	3768.36	Block	-	-	Block
	12/16/15	3768.36	Block	-	-	Block
	03/24/16	3768.36	Block	-	-	Block
	06/20/16	3768.36	Block	-	-	Block
	09/28/16	3768.36	Block		-	Block
	12/13/16	3768.36	Block		-	Block
MW-2			Diameter: 4 in.	Screened Interval: 63 ft. to 83 ft.		TD: 83 ft.
	03/18/14	3768.35	79.20	73.97	5.23	3693.52
	06/11/14	3768.35	80.42	74.51	5.91	3692.86
	09/19/14	3768.35	81.15	75.21	5.94	3692.16
	12/02/14	3768.35	81.72	75.62	6.10	3691.72
	03/25/15	3768.35	81.97	75.90	6.07	3691.45
	06/23/15	3768.35	82.62	76.18	6.44	3691.11
	09/16/15	3768.35	83.54	76.81	6.73	3690.43
	12/16/15	3768.35	Block	-	-	Block
	03/24/16	3768.35	83.50	77.21	6.29	3690.10
	06/20/16	3768.35	83.60	77.70	5.90	3689.68
	09/28/16	3768.35	83.63	78.31	5.32	3689.16
	12/13/16	3768.35	82.48	78.70	3.78	3689.03
MW-3			Diameter: 4 in.	Screened Interval: 61 ft. to 81 ft.		TD: 81 ft.
	03/18/14	3767.24	79.95	73.30	6.65	3692.84
	06/11/14	3767.24	80.23	73.95	6.28	3692.25
	09/19/14	3767.24	76.11	75.45	0.66	3691.68
	12/10/14	3767.24	78.50	75.80	2.70	3690.99
	03/25/15	3767.24	81.00	75.35	5.65	3690.96
	06/23/15	3767.24	80.85	75.50	5.35	3690.86
	09/16/15	3767.24	80.18	77.92	2.26	3688.95
	12/16/15	3767.24	80.90	76.45	4.45	3690.06
	03/24/16	3767.24	80.90	76.06	4.84	3690.38
	06/20/16	3767.24	80.88	77.10	3.78	3689.52
	09/28/16	3767.24	80.92	77.85	3.07	3688.88
	12/13/16	3767.24	81.06	78.15	2.91	3688.61
MW-4A			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 95 ft.
	03/18/14	3770.64	83.21	76.87	6.34	3692.72
	06/11/14	3770.64	83.78	77.53	6.25	3692.08
	09/19/14	3770.64	84.24	78.42	5.82	3691.26
	12/10/14	3770.64	80.83	79.64	1.19	3690.80
	03/25/15	3770.64	80.65	79.95	0.70	3690.57
	06/23/15	3770.64	85.90	79.20	6.70	3690.33
	09/16/15	3770.64	81.40	81.04	0.36	3689.54
	12/16/15	3770.64	84.21	80.80	3.41	3689.28
	03/24/16	3770.64	86.93	80.38	6.55	3689.18
	06/20/16	3770.64	87.91	80.75	7.16	3688.71
	09/28/16	3770.64	85.53	82.09	3.44	3687.98
	12/13/16	3770.64	84.82	82.70	2.12	3687.59

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-5			Diameter: 4 in.	Screened Interval: 57 ft. to 97 ft.		TD: 97 ft.
	03/18/14	3768.85	78.85	74.60	4.25	3693.55
	06/11/14	3768.85	80.71	74.98	5.73	3692.92
	09/19/14	3768.85	81.75	75.60	6.15	3692.24
	12/10/14	3768.85	82.44	76.00	6.44	3691.79
	03/25/15	3768.85	82.75	76.26	6.49	3691.52
	06/23/15	3768.85	83.15	76.58	6.57	3691.19
	09/16/15	3768.85	80.75	77.91	2.84	3690.47
	12/16/15	3768.85	86.06	77.57	8.49	3689.88
	03/24/16	3768.85	84.32	77.78	6.54	3689.99
	06/20/16	3768.85	84.62	78.21	6.41	3689.58
	09/28/16	3768.85	82.42	79.54	2.88	3688.83
	12/13/16	3768.85	83.17	79.82	3.35	3688.48
MW-6			Diameter: 4 in.	Screened Interval: 52 ft. to 92 ft.		TD: 92 ft.
	03/18/14	3769.50	82.40	75.49	6.91	3692.87
	06/11/14	3769.50	84.37	76.16	8.21	3691.99
	09/19/14	3769.50	85.75	76.75	9.00	3691.26
	12/10/14	3769.50	85.78	77.19	8.59	3690.89
	03/25/15	3769.50	85.95	77.50	8.45	3690.61
	06/23/15	3769.50	86.42	77.70	8.72	3690.36
	09/16/15	3769.50	85.21	78.68	6.53	3689.74
	12/16/15	3769.50	87.20	78.68	8.52	3689.41
	03/24/16	3769.50	87.85	78.80	9.05	3689.21
	06/20/16	3769.50	87.75	79.28	8.47	3688.82
	09/28/16	3769.50	88.51	79.97	8.54	3688.12
	12/13/16	3769.50	88.08	80.45	7.63	3687.79
MW-7			Diameter: 4 in.	Screened Interval: 46 ft. to 86 ft.		TD: 86 ft.
	03/18/14	3770.20	82.15	76.75	5.40	3692.56
	06/11/14	3770.20	82.89	77.40	5.49	3691.89
	09/19/14	3770.20	84.13	78.02	6.11	3691.17
	12/10/14	3770.20	83.18	78.77	4.41	3690.70
	03/25/15	3770.20	81.36	79.50	1.86	3690.39
	06/23/15	3770.20	85.62	78.92	6.70	3690.17
	09/16/15	3770.20	81.34	80.65	0.69	3689.44
	12/16/15	3770.20	83.61	80.62	2.99	3689.09
	03/24/16	3770.20	85.95	80.00	5.95	3689.22
	06/20/16	3770.20	83.60	81.32	2.28	3688.50
	09/28/16	3770.20	84.88	81.87	3.01	3687.83
	12/13/16	3770.20	84.43	82.34	2.09	3687.52
MW-8			Diameter: 4 in.	Screened Interval: 53 ft. to 93 ft.		TD: 93 ft.
	03/18/14	3768.09	79.25	74.88	4.37	3692.49
	06/11/14	3768.09	80.24	75.47	4.77	3691.83
	09/19/14	3768.09	82.21	75.91	6.30	3691.14
	12/10/14	3768.09	81.77	76.61	5.16	3690.63
	03/25/15	3768.09	82.51	76.73	5.78	3690.41
	06/23/15	3768.09	82.88	77.00	5.88	3690.12
	09/16/15	3768.09	83.32	77.71	5.61	3689.45
	12/16/15	3768.09	83.85	78.01	5.84	3689.12
	03/24/16	3768.09	84.18	78.08	6.10	3689.00
	06/20/16	3768.09	84.61	78.60	6.01	3688.50
	09/28/16	3768.09	85.33	79.29	6.04	3687.80
	12/13/16	3768.09	85.01	79.76	5.25	3687.46

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-9			Diameter: 4 in.	Screened Interval: 50 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3767.64	73.41	73.40	0.01	3694.24
	06/11/14	3767.64	77.50	74.87	2.63	3692.34
	09/19/14	3767.64	81.44	74.88	6.56	3691.68
	12/10/14	3767.64	78.19	76.09	2.10	3691.20
	03/25/15	3767.64	82.45	75.53	6.92	3690.97
	06/23/15	3767.64	83.30	75.61	7.69	3690.76
	09/16/15	3767.64	80.30	77.11	3.19	3690.00
	12/16/15	3767.64	83.15	76.95	6.20	3689.67
	03/24/16	3767.64	85.20	76.70	8.50	3689.54
	06/20/16	3767.64	83.13	77.71	5.42	3689.04
	09/28/16	3767.64	83.88	78.36	5.52	3688.37
	12/13/16	3767.64	85.24	78.50	6.74	3688.03
MW-10			Diameter: 4 in.	Screened Interval: 50 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3767.51	79.70	73.08	6.62	3693.34
	06/11/14	3767.51	79.71	73.92	5.79	3692.63
	09/19/14	3767.51	76.26	75.51	0.75	3691.88
	12/10/14	3767.51	78.50	75.55	2.95	3691.47
	03/25/15	3767.51	79.56	75.67	3.89	3691.20
	06/23/15	3767.51	82.85	75.32	7.53	3690.95
	09/16/15	3767.51	78.10	77.15	0.95	3690.20
	12/16/15	3767.51	86.20	84.35	1.85	3682.85
	03/24/16	3767.51	84.70	76.35	8.35	3689.78
	06/20/16	3767.51	85.18	76.82	8.36	3689.31
	09/28/16	3767.51	85.68	77.52	8.16	3688.64
	12/13/16	3767.51	85.27	78.03	7.24	3688.29
MW-11			Diameter: 4 in.	Screened Interval: 53 ft. to 93 ft.		TD: 93 ft.
	03/18/14	3769.37	79.45	75.25	4.20	3693.43
	06/11/14	3769.37	78.20	76.31	1.89	3692.75
	09/19/14	3769.37	79.10	77.02	2.08	3692.01
	12/10/14	3769.37	78.78	77.61	1.17	3691.57
	03/25/15	3769.37	79.00	77.90	1.10	3691.29
	06/23/15	3769.37	83.55	77.35	6.20	3691.00
	09/16/15	3769.37	80.90	78.70	2.20	3690.31
	12/16/15	3769.37	82.95	78.65	4.30	3690.01
	03/24/16	3769.37	85.00	78.40	6.60	3689.88
	06/20/16	3769.37	85.60	78.85	6.75	3689.41
	09/28/16	3769.37	86.19	79.57	6.62	3688.71
	12/13/16	3769.37	86.35	79.96	6.39	3688.36
MW-12			Diameter: 4 in.	Screened Interval: 51 ft. to 91 ft.		TD: 91 ft.
	03/18/14	3769.68	80.92	75.42	5.50	3693.35
	06/11/14	3769.68	82.46	76.20	6.26	3692.45
	09/19/14	3769.68	84.05	76.78	7.27	3691.70
	12/10/14	3769.68	83.58	77.40	6.18	3691.26
	03/25/15	3769.68	85.17	77.36	7.81	3691.03
	06/23/15	3769.68	85.50	77.68	7.82	3690.71
	09/16/15	3769.68	82.59	79.15	3.44	3689.96
	12/16/15	3769.68	85.36	78.96	6.40	3689.66
	03/24/16	3769.68	86.60	78.84	7.76	3689.56
	06/20/16	3769.68	87.30	79.35	7.95	3689.02
	09/28/16	3769.68	87.31	80.24	7.07	3688.27
	12/13/16	3769.68	88.31	80.40	7.91	3687.97

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-13			Diameter: 4 in.	Screened Interval: 56 ft. to 96 ft.		TD: 96 ft.
	03/18/14	3771.14	80.88	78.33	2.55	3692.39
	06/11/14	3771.14	81.55	79.00	2.55	3691.72
	09/19/14	3771.14	82.27	79.77	2.50	3690.96
	12/10/14	3771.14	82.66	80.23	2.43	3690.51
	03/25/15	3771.14	82.87	80.43	2.44	3690.31
	06/23/15	3771.14	81.85	81.05	0.80	3689.96
	09/16/15	3771.14	82.40	81.75	0.65	3689.28
	12/16/15	3771.14	82.76	82.13	0.63	3688.91
	03/24/16	3771.14	82.85	82.20	0.65	3688.83
	06/20/16	3771.14	82.78	82.77	0.01	3688.37
	09/28/16	3771.14	83.51	-	-	3687.63
	12/13/16	3771.14	83.83	-	-	3687.31
MW-14			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 95 ft.
	03/18/14	3771.62	79.58	-	-	3692.04
	06/11/14	3771.62	80.41	-	-	3691.21
	09/19/14	3771.62	80.91	-	-	3690.71
	12/10/14	3771.62	81.36	-	-	3690.26
	03/25/15	3771.62	81.65	-	-	3689.97
	06/23/15	3771.62	81.93	-	-	3689.69
	09/16/15	3771.62	82.72	-	-	3688.90
	12/16/15	3771.62	83.08	-	-	3688.54
	03/24/16	3771.62	83.18	-	-	3688.44
	06/20/16	3771.62	83.66	-	-	3687.96
	09/28/16	3771.62	84.31	-	-	3687.31
	12/13/16	3771.62	84.64	-	-	3686.98
MW-15			Diameter: 4 in.	Screened Interval: 53 ft. to 93 ft.		TD: 93 ft.
	03/18/14	3771.49	79.05	78.45	0.60	3692.94
	06/11/14	3771.49	81.61	79.22	2.39	3691.88
	09/19/14	3771.49	80.72	80.32	0.40	3691.10
	12/10/14	3771.49	80.84	80.83	0.01	3690.66
	03/25/15	3771.49	81.05	81.04	0.01	3690.45
	06/23/15	3771.49	82.00	81.21	0.79	3690.15
	09/16/15	3771.49	82.38	81.98	0.40	3689.44
	12/16/15	3771.49	82.65	82.47	0.18	3688.99
	03/24/16	3771.49	82.82	82.54	0.28	3688.90
	06/20/16	3771.49	82.19	81.98	0.21	3689.48
	09/28/16	3771.49	83.73	-	-	3687.76
	12/13/16	3771.49	84.05	-	-	3687.44
MW-16			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 95 ft.
	03/18/14	3769.23	80.07	76.78	3.29	3691.91
	06/11/14	3769.23	79.85	77.65	2.20	3691.22
	09/19/14	3769.23	80.45	78.35	2.10	3690.53
	12/10/14	3769.23	82.44	78.52	3.92	3690.06
	03/25/15	3769.23	82.47	78.81	3.66	3689.82
	06/23/15	3769.23	Block		-	Block
	09/16/15	3769.23	85.20	79.35	5.85	3688.91
	12/16/15	3769.23	85.72	79.72	6.00	3688.52
	03/24/16	3769.23	85.60	79.90	5.70	3688.39
	06/20/16	3769.23	81.88	81.30	0.58	3687.83
	09/28/16	3769.23	82.28	81.99	0.29	3687.19
	12/13/16	3769.23	82.43	82.39	0.04	3686.83

