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2016 ANNUAL GROUNDWATER MONITORING REPORT

**HOBBS JUNCTION MAINLINE
LEA COUNTY, NEW MEXICO
SRS #2003—00017
NMOCD REF. # AP-054**

**Prepared For:
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333 CLAY STREET, SUITE 1600
HOUSTON, TEXAS**

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April, 2017



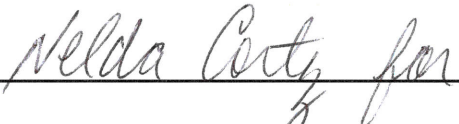
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TALON/LPE PROJECT NO. 700376.052.03

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NMOCD – New Mexico Oil Conservation Division

NMSLO – New Mexico State Land Office

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1.0 INTRODUCTION

1.1 Introduction and Site Background

The Hobbs Junction Mainline site (site) is located approximately three miles west of Hobbs, in Lea County, New Mexico. The GPS coordinates of this site are 32° 42' 40.85" latitude and 103° 13' 42.01" longitude. The land on the southern portion of the site is owned by Ms. Faye Klein and the land on the northern portion of the site is owned by the State of New Mexico. A site plan is provided as Figure 1 included in Appendix A.

1.2 Site Geology

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

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

1.3 Previous Environmental Investigations

Currently, a total of 33 monitor wells have been installed in the vicinity of the release (see Figure 1). Initial groundwater delineation activities began on February 13, 2003, by advancing a soil boring BH-1 with a hollow-stem auger drilling rig. Refusal occurred 28 feet below ground surface (bgs), in well-indurated caliche. On March 5, 2003, using an air rotary rig, monitor wells MW-1 and MW-2 were installed to groundwater in order to evaluate the presence of phase separated hydrocarbons (PSH). After it was determined that monitor wells MW-1 and MW-2 were impacted with PSH; monitor wells MW-3 through MW-6 were installed in August 2003. PSH was detected in monitor wells MW-3 through MW-6 during the development process. On January 19 and 20, 2004, monitor wells MW-7 through MW-13 were installed in order to delineate the dissolved-phase plume. Subsequent to development, PSH was detected in monitor well MW-12. Monitor wells MW-14 through MW-17 were installed on May 24, 2004, outside the release perimeter. PSH was detected in monitor wells MW-14 and MW-17 as well. Monitor wells MW-18 through MW-20 were installed in November 2006, and monitor wells MW-21 and MW-22 were installed on December 5, 2007, in order to further delineate the dissolved phase plume. Monitor wells MW-23 and MW-24 were installed on March 17, 2008, as requested by the New Mexico Oil Conservation Division (NMOCD), in order to further delineate the dissolved phase plume down-gradient towards the southeast. Subsequently, monitor wells MW-

25, MW-26, and MW-27 were installed in December of 2011 to increase the density of pumping wells in order to increase drawdown of the groundwater level to further impede the migration of the dissolved-phase plume. Six (6) new monitor wells (MW-28 through MW-33) were installed in late April 2015. Two (2) of the wells, MW-29 and MW-30, were completed with 4-inch screen and blank riser to accommodate pneumatic pumps. Four (4) of the wells were completed with 2-inch screen and blank riser to further delineate the benzene, toluene, ethylbenzene, xylenes (BTEX) contamination north, northeast, south and southeast (downgradient) of the dissolved-phase plume.

A quarterly groundwater monitoring program was implemented for the site that included PSH recovery utilizing an automated eductor system, which operated from March 2004 to March 2007. In March 2007, the eductor system was replaced with an automated pneumatic skimmer and bladder pump PSH recovery system. At that time, a total of eight (8) skimmer pumps were installed in monitor wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-12, MW-14, and MW-17 and a pneumatic total fluid pump was installed in monitor well MW-5.

Currently, there are two (2) pneumatic specific gravity skimmers and bladder pumps in monitor wells MW-8 and MW-16 and 15 pneumatic total fluids pumps in monitor wells MW-1, through MW-6, MW-10, MW-11, MW-12, MW-14, MW-15, MW-20, MW-25, MW-26, and MW-27. The total fluids pumps in monitor wells MW-25, MW-26, and MW-27 were installed in early 2012. An electric total fluids pump was installed in MW-17 during the fourth quarter 2012. The recovered water is transferred to Occidental Permian's North Hobbs Satellite disposal facility via HDPE flow-line and the recovered oil is periodically collected with a vacuum truck and transported to the Plains Lea Station and re-introduced into the pipeline system.

1.4 Regulatory Framework

Groundwater analytical data collected from monitor wells during quarterly groundwater monitoring events at this site is evaluated to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards listed in the table below.

(NMWQCC) groundwater standards	
Compound	mg/L
Benzene	0.010
Toluene	0.750
Ethylbenzene	0.750
Total Xylenes	0.620
PAH (Naphthalene)	0.030
PAH (Benzo[a]pyrene)	0.007

2.0 SITE ACTIVITIES

The sections that follow summarize groundwater monitoring, PSH recovery and site assessment activities conducted at the subject site during the year 2016. The primary function of groundwater monitoring activities is to collect depth to fluid measurements and collect groundwater samples 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 Monitoring Activities

Talon conducted four (4) groundwater monitoring events during 2016: March 09, 2016, June 08, 2016, September 21, 2016, and December 07, 2016. Details of the gauging, purging, and sample collection activities are presented in Section 2.2.

2.2 Groundwater Gauging, Purging, and Sampling Procedures

During each groundwater monitoring event, all monitor wells were measured to determine static water levels and to monitor the presence and/or absence of PSH accumulations. The top of groundwater elevation was corrected in monitor wells impacted with PSH by the following equation: Corrected groundwater elevation = the surveyed top of casing elevation – (measured depth to water) – (PSH thickness x the specific gravity of the PSH). Measured groundwater depths and elevations collected during the sampling events, along with historical measurements, are presented in Table 1 – Summary of Historical Fluid Level Measurements and contoured gradient maps are located in Appendix A.

All wells not impacted with PSH were purged a minimum of three (3) well volumes prior to sample collection. All monitor wells were purged utilizing dedicated disposable polyethylene bailers or 12-volt submersible pump and vinyl tubing. The pumps and tubing used to purge the wells were decontaminated with Alconox® detergent and rinsed with distilled water prior to initial use and between sample collection events. All recovered groundwater from purging activities and recovered water used in the decontamination process was contained onsite in the system recovery tank until the water was transferred to the North Hobbs Unit disposal facility. Approximately 320 gallons of groundwater was purged during the four (4) quarterly groundwater monitoring events.

Groundwater samples were collected from monitoring wells not impacted with PSH utilizing dedicated disposable polyethylene bailers. The groundwater samples collected were transferred from the disposable bailer into appropriately preserved laboratory supplied sample containers. The groundwater samples were maintained on ice in the custody of Talon/LPE, until delivery to TraceAnalysis, Inc. in Lubbock or Midland, Texas for analysis. The collected samples were quantified for BTEX by EPA Method SW-846 8021b. In addition, samples collected from MW-21, MW-22, MW-28, MW-31, MW-32, and MW-33 in March 2016, were also quantified for polycyclic aromatic hydrocarbons (PAH) by EPA Method 8270D.

2.3 Phase Separated Hydrocarbon and Groundwater Recovery

The crude oil and groundwater recovered with the total fluids and skimmer pumps were expelled to a 350-barrel frac tank used as a settling tank where the oil and water are gravity separated. The tank is equipped with a head pressure switch, which operates a transfer pump. When the pump is engaged, the recovered water is transferred to Occidental Permian's North Hobbs Satellite disposal facility via four (4) inch HDPE flow line. The recovered oil that remains in the frac tank is periodically collected with a vacuum truck and transported to the Plains Lea Station where it is re-introduced into the pipeline system.