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-17			Diameter: 4 in.	Screened Interval: 48 ft. to 88 ft.		TD: 88 ft.
	03/18/14	3767.45	73.65	-	-	3693.80
	06/11/14	3767.45	74.15	-	-	3693.30
	09/19/14	3767.45	74.80	-	-	3692.65
	12/10/14	3767.45	75.26	-	-	3692.19
	03/25/15	3767.45	75.60	-	-	3691.85
	06/23/15	3767.45	75.90	-	-	3691.55
	09/16/15	3767.45	76.62	-	-	3690.83
	12/16/15	3767.45	77.03	-	-	3690.42
	03/24/16	3767.45	77.18	-	-	3690.27
	06/20/16	3767.45	77.62	-	-	3689.83
	09/28/16	3767.45	78.25	-	-	3689.20
	12/13/16	3767.45	78.60	-	-	3688.85
MW-18			Diameter: 4 in.	Screened Interval: 48 ft. to 88 ft.		TD: 88 ft.
	03/18/14	3769.79	76.12	-	-	3693.67
	06/11/14	3769.79	76.65	-	-	3693.14
	09/19/14	3769.79	77.36	-	-	3692.43
	12/10/14	3769.79	77.83	-	-	3691.96
	03/25/15	3769.79	78.12	-	-	3691.67
	06/23/15	3769.79	78.45	-	-	3691.34
	09/16/15	3769.79	79.19	-	-	3690.60
	12/16/15	3769.79	79.55	-	-	3690.24
	03/24/16	3769.79	79.70	-	-	3690.09
	06/20/16	3769.79	80.18	-	-	3689.61
	09/28/16	3769.79	80.80	-	-	3688.99
	12/13/16	3769.79	81.16	-	-	3688.63
MW-19			Diameter: 4 in.	Screened Interval: 48 ft. to 88 ft.		TD: 88 ft.
	03/18/14	3773.35	80.63	-	-	3692.72
	06/11/14	3773.35	81.23	-	-	3692.12
	09/19/14	3773.35	82.00	-	-	3691.35
	12/10/14	3773.35	82.43	-	-	3690.92
	03/25/15	3773.35	82.68	-	-	3690.67
	06/23/15	3773.35	83.00	-	-	3690.35
	09/16/15	3773.35	83.81	-	-	3689.54
	12/16/15	3773.35	84.11	-	-	3689.24
	03/24/16	3773.35	84.20	-	-	3689.15
	06/20/16	3773.35	84.70	-	-	3688.65
	09/28/16	3773.35	85.38	-	-	3687.97
	12/13/16	3773.35	85.67	-	-	3687.68
MW-20			Diameter: 4 in.	Screened Interval: 54 ft. to 94 ft.		TD: 94 ft.
	03/18/14	3773.11	80.90	-	-	3692.21
	06/11/14	3773.11	81.49	-	-	3691.62
	09/19/14	3773.11	82.25	-	-	3690.86
	12/10/14	3773.11	82.70	-	-	3690.41
	03/25/15	3773.11	82.95	-	-	3690.16
	06/23/15	3773.11	83.23	-	-	3689.88
	09/16/15	3773.11	84.04	-	-	3689.07
	12/16/15	3773.11	84.38	-	-	3688.73
	03/24/16	3773.11	84.47	-	-	3688.64
	06/20/16	3773.11	84.96	-	-	3688.15
	09/28/16	3773.11	85.64	-	-	3687.47
	12/13/16	3773.11	85.92	-	-	3687.19

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-21			Diameter: 4 in.	Screened Interval: 50 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3767.35	73.23	-	-	3694.12
	06/11/14	3767.35	73.72	-	-	3693.63
	09/19/14	3767.35	74.37	-	-	3692.98
	12/10/14	3767.35	74.82	-	-	3692.53
	03/25/15	3767.35	75.19	-	-	3692.16
	06/23/15	3767.35	75.90	-	-	3691.45
	09/16/15	3767.35	76.17	-	-	3691.18
	12/16/15	3767.35	76.60	-	-	3690.75
	03/24/16	3767.35	76.76	-	-	3690.59
	06/20/16	3767.35	77.22	-	-	3690.13
	09/28/16	3767.35	77.85	-	-	3689.50
	12/13/16	3767.35	78.21	-	-	3689.14
MW-22			Diameter: 4 in.	Screened Interval: 50 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3769.17	74.98	-	-	3694.19
	06/11/14	3769.17	75.45	-	-	3693.72
	09/19/14	3769.17	76.18	-	-	3692.99
	12/10/14	3769.17	76.67	-	-	3692.50
	03/25/15	3769.17	76.98	-	-	3692.19
	06/23/15	3769.17	77.31	-	-	3691.86
	09/16/15	3769.17	78.01	-	-	3691.16
	12/16/15	3769.17	78.41	-	-	3690.76
	03/24/16	3769.17	78.61	-	-	3690.56
	06/20/16	3769.17	79.06	-	-	3690.11
	09/28/16	3769.17	79.67	-	-	3689.50
	12/13/16	3769.17	80.02	-	-	3689.15
MW-23			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 110 ft.
	03/18/14	3771.00	77.15	-	-	3693.85
	06/11/14	3771.00	77.68	-	-	3693.32
	09/19/14	3771.00	78.42	-	-	3692.58
	12/10/14	3771.00	78.88	-	-	3692.12
	03/25/15	3771.00	79.18	-	-	3691.82
	06/23/15	3771.00	79.52	-	-	3691.48
	09/16/15	3771.00	80.24	-	-	3690.76
	12/16/15	3771.00	80.64	-	-	3690.36
	03/24/16	3771.00	80.75	-	-	3690.25
	06/20/16	3771.00	81.22	-	-	3689.78
	09/28/16	3771.00	81.87	-	-	3689.13
	12/13/16	3771.00	82.20	-	-	3688.80
MW-24			Diameter: 4 in.	Screened Interval: 50 ft. to 90 ft.		TD: 95 ft.
	03/18/14	3770.97	82.40	77.28	5.12	3692.41
	06/11/14	3770.97	83.25	77.90	5.35	3691.73
	09/19/14	3770.97	84.30	78.61	5.69	3690.94
	12/10/14	3770.97	84.78	79.05	5.73	3690.49
	03/25/15	3770.97	85.63	79.15	6.48	3690.20
	06/23/15	3770.97	85.90	79.54	6.36	3689.84
	09/16/15	3770.97	84.83	80.48	4.35	3689.40
	12/16/15	3770.97	85.49	81.74	3.75	3688.29
	03/24/16	3770.97	85.10	80.91	4.19	3689.01
	06/20/16	3770.97	85.76	81.40	4.36	3688.48
	09/28/16	3770.97	86.29	82.16	4.13	3687.78
	12/13/16	3770.97	85.82	82.64	3.18	3687.54

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-25			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 110 ft.
	03/18/14	3770.54	81.95	76.65	5.30	3692.57
	06/11/14	3770.54	82.35	77.38	4.97	3691.92
	09/19/14	3770.54	81.39	78.52	2.87	3691.30
	12/10/14	3770.54	82.27	78.85	3.42	3690.84
	03/25/15	3770.54	84.40	78.70	5.70	3690.42
	06/23/15	3770.54	84.23	79.12	5.11	3690.14
	09/16/15	3770.54	81.98	80.42	1.56	3689.73
	12/16/15	3770.54	83.96	80.40	3.56	3689.25
	03/24/16	3770.54	84.76	80.38	4.38	3689.07
	06/20/16	3770.54	85.03	80.90	4.13	3688.61
	09/28/16	3770.54	85.90	81.61	4.29	3687.86
	12/13/16	3770.54	Block		-	Block
MW-26			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 110 ft.
	03/18/14	3772.89	79.40	-	-	3693.49
	06/11/14	3772.89	80.27	-	-	3692.62
	09/19/14	3772.89	81.05	-	-	3691.84
	12/10/14	3772.89	81.47	-	-	3691.42
	03/25/15	3772.89	81.73	-	-	3691.16
	06/23/15	3772.89	82.08	-	-	3690.81
	09/16/15	3772.89	82.86	-	-	3690.03
	12/16/15	3772.89	83.20	-	-	3689.69
	03/24/16	3772.89	83.30	-	-	3689.59
	06/20/16	3772.89	83.80	-	-	3689.09
	09/28/16	3772.89	84.40	-	-	3688.49
	12/13/16	3772.89	84.75	-	-	3688.14
MW-27			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 110 ft.
	03/18/14	3774.53	82.47	-	-	3692.06
	06/11/14	3774.53	83.36	-	-	3691.17
	09/19/14	3774.53	84.13	-	-	3690.40
	12/10/14	3774.53	84.56	-	-	3689.97
	03/25/15	3774.53	84.80	-	-	3689.73
	06/23/15	3774.53	85.12	-	-	3689.41
	09/16/15	3774.53	85.91	-	-	3688.62
	12/16/15	3774.53	86.28	-	-	3688.25
	03/24/16	3774.53	86.82	-	-	3687.71
	06/20/16	3774.53	86.85	-	-	3687.68
	09/28/16	3774.53	87.52	-	-	3687.01
	12/13/16	3774.53	87.80	-	-	3686.73
MW-28			Diameter: 4 in.	Screened Interval: 55 ft. to 95 ft.		TD: 100 ft.
	03/18/14	3772.18	81.64	-	-	3690.54
	06/11/14	3772.18	81.19	-	-	3690.99
	09/19/14	3772.18	81.95	-	-	3690.23
	12/10/14	3772.18	82.38	-	-	3689.80
	03/25/15	3772.18	82.69	-	-	3689.49
	06/23/15	3772.18	80.99	-	-	3691.19
	09/16/15	3772.18	83.73	-	-	3688.45
	12/16/15	3772.18	84.11	-	-	3688.07
	03/24/16	3772.18	84.20	-	-	3687.98
	06/20/16	3772.18	84.70	-	-	3687.48
	09/28/16	3772.18	85.35	-	-	3686.83
	12/13/16	3772.18	85.68	-	-	3686.50

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-29			Diameter: 4 in.	Screened Interval: 55 ft. to 96 ft.		TD: 96 ft.
	03/18/14	3769.79	78.37	-	-	3691.42
	06/11/14	3769.79	78.25	-	-	3691.54
	09/19/14	3769.79	79.62	-	-	3690.17
	12/10/14	3769.79	80.06	-	-	3689.73
	03/25/15	3769.79	80.40	-	-	3689.39
	06/23/15	3769.79	80.68	-	-	3689.11
	09/16/15	3769.79	81.40	-	-	3688.39
	12/16/15	3769.79	81.82	-	-	3687.97
	03/24/16	3769.79	81.91	-	-	3687.88
	06/20/16	3769.79	82.40	-	-	3687.39
	09/28/16	3769.79	83.05	-	-	3686.74
	12/13/16	3769.79	83.37	-	-	3686.42
MW-30			Diameter: 4 in.	Screened Interval: 61 ft. to 91 ft.		TD: 91 ft.
	03/18/14	3766.52	78.34	72.16	6.18	3693.34
	06/11/14	3766.52	78.01	73.05	4.96	3692.65
	09/19/14	3766.52	79.27	73.58	5.69	3692.00
	12/10/14	3766.52	77.85	74.42	3.43	3691.53
	03/25/15	3766.52	77.35	74.90	2.45	3691.22
	06/23/15	3766.52	81.07	74.47	6.60	3690.96
	09/16/15	3766.52	76.70	76.20	0.50	3690.24
	12/16/15	3766.52	81.75	75.55	6.20	3689.95
	03/24/16	3766.52	81.80	75.78	6.02	3689.75
	06/20/16	3766.52	81.56	75.42	6.14	3690.09
	09/28/16	3766.52	80.55	77.37	3.18	3688.63
	12/14/16	3766.52	80.22	77.88	2.34	3688.25
MW-31			Diameter: 4 in.	Screened Interval: 60 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3766.45	78.87	72.42	6.45	3692.42
	06/11/14	3766.45	79.24	73.10	6.14	3691.82
	09/19/14	3766.45	80.58	73.75	6.83	3690.99
	12/10/14	3766.45	80.80	74.16	6.64	3690.63
	03/25/15	3766.45	80.70	74.51	6.19	3690.39
	06/23/15	3766.45	81.75	74.63	7.12	3690.04
	09/16/15	3766.45	82.45	75.23	7.22	3689.42
	12/16/15	3766.45	83.15	75.55	7.60	3689.00
	03/24/16	3766.45	83.58	75.68	7.90	3688.80
	06/20/16	3766.45	83.72	75.81	7.91	3688.66
	09/28/16	3766.45	84.04	76.96	7.08	3687.72
	12/14/16	3766.45	83.10	77.56	5.54	3687.51
MW-32			Diameter: 4 in.	Screened Interval: 60 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3766.75	78.20	73.31	4.89	3692.22
	06/11/14	3766.75	78.86	73.97	4.89	3691.56
	09/19/14	3766.75	79.62	74.63	4.99	3690.87
	12/10/14	3766.75	79.45	75.14	4.31	3690.53
	03/25/15	3766.75	80.35	75.41	4.94	3690.11
	06/23/15	3766.75	81.68	75.45	6.23	3689.74
	09/16/15	3766.75	82.81	76.00	6.81	3689.05
	12/16/15	3766.75	83.35	76.32	7.03	3688.67
	03/24/16	3766.75	83.85	76.42	7.43	3688.47
	06/20/16	3766.75	83.43	76.82	6.61	3688.28
	09/28/16	3766.75	83.95	77.74	6.21	3687.46
	12/14/16	3766.75	84.08	78.18	5.90	3687.10

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-33			Diameter: 4 in.	Screened Interval: 60 ft. to 90 ft.		TD: 90 ft.
	03/18/14	3767.44	79.87	74.20	5.67	3691.82
	06/11/14	3767.44	81.30	74.69	6.61	3691.10
	09/19/14	3767.44	81.18	75.54	5.64	3690.49
	12/10/14	3767.44	81.05	76.13	4.92	3690.08
	03/25/15	3767.44	80.73	76.65	4.08	3689.77
	06/23/15	3767.44	82.88	76.43	6.45	3689.40
	09/16/15	3767.44	81.45	77.52	3.93	3688.94
	12/16/15	3767.44	Block	-	-	Block
	03/24/16	3767.44	Block	-	-	Block
	06/20/16	3767.44	85.01	77.95	7.06	3687.73
	09/28/16	3767.44	82.56	79.32	3.24	3687.31
	12/14/16	3767.44	83.23	79.60	3.63	3686.93
MW-34			Diameter: 4 in.	Screened Interval: 59.4 ft. to 89.4 ft.		TD: 89.4 ft.
	03/18/14	3766.32	73.30	-	-	3693.02
	06/11/14	3766.32	73.83	-	-	3692.49
	09/19/14	3766.32	74.46	-	-	3691.86
	12/10/14	3766.32	74.95	-	-	3691.37
	03/25/15	3766.32	75.30	-	-	3691.02
	06/23/15	3766.32	75.55	-	-	3690.77
	09/16/15	3766.32	76.24	-	-	3690.08
	12/16/15	3766.32	76.65	-	-	3689.67
	03/24/16	3766.32	76.85	-	-	3689.47
	06/20/16	3766.32	77.30	-	-	3689.02
	09/28/16	3766.32	77.90	-	-	3688.42
	12/13/16	3766.32	78.28	-	-	3688.04
MW-35			Diameter: 4 in.	Screened Interval: 61.1 ft. to 91.1 ft.		TD: 91.1 ft.
	03/18/14	3765.67	73.27	-	-	3692.40
	06/11/14	3765.67	73.71	-	-	3691.96
	09/19/14	3765.67	74.35	-	-	3691.32
	12/10/14	3765.67	74.85	-	-	3690.82
	03/25/15	3765.67	75.19	-	-	3690.48
	06/23/15	3765.67	75.43	-	-	3690.24
	09/16/15	3765.67	76.14	-	-	3689.53
	12/16/15	3765.67	76.55	-	-	3689.12
	03/24/16	3765.67	76.71	-	-	3688.96
	06/20/16	3765.67	77.18	-	-	3688.49
	09/28/16	3765.67	77.79	-	-	3687.88
	12/13/16	3765.67	78.18	-	-	3687.49
MW-36			Diameter: 4 in.	Screened Interval: 61.4 ft. to 91.4 ft.		TD: 91.4 ft.
	03/18/14	3765.37	73.40	-	-	3691.97
	06/11/14	3765.37	73.90	-	-	3691.47
	09/19/14	3765.37	74.56	-	-	3690.81
	12/10/14	3765.37	75.05	-	-	3690.32
	03/25/15	3765.37	75.38	-	-	3689.99
	06/23/15	3765.37	75.65	-	-	3689.72
	09/16/15	3765.37	76.33	-	-	3689.04
	12/16/15	3765.37	76.74	-	-	3688.63
	03/24/16	3765.37	76.91	-	-	3688.46
	06/20/16	3765.37	77.35	-	-	3688.02
	09/28/16	3765.37	78.00	-	-	3687.37
	12/13/16	3765.37	78.37	-	-	3687.00

Table 1 - Summary of Historical Fluid Level Measurements
Moore to Jal No.1
SRS #2002-10270

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-37			Diameter: 4 in.	Screened Interval: 73 ft. to 103 ft.		TD: 103 ft.
	01/09/14	3772.66	81.37	-	-	3691.29
	03/18/14	3772.66	81.82	-	-	3690.84
	06/11/14	3772.66	82.37	-	-	3690.29
	09/19/14	3772.66	83.10	-	-	3689.56
	12/10/14	3772.66	83.55	-	-	3689.11
	03/25/15	3772.66	83.82	-	-	3688.84
	06/23/15	3772.66	84.13	-	-	3688.53
	09/16/15	3772.66	84.85	-	-	3687.81
	12/16/15	3772.66	85.30	-	-	3687.36
	03/24/16	3772.66	85.33	-	-	3687.33
	06/20/16	3772.66	85.86	-	-	3686.80
	09/28/16	3772.66	86.50	-	-	3686.16
	12/13/16	3772.66	86.81	-	-	3685.85
MW-38			Diameter: 4 in.	Screened Interval: 73 ft. to 103 ft.		TD: 103 ft.
	01/09/14	3769.96	79.68	-	-	3690.28
	03/18/14	3769.96	79.03	-	-	3690.93
	06/11/14	3769.96	79.54	-	-	3690.42
	09/19/14	3769.96	80.24	-	-	3689.72
	12/10/14	3769.96	80.70	-	-	3689.26
	03/25/15	3769.96	81.01	-	-	3688.95
	06/23/15	3769.96	81.31	-	-	3688.65
	09/16/15	3769.96	82.00	-	-	3687.96
	12/16/15	3769.96	82.48	-	-	3687.48
	03/24/16	3769.96	82.52	-	-	3687.44
	06/20/16	3769.96	83.02	-	-	3686.94
	09/28/16	3769.96	83.67	-	-	3686.29
	12/13/16	3769.96	84.02	-	-	3685.94

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

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-14	03/20/14	0.575	<0.00905	<0.0124	<0.00945
	06/11/14	0.652	<0.00100	<0.00100	<0.00100
	09/25/14	0.0137	<0.00100	<0.00100	<0.00100
	12/17/14	0.00280	<0.00100	<0.00100	<0.00100
	03/27/15	0.00160	<0.00100	<0.00100	<0.00300
	07/01/15	0.00860	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	0.0141	<0.00100	<0.00100	<0.00100
	03/28/16	0.0120	0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	0.00150	<0.000621	<0.000763	0.00130
	12/13/16	0.0411	<0.00100	<0.000657	<0.000642
MW-17	03/19/14	0.00840	<0.000181	0.0114	0.0424
	06/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/25/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.0108	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-18	03/19/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/25/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.00550	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	0.00240
MW-19	03/19/14	0.00150	<0.000181	<0.000247	<0.000189
	06/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	<0.00100	0.00370	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-20	03/19/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-21	03/20/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.00710	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	0.00214

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-22	03/20/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.00630	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-23	03/20/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/27/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.00610	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-26	03/20/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/25/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/27/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	0.00540	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-27	03/20/14	<0.000238	<0.000181	0.00100	0.00320
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/25/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/27/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/18/15	0.00310	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-28	03/20/14	0.634	<0.00905	<0.0124	<0.00945
	06/11/14	0.363	<0.00100	<0.00100	<0.00100
	09/25/14	0.00800	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/27/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/18/15	0.0234	<0.00100	<0.00100	<0.00100
	03/28/16	0.120	<0.00100	<0.00100	<0.00100
	06/22/16	0.0468	<0.000621	<0.000763	<0.000256
	09/28/16	0.00240	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-29	03/20/14	51.1	<0.0362	1.00	<0.0378
	06/11/14	49.4	<0.00100	0.625	<0.00100
	09/25/14	40.4	<0.00100	0.840	<0.00100
	12/17/14	35.6	<0.100	<0.100	<0.100
	03/27/15	30.3	<0.200	<0.200	<0.600
	07/01/15	20.7	<0.200	<0.200	<0.200
	09/16/15	15.6	<0.0500	<0.0500	<0.0500
	12/18/15	11.7	<0.0500	<0.0500	<0.0500
	03/28/16	20.0	<0.0500	<0.0500	<0.0500
	06/22/16	6.81	<0.0310	<0.0382	<0.0128
	09/28/16	4.77	<0.0658	<0.0809	<0.0271
	12/13/16	6.92	<0.0200	<0.0131	0.0530

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-34	03/20/14	0.00200	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/30/14	0.00170	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	06/25/15	0.00400	0.00500	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/21/16	0.00400	0.00160	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	0.00239	<0.000642
MW-35	03/20/14	0.00520	0.00410	<0.000247	<0.000189
	06/11/14	0.00250	0.00140	<0.00100	<0.00100
	09/30/14	0.0185	0.0126	0.00100	0.00330
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	06/25/15	0.00380	0.00530	<0.00100	<0.00100
	09/16/15	0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	0.00920	0.00510	0.00290	0.00270
	06/21/16	0.000600 J	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	0.00427

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-36	03/20/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	10/02/14	0.00480	<0.00100	<0.00100	<0.00100
	12/16/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	06/25/15	0.00400	0.00630	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/13/16	<0.000408	<0.00100	<0.000657	0.00416
MW-37	01/10/14	0.00100	0.00640	0.00270	0.00880
	03/19/14	0.00280	<0.000181	<0.000247	<0.000189
	06/12/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/24/14	0.00120	<0.00100	<0.00100	<0.00100
	12/15/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/26/15	<0.00100	<0.00100	<0.00100	<0.00300
	07/01/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/16/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/18/15	0.00280	<0.00100	<0.00100	<0.00100
	03/28/16	<0.00100	<0.00100	<0.00100	<0.00100
	06/22/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/28/16	0.889	<0.0658	<0.0809	<0.0271
	12/13/16	0.602	<0.0200	<0.0131	<0.0128

Table 2 - Summary of Groundwater Analytical Results - BTEX
Moore to Jal No.1
SRS #2002-10270

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-38	01/10/14	<0.000188	<0.000160	<0.000119	<0.000142
	03/19/14	0.0287	<0.000181	<0.000247	<0.000189
	06/12/14	0.127	<0.00100	<0.00100	<0.00100
	09/24/14	0.0217	<0.00100	<0.00100	<0.00100
	12/15/14	0.407	<0.0500	<0.0500	<0.0500
	03/26/15	0.0124	<0.00100	<0.00100	<0.00300
	07/01/15	0.132	0.00400	<0.00100	0.00750
	09/16/15	0.563	<0.0100	<0.0100	<0.0100
	12/18/15	0.638	<0.0100	<0.0100	<0.0100
	03/28/16	6.55	<0.0500	<0.0500	0.104
	06/22/16	4.07	<0.0310	<0.0382	0.0427 J
	09/28/16	2.83	<0.0658	0.126	0.417
	12/13/16	5.91	<0.0200	0.0450	0.0417

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

Table 3 - Summary of Groundwater Analyitcal Results - PAH Supplement
Moore to Jal No.1
SRS #2002-10270

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
MW-28	09/25/14	<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
	03/28/16	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198
MW-29	09/25/14	<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
	03/28/16	0.0163	0.0165	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	0.00106	<0.000196	0.000884	<0.000196	0.0342	0.000957	<0.000196
MW-34	12/16/14	<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
	03/28/16	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198
MW-35	12/16/14	<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
	03/28/16	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198
MW-36	10/02/14	<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
	03/28/16	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196
MW-37	06/12/14	<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
	03/28/16	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197
MW-38	06/12/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000946	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	03/28/16	0.00281	0.00308	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	0.00650	<0.000195	<0.000195

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

PAH = Polycyclic Aromatic Hydrocarbons, analyzed by EPA Method 8270C

APPENDIX C

Laboratory Analytical Data Reports and Chain 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

Alan Izard
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: April 1, 2016

Work Order: 16032909

Project Location: Lovington, New Mexico
Project Name: Moore to Jal #1
Project Number: 700376.044.03

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
416556	MW-34	water	2016-03-28	11:50	2016-03-29
416557	MW-35	water	2016-03-28	12:20	2016-03-29
416558	MW-36	water	2016-03-28	12:50	2016-03-29
416559	MW-37	water	2016-03-28	13:10	2016-03-29
416560	MW-28	water	2016-03-28	13:30	2016-03-29
416561	MW-14	water	2016-03-28	13:45	2016-03-29
416562	MW-27	water	2016-03-28	14:20	2016-03-29
416563	MW-20	water	2016-03-28	14:30	2016-03-29
416564	MW-19	water	2016-03-28	14:40	2016-03-29
416565	MW-26	water	2016-03-28	15:10	2016-03-29
416566	MW-23	water	2016-03-28	15:30	2016-03-29
416567	MW-22	water	2016-03-28	15:50	2016-03-29
416568	MW-21	water	2016-03-28	16:20	2016-03-29
416569	MW-17	water	2016-03-28	16:30	2016-03-29
416570	MW-18	water	2016-03-28	16:40	2016-03-29
416571	MW-38	water	2016-03-28	17:00	2016-03-29
416572	MW-29	water	2016-03-28	17:20	2016-03-29

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.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 28 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Johnny Grindstaff, Operations Manager

Report Contents

Case Narrative

Samples for project Moore to Jal #1 were received by TraceAnalysis, Inc. on 2016-03-29 and assigned to work order 16032909. Samples for work order 16032909 were received intact at a temperature of 3.7 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	109353	2016-03-29 at 14:50	129108	2016-03-29 at 14:50
PAH	S 8270D	109413	2016-03-29 at 15:00	129177	2016-03-31 at 11:30

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 16032909 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: 416556 - MW-34

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0919	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0920	mg/L	1	0.100	92	70 - 120

Sample: 416556 - MW-34

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
1-Methylnaphthalene	U	1	<0.000198	mg/L	0.99	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluorene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Chrysene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200

continued ...

sample 416556 continued . . .

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0554	mg/L	0.99	0.0800	69	10 - 120
2-Fluorobiphenyl			0.0576	mg/L	0.99	0.0800	72	35.9 - 120
Terphenyl-d14			0.0797	mg/L	0.99	0.0800	100	23.2 - 120

Sample: 416557 - MW-35

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	**0.00920**	mg/L	1	0.00100
Toluene	Qr	1,2,3,4,5	**0.00510**	mg/L	1	0.00100
Ethylbenzene	Qr	1,2,3,4,5	**0.00290**	mg/L	1	0.00100
Xylene	Qr	1,2,3,4,5	**0.00270**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0920	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0909	mg/L	1	0.100	91	70 - 120

Sample: 416557 - MW-35

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
1-Methylnaphthalene	U	1	<0.000198	mg/L	0.99	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluorene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Chrysene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0480	mg/L	0.99	0.0800	60	10 - 120
2-Fluorobiphenyl			0.0497	mg/L	0.99	0.0800	62	35.9 - 120
Terphenyl-d14			0.0669	mg/L	0.99	0.0800	84	23.2 - 120

Sample: 416558 - MW-36

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0922	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0927	mg/L	1	0.100	93	70 - 120

Sample: 416558 - MW-36

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
1-Methylnaphthalene	U	1	<0.000196	mg/L	0.98	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Fluorene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Anthracene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Pyrene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Chrysene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0569	mg/L	0.98	0.0800	71	10 - 120
2-Fluorobiphenyl			0.0590	mg/L	0.98	0.0800	74	35.9 - 120
Terphenyl-d14			0.0781	mg/L	0.98	0.0800	98	23.2 - 120

Sample: 416559 - MW-37

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0919	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0896	mg/L	1	0.100	90	70 - 120

Sample: 416559 - MW-37

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
1-Methylnaphthalene	U	1	<0.000197	mg/L	0.985	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Fluorene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Anthracene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Pyrene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Chrysene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200

continued ...

sample 416559 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000197	mg/L	0.985	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0553	mg/L	0.985	0.0800	69	10 - 120
2-Fluorobiphenyl			0.0568	mg/L	0.985	0.0800	71	35.9 - 120
Terphenyl-d14 Qsr	Qsr		0.117	mg/L	0.985	0.0800	146	23.2 - 120

Sample: 416560 - MW-28

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	**0.120**	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0920	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0923	mg/L	1	0.100	92	70 - 120

Sample: 416560 - MW-28

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
1-Methylnaphthalene	U	1	<0.000198	mg/L	0.99	0.000200

continued . . .

sample 416560 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Acenaphthylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluorene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Chrysene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000198	mg/L	0.99	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0720	mg/L	0.99	0.0800	90	10 - 120
2-Fluorobiphenyl			0.0767	mg/L	0.99	0.0800	96	35.9 - 120
Terphenyl-d14	Qsr	Qsr	0.108	mg/L	0.99	0.0800	135	23.2 - 120

Sample: 416561 - MW-14

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	**0.0120**	mg/L	1	0.00100
Toluene	Qr	1,2,3,4,5	**0.00100**	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0924	mg/L	1	0.100	92	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.0917	mg/L	1	0.100	92	70 - 120

Sample: 416562 - MW-27

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0908	mg/L	1	0.100	91	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0903	mg/L	1	0.100	90	70 - 120

Sample: 416563 - MW-20

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0918	mg/L	1	0.100	92	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.0919	mg/L	1	0.100	92	70 - 120

Sample: 416564 - MW-19

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0913	mg/L	1	0.100	91	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0902	mg/L	1	0.100	90	70 - 120

Sample: 416565 - MW-26

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0926	mg/L	1	0.100	93	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.0919	mg/L	1	0.100	92	70 - 120

Sample: 416566 - MW-23

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0913	mg/L	1	0.100	91	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0917	mg/L	1	0.100	92	70 - 120

Sample: 416567 - MW-22

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0911	mg/L	1	0.100	91	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.0901	mg/L	1	0.100	90	70 - 120

Sample: 416568 - MW-21

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0910	mg/L	1	0.100	91	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0906	mg/L	1	0.100	91	70 - 120

Sample: 416569 - MW-17

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0908	mg/L	1	0.100	91	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.0915	mg/L	1	0.100	92	70 - 120

Sample: 416570 - MW-18

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0920	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0921	mg/L	1	0.100	92	70 - 120

Sample: 416571 - MW-38

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	**6.55**	mg/L	50	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.0500	mg/L	50	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.0500	mg/L	50	0.00100
Xylene	Qr	1,2,3,4,5	**0.104**	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	4.66	mg/L	50	5.00	93	71.6 - 120

continued . . .

sample continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	4.70	mg/L	50	5.00	94	70 - 120

Sample: 416571 - MW-38

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene		1,2,3,4,5	**0.00650**	mg/L	0.976	0.000200
2-Methylnaphthalene		1,2,3,4,5	**0.00308**	mg/L	0.976	0.000200
1-Methylnaphthalene		1	**0.00281**	mg/L	0.976	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Fluorene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Anthracene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Pyrene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Chrysene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000195	mg/L	0.976	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0424	mg/L	0.976	0.0800	53	10 - 120
2-Fluorobiphenyl			0.0455	mg/L	0.976	0.0800	57	35.9 - 120
Terphenyl-d14			0.0693	mg/L	0.976	0.0800	87	23.2 - 120

Sample: 416572 - MW-29

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	129108	Date Analyzed:	2016-03-29	Analyzed By:	ST
Prep Batch:	109353	Sample Preparation:	2016-03-29	Prepared By:	ST