The depth to water and PSH in the frac tank is periodically measured with an interface probe and the recovered volumes are calculated. During 2016 the quarterly groundwater and PSH recovery totals are as followed:

- 1st Quarter – approximately 26.0 bbls of oil and 10,853 bbls of water
- 2nd Quarter – approximately 17.0 bbls of oil and 3,063 bbls of water
- 3rd Quarter – approximately 27.6 bbls of oil and 11,701 bbls of water
- 4th Quarter – approximately 56.6 bbls of oil and 8,721 bbls of water

Approximately 127 bbls of oil was recovered during 2016 and a total of 2,686 bbls of PSH has been recovered from the site to date.

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 reports and chains of custody documentation are provided in Appendix C. The following sections present the results from the monitoring of the first water-bearing zone underlying the Hobbs Junction Mainline site.

3.1 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 has 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 zero (0) to 1.6 inches per year.

The Ogallala Aquifer is generally unconfined and the potentiometric surface generally mimics the topography 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 been approximately 40 feet bgs and the groundwater flow direction is to the southeast at an average of 25 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. The pH of Ogallala water averages 7.3.

3.2 Groundwater Gradient and Flow Direction

Water level measurements were collected from all monitor wells during all four (4) groundwater monitoring events. The data collected is summarized in Table 1, Summary of Historical Fluid Level Measurements, presented in Appendix B. Potentiometric surface contour maps were constructed from the four (4) water level measurement datasets. These maps are Figure 2a through Figure 2d presented in Appendix A. The groundwater flow direction at the site is consistently towards the east-southeast, at an average gradient of 0.0046 ft./ft., or approximately 24 ft./mile. Groundwater levels at the subject site declined an average of 0.145 feet, which is consistent with regional declining regional groundwater elevations in the Ogallala Aquifer.

3.3 Phase Separated Hydrocarbon (PSH)

The collection of water level measurement data was conducted using an oil/water interface probe, which was also used to determine the presence of PSH.

- In March 2016, PSH was observed in monitor wells MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-25, MW-26, MW-27 and MW-30. PSH thicknesses ranged from 0.01 feet in MW-30 to 3.79 feet in MW-1.
- In June 2016, PSH was observed in monitor wells MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-26, MW-27, MW-29, and MW-30. PSH thicknesses ranged from 0.76 feet in MW-2 to 5.19 feet in MW-17.
- In September 2016, PSH was observed in monitor wells MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-25, MW-26, MW-27, MW-29 and MW-30. PSH thicknesses ranged from 0.06 feet in MW-11 to 5.39 feet in MW-17.
- In December 2016, PSH was observed in monitor wells MW-1 through MW-6, MW-8, MW-9, MW-10, MW-12, MW-14 through MW-17, MW-19, MW-20, MW-26, MW-27, MW-29 and MW-30. PSH thicknesses ranged from 0.01 feet in MW-2 to 4.09 feet in MW-20.

PSH thickness isopleths maps are presented as Figure 3a through Figure 3d in Appendix A.

3.4 Groundwater Sampling Results

During the March 2016 groundwater monitoring event, groundwater samples were collected from eleven (11) monitor wells: MW-7, MW-13, MW-18, MW-21 through MW-24, MW-28, MW-31, MW-32 and MW-33. Twenty-one (21) monitor wells (MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-25, MW-26, MW-27, MW-29 and MW-30) were not sampled due to the presence of PSH. MW-29 was not sampled during this event. Analytical results from the collected groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000223 mg/L in two (2) wells (MW-13 and MW-32) to 2.05 mg/L in MW-22. Benzene concentrations exceeded the NMWQCC standard of 0.010 mg/L in monitor wells MW-21 and MW-22.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000238 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.304 mg/L in MW-22. Ethylbenzene concentrations did not exceed the NMWQCC standard of 0.750 mg/L in any of the monitor wells sampled this quarter.
- Xylene concentrations ranged from <0.000243 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.0383 mg/L in MW-21. Xylene concentrations did not exceed the NMWQCC standard of 0.620 mg/L in any of the monitor wells sampled this quarter.

- PAH constituent concentrations ranged from less than laboratory detection limit for most of the analytes in the samples from MW-21, MW-22 and MW-28, MW-31, MW-32, and MW-33 to 0.000509 mg/L (1-Methylnaphthalene) in MW-21. All PAH concentrations were below the NMWQCC groundwater standard of 0.030 mg/L for naphthalene and 0.007 mg/L for benzo[a]pyrene in these wells.

During the June 2016 groundwater monitoring event, groundwater samples were collected from eleven (11) monitor wells: MW-7, MW-13, MW-18, MW-21 through MW-24, MW-28, MW-31, MW-32 and MW-33. Twenty-two (22) monitor wells (MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-26, MW-27, MW-29 and MW-30) were not sampled due to the presence of PSH. MW-25 was not sampled during this event. Analytical results from the collected groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000504 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 1.88 mg/L in MW-22. Benzene concentrations exceeded the NMWQCC standard of 0.010 mg/L in monitor wells MW-21 and MW-22.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000763 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.280 mg/L in MW-21. Ethylbenzene concentrations did not exceed the NMWQCC standard of 0.750 mg/L in any of the monitor wells sampled this quarter.
- Xylene concentrations ranged from less than laboratory detection limit in ten (10) wells (MW-7, MW-13, MW-18, MW-22, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.0467 mg/L in MW-21. Xylene concentrations did not exceed the NMWQCC standard of 0.620 mg/L in any of the monitor wells sampled this quarter.

During the September 2016 groundwater monitoring event, groundwater samples were collected from 11 monitor wells: MW-7, MW-13, MW-18, MW-21 through MW-24, MW-28, MW-31, MW-32 and MW-33. Twenty-two (22) monitor wells (MW-1 through MW-6, MW-8 through MW-12, MW-14 through MW-17, MW-19, MW-20, MW-25, MW-26, MW-27, MW-29 and MW-30) were not sampled due to the presence of PSH. Analytical results from the collected groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000504 mg/L in six (6) wells (MW-7, MW-18, MW-23, MW-24, MW-32, and MW-33) to 3.38 mg/L in MW-21. Benzene concentrations exceeded the NMWQCC standard of 0.010 mg/L in monitor wells MW-21 and MW-22.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000763 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.452 mg/L in MW-22. Ethylbenzene concentrations did not exceed the NMWQCC standard of 0.750 mg/L in any of the monitor wells sampled this quarter.

- Xylene concentrations ranged from <0.000256 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.158 mg/L in MW-21. Xylene concentrations did not exceed the NMWQCC standard of 0.620 mg/L in any of the monitor wells sampled this quarter.

During the December 2016 groundwater monitoring event, groundwater samples were collected from 11 monitor wells: MW-7, MW-13, MW-18, MW-21 through MW-24, MW-28, MW-31, MW-32 and MW-33. Twenty (20) monitor wells (MW-1 through MW-6, MW-8 through MW-10, MW-12, MW-14 through MW-17, MW-19, MW-20, MW-26, MW-27, MW-29 and MW-30) were not sampled due to the presence of PSH. MW-11 and MW-25 were not sampled this quarter. Analytical results from the collected groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000408 mg/L in eight (8) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-31, MW-32 and MW-33) to 5.32 mg/L in MW-21. Benzene concentrations exceeded the NMWQCC standard of 0.010 mg/L in monitor wells MW-21 and MW-22.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000657 mg/L in nine (9) wells (MW-7, MW-13, MW-18, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.485 mg/L in MW-21. Ethylbenzene concentrations did not exceed the NMWQCC standard of 0.750 mg/L in any of the wells sampled this quarter.
- Xylene concentrations ranged from less than laboratory detection limit in ten (10) wells (MW-7, MW-13, MW-18, MW-22, MW-23, MW-24, MW-28, MW-31, MW-32, and MW-33) to 0.344 mg/L in MW-21. Xylene concentrations did not exceed the NMWQCC standard of 0.620 mg/L in any of the monitor wells sampled this quarter.