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	Qr	1,2,3,4,5	**20.0**		mg/L	50	0.00100
Toluene	Qr,U	1,2,3,4,5	<0.0500		mg/L	50	0.00100
Ethylbenzene	Qr,U	1,2,3,4,5	<0.0500		mg/L	50	0.00100
Xylene	Qr,U	1,2,3,4,5	<0.0500		mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	4.60	mg/L	50	5.00	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	4.58	mg/L	50	5.00	92	70 - 120

Sample: 416572 - MW-29

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129177	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109413	Sample Preparation:	2016-03-29	Prepared By:	MN

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Naphthalene		1,2,3,4,5	**0.0342**		mg/L	0.98	0.000200
2-Methylnaphthalene		1,2,3,4,5	**0.0165**		mg/L	0.98	0.000200
1-Methylnaphthalene		1	**0.0163**		mg/L	0.98	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Dibenzofuran		1,2,3,4,5	**0.00106**		mg/L	0.98	0.000200
Fluorene		1,2,3,4,5	**0.000884**		mg/L	0.98	0.000200
Anthracene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Phenanthrene		1,2,3,4,5	**0.000957**		mg/L	0.98	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Pyrene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Chrysene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000196		mg/L	0.98	0.000200

continued ...

sample 416572 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000196	mg/L	0.98	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0570	mg/L	0.98	0.0800	71	10 - 120
2-Fluorobiphenyl			0.0610	mg/L	0.98	0.0800	76	35.9 - 120
Terphenyl-d14			0.0894	mg/L	0.98	0.0800	112	23.2 - 120

Method Blanks

Method Blank (1) QC Batch: 129108

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST
Prep Batch: 109353 | QC Preparation: 2016-03-29 | Prepared By: ST

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.000223	mg/L	0.001
Toluene		1,2,3,4,5	<0.000238	mg/L	0.001
Ethylbenzene		1,2,3,4,5	<0.000238	mg/L	0.001
Xylene		1,2,3,4,5	<0.000243	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0925	mg/L	1	0.100	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0912	mg/L	1	0.100	91	70 - 120

Method Blank (1) QC Batch: 129177

QC Batch: 129177 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109413 | QC Preparation: 2016-03-29 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1,2,3,4,5	<0.0000656	mg/L	0.0002
2-Methylnaphthalene		1,2,3,4,5	<0.0000516	mg/L	0.0002
1-Methylnaphthalene		1	<0.0000663	mg/L	0.0002
Acenaphthylene		1,2,3,4,5	<0.0000581	mg/L	0.0002
Acenaphthene		1,2,3,4,5	<0.0000332	mg/L	0.0002
Dibenzofuran		1,2,3,4,5	<0.0000607	mg/L	0.0002
Fluorene		1,2,3,4,5	<0.0000788	mg/L	0.0002
Anthracene		1,2,3,4,5	<0.0000321	mg/L	0.0002
Phenanthrene		1,2,3,4,5	<0.0000516	mg/L	0.0002
Fluoranthene		1,2,3,4,5	<0.0000638	mg/L	0.0002
Pyrene		1,2,3,4,5	<0.0000415	mg/L	0.0002
Benzo(a)anthracene		1,2,3,4,5	<0.0000721	mg/L	0.0002
Chrysene		1,2,3,4,5	<0.0000811	mg/L	0.0002
Benzo(b)fluoranthene		1,2,3,4,5	<0.0000710	mg/L	0.0002
Benzo(k)fluoranthene		1,2,3,4,5	<0.0000561	mg/L	0.0002
Benzo(a)pyrene		1,2,3,4,5	<0.0000418	mg/L	0.0002

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	<0.0000537	mg/L	0.0002
Dibenzo(a,h)anthracene		1,2,3,4,5	<0.0000562	mg/L	0.0002
Benzo(g,h,i)perylene		1,2,3,4,5	<0.0000519	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0469	mg/L	1	0.0800	59	10 - 120
2-Fluorobiphenyl			0.0490	mg/L	1	0.0800	61	35.9 - 120
Terphenyl-d14			0.0497	mg/L	1	0.0800	62	23.2 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST
Prep Batch: 109353 | QC Preparation: 2016-03-29 | Prepared By: ST

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0848	mg/L	1	0.100	<0.000223	85	78.9 - 120
Toluene		1,2,3,4,5	0.0869	mg/L	1	0.100	<0.000238	87	79.8 - 120
Ethylbenzene		1,2,3,4,5	0.0873	mg/L	1	0.100	<0.000238	87	79.7 - 120
Xylene		1,2,3,4,5	0.264	mg/L	1	0.300	<0.000243	88	78.2 - 120

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		1,2,3,4,5	0.0881	mg/L	1	0.100	<0.000223	88	78.9 - 120	4	20
Toluene		1,2,3,4,5	0.0894	mg/L	1	0.100	<0.000238	89	79.8 - 120	3	20
Ethylbenzene		1,2,3,4,5	0.0912	mg/L	1	0.100	<0.000238	91	79.7 - 120	4	20
Xylene		1,2,3,4,5	0.277	mg/L	1	0.300	<0.000243	92	78.2 - 120	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)	5	0.0940	0.0942	mg/L	1	0.100	94	94	71.6 - 120
4-Bromofluorobenzene (4-BFB)	5	0.0955	0.0973	mg/L	1	0.100	96	97	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 129177 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109413 | QC Preparation: 2016-03-29 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,5	0.0703	mg/L	1	0.0800	<0.0000656	88	49.7 - 120
2-Methylnaphthalene		1,2,3,4,5	0.0682	mg/L	1	0.0800	<0.0000516	85	44.6 - 120
1-Methylnaphthalene		1	0.0571	mg/L	1	0.0800	<0.0000663	71	10 - 189
Acenaphthylene		1,2,3,4,5	0.0777	mg/L	1	0.0800	<0.0000581	97	40.9 - 120
Acenaphthene		1,2,3,4,5	0.0716	mg/L	1	0.0800	<0.0000332	90	49.9 - 120

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dibenzofuran		1,2,3,4,5	0.0669	mg/L	1	0.0800	<0.0000607	84	34 - 120
Fluorene		1,2,3,4,5	0.0703	mg/L	1	0.0800	<0.0000788	88	49.7 - 120
Anthracene		1,2,3,4,5	0.0702	mg/L	1	0.0800	<0.0000321	88	11.4 - 155
Phenanthrene		1,2,3,4,5	0.0678	mg/L	1	0.0800	<0.0000516	85	41 - 120
Fluoranthene		1,2,3,4,5	0.0695	mg/L	1	0.0800	<0.0000638	87	35.7 - 120
Pyrene		1,2,3,4,5	0.0835	mg/L	1	0.0800	<0.0000415	104	19.5 - 139
Benzo(a)anthracene		1,2,3,4,5	0.0726	mg/L	1	0.0800	<0.0000721	91	53.4 - 120
Chrysene		1,2,3,4,5	0.0682	mg/L	1	0.0800	<0.0000811	85	10 - 170
Benzo(b)fluoranthene		1,2,3,4,5	0.0689	mg/L	1	0.0800	<0.0000710	86	29.2 - 120
Benzo(k)fluoranthene		1,2,3,4,5	0.0671	mg/L	1	0.0800	<0.0000561	84	23.4 - 120
Benzo(a)pyrene		1,2,3,4,5	0.0718	mg/L	1	0.0800	<0.0000418	90	23.4 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	0.0705	mg/L	1	0.0800	<0.0000537	88	10 - 129
Dibenzo(a,h)anthracene		1,2,3,4,5	0.0678	mg/L	1	0.0800	<0.0000562	85	10 - 174
Benzo(g,h,i)perylene		1,2,3,4,5	0.0714	mg/L	1	0.0800	<0.0000519	89	30.6 - 120

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		1,2,3,4,5	0.0707	mg/L	1	0.0800	<0.0000656	88	49.7 - 120	1	20
2-Methylnaphthalene		1,2,3,4,5	0.0666	mg/L	1	0.0800	<0.0000516	83	44.6 - 120	2	20
1-Methylnaphthalene		1	0.0559	mg/L	1	0.0800	<0.0000663	70	10 - 189	2	20
Acenaphthylene		1,2,3,4,5	0.0781	mg/L	1	0.0800	<0.0000581	98	40.9 - 120	0	20
Acenaphthene		1,2,3,4,5	0.0713	mg/L	1	0.0800	<0.0000332	89	49.9 - 120	0	20
Dibenzofuran		1,2,3,4,5	0.0670	mg/L	1	0.0800	<0.0000607	84	34 - 120	0	20
Fluorene		1,2,3,4,5	0.0696	mg/L	1	0.0800	<0.0000788	87	49.7 - 120	1	20
Anthracene		1,2,3,4,5	0.0715	mg/L	1	0.0800	<0.0000321	89	11.4 - 155	2	20
Phenanthrene		1,2,3,4,5	0.0692	mg/L	1	0.0800	<0.0000516	86	41 - 120	2	20
Fluoranthene		1,2,3,4,5	0.0729	mg/L	1	0.0800	<0.0000638	91	35.7 - 120	5	20
Pyrene		1,2,3,4,5	0.0833	mg/L	1	0.0800	<0.0000415	104	19.5 - 139	0	20
Benzo(a)anthracene		1,2,3,4,5	0.0731	mg/L	1	0.0800	<0.0000721	91	53.4 - 120	1	20
Chrysene		1,2,3,4,5	0.0680	mg/L	1	0.0800	<0.0000811	85	10 - 170	0	20
Benzo(b)fluoranthene		1,2,3,4,5	0.0681	mg/L	1	0.0800	<0.0000710	85	29.2 - 120	1	20
Benzo(k)fluoranthene		1,2,3,4,5	0.0660	mg/L	1	0.0800	<0.0000561	82	23.4 - 120	2	20
Benzo(a)pyrene		1,2,3,4,5	0.0702	mg/L	1	0.0800	<0.0000418	88	23.4 - 120	2	20
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	0.0688	mg/L	1	0.0800	<0.0000537	86	10 - 129	2	20
Dibenzo(a,h)anthracene		1,2,3,4,5	0.0664	mg/L	1	0.0800	<0.0000562	83	10 - 174	2	20
Benzo(g,h,i)perylene		1,2,3,4,5	0.0719	mg/L	1	0.0800	<0.0000519	90	30.6 - 120	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	0.0787	0.0811	mg/L	1	0.0800	98	101	10 - 120
2-Fluorobiphenyl	0.0803	0.0831	mg/L	1	0.0800	100	104	35.9 - 120
Terphenyl-d14	0.0889	0.0883	mg/L	1	0.0800	111	110	23.2 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 416556

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST
Prep Batch: 109353 | QC Preparation: 2016-03-29 | Prepared By: ST

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0303	mg/L	1	0.100	0.0005	30	18.2 - 149
Toluene		1,2,3,4,5	0.0303	mg/L	1	0.100	<0.000238	30	13 - 157
Ethylbenzene		1,2,3,4,5	0.0305	mg/L	1	0.100	<0.000238	30	12.9 - 156
Xylene		1,2,3,4,5	0.0919	mg/L	1	0.300	<0.000243	31	22 - 150

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	1,2,3,4,5	0.0241	mg/L	1	0.100	0.0005	24	18.2 - 149	23	20
Toluene	Qr	1,2,3,4,5	0.0237	mg/L	1	0.100	<0.000238	24	13 - 157	24	20
Ethylbenzene	Qr	1,2,3,4,5	0.0233	mg/L	1	0.100	<0.000238	23	12.9 - 156	27	20
Xylene	Qr	1,2,3,4,5	0.0704	mg/L	1	0.300	<0.000243	23	22 - 150	26	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)	5	0.0908	0.0923	mg/L	1	0.1	91	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)	5	0.0933	0.0903	mg/L	1	0.1	93	90	70 - 120

Calibration Standards

Standard (CCV-1)

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.0861	86	80 - 120	2016-03-29
Toluene		1,2,3,4,5	mg/L	0.100	0.0875	88	80 - 120	2016-03-29
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0872	87	80 - 120	2016-03-29
Xylene		1,2,3,4,5	mg/L	0.300	0.263	88	80 - 120	2016-03-29

Standard (CCV-2)

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.0887	89	80 - 120	2016-03-29
Toluene		1,2,3,4,5	mg/L	0.100	0.0904	90	80 - 120	2016-03-29
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0897	90	80 - 120	2016-03-29
Xylene		1,2,3,4,5	mg/L	0.300	0.270	90	80 - 120	2016-03-29

Standard (CCV-3)

QC Batch: 129108 | Date Analyzed: 2016-03-29 | Analyzed By: ST

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.0887	89	80 - 120	2016-03-29
Toluene		1,2,3,4,5	mg/L	0.100	0.0892	89	80 - 120	2016-03-29
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0893	89	80 - 120	2016-03-29
Xylene		1,2,3,4,5	mg/L	0.300	0.269	90	80 - 120	2016-03-29

Standard (CCV-1)

QC Batch: 129177 Date Analyzed: 2016-03-31 Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,5	mg/L	60.0	60.9	102	80 - 120	2016-03-31
2-Methylnaphthalene		1,2,3,4,5	mg/L	60.0	58.5	98	80 - 120	2016-03-31
1-Methylnaphthalene		1	mg/L	60.0	53.8	90	80 - 120	2016-03-31
Acenaphthylene		1,2,3,4,5	mg/L	60.0	63.6	106	80 - 120	2016-03-31
Acenaphthene		1,2,3,4,5	mg/L	60.0	61.2	102	80 - 120	2016-03-31
Dibenzofuran		1,2,3,4,5	mg/L	60.0	63.1	105	80 - 120	2016-03-31
Fluorene		1,2,3,4,5	mg/L	60.0	65.1	108	80 - 120	2016-03-31
Anthracene		1,2,3,4,5	mg/L	60.0	62.1	104	80 - 120	2016-03-31
Phenanthrene		1,2,3,4,5	mg/L	60.0	58.5	98	80 - 120	2016-03-31
Fluoranthene		1,2,3,4,5	mg/L	60.0	59.1	98	80 - 120	2016-03-31
Pyrene		1,2,3,4,5	mg/L	60.0	67.8	113	80 - 120	2016-03-31
Benzo(a)anthracene		1,2,3,4,5	mg/L	60.0	60.2	100	80 - 120	2016-03-31
Chrysene		1,2,3,4,5	mg/L	60.0	58.0	97	80 - 120	2016-03-31
Benzo(b)fluoranthene		1,2,3,4,5	mg/L	60.0	66.5	111	80 - 120	2016-03-31
Benzo(k)fluoranthene		1,2,3,4,5	mg/L	60.0	62.4	104	80 - 120	2016-03-31
Benzo(a)pyrene		1,2,3,4,5	mg/L	60.0	66.1	110	80 - 120	2016-03-31
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	mg/L	60.0	66.5	111	80 - 120	2016-03-31
Dibenzo(a,h)anthracene		1,2,3,4,5	mg/L	60.0	66.6	111	80 - 120	2016-03-31
Benzo(g,h,i)perylene		1,2,3,4,5	mg/L	60.0	63.9	106	80 - 120	2016-03-31

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			63.7	mg/L	1	60.0	106	-
2-Fluorobiphenyl			61.4	mg/L	1	60.0	102	-
Terphenyl-d14			65.1	mg/L	1	60.0	108	-

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	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5		2015-066	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.
Qsr	Surrogate recovery outside of laboratory limits.

F	Description
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 # 16032909

Page 1 of 3

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-1296

5002 Basin Street, Suite A1
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Tel (432) 689-6301
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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 #: ~~432-522-2433~~ 806-787-8078 AI
Address: (Street, City, Zip) 2901 HWY 349, Midland, TX 79706
Fax #:
Contact Person: Alan Izard
E-mail: AIzard@TalonLPE.com
Invoice to: (If different from above) Plains All American Pipeline SRS #2002-10270
Project #: 700376.044.03
Project Name: Moore to Jal #1
Project Location (including state): Lovington, New Mexico
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
416552	MW-34	3	40ml	X				X				X		3-28	11:50
—	MW-34	1	1 lt.	X									X		11:50
557	MW-35	3	40ml	X				X				X			12:20
—	MW-35	1	1 lt.	X									X		12:20
558	MW-36	3	40ml	X				X				X			12:50
—	MW-36	1	1 lt.	X									X		12:50
559	MW-37	3	40ml	X				X				X			13:10
—	MW-37	1	1 lt.	X									X		13:10
560	MW-28	2 ~~3~~	40ml	X				X				X			13:30
—	MW-28	1	1 lt.	X									X		13:30
561	MW-14	3	40ml	X				X				X			13:45

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																							5	
			X	X																					
	X																								
			X	X																					
	X																								
		X	X	X																					
	X																								
		X	X	X																					
	X																								
		X	X	X																					
	X																								

Relinquished by: Company: Date: Time:
Alan Izard Talon 3-29-16 1900
Received by: Company: Date: Time:
Alan Izard Talon 3-28-16 1900

Relinquished by: Company: Date: Time:
Received by: Company: Date: Time:

Relinquished by: Company: Date: Time:
Alan Izard Talon 3-29-16 0840
Received by: Company: Date: Time:
Brenda Ward TA Hobbs 3/29/16 8:40

INST ____ °C
OBS ____ °C
COR ____ °C

INST ____ °C
OBS ____ °C
COR ____ °C

INST IR 3 °C
OBS 3.3 °C
COR 3.7 °C

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

REMARKS:
BTEX & PAH only
Please use SRS # for PO #.
↓
2002-10270

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

Carrier # Courier MW28 - one Broken

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

ORIGINAL COPY

LAB Order ID # 16032909

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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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 #: ~~432-522-2133~~ AI
Address: (Street, City, Zip) 2901 HWY 349 Midland, TX
Fax #:
Contact Person: Alan Izard
E-mail: AIzard@TalonLPE.com
Invoice to: (If different from above) Plains All American Pipe Line SRS #2002-10270
Project #: 200376.044.03
Project Name: Moore to Jal #1
Project Location (including state): Lovington, New Mexico
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
416562	MW-27	3	40ml	X				X				X		3-28	14:20
563	MW-20	3	40ml	X				X				X			14:30
564	MW-19	3	40ml	X				X				X			14:40
565	MW-26	3	40ml	X				X				X			15:10
566	MW-23	3	40ml	X				X				X			15:30
567	MW-22	3	40ml	X				X				X			15:50
568	MW-21	3	40ml	X				X				X			16:20
569	MW-17	3	40ml	X				X				X			16:30
570	MW-18	3	40ml	X				X				X			16:40
571	MW-38	3	40ml	X				X				X			17:00
—	MW-38	1	1lt.	X									X		17:00

ANALYSIS REQUEST	Turn Around Time if different from standard	Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624	5	
TPH 418.1 / TX1005 / TX1005 Ext(C35)		
TPH 8015 GRO / DRO / TVHC		
PAH 8270 / 625	X	
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		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Mark Lott	Talon	3-28-16	1900	Alan Izard		3-28-16	1900	INST ____ °C
								OBS ____ °C
								COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
								INST ____ °C
								OBS ____ °C
								COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Alan Izard	Talon	3-29-16	0840	Brenda Ward	FA NUBCOR	3/29/16	8:40	INST IC 3 °C
								OBS 3.3 °C
								COR 3.7 °C

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

REMARKS:
BTEX or PAH only
Please use SRS # for PO #
↓
2002-10270

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

Carrier # Courier

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Invoice to: (If different from above) Plains All American Pipe Line SRS # 2002-10270
Project #: 700376.044.03
Project Name: Moore to Jal #1
Project Location (including state): Lovington, New Mexico
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
416572	MW-29	3	40ml	X										3-28	17:20	X																							5
—	MW-29	1	1lt	X										3-28	17:20					X																			↓

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Mark Davis	Talon	3-28-16	1900	Alan Izard		3-28-16	1900	INST ___ °C
								OBS ___ °C
								COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
								INST ___ °C
								OBS ___ °C
								COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Alan Izard	Talon	3-29-16	0840	Brenda Ward	TA Lubbock	3/29/16	8:40	INST FR 3.3 °C
								OBS 3.3 °C
								COR 3.1 °C

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

REMARKS:
BTEX or PAH only
Please use SRS # for PO #
↓
2002-10270

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

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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

Melissa Decker
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: June 28, 2016

Work Order: 16062305

Project Location: Hobbs, New Mexico
Project Name: Moore to Jal #1
Project Number: 700376.044.03
SRS Number: 2002-10270

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

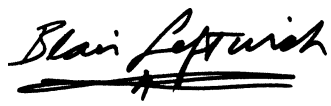
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
422453	MW-14	water	2016-06-22	13:30	2016-06-23
422454	MW-17	water	2016-06-22	10:40	2016-06-23
422455	MW-18	water	2016-06-22	12:00	2016-06-23
422456	MW-19	water	2016-06-22	12:30	2016-06-23
422457	MW-20	water	2016-06-22	12:40	2016-06-23
422458	MW-21	water	2016-06-22	11:00	2016-06-23
422459	MW-22	water	2016-06-22	11:20	2016-06-23
422460	MW-23	water	2016-06-22	11:40	2016-06-23
422461	MW-26	water	2016-06-22	12:20	2016-06-23
422462	MW-27	water	2016-06-22	13:00	2016-06-23
422463	MW-28	water	2016-06-22	14:00	2016-06-23
422464	MW-29	water	2016-06-22	14:40	2016-06-23
422465	MW-34	water	2016-06-21	10:50	2016-06-23
422466	MW-35	water	2016-06-21	11:15	2016-06-23
422467	MW-36	water	2016-06-21	11:40	2016-06-23
422468	MW-37	water	2016-06-22	13:15	2016-06-23
422469	MW-38	water	2016-06-22	14:20	2016-06-23

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.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

Notes:
For inorganic analyses, the term MQL should actually read PQL.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Johnny Grindstaff, Operations Manager

Report Contents

Case Narrative

Samples for project Moore to Jal #1 were received by TraceAnalysis, Inc. on 2016-06-23 and assigned to work order 16062305. Samples for work order 16062305 were received intact at a temperature of 2.2 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	110995	2016-06-22 at 14:56	131079	2016-06-23 at 16:00
BTEX	S 8021B	111010	2016-06-23 at 09:53	131080	2016-06-24 at 08:16

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 16062305 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: 422453 - MW-14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK
Prep Batch:	110995	Sample Preparation:	2016-06-22	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0906	mg/L	1	0.100	91	70 - 130

Sample: 422454 - MW-17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK
Prep Batch:	110995	Sample Preparation:	2016-06-22	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0987	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0897	mg/L	1	0.100	90	70 - 130

Sample: 422455 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK
Prep Batch:	110995	Sample Preparation:	2016-06-22	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0890	mg/L	1	0.100	89	70 - 130

Sample: 422456 - MW-19

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK
Prep Batch:	110995	Sample Preparation:	2016-06-22	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0983	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0894	mg/L	1	0.100	89	70 - 130

Sample: 422457 - MW-20

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK

Prep Batch: 110995 | Sample Preparation: 2016-06-22 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0969	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0892	mg/L	1	0.100	89	70 - 130

Sample: 422458 - MW-21

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 131079 | Date Analyzed: 2016-06-23 | Analyzed By: AK
Prep Batch: 110995 | Sample Preparation: 2016-06-22 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0955	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0878	mg/L	1	0.100	88	70 - 130

Sample: 422459 - MW-22

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 131080 | Date Analyzed: 2016-06-24 | Analyzed By: AK
Prep Batch: 111010 | Sample Preparation: 2016-06-23 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0919	mg/L	1	0.100	92	70 - 130

Sample: 422460 - MW-23

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0982	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0880	mg/L	1	0.100	88	70 - 130

Sample: 422461 - MW-26

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 422461 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0980	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0881	mg/L	1	0.100	88	70 - 130

Sample: 422462 - MW-27

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0979	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0844	mg/L	1	0.100	84	70 - 130

Sample: 422463 - MW-28

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

continued ...

sample 422463 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	**0.0468**	**0.0468**	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0959	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0859	mg/L	1	0.100	86	70 - 130

Sample: 422464 - MW-29

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	**6.81**	**6.81**	<0.0252	mg/L	50	0.0252	0.001	0.000504
Toluene	U	1	<0.0310	<0.0500	<0.0310	mg/L	50	0.0310	0.001	0.000621
Ethylbenzene	U	1	<0.0382	<0.0500	<0.0382	mg/L	50	0.0382	0.001	0.000763
Xylene	U	1	<0.0128	<0.0500	<0.0128	mg/L	50	0.0128	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.83	mg/L	50	5.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			4.34	mg/L	50	5.00	87	70 - 130

Sample: 422465 - MW-34

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	**0.00400**	**0.00400**	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene		1	**0.00160**	**0.00160**	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0865	mg/L	1	0.100	86	70 - 130

Sample: 422466 - MW-35

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1	**0.000600**	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0987	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0864	mg/L	1	0.100	86	70 - 130

Sample: 422467 - MW-36

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 422467 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0993	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0869	mg/L	1	0.100	87	70 - 130

Sample: 422468 - MW-37

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131080	Date Analyzed:	2016-06-24	Analyzed By:	AK
Prep Batch:	111010	Sample Preparation:	2016-06-23	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0971	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0855	mg/L	1	0.100	86	70 - 130

Sample: 422469 - MW-38

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	131079	Date Analyzed:	2016-06-23	Analyzed By:	AK
Prep Batch:	110995	Sample Preparation:	2016-06-22	Prepared By:	AK

continued ...

sample 422469 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	**4.07**	**4.07**	<0.0252	mg/L	50	0.0252	0.001	0.000504
Toluene	U	1	<0.0310	<0.0500	<0.0310	mg/L	50	0.0310	0.001	0.000621
Ethylbenzene	U	1	<0.0382	<0.0500	<0.0382	mg/L	50	0.0382	0.001	0.000763
Xylene	J	1	**0.0427**	<0.0500	<0.0128	mg/L	50	0.0128	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			5.00	mg/L	50	5.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			4.72	mg/L	50	5.00	94	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 131079 | Date Analyzed: 2016-06-23 | Analyzed By: AK
Prep Batch: 110995 | QC Preparation: 2016-06-22 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1	<0.000504	mg/L	0.000504
Toluene		1	<0.000621	mg/L	0.000621
Ethylbenzene		1	<0.000763	mg/L	0.000763
Xylene		1	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0982	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0885	mg/L	1	0.100	88	70 - 130

Method Blank (1)

QC Batch: 131080 | Date Analyzed: 2016-06-24 | Analyzed By: AK
Prep Batch: 111010 | QC Preparation: 2016-06-23 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1	<0.000504	mg/L	0.000504
Toluene		1	<0.000621	mg/L	0.000621
Ethylbenzene		1	<0.000763	mg/L	0.000763
Xylene		1	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0997	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0901	mg/L	1	0.100	90	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 131079 | Date Analyzed: 2016-06-23 | Analyzed By: AK
Prep Batch: 110995 | QC Preparation: 2016-06-22 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000504	105	70 - 130
Toluene		1	0.105	mg/L	1	0.100	<0.000621	105	70 - 130
Ethylbenzene		1	0.103	mg/L	1	0.100	<0.000763	103	70 - 130
Xylene		1	0.308	mg/L	1	0.300	<0.000256	103	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	0.102	mg/L	1	0.100	<0.000504	102	70 - 130	3	20
Toluene		1	0.104	mg/L	1	0.100	<0.000621	104	70 - 130	1	20
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000763	104	70 - 130	1	20
Xylene		1	0.305	mg/L	1	0.300	<0.000256	102	70 - 130	1	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0995	0.0994	mg/L	1	0.100	100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.106	0.107	mg/L	1	0.100	106	107	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 131080 | Date Analyzed: 2016-06-24 | Analyzed By: AK
Prep Batch: 111010 | QC Preparation: 2016-06-23 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000504	103	70 - 130
Toluene		1	0.105	mg/L	1	0.100	<0.000621	105	70 - 130
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000763	102	70 - 130
Xylene		1	0.308	mg/L	1	0.300	<0.000256	103	70 - 130

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.107	mg/L	1	0.100	<0.000504	107	70 - 130	4	20
Toluene		1	0.110	mg/L	1	0.100	<0.000621	110	70 - 130	5	20
Ethylbenzene		1	0.107	mg/L	1	0.100	<0.000763	107	70 - 130	5	20
Xylene		1	0.319	mg/L	1	0.300	<0.000256	106	70 - 130	4	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.100	0.101	mg/L	1	0.100	100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.107	0.109	mg/L	1	0.100	107	109	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 422262

QC Batch: 131079 | Date Analyzed: 2016-06-23 | Analyzed By: AK
Prep Batch: 110995 | QC Preparation: 2016-06-22 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	1	0.0222	mg/L	1	0.100	<0.000504	22	70 - 130
Toluene	Qs	1	0.0198	mg/L	1	0.100	<0.000621	20	70 - 130
Ethylbenzene	Qs	1	0.0196	mg/L	1	0.100	<0.000763	20	70 - 130
Xylene	Qs	1	0.0554	mg/L	1	0.300	<0.000256	18	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	Qs	1	0.0243	mg/L	1	0.100	<0.000504	24	70 - 130	9	20
Toluene	Qs	1	0.0231	mg/L	1	0.100	<0.000621	23	70 - 130	15	20
Ethylbenzene	Qs	1	0.0239	mg/L	1	0.100	<0.000763	24	70 - 130	20	20
Xylene	Qs	1	0.0658	mg/L	1	0.300	<0.000256	22	70 - 130	17	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0978	0.0980	mg/L	1	0.1	98	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0958	0.0965	mg/L	1	0.1	96	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 422459

QC Batch: 131080 | Date Analyzed: 2016-06-24 | Analyzed By: AK
Prep Batch: 111010 | QC Preparation: 2016-06-23 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.106	mg/L	1	0.100	<0.000504	106	70 - 130
Toluene		1	0.107	mg/L	1	0.100	<0.000621	107	70 - 130
Ethylbenzene		1	0.103	mg/L	1	0.100	<0.000763	103	70 - 130
Xylene		1	0.304	mg/L	1	0.300	<0.000256	101	70 - 130

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

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.101	mg/L	1	0.100	<0.000504	101	70 - 130	5	20
Toluene		1	0.102	mg/L	1	0.100	<0.000621	102	70 - 130	5	20
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000763	101	70 - 130	2	20
Xylene		1	0.300	mg/L	1	0.300	<0.000256	100	70 - 130	1	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0987	0.0993	mg/L	1	0.1	99	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.106	0.105	mg/L	1	0.1	106	105	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 131079 Date Analyzed: 2016-06-23 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-23
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2016-06-23
Ethylbenzene		1	mg/L	0.100	0.101	101	80 - 120	2016-06-23
Xylene		1	mg/L	0.300	0.298	99	80 - 120	2016-06-23

Standard (CCV-3)

QC Batch: 131079 Date Analyzed: 2016-06-23 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2016-06-23
Toluene		1	mg/L	0.100	0.108	108	80 - 120	2016-06-23
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-23
Xylene		1	mg/L	0.300	0.304	101	80 - 120	2016-06-23

Standard (CCV-1)

QC Batch: 131080 Date Analyzed: 2016-06-24 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2016-06-24
Toluene		1	mg/L	0.100	0.108	108	80 - 120	2016-06-24
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-24
Xylene		1	mg/L	0.300	0.304	101	80 - 120	2016-06-24

Standard (CCV-2)

QC Batch: 131080 Date Analyzed: 2016-06-24 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-24
Toluene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-24
Ethylbenzene		1	mg/L	0.100	0.101	101	80 - 120	2016-06-24
Xylene		1	mg/L	0.300	0.297	99	80 - 120	2016-06-24

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	water	BTEX-2	Benzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Toluene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Ethylbenzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Xylene	0.000768	Pass

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	T104704392-14-8	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.