Newly-installed monitor wells are monitored for PAH at least two (2) consecutive years on an annual basis after regulated PAH constituents are below NMWQCC standards. Similarly, monitor wells that formerly contained PSH follow the same regimen. A PAH sample was collected from MW-21, MW-22, MW-28, MW-31, MW-32 and MW-33 during the March 2016 groundwater monitoring event. The laboratory analytical results for PAH are summarized in Table 3 – Summary of Historical Groundwater Analytical Results – PAH Supplement, in Appendix B. Laboratory analytical data reports and chains of custody documentation are provided in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following section presents a summary of the four 2016 groundwater monitoring events conducted at the Hobbs Junction Mainline site and provides recommendations for future actions.

4.1 Summary of Findings

- Approximately 127 bbls of crude oil was recovered during 2016 and a total of 2,686 bbls of PSH has been recovered from the site to date.
- The furthest down-gradient monitor wells MW-23 and MW-24 did not exhibit BTEX concentrations above the NMWQCC Standards during each of the four (4) quarterly groundwater monitoring events indicating that the system is inhibiting the down-gradient migration of the dissolved-phase plume (see Table 2).
- The PSH plume has covered approximately the same areal extent, but the PSH thicknesses in many wells has decreased.
- Dissolved-phase contaminant plume is stable, and BTEX concentrations are declining.
- The PSH and the dissolved-phase BTEX plumes are delineated.

4.2 Recommendations

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

- Continue operation and maintenance of the PSH recovery system and transfer system. Adjust pump intake port depths and controller settings to optimize PSH recovery.
- Continue the quarterly groundwater monitoring program and annual reporting in accordance with NMOCD directives.

APPENDIX A

Figures

Figure 1 – Site Plan

Figure 2a – Groundwater Gradient Map – 03/09/2016

Figure 2b – Groundwater Gradient Map – 06/08/2016

Figure 2c – Groundwater Gradient Map – 09/21/2016

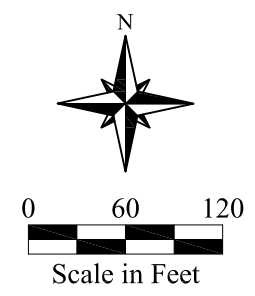
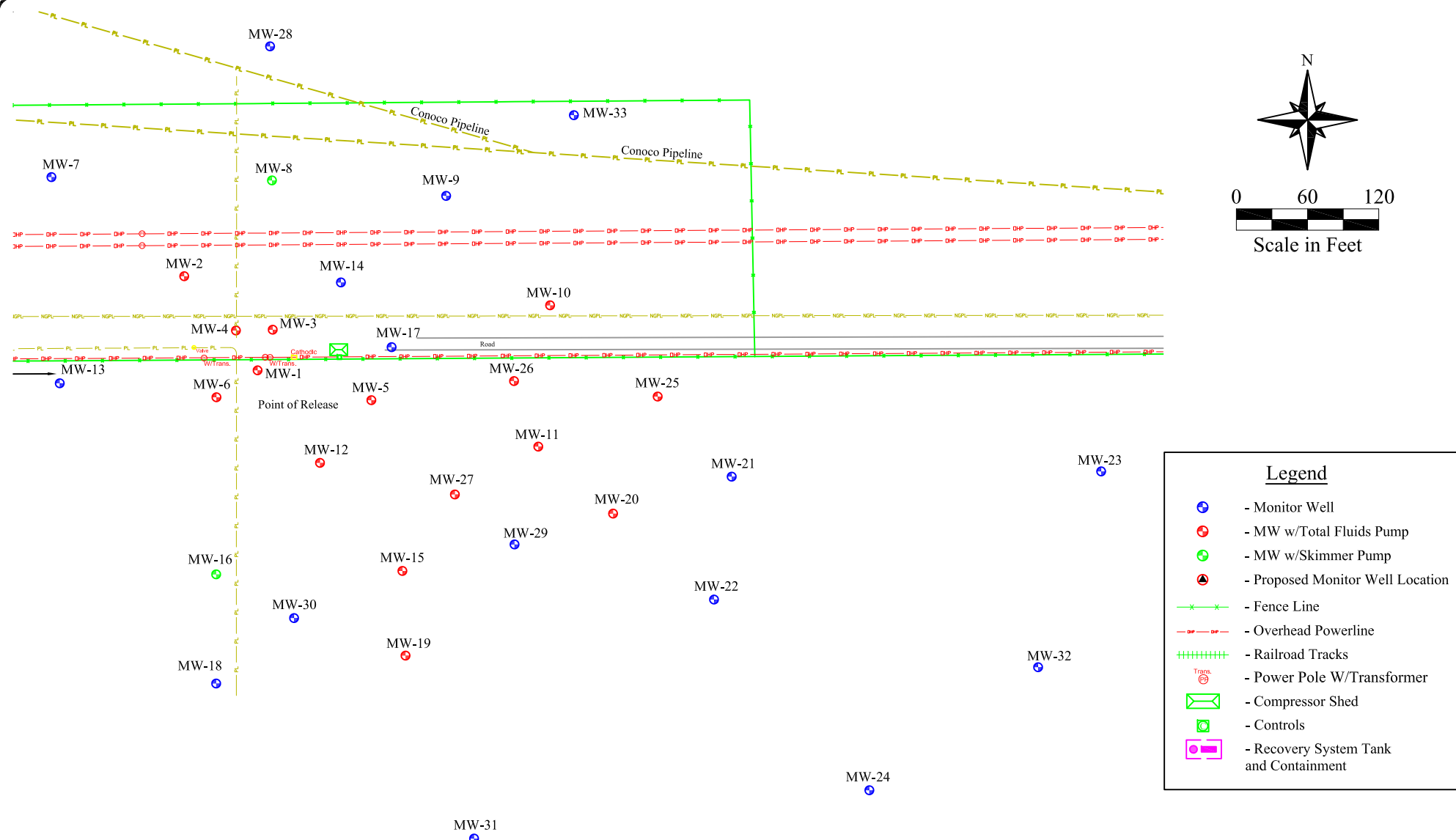
Figure 2d – Groundwater Gradient Map – 12/07/2016

Figure 3a – PSH Thickness & Groundwater Concentration Map – 03/09/2016

Figure 3b – PSH Thickness & Groundwater Concentration Map – 06/08/2016

Figure 3c – PSH Thickness & Groundwater Concentration Map – 09/21/2016

Figure 3d – PSH Thickness & Groundwater Concentration Map – 12/07/2016

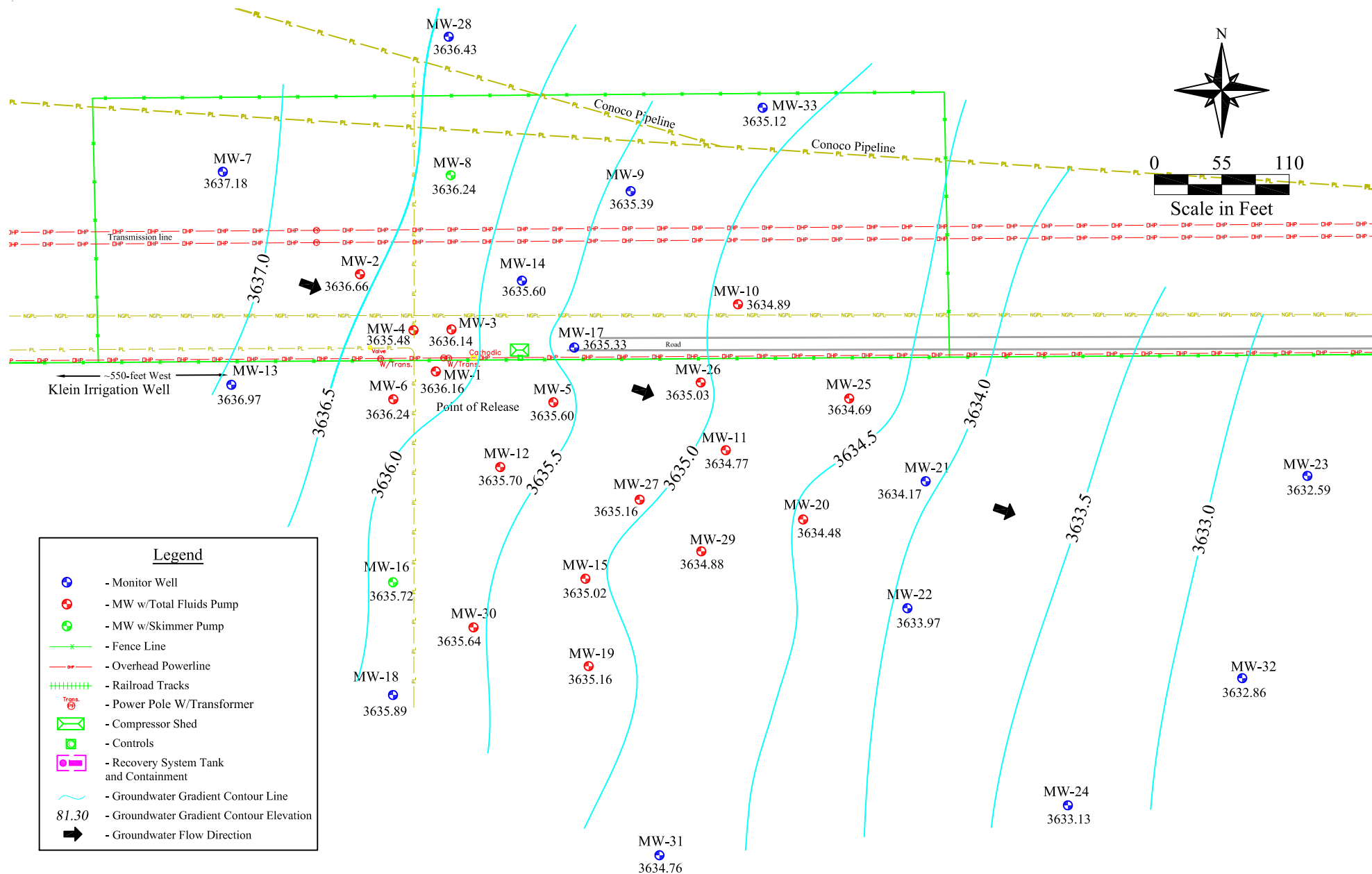


Project # 700376.052.01



Date: 01/18/2016
Scale: 1" = 120'
Drawn By: TJS

Hobbs Junction Mainline
SRS # 2003-00017, NMOCD REF. # AP-054
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
Figure 1 - Site Map



Project = 700376.052.01

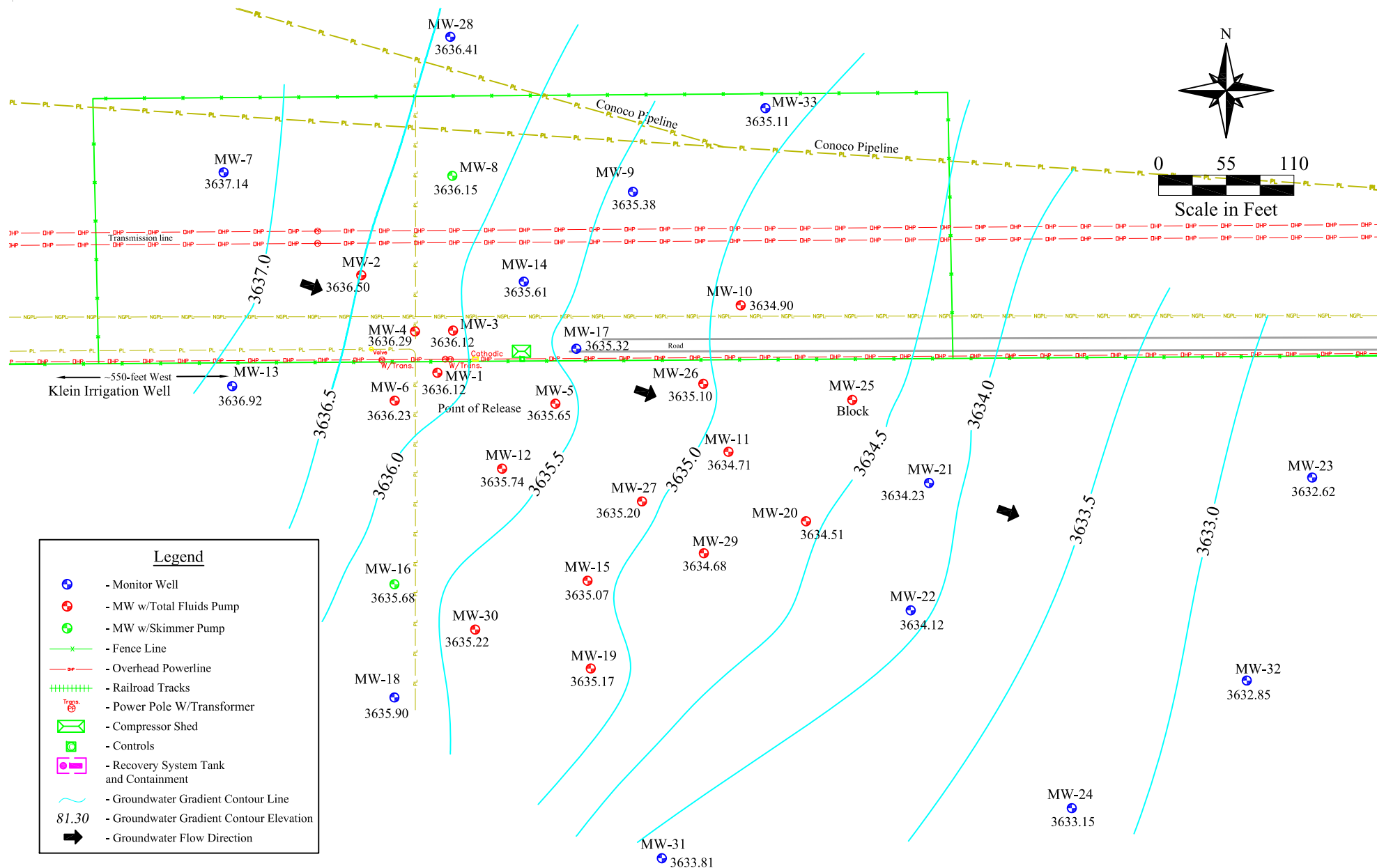


Date: 04/21/2016

Scale: 1" = 110'

Drawn By: SMM

Hobbs Junction Mainline
 SRS # 2003-00017, NMOCDF REF. # AP-054
 SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
 Figure 2a - Groundwater Gradient Map - 03/09/2016