LAB Order ID 0062305

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
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 LPE
Phone #: 432-522-2133
Address: (Street, City, Zip) 2901 HWY 349
Fax #:
Contact Person: Melissa Decker
E-mail: mDecker@TalonLPE.com
Invoice to: (If different from above) Plains All American Pipeline SRS # 2002-10270
Project #: 700376.044.03
Project Name: Moore to Jal #1
Project Location (including state): Hobbs, New Mexico
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
62453	MW-14	3	40ml	X				X				X		6-22	13:30
454	MW-17	3	40ml	X				X				X		6-22	10:40
455	MW-18	3	40ml	X				X				X		6-22	12:00
456	MW-19	3	40ml	X				X				X		6-22	12:30
457	MW-20	3	40ml	X				X				X		6-22	12:40
458	MW-21	3	40ml	X				X				X		6-22	11:00
459	MW-22	3	40ml	X				X				X		6-22	11:20
460	MW-23	3	40ml	X				X				X		6-22	11:40
461	MW-26	3	40ml	X				X				X		6-22	12:20
462	MW-27	3	40ml	X				X				X		6-22	13:00
463	MW-28	3	40ml	X				X				X		6-22	14:00

ANALYSIS REQUEST	Turn Around Time If different from standard	Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624	X	
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		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Mark Davis	Talon	6-23-16	8:18	Kelley H	TH	6-23-16	8:18

INST 2.2 °C
OBS ____ °C
COR ____ °C

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

REMARKS: BTEX only
Please use plains SRS # for PO #1

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

Carrier # Carry-in

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

ORIGINAL COPY

LAB Order ID 160623O5

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
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200 East Sunset Rd., Suite E
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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 #: 432-522-2133
Address: (Street, City, Zip) 2901 HWY 349
Fax #:
Contact Person: Melissa Decker
E-mail: MDecker@TalonLPE.com
Invoice to: (If different from above) Plains All American Pipeline SRS # 2002-10270
Project #: 700376.044.03
Project Name: Moore to Jal #1
Project Location (including state): Hobbs, New Mexico
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
22464	MW-29	3	40 ml	X				X				X		6-22	14:40		X																								
465	MW-34	3	40 ml	X				X				X		6-21	10:50		X																								
466	MW-35	3	40 ml	X				X				X		6-21	11:15		X																								
467	MW-36	3	40 ml	X				X				X		6-21	11:40		X																								
468	MW-37	3	40 ml	X				X				X		6-22	13:15		X																								
469	MW-38	3	40 ml	X				X				X		6-22	14:20		X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Marvin Talon		6-23-16	8:18	[illegible] # 174		6-23-16	8:18	INST 2.2 °C OBS 2.2 °C COR °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST °C OBS °C COR °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST °C OBS °C COR °C

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

REMARKS: BTEX only
Please use SRS # for PO #

- ☐ 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

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

Benjamin Arguijo
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: October 12, 2016

Work Order: 16092901

Project Location: Lovington, NM
Project Name: 8" Moore to Jal #1
Project Number: 2002-10270

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

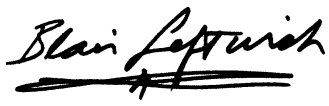
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
429154	MW-14	water	2016-09-28	15:00	2016-09-29
429155	MW-17	water	2016-09-28	12:40	2016-09-29
429156	MW-18	water	2016-09-28	13:30	2016-09-29
429157	MW-19	water	2016-09-28	14:00	2016-09-29
429158	MW-20	water	2016-09-28	14:15	2016-09-29
429159	MW-21	water	2016-09-28	12:20	2016-09-29
429160	MW-22	water	2016-09-28	13:00	2016-09-29
429161	MW-23	water	2016-09-28	13:15	2016-09-29
429162	MW-26	water	2016-09-28	13:50	2016-09-29
429163	MW-27	water	2016-09-28	14:40	2016-09-29
429164	MW-28	water	2016-09-28	15:40	2016-09-29
429165	MW-29	water	2016-09-28	16:20	2016-09-29
429166	MW-34	water	2016-09-28	11:40	2016-09-29
429167	MW-35	water	2016-09-28	11:20	2016-09-29
429168	MW-36	water	2016-09-28	11:00	2016-09-29
429169	MW-37	water	2016-09-28	15:15	2016-09-29
429170	MW-38	water	2016-09-28	16:00	2016-09-29

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.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

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

Notes:
For inorganic analyses, the term MQL should actually read PQL.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Johnny Grindstaff, Operations Manager

Report Contents

Case Narrative

Samples for project 8" Moore to Jal #1 were received by TraceAnalysis, Inc. on 2016-09-29 and assigned to work order 16092901. Samples for work order 16092901 were received intact at a temperature of 1.1 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	112890	2016-10-06 at 15:00	133188	2016-10-07 at 12:30
BTEX	S 8021B	112904	2016-10-07 at 12:30	133198	2016-10-08 at 11:00
BTEX	S 8021B	112911	2016-10-10 at 07:59	133247	2016-10-11 at 12:28

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 16092901 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: 429154 - MW-14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		6	**0.00150**	**0.00150**	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene		6	**0.00130**	**0.00130**	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0780	mg/L	1	0.100	78	70 - 130

Sample: 429155 - MW-17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0819	mg/L	1	0.100	82	70 - 130

Sample: 429156 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0859	mg/L	1	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0768	mg/L	1	0.100	77	70 - 130

Sample: 429157 - MW-19

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0881	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0774	mg/L	1	0.100	77	70 - 130

Sample: 429158 - MW-20

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK

Prep Batch: 112890 | Sample Preparation: 2016-10-06 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0907	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0789	mg/L	1	0.100	79	70 - 130

Sample: 429159 - MW-21

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK
Prep Batch: 112890 | Sample Preparation: 2016-10-06 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0769	mg/L	1	0.100	77	70 - 130

Sample: 429160 - MW-22

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK
Prep Batch: 112890 | Sample Preparation: 2016-10-06 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0931	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0801	mg/L	1	0.100	80	70 - 130

Sample: 429161 - MW-23

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0787	mg/L	1	0.100	79	70 - 130

Sample: 429162 - MW-26

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 429162 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0774	mg/L	1	0.100	77	70 - 130

Sample: 429163 - MW-27

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133188	Date Analyzed:	2016-10-07	Analyzed By:	AK
Prep Batch:	112890	Sample Preparation:	2016-10-06	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0849	mg/L	1	0.100	85	70 - 130

Sample: 429164 - MW-28

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133247	Date Analyzed:	2016-10-11	Analyzed By:	AK
Prep Batch:	112911	Sample Preparation:	2016-10-10	Prepared By:	AK

continued . . .

sample 429164 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		6	**0.00240**	**0.00240**	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0918	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0812	mg/L	1	0.100	81	70 - 130

Sample: 429165 - MW-29

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133198	Date Analyzed:	2016-10-08	Analyzed By:	AK
Prep Batch:	112904	Sample Preparation:	2016-10-07	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		6	**4.77**	**4.77**	<0.0534	mg/L	106	0.0534	0.001	0.000504
Toluene	U	6	<0.0658	<0.106	<0.0658	mg/L	106	0.0658	0.001	0.000621
Ethylbenzene	Qr,U	6	<0.0809	<0.106	<0.0809	mg/L	106	0.0809	0.001	0.000763
Xylene	Qr,U	6	<0.0271	<0.106	<0.0271	mg/L	106	0.0271	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.49	mg/L	106	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			8.28	mg/L	106	10.0	83	70 - 130

Sample: 429166 - MW-34

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133198	Date Analyzed:	2016-10-08	Analyzed By:	AK
Prep Batch:	112904	Sample Preparation:	2016-10-07	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	Qr,U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	Qr,U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0795	mg/L	1	0.100	80	70 - 130

Sample: 429167 - MW-35

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133247	Date Analyzed:	2016-10-11	Analyzed By:	AK
Prep Batch:	112911	Sample Preparation:	2016-10-10	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0913	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0808	mg/L	1	0.100	81	70 - 130

Sample: 429168 - MW-36

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133198	Date Analyzed:	2016-10-08	Analyzed By:	AK
Prep Batch:	112904	Sample Preparation:	2016-10-07	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	6	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 429168 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Toluene	U	6	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	Qr,U	6	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	Qr,U	6	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	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)			0.0781	mg/L	1	0.100	78	70 - 130

Sample: 429169 - MW-37

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133247	Date Analyzed:	2016-10-11	Analyzed By:	AK
Prep Batch:	112911	Sample Preparation:	2016-10-10	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		6	**0.889**	**0.889**	<0.0534	mg/L	106	0.0534	0.001	0.000504
Toluene	U	6	<0.0658	<0.106	<0.0658	mg/L	106	0.0658	0.001	0.000621
Ethylbenzene	U	6	<0.0809	<0.106	<0.0809	mg/L	106	0.0809	0.001	0.000763
Xylene	U	6	<0.0271	<0.106	<0.0271	mg/L	106	0.0271	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.53	mg/L	106	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			8.41	mg/L	106	10.0	84	70 - 130

Sample: 429170 - MW-38

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	133198	Date Analyzed:	2016-10-08	Analyzed By:	AK
Prep Batch:	112904	Sample Preparation:	2016-10-07	Prepared By:	AK

continued . . .

sample 429170 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		6	**2.83**	**2.83**	<0.0534	mg/L	106	0.0534	0.001	0.000504
Toluene	U	6	<0.0658	<0.106	<0.0658	mg/L	106	0.0658	0.001	0.000621
Ethylbenzene	Qr	6	**0.126**	**0.126**	<0.0809	mg/L	106	0.0809	0.001	0.000763
Xylene	Qr	6	**0.417**	**0.417**	<0.0271	mg/L	106	0.0271	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.10	mg/L	106	10.0	91	70 - 130
4-Bromofluorobenzene (4-BFB)			8.15	mg/L	106	10.0	82	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK
Prep Batch: 112890 | QC Preparation: 2016-10-06 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		6	<0.000504	mg/L	0.000504
Toluene		6	<0.000621	mg/L	0.000621
Ethylbenzene		6	<0.000763	mg/L	0.000763
Xylene		6	<0.000256	mg/L	0.000256

Surrogate	F	C	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)			0.0791	mg/L	1	0.100	79	70 - 130

Method Blank (1)

QC Batch: 133198 | Date Analyzed: 2016-10-08 | Analyzed By: AK
Prep Batch: 112904 | QC Preparation: 2016-10-07 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		6	<0.000504	mg/L	0.000504
Toluene		6	<0.000621	mg/L	0.000621
Ethylbenzene		6	<0.000763	mg/L	0.000763
Xylene		6	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0887	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0783	mg/L	1	0.100	78	70 - 130

Method Blank (1)

QC Batch: 133247 | Date Analyzed: 2016-10-11 | Analyzed By: AK
Prep Batch: 112911 | QC Preparation: 2016-10-10 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		6	<0.000504	mg/L	0.000504
Toluene		6	<0.000621	mg/L	0.000621
Ethylbenzene		6	<0.000763	mg/L	0.000763
Xylene		6	<0.000256	mg/L	0.000256

Surrogate	F	C	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)			0.0817	mg/L	1	0.100	82	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK
Prep Batch: 112890 | QC Preparation: 2016-10-06 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.0971	mg/L	1.06	0.100	<0.000534	97	70 - 130
Toluene		6	0.0943	mg/L	1.06	0.100	<0.000658	94	70 - 130
Ethylbenzene		6	0.0984	mg/L	1.06	0.100	<0.000809	98	70 - 130
Xylene		6	0.297	mg/L	1.06	0.300	<0.000271	99	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		6	0.101	mg/L	1.06	0.100	<0.000534	101	70 - 130	4	20
Toluene		6	0.0992	mg/L	1.06	0.100	<0.000658	99	70 - 130	5	20
Ethylbenzene		6	0.104	mg/L	1.06	0.100	<0.000809	104	70 - 130	6	20
Xylene		6	0.312	mg/L	1.06	0.300	<0.000271	104	70 - 130	5	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0983	0.0996	mg/L	1.06	0.100	98	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0885	0.0887	mg/L	1.06	0.100	88	89	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 133198 | Date Analyzed: 2016-10-08 | Analyzed By: AK
Prep Batch: 112904 | QC Preparation: 2016-10-07 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.0922	mg/L	1.06	0.100	<0.000534	92	70 - 130
Toluene		6	0.0900	mg/L	1.06	0.100	<0.000658	90	70 - 130
Ethylbenzene		6	0.0974	mg/L	1.06	0.100	<0.000809	97	70 - 130
Xylene		6	0.297	mg/L	1.06	0.300	<0.000271	99	70 - 130

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		6	0.0901	mg/L	1.06	0.100	<0.000534	90	70 - 130	2	20
Toluene		6	0.0895	mg/L	1.06	0.100	<0.000658	90	70 - 130	1	20
Ethylbenzene		6	0.0966	mg/L	1.06	0.100	<0.000809	97	70 - 130	1	20
Xylene		6	0.294	mg/L	1.06	0.300	<0.000271	98	70 - 130	1	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0931	0.0940	mg/L	1.06	0.100	93	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0845	0.0865	mg/L	1.06	0.100	84	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 133247 | Date Analyzed: 2016-10-11 | Analyzed By: AK
Prep Batch: 112911 | QC Preparation: 2016-10-10 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.0847	mg/L	1	0.100	<0.000504	85	70 - 130
Toluene		6	0.0855	mg/L	1	0.100	<0.000621	86	70 - 130
Ethylbenzene		6	0.0943	mg/L	1	0.100	<0.000763	94	70 - 130
Xylene		6	0.287	mg/L	1	0.300	<0.000256	96	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		6	0.0948	mg/L	1	0.100	<0.000504	95	70 - 130	11	20
Toluene		6	0.0910	mg/L	1	0.100	<0.000621	91	70 - 130	6	20
Ethylbenzene		6	0.0979	mg/L	1	0.100	<0.000763	98	70 - 130	4	20
Xylene		6	0.297	mg/L	1	0.300	<0.000256	99	70 - 130	3	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0947	0.0956	mg/L	1	0.100	95	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0849	0.0866	mg/L	1	0.100	85	87	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 429123

QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK
Prep Batch: 112890 | QC Preparation: 2016-10-06 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.102	mg/L	1.06	0.100	<0.000534	102	70 - 130
Toluene		6	0.0984	mg/L	1.06	0.100	<0.000658	98	70 - 130
Ethylbenzene		6	0.0987	mg/L	1.06	0.100	<0.000809	99	70 - 130
Xylene		6	0.293	mg/L	1.06	0.300	<0.000271	98	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		6	0.102	mg/L	1.06	0.100	<0.000534	102	70 - 130	0	20
Toluene		6	0.0977	mg/L	1.06	0.100	<0.000658	98	70 - 130	1	20
Ethylbenzene		6	0.104	mg/L	1.06	0.100	<0.000809	104	70 - 130	5	20
Xylene		6	0.317	mg/L	1.06	0.300	<0.000271	106	70 - 130	8	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0965	0.0970	mg/L	1.06	0.1	96	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0851	0.0877	mg/L	1.06	0.1	85	88	70 - 130