Project = 700376.052.01

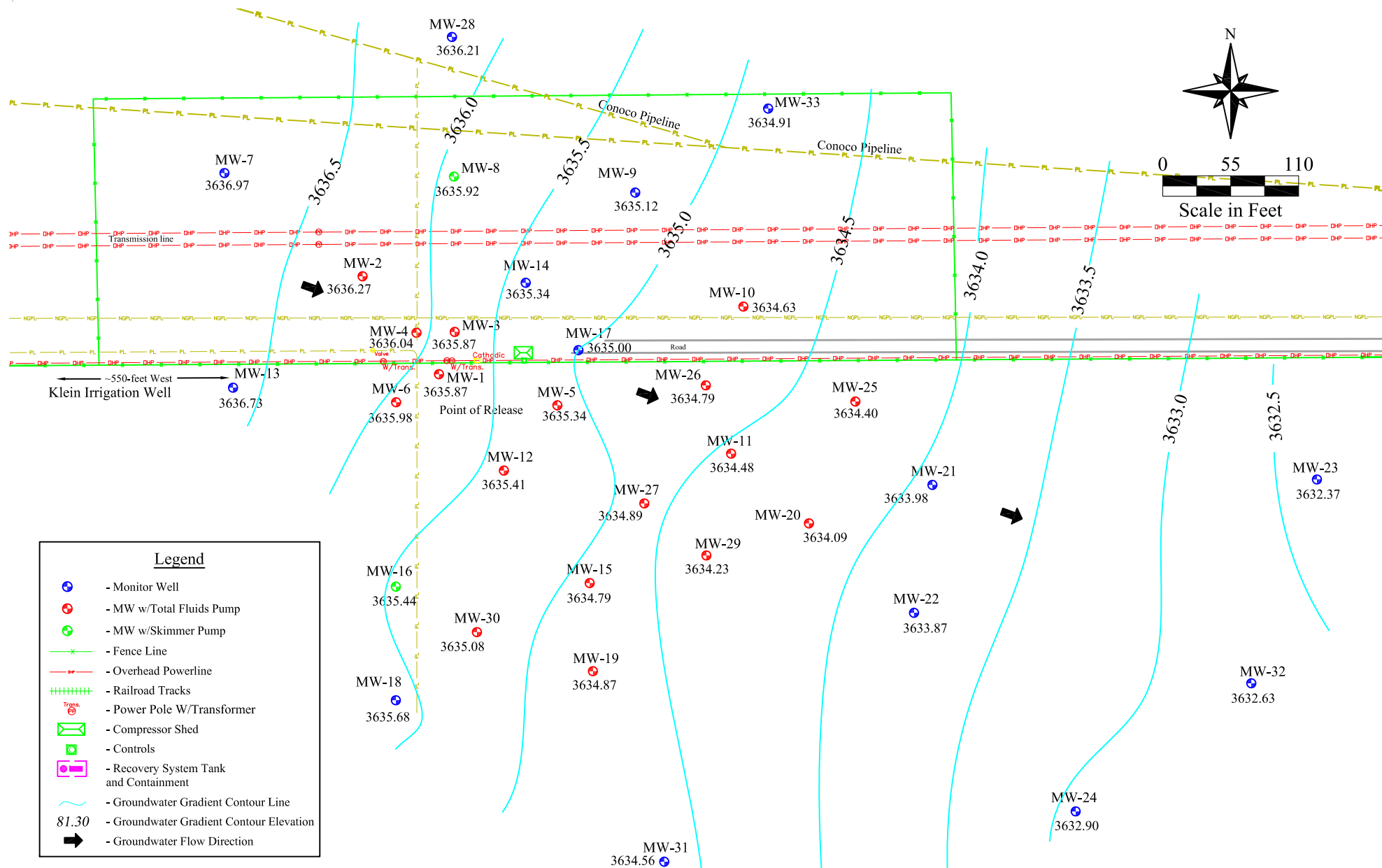


Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline
 SRS # 2003-00017, NMOCDF REF. # AP-054
 SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
 Figure 2b - Groundwater Gradient Map - 06/08/2016



Project = 700376.052.01



Date: 03/29/2017

Scale: 1" = 110'

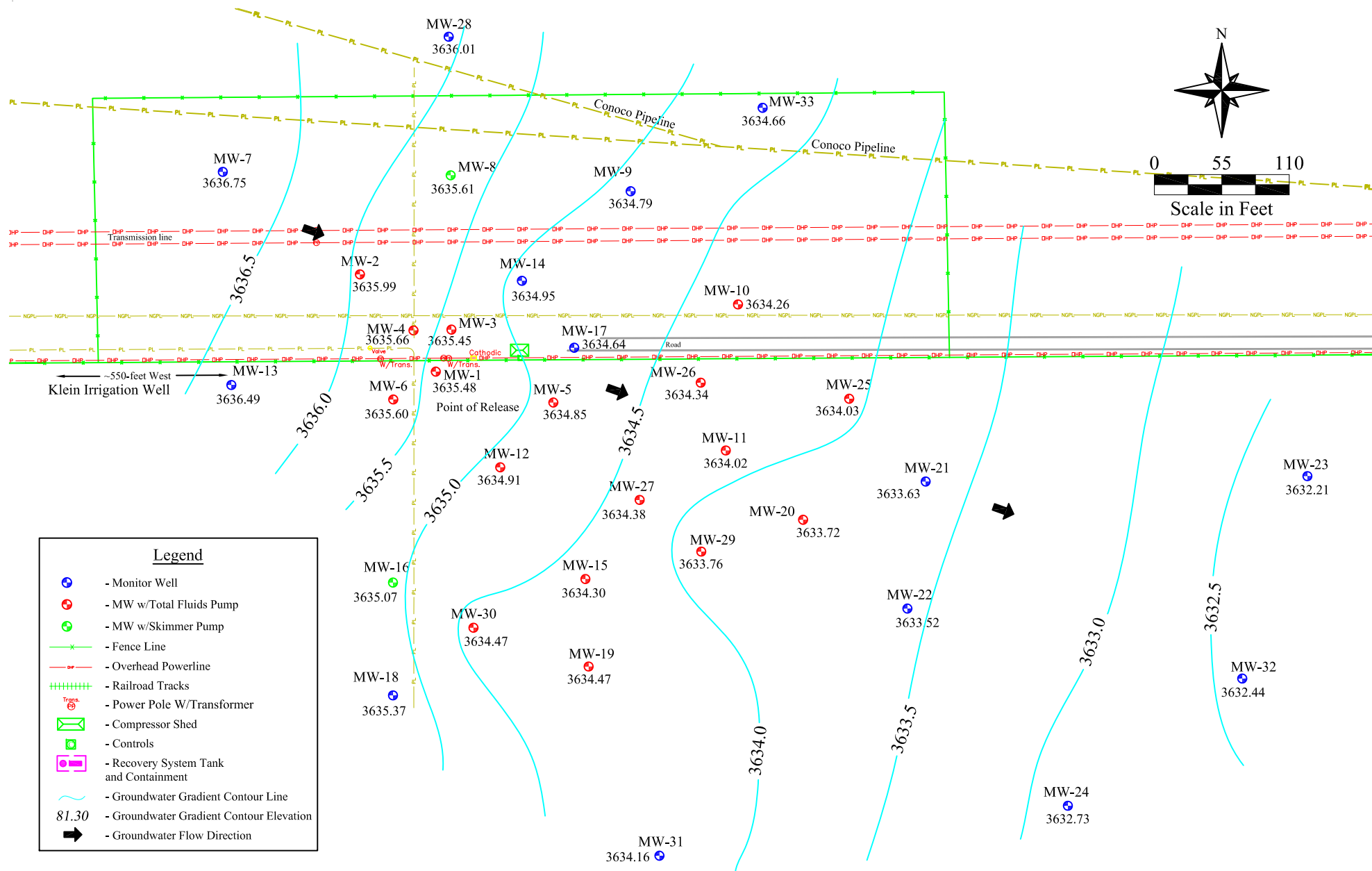
Drawn By: K LW

Hobbs Junction Mainline

SRS # 2003-00017, NMOC D REF. # AP-054

SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Figure 2c - Groundwater Gradient Map - 09/21/2016



Project = 700376.052.01

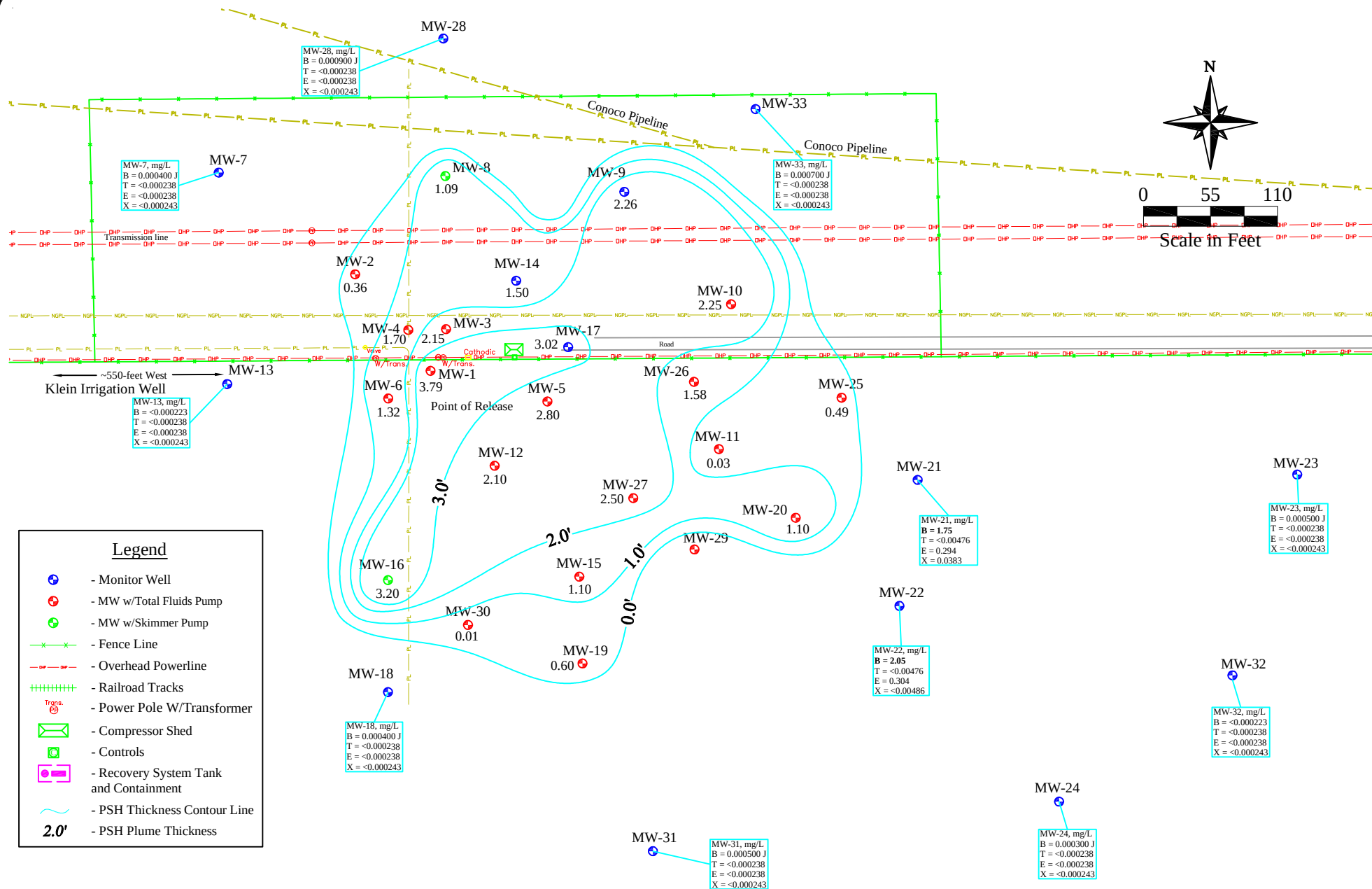


Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline
 SRS # 2003-00017, NMOCDF REF. # AP-054
 SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
 Figure 2d - Groundwater Gradient Map - 12/07/2016



Project # 700376.052.01

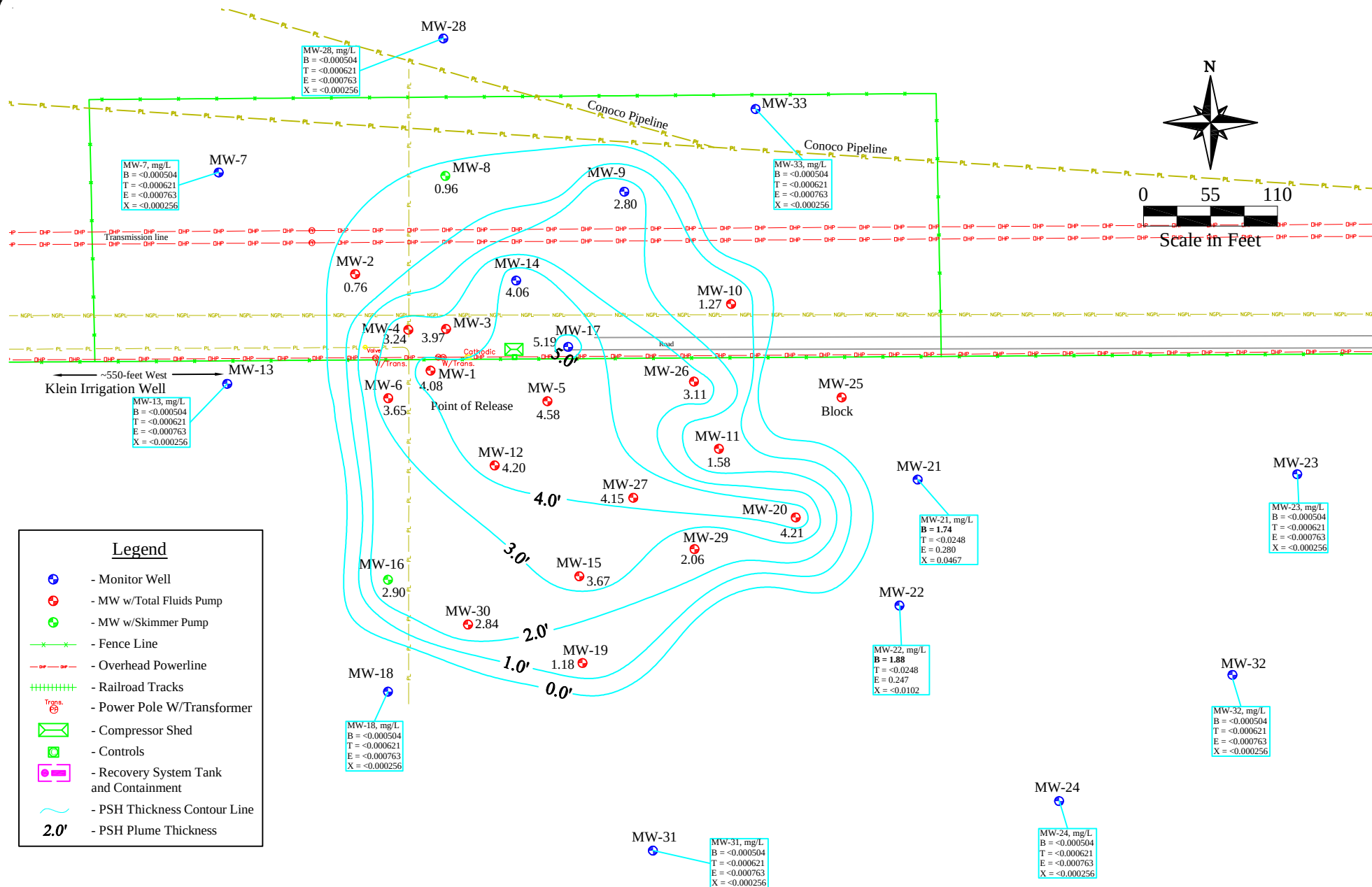


Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline
SRS # 2003-00017, NMOCD REF. # AP-054
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
Figure 3a - PSH Thickness & Groundwater Concentration Map - (03/09/2016)