Matrix Spike (MS-1) Spiked Sample: 429166

QC Batch: 133198 | Date Analyzed: 2016-10-08 | Analyzed By: AK
Prep Batch: 112904 | QC Preparation: 2016-10-07 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.0705	mg/L	1.06	0.100	<0.000534	70	70 - 130
Toluene	Qs	6	0.0685	mg/L	1.06	0.100	<0.000658	68	70 - 130
Ethylbenzene		6	0.0709	mg/L	1.06	0.100	<0.000809	71	70 - 130
Xylene		6	0.213	mg/L	1.06	0.300	<0.000271	71	70 - 130

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

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		6	0.0843	mg/L	1.06	0.100	<0.000534	84	70 - 130	18	20
Toluene		6	0.0833	mg/L	1.06	0.100	<0.000658	83	70 - 130	20	20
Ethylbenzene	Qr	6	0.0893	mg/L	1.06	0.100	<0.000809	89	70 - 130	23	20
Xylene	Qr	6	0.270	mg/L	1.06	0.300	<0.000271	90	70 - 130	24	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0918	0.0922	mg/L	1.06	0.1	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0835	0.0845	mg/L	1.06	0.1	84	84	70 - 130

Matrix Spike (MS-1) Spiked Sample: 429570

QC Batch: 133247 | Date Analyzed: 2016-10-11 | Analyzed By: AK
Prep Batch: 112911 | QC Preparation: 2016-10-10 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		6	0.0959	mg/L	1	0.100	<0.000504	96	70 - 130
Toluene		6	0.0925	mg/L	1	0.100	<0.000621	92	70 - 130
Ethylbenzene		6	0.0950	mg/L	1	0.100	<0.000763	95	70 - 130
Xylene		6	0.283	mg/L	1	0.300	<0.000256	94	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		6	0.0891	mg/L	1	0.100	<0.000504	89	70 - 130	7	20
Toluene		6	0.0855	mg/L	1	0.100	<0.000621	86	70 - 130	8	20
Ethylbenzene		6	0.0906	mg/L	1	0.100	<0.000763	91	70 - 130	5	20
Xylene		6	0.275	mg/L	1	0.300	<0.000256	92	70 - 130	3	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0951	0.0944	mg/L	1	0.1	95	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0878	0.0845	mg/L	1	0.1	88	84	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0879	88	80 - 120	2016-10-07
Toluene		6	mg/L	0.100	0.0844	84	80 - 120	2016-10-07
Ethylbenzene		6	mg/L	0.100	0.0864	86	80 - 120	2016-10-07
Xylene		6	mg/L	0.300	0.259	86	80 - 120	2016-10-07

Standard (CCV-3)

QC Batch: 133188 | Date Analyzed: 2016-10-07 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0944	94	80 - 120	2016-10-07
Toluene		6	mg/L	0.100	0.0915	92	80 - 120	2016-10-07
Ethylbenzene		6	mg/L	0.100	0.0921	92	80 - 120	2016-10-07
Xylene		6	mg/L	0.300	0.274	91	80 - 120	2016-10-07

Standard (CCV-1)

QC Batch: 133198 | Date Analyzed: 2016-10-08 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0944	94	80 - 120	2016-10-08
Toluene		6	mg/L	0.100	0.0915	92	80 - 120	2016-10-08
Ethylbenzene		6	mg/L	0.100	0.0921	92	80 - 120	2016-10-08
Xylene		6	mg/L	0.300	0.274	91	80 - 120	2016-10-08

Standard (CCV-2)

QC Batch: 133198 | Date Analyzed: 2016-10-08 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0885	88	80 - 120	2016-10-08
Toluene		6	mg/L	0.100	0.0867	87	80 - 120	2016-10-08
Ethylbenzene		6	mg/L	0.100	0.0913	91	80 - 120	2016-10-08
Xylene		6	mg/L	0.300	0.274	91	80 - 120	2016-10-08

Standard (CCV-1)

QC Batch: 133247 Date Analyzed: 2016-10-11 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0856	86	80 - 120	2016-10-11
Toluene		6	mg/L	0.100	0.0834	83	80 - 120	2016-10-11
Ethylbenzene		6	mg/L	0.100	0.0887	89	80 - 120	2016-10-11
Xylene		6	mg/L	0.300	0.269	90	80 - 120	2016-10-11

Standard (CCV-2)

QC Batch: 133247 Date Analyzed: 2016-10-11 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		6	mg/L	0.100	0.0868	87	80 - 120	2016-10-11
Toluene		6	mg/L	0.100	0.0835	84	80 - 120	2016-10-11
Ethylbenzene		6	mg/L	0.100	0.0851	85	80 - 120	2016-10-11
Xylene		6	mg/L	0.300	0.254	85	80 - 120	2016-10-11

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	water	BTEX-2	Benzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Toluene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Ethylbenzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Xylene	0.000768	Pass

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	L-A-B	L2418.01	El Paso
2	L-A-B	L2418	Lubbock
3	Kansas	Kansas E-10317	Lubbock
4	NELAP	T104704221-15-6	El Paso
5	NELAP	T104704219-16-12	Lubbock
6	NELAP	T104704392-14-8	Midland
7		2015-066	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.
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 # 160092901

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
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

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

Company Name: Talon/LPE	Phone #: (806) 549-9597
Address: 2901 State Highway 349, Midland, TX 79706	Fax #: (432)522-2180
Contact Person: Ben J. Arguijo	E-mail: bjarguijo@talonlpe.com
Invoice to: Camille Bryant - Plains All American P.O. # PAA-C. Bryant	
Project #: SRS #2002-10270	Project Name: 8-Inch Moore to Jal No.1
Project Location: (include state) Lovington, 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 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 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
429154	MW-14	3	40ml	X				X				X		9/28/16	1500		X																				
155	MW-17	3	40ml	X				X				X		9/28/16	1240		X																				
156	MW-18	3	40ml	X				X				X		9/28/16	1330		X																				
157	MW-19	3	40ml	X				X				X		9/28/16	1400		X																				
158	MW-20	3	40ml	X				X				X		9/28/16	1415		X																				
159	MW-21	3	40ml	X				X				X		9/28/16	1220		X																				
160	MW-22	3	40ml	X				X				X		9/28/16	1300		X																				
161	MW-23	3	40ml	X				X				X		9/28/16	1315		X																				
162	MW-26	3	40ml	X				X				X		9/28/16	1350		X																				
163	MW-27	3	40ml	X				X				X		9/28/16	1440		X																				
164	MW-28	3	40ml	X				X				X		9/28/16	1540		X																				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Mark Davis	Talon	9-29	8:27		TA	9/29/16	8:28	INST IR-1 OBS 0.6 °C COR 1.1 °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 ____ 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-in

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

LAB Order ID # 16092901

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9
Lubbock,Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland,Texas 79703
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

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

Company Name: Talon/LPE	Phone #: (806) 549-9597
Address: 2901 State Highway 349, Midland, TX 79706	Fax #: (432)522-2180
Contact Person: Ben J. Arguijo	E-mail: bjarguijo@talonlpe.com
Invoice to: Camille Bryant - Plains All American P.O. # PAA-C. Bryant	
Project #: SRS #2002-10270	Project Name: 8-Inch Moore to Jal No.1
Project Location: (include state) Lovington, 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 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 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
429 165	MW-29	3	40ml	X				X				X		9/28/16	1620		X																			
166	MW-34	3	40ml	X				X				X		9/28/16	1140		X																			
167	MW-35	3	40ml	X				X				X		9/28/16	1120		X																			
168	MW-36	3	40ml	X				X				X		9/28/16	1100		X																			
169	MW-37	3	40ml	X				X				X		9/28/16	1515		X																			
170	MW-38	3	40ml	X				X				X		9/28/16	1600		X																			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Mark Davis	Talon	9-29-16	8:27		TA	9/29/16	8:38	INST IR-1 OBS 0.6 °C COR 1.1 °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 ____ 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 # Carey

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

Analytical Report 542083

for

Talon/LPE Co.

Project Manager: Ben Arguijo

8 inch Moore to Jal #1

SRS#2002-10270

28-MAR-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Table of Contents

28-MAR-17

Project Manager: **Ben Arguijo**
Talon/LPE Co.
2901 S State Highway 349
Midland, TX 79706

Reference: XENCO Report No(s): **542083**
8 inch Moore to Jal #1
Project Address:

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 542083. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 542083 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 542083

Talon/LPE Co., Midland, TX

8 inch Moore to Jal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-14	W	12-13-16 17:10		542083-001
MW-17	W	12-13-16 12:45		542083-002
MW-18	W	12-13-16 13:15		542083-003
MW-19	W	12-13-16 17:20		542083-004
MW-20	W	12-13-16 17:30		542083-005
MW-21	W	12-13-16 13:00		542083-006
MW-22	W	12-13-16 13:30		542083-007
MW-23	W	12-13-16 13:40		542083-008
MW-26	W	12-13-16 17:15		542083-009
MW-27	W	12-13-16 17:40		542083-010
MW-28	W	12-13-16 17:00		542083-011
MW-29	W	12-13-16 16:30		542083-012
MW-34	W	12-13-16 12:30		542083-013
MW-35	W	12-13-16 12:15		542083-014
MW-36	W	12-13-16 11:00		542083-015
MW-37	W	12-13-16 16:45		542083-016
MW-38	W	12-13-16 16:40		542083-017

Client Name: Talon/LPE Co.

Project Name: 8 inch Moore to Jal #1

Project ID: *SRS#2002-10270*
Work Order Number(s): *542083*

Report Date: *28-MAR-17*
Date Received: *12/14/2016*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-14** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-001 Date Collected: 12.13.16 17.10 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.0411**	0.00200	0.000408	mg/L	12.17.16 07:26		1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 07:26	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 07:26	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 07:26	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 07:26	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 07:26	U	
Total BTEX		**0.0411**		0.000408	mg/L	12.17.16 07:26		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	80 - 120	%		
4-Bromofluorobenzene	82	80 - 120	%		

Sample Id: **MW-17** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-002 Date Collected: 12.13.16 12.45 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 08:39	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 08:39	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 08:39	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 08:39	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 08:39	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 08:39	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 08:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	80 - 120	%		
4-Bromofluorobenzene	104	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-18** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-003 Date Collected: 12.13.16 13.15 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 08:55	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 08:55	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 08:55	U	1
m,p-Xylenes	179601-23-1	**0.00240**	0.00200	0.00140	mg/L	12.17.16 08:55		1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 08:55	U	1
Total Xylenes	1330-20-7	**0.00240**		0.000642	mg/L	12.17.16 08:55		
Total BTEX		**0.00240**		0.000408	mg/L	12.17.16 08:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	80 - 120	%		
4-Bromofluorobenzene	100	80 - 120	%		

Sample Id: **MW-19** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-004 Date Collected: 12.13.16 17.20 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 09:13	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 09:13	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 09:13	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 09:13	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 09:13	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 09:13	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 09:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-20** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-005 Date Collected: 12.13.16 17.30 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 09:29	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 09:29	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 09:29	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 09:29	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 09:29	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 09:29	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 09:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	80 - 120	%		
4-Bromofluorobenzene	108	80 - 120	%		

Sample Id: **MW-21** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-006 Date Collected: 12.13.16 13.00 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 09:47	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 09:47	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 09:47	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 09:47	U	1
o-Xylene	95-47-6	**0.00214**	0.00200	0.000642	mg/L	12.17.16 09:47		1
Total Xylenes	1330-20-7	**0.00214**		0.000642	mg/L	12.17.16 09:47		
Total BTEX		**0.00214**		0.000408	mg/L	12.17.16 09:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	80 - 120	%		
4-Bromofluorobenzene	83	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-22** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-007 Date Collected: 12.13.16 13.30 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 10:09	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 10:09	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 10:09	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 10:09	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 10:09	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 10:09	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 10:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	80 - 120	%		
4-Bromofluorobenzene	107	80 - 120	%		

Sample Id: **MW-23** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-008 Date Collected: 12.13.16 13.40 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 10:26	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 10:26	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 10:26	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 10:26	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 10:26	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 10:26	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 10:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	80 - 120	%		
4-Bromofluorobenzene	87	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-26** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-009 Date Collected: 12.13.16 17.15 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 10:43	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 10:43	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 10:43	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 10:43	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 10:43	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 10:43	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 10:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	85	80 - 120	%		

Sample Id: **MW-27** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-010 Date Collected: 12.13.16 17.40 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 11:00	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 11:00	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 11:00	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 11:00	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 11:00	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 11:00	U	
Total BTEX		<0.000408		0.000408	mg/L	12.17.16 11:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-28** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-011 Date Collected: 12.13.16 17.00 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3006015 Date Prep: 12.19.16 12.57

Prep seq: 717483

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.19.16 21:19	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.19.16 21:19	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.19.16 21:19	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.19.16 21:19	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.19.16 21:19	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.19.16 21:19	U	
Total BTEX		<0.000408		0.000408	mg/L	12.19.16 21:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	80 - 120	%		
4-Bromofluorobenzene	84	80 - 120	%		

Sample Id: **MW-29** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-012 Date Collected: 12.13.16 16.30 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3006015 Date Prep: 12.19.16 12.57

Prep seq: 717483

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**6.92**	0.0400	0.00816	mg/L	12.19.16 22:25		20
Toluene	108-88-3	<0.0200	0.0400	0.0200	mg/L	12.19.16 22:25	U	20
Ethylbenzene	100-41-4	<0.0131	0.0400	0.0131	mg/L	12.19.16 22:25	U	20
m,p-Xylenes	179601-23-1	**0.0530**	0.0400	0.0280	mg/L	12.19.16 22:25		20
o-Xylene	95-47-6	<0.0128	0.0400	0.0128	mg/L	12.19.16 22:25	U	20
Total Xylenes	1330-20-7	**0.0530**		0.0128	mg/L	12.19.16 22:25		
Total BTEX		**6.97**		0.00816	mg/L	12.19.16 22:25		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	80 - 120	%		
4-Bromofluorobenzene	80	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-34** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-013 Date Collected: 12.13.16 12.30 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005927 Date Prep: 12.16.16 16.45

Prep seq: 717416

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 13:51	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 13:51	U	1
Ethylbenzene	100-41-4	**0.00239**	0.00200	0.000657	mg/L	12.17.16 13:51		1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 13:51	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 13:51	U	1
Total Xylenes	1330-20-7	<0.000642		0.000642	mg/L	12.17.16 13:51	U	
Total BTEX		**0.00239**		0.000408	mg/L	12.17.16 13:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	80 - 120	%		
4-Bromofluorobenzene	105	80 - 120	%		

Sample Id: **MW-35** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-014 Date Collected: 12.13.16 12.15 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005927 Date Prep: 12.16.16 16.45

Prep seq: 717416

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 14:08	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 14:08	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 14:08	U	1
m,p-Xylenes	179601-23-1	**0.00427**	0.00200	0.00140	mg/L	12.17.16 14:08		1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 14:08	U	1
Total Xylenes	1330-20-7	**0.00427**		0.000642	mg/L	12.17.16 14:08		
Total BTEX		**0.00427**		0.000408	mg/L	12.17.16 14:08		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-36** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-015 Date Collected: 12.13.16 11.00 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005927 Date Prep: 12.16.16 16.45