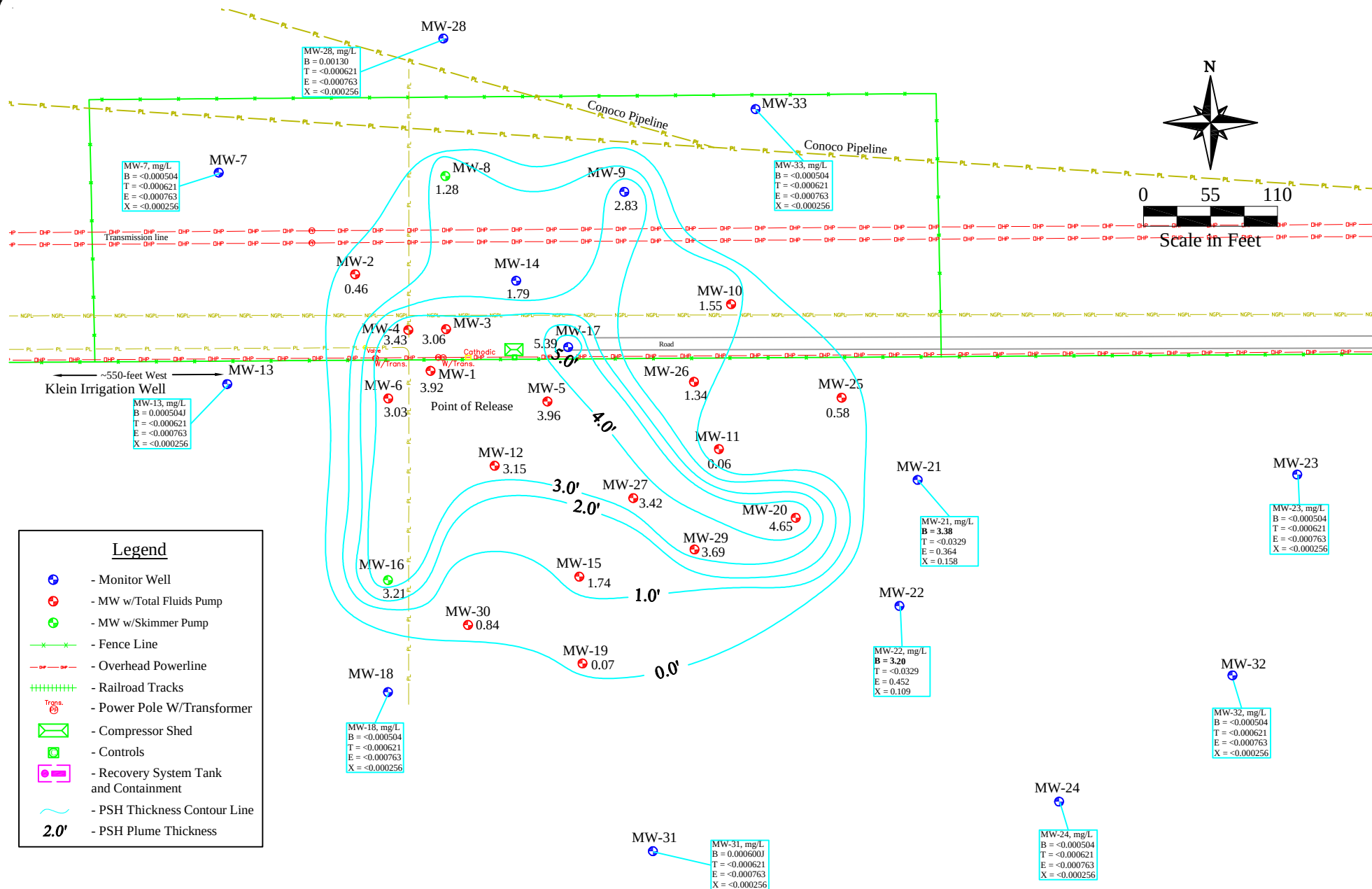


Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline
SRS # 2003-00017, NMOCD REF. # AP-054
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
Figure 3b - PSH Thickness & Groundwater Concentration Map - (06/08/2016)



Project # 700376.052.01

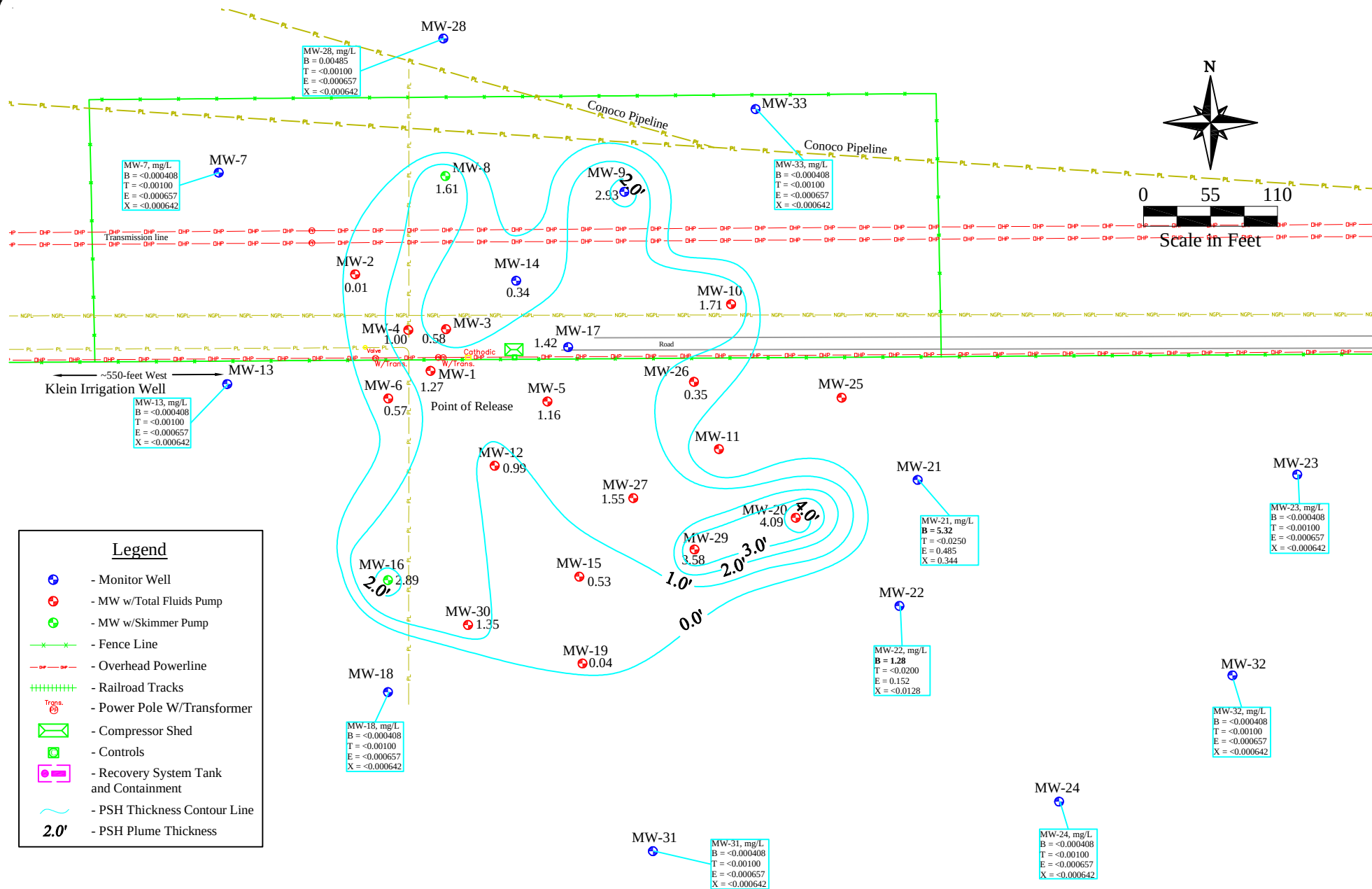


Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline
SRS # 2003-00017, NMOCD REF. # AP-054
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
Figure 3c - PSH Thickness & Groundwater Concentration Map - (09/21/2016)