Prep seq: 717416

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 14:24	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 14:24	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 14:24	U	1
m,p-Xylenes	179601-23-1	**0.00212**	0.00200	0.00140	mg/L	12.17.16 14:24		1
o-Xylene	95-47-6	**0.00204**	0.00200	0.000642	mg/L	12.17.16 14:24		1
Total Xylenes	1330-20-7	**0.00416**		0.000642	mg/L	12.17.16 14:24		
Total BTEX		**0.00416**		0.000408	mg/L	12.17.16 14:24		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	80 - 120	%		
4-Bromofluorobenzene	108	80 - 120	%		

Sample Id: **MW-37** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-016 Date Collected: 12.13.16 16.45 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3006015 Date Prep: 12.19.16 12.57

Prep seq: 717483

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.602**	0.0400	0.00816	mg/L	12.20.16 02:17		20
Toluene	108-88-3	<0.0200	0.0400	0.0200	mg/L	12.20.16 02:17	U	20
Ethylbenzene	100-41-4	<0.0131	0.0400	0.0131	mg/L	12.20.16 02:17	U	20
m,p-Xylenes	179601-23-1	<0.0280	0.0400	0.0280	mg/L	12.20.16 02:17	U	20
o-Xylene	95-47-6	<0.0128	0.0400	0.0128	mg/L	12.20.16 02:17	U	20
Total Xylenes	1330-20-7	<0.0128		0.0128	mg/L	12.20.16 02:17	U	
Total BTEX		**0.602**		0.00816	mg/L	12.20.16 02:17		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **MW-38** Matrix: Ground Water Sample Depth:

Lab Sample Id: 542083-017 Date Collected: 12.13.16 16.40 Date Received: 12.14.16 09.00

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3006015 Date Prep: 12.19.16 12.57

Prep seq: 717483

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**5.91**	0.0400	0.00816	mg/L	12.19.16 22:42		20
Toluene	108-88-3	<0.0200	0.0400	0.0200	mg/L	12.19.16 22:42	U	20
Ethylbenzene	100-41-4	**0.0450**	0.0400	0.0131	mg/L	12.19.16 22:42		20
m,p-Xylenes	179601-23-1	<0.0280	0.0400	0.0280	mg/L	12.19.16 22:42	U	20
o-Xylene	95-47-6	**0.0417**	0.0400	0.0128	mg/L	12.19.16 22:42		20
Total Xylenes	1330-20-7	**0.0417**		0.0128	mg/L	12.19.16 22:42		
Total BTEX		**6.00**		0.00816	mg/L	12.19.16 22:42		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **717413-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 717413-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005905 Date Prep: 12.16.16 16.15

Prep seq: 717413

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 04:54	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 04:54	U	1
Ethylbenzene	100-41-4	**0.00180**	0.00200	0.000657	mg/L	12.17.16 04:54	J	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 04:54	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 04:54	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	80 - 120	%		
4-Bromofluorobenzene	100	80 - 120	%		

Sample Id: **717416-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 717416-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3005927 Date Prep: 12.16.16 16.45

Prep seq: 717416

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.17.16 13:34	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.17.16 13:34	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.17.16 13:34	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.17.16 13:34	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.17.16 13:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	80 - 120	%		
4-Bromofluorobenzene	85	80 - 120	%		

Certificate of Analytical Results
542083
Talon/LPE Co., Midland, TX
8 inch Moore to Jal #1

Sample Id: **717483-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 717483-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3006015 Date Prep: 12.19.16 12.57

Prep seq: 717483

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.19.16 19:56	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/L	12.19.16 19:56	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.19.16 19:56	U	1
m,p-Xylenes	179601-23-1	<0.00140	0.00200	0.00140	mg/L	12.19.16 19:56	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.19.16 19:56	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	85	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: 8 inch Moore to Jal #1

Work Orders : 542083, **Project ID:** SRS#2002-10270

Lab Batch #: 3005905 **Sample:** 717413-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 03:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 3005905 **Sample:** 717413-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 03:46

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 3005905 **Sample:** 542085-001 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/17/16 04:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 3005905 **Sample:** 542085-001 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/17/16 04:20

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 3005905 **Sample:** 717413-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 04:54

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: 8 inch Moore to Jal #1

Work Orders : 542083,

Project ID: SRS#2002-10270

Lab Batch #: 3005927 **Sample:** 717416-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 12:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0361	0.0300	120	80-120	

Lab Batch #: 3005927 **Sample:** 717416-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 12:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 3005927 **Sample:** 542083-013 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/17/16 12:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 3005927 **Sample:** 542083-013 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/17/16 12:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 3005927 **Sample:** 717416-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/17/16 13:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: 8 inch Moore to Jal #1

Work Orders : 542083,

Project ID: SRS#2002-10270

Lab Batch #: 3006015 **Sample:** 717483-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/19/16 18:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 3006015 **Sample:** 717483-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/19/16 18:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 3006015 **Sample:** 542088-001 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/19/16 19:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 3006015 **Sample:** 542088-001 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 12/19/16 19:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 3006015 **Sample:** 717483-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/19/16 19:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: 8 inch Moore to Jal #1

Work Order #: 542083 **Project ID:** SRS#2002-10270

Analyst: ALJ **Date Prepared:** 12/16/2016 **Date Analyzed:** 12/17/2016

Lab Batch ID: 3005905 **Sample:** 717413-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0956	96	0.100	0.0772	77	21	70-125	25	
Toluene	<0.00100	0.100	0.0898	90	0.100	0.0729	73	21	70-125	25	
Ethylbenzene	0.00180	0.100	0.0910	91	0.100	0.0764	76	17	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.181	91	0.200	0.152	76	17	70-131	25	
o-Xylene	<0.000642	0.100	0.0954	95	0.100	0.0776	78	21	71-133	25	

Analyst: ALJ **Date Prepared:** 12/16/2016 **Date Analyzed:** 12/17/2016

Lab Batch ID: 3005927 **Sample:** 717416-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0978	98	0.100	0.0992	99	1	70-125	25	
Toluene	<0.00100	0.100	0.0939	94	0.100	0.0923	92	2	70-125	25	
Ethylbenzene	<0.000657	0.100	0.0996	100	0.100	0.101	101	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.199	100	0.200	0.199	100	0	70-131	25	
o-Xylene	<0.000642	0.100	0.104	104	0.100	0.104	104	0	71-133	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: 8 inch Moore to Jal #1

Work Order #: 542083 **Project ID:** SRS#2002-10270

Analyst: ALJ **Date Prepared:** 12/19/2016 **Date Analyzed:** 12/19/2016

Lab Batch ID: 3006015 **Sample:** 717483-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0763	76	0.100	0.0778	78	2	70-125	25	
Toluene	<0.00100	0.100	0.0711	71	0.100	0.0738	74	4	70-125	25	
Ethylbenzene	<0.000657	0.100	0.0801	80	0.100	0.0811	81	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.162	81	0.200	0.161	81	1	70-131	25	
o-Xylene	<0.000642	0.100	0.0859	86	0.100	0.0822	82	4	71-133	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: 8 inch Moore to Jal #1

Work Order # : 542083 **Project ID:** SRS#2002-10270

Lab Batch ID: 3005905 **QC- Sample ID:** 542085-001 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 12/17/2016 **Date Prepared:** 12/16/2016 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0800	80	0.100	0.0854	85	7	70-125	25	
Toluene	<0.00100	0.100	0.0730	73	0.100	0.0813	81	11	70-125	25	
Ethylbenzene	<0.000657	0.100	0.0775	78	0.100	0.0825	83	6	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.152	76	0.200	0.164	82	8	70-131	25	
o-Xylene	0.000660	0.100	0.0769	76	0.100	0.0855	85	11	71-133	25	

Lab Batch ID: 3005927 **QC- Sample ID:** 542083-013 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 12/17/2016 **Date Prepared:** 12/16/2016 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.000960	0.100	0.0906	90	0.100	0.0872	86	4	70-125	25	
Toluene	0.00163	0.100	0.0853	84	0.100	0.0817	80	4	70-125	25	
Ethylbenzene	0.00239	0.100	0.0925	90	0.100	0.0877	85	5	71-129	25	
m,p-Xylenes	0.00165	0.200	0.184	91	0.200	0.175	87	5	70-131	25	
o-Xylene	0.00131	0.100	0.0951	94	0.100	0.0922	91	3	71-133	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: 8 inch Moore to Jal #1

Work Order # : 542083 **Project ID:** SRS#2002-10270

Lab Batch ID: 3006015 **QC- Sample ID:** 542088-001 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 12/19/2016 **Date Prepared:** 12/19/2016 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00892	0.100	0.0868	78	0.100	0.0887	80	2	70-125	25	
Toluene	<0.00100	0.100	0.0752	75	0.100	0.0803	80	7	70-125	25	
Ethylbenzene	0.000930	0.100	0.0821	81	0.100	0.0821	81	0	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.164	82	0.200	0.165	83	1	70-131	25	
o-Xylene	0.000920	0.100	0.0833	82	0.100	0.0846	84	2	71-133	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Asbestos Radiochemistry

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Page 1 of 2

LAB W.O#: 542083

Field billable Hrs :

Company:	Talon/LPE	Phone:	(806)549-9597
Address:	2901 State Highway 349	Fax:	(432)522-2180
City:	Midland	State: TX	Zip: 79706
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@talonlpe.com
Project ID:	8-Inch Moore to Jal #1 SRS #2002-10270	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	
Sampler Name:	MARK DAVIS	Circle One Event:	Daily Weekly Monthly (Quartely) Semi-Annual Annual N/A

TAT Work Days = D Need results by:_____ Time:_____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260	BTEX									Hold Sample (CALL__) Run PAH on Highest TPH__ Only if
								# Cont		VP	E,I									
1	MW-14	12/13/16	17:10	GW			3			X										
2	MW-17	12/13/16	12:45	GW			3			X										
3	MW-18	12/13/16	13:15	GW			3			X										
4	MW-19	12/13/16	17:20	GW			3			X										
5	MW-20	12/13/16	17:30	GW			3			X										
6	MW-21	12/13/16	13:00	GW			3			X										
7	MW-22	12/13/16	13:30	GW			3			X										
8	MW-23	12/13/16	13:40	GW			3			X										
9	MW-26	12/13/16	17:15	GW			3			X										
0	MW-27	12/13/16	17:40	GW			3			X										

* Container Type Codes

VA Vial Amber, VC Vial Clear, VP Vial Pre-preserved, GA Glass Amber, GC Glass Clear, PA Plastic Amber, PC Plastic Clear, ES Encore Sampler, TS TerraCore Sampler, AC Air Canister, TB Tedlar Bag, ZB Zip Lock Bag, PC Plastic Clear
Other_____

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal 40ml, 125 ml, 250 ml, 500 ml, 1L, Other_____

** Preservative Type Codes

A. None, B. HNO_3, C. H_2SO_4, D. NaOH, E. HCL, F. MeOH, G. $Na_2S_2O_3$, H. $NaHSO_4$, I. Ice, J. MCAA, K. ZnAc&NaOH, L. Asbc Acid&NaOH
O._____

^ Matrix Type Codes

GW Ground Water, WW Waste Water, DW Drinking Water, SW Surface Water, OW Ocean/Sea Water, PL Product-Liquid, PS Product-Solid, SL Sludge, S Soil/Sediment/Solid, W Wipe, A Air, O Oil, T Tissue, U Urine, B Blood
Other_____

REMARKS

Temp: IR ID:R-8
CF:+ 0.1 2.1
Corrected Temp: 2.2

Reg. Program / Clean-up Std	17:00	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Mark L Davis	Talon	12-14-16	9:00	[illegible] KRAMER	Xenco	12/14/16	900
2								
3								
4								

Lab Use Only	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

C.O.C. Serial #

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

 Revision Date: Nov 12, 2009

CHAIN OF CUSTODY RECORD

XENCO Laboratories
Environmental Asbestos Radiochemistry
Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O#: 542083

Field billable Hrs :

Company:	Talon/LPE	Phone:	(806)549-9597
Address:	2901 State Highway 349	Fax:	(432)522-2180
City:	Midland	State: TX	Zip: 79706
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, biarguijo@talonlpe.com
Project ID:	8-Inch Moore to Jal #1 SRS #2002-10270	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	
Sampler Name:	MARK DAVIS	Circle One Event:	Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

TAT Work Days = D Need results by:_____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260	BTEX									Hold Sample (CALL__) Run PAH on Highest TPH__ Only if
							# Cont			VP	E,I									
1	MW-28	12/13/16	17:00	GW			3			X										
2	MW-29	12/13/16	16:30	GW			3			X										
3	MW-34	12/13/16	12:30	GW			3			X										
4	MW-35	12/13/16	12:15	GW			3			X										
5	MW-36	12/13/16	11:00	GW			3			X										
6	MW-37	12/13/16	16:45	GW			3			X										
7	MW-38	12/13/16	16:40	GW			3			X										
8																				
9																				
10																				

Temp: IR ID:R-8
CF:+ 0.1 2.1
Corrected Temp: 2.2

* Container Type Codes

VA Vial Amber ES Encore Sampler
VC Vial Clear TS TerraCore Sampler
VP Vial Pre-preserved AC Air Canister
GA Glass Amber TB Tedlar Bag
GC Glass Clear ZB Zip Lock Bag
PA Plastic Amber PC Plastic Clear
PC Plastic Clear
Other_____

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz , 1Gal 40ml, 125 ml, 250 ml, 500 ml, 1L, Other_____

** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA
C. H_2SO_4 G. $Na_2S_2O_3$ K. ZnAc&NaOH
D. NaOH H. $NaHSO_4$ L Asbc Acid&NaOH
O._____

^ Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid
WW Waste Water W Wipe
DW Drinking Water A Air
SW Surface Water O Oil
OW Ocean/Sea Water T Tissue
PL Product-Liquid U Urine
PS Product-Solid B Blood
SL Sludge
Other_____

REMARKS

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Mark Davis	Talon	12-14-16	9:00	[signature]	Xenco	12-14-16	0900
2								
3								
4								

Lab Use Only

	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

C.O.C. Serial #

 Revision Date: Nov 12, 2009

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Talon/LPE Co.

Date/ Time Received: 12/14/2016 09:00:00 AM

Work Order #: 542083

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**Yes**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 12/14/2016

Checklist reviewed by: Alex Montoya
Alex Montoya
Date: 12/14/2016

APPENDIX D

NMOCD C-141

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 March 17, 1999

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	Contact
EOTT Energy Pipeline, LP	**Frank Hernandez**
Address	Telephone No.
5805 East Hwy 80	**915-638-3799**
Facility Name	Facility Type
Hobbs Junction Mainline	**10" Crude Oil Pipeline**

Surface Owner	Mineral Owner	Lease No.
State of NM	**NA**	**NA**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude	Latitude	County:
M	**26**	**18S**	**37E**	**15**	**700**	**W103:13:42.01**	**N32:42:40.85**	**Lea**

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Crude Oil	**50 bbl**	**24 bbl**
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Steel Pipeline	**1/23/03-8:00 AM**	**1/23/03-10:45 AM**
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	If YES, To Whom? **Sylvia Dickie - Hobbs NMOCD**	
By Whom? **Pat McCasland - EPI**	Date and Hour **1/23/03-11:35 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.*
Corroded pipeline (internal), repaired with clamp

Describe Area Affected and Cleanup Action Taken.*
~12500-ft^2 surface area affected; 50-bbl released; 24-bbl of crude recovered. Removal and disposal of contaminated soil above remedial goals was commenced by EPI.

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: Frank Hernandez	**OIL CONSERVATION DIVISION**	
Printed Name: **Frank Hernandez**	Approved by District Supervisor:	
Title: **District Environmental Supervisor**	Approval Date:	Expiration Date:
Date: **1/24/03** Phone: **915-638-3799**	Conditions of Approval:	☐ Attached .

Attach Additional Sheets If Necessary