Project # 700376.052.01



Date: 03/29/2017

Scale: 1" = 110'

Drawn By: K LW

Hobbs Junction Mainline

SRS # 2003-00017, NMOCD REF. # AP-054

SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/07/2016

APPENDIX B

Tables

Table 1 – Summary of Historical Fluid Level Measurements

Table 2 – Summary of Groundwater Analytical Data – BTEX

Table 3 – Summary of Historical Analytical Data – PAH Supplement



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-1			Diameter: 4 in.	Screened Interval: 39 ft. to 54 ft.		TD: 54.19 ft.
	03/28/14	3678.50	45.53	41.40	4.13	3636.42
	05/29/14	3678.50	46.10	41.54	4.56	3636.21
	08/28/14	3678.50	44.26	41.85	2.41	3636.25
	01/09/15	3678.50	44.19	40.95	3.24	3637.02
	03/10/15	3678.50	45.05	41.37	3.68	3636.52
	07/02/15	3678.50	46.06	41.20	4.86	3636.50
	09/11/15	3678.50	46.05	41.60	4.45	3636.17
	12/14/15	3678.50	46.45	41.65	4.80	3636.06
	03/09/16	3678.50	45.50	41.71	3.79	3636.16
	06/08/16	3678.50	45.79	41.71	4.08	3636.12
	09/21/16	3678.50	45.90	41.98	3.92	3635.87
	12/07/16	3678.50	44.08	42.81	1.27	3635.48
MW-2			Diameter: 4 in.	Screened Interval: 38 ft. to 53 ft.		TD: 53.42 ft.
	03/28/14	3679.47	42.98	42.63	0.35	3636.78
	05/29/14	3679.47	42.85	42.83	0.02	3636.64
	08/28/14	3679.47	43.20	42.69	0.51	3636.70
	01/09/15	3679.47	43.95	41.88	2.07	3637.25
	03/10/15	3679.47	44.90	42.17	2.73	3636.85
	07/06/15	3679.47	44.22	42.53	1.69	3636.66
	09/11/15	3679.47	43.62	42.75	0.87	3636.58
	12/14/15	3679.47	43.20	42.76	0.44	3636.64
	03/09/16	3679.47	43.11	42.75	0.36	3636.66
	06/08/16	3679.47	43.60	42.84	0.76	3636.50
	09/21/16	3679.47	43.58	43.12	0.46	3636.27
	12/07/16	3679.47	43.49	43.48	0.01	3635.99
MW-3			Diameter: 4 in.	Screened Interval: 39 ft. to 54 ft.		TD: 54.69 ft.
	03/28/14	3679.81	46.26	42.84	3.42	3636.41
	05/29/14	3679.81	46.97	42.91	4.06	3636.23
	08/28/14	3679.81	44.35	43.45	0.90	3636.21
	01/09/15	3679.81	45.44	42.42	3.02	3636.89
	03/10/15	3679.81	46.21	42.71	3.50	3636.52
	07/06/15	3679.81	46.80	42.89	3.91	3636.27
	09/11/15	3679.81	46.10	43.21	2.89	3636.12
	12/14/15	3679.81	45.65	43.05	2.60	3636.33
	03/09/16	3679.81	45.47	43.32	2.15	3636.14
	06/08/16	3679.81	47.00	43.03	3.97	3636.12
	09/21/16	3679.81	46.50	43.44	3.06	3635.87
	12/07/16	3679.81	44.84	44.26	0.58	3635.45
MW-4			Diameter: 4 in.	Screened Interval: 39 ft. to 54 ft.		TD: 54.62 ft.
	03/28/14	3679.64	46.00	42.50	3.50	3636.56
	05/29/14	3679.64	46.60	42.59	4.01	3636.39
	08/28/14	3679.64	44.95	42.88	2.07	3636.42
	01/09/15	3679.64	44.80	42.12	2.68	3637.08
	03/10/15	3679.64	45.60	42.45	3.15	3636.67
	07/06/15	3679.64	46.06	42.61	3.45	3636.46
	09/11/15	3679.64	45.98	42.80	3.18	3636.32
	12/14/15	3679.64	45.85	42.75	3.10	3636.38
	03/09/16	3679.64	45.58	43.88	1.70	3635.48
	06/08/16	3679.64	46.06	42.82	3.24	3636.29
	09/21/16	3679.64	46.46	43.03	3.43	3636.04
	12/07/16	3679.64	44.81	43.81	1.00	3635.66



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: 40 ft. to 55 ft.		TD: 55 ft.
	03/28/14	3679.26	45.52	42.99	2.53	3635.85
	05/29/14	3679.26	47.65	42.75	4.90	3635.70
	08/28/14	3679.26	45.75	43.12	2.63	3635.71
	01/09/15	3679.26	46.40	42.18	4.22	3636.38
	03/10/15	3679.26	46.70	42.60	4.10	3635.98
	07/06/15	3679.26	47.07	42.85	4.22	3635.71
	09/11/15	3679.26	46.07	43.22	2.85	3635.57
	12/14/15	3679.26	43.96	43.00	0.96	3636.10
	03/09/16	3679.26	46.00	43.20	2.80	3635.60
	06/08/16	3679.26	47.43	42.85	4.58	3635.65
	09/21/16	3679.26	47.23	43.27	3.96	3635.34
	12/07/16	3679.26	45.38	44.22	1.16	3634.85
MW-6			Diameter: 4 in.	Screened Interval: 40 ft. to 55 ft.		TD: 55 ft.
	03/28/14	3680.63	44.82	44.00	0.82	3636.49
	05/29/14	3680.63	45.30	44.13	1.17	3636.31
	08/28/14	3680.63	47.52	43.60	3.92	3636.38
	01/09/15	3680.63	46.71	43.00	3.71	3637.02
	03/10/15	3680.63	46.77	43.45	3.32	3636.63
	07/06/15	3680.63	46.56	43.78	2.78	3636.39
	09/11/15	3680.63	45.79	44.13	1.66	3636.23
	12/14/15	3680.63	46.28	44.00	2.28	3636.25
	03/09/16	3680.63	45.49	44.17	1.32	3636.24
	06/08/16	3680.63	47.45	43.80	3.65	3636.23
	09/21/16	3680.63	47.18	44.15	3.03	3635.98
	12/07/16	3680.63	45.51	44.94	0.57	3635.60
MW-7			Diameter: 2 in.	Screened Interval: 38 ft. to 53 ft.		TD: 53 ft.
	03/28/14	3679.85	42.18	-	-	3637.67
	05/29/14	3679.85	42.61	-	-	3637.24
	08/28/14	3679.85	42.58	-	-	3637.27
	01/09/15	3679.85	41.99	-	-	3637.86
	03/10/15	3679.85	42.10	-	-	3637.75
	07/02/15	3679.85	42.62	-	-	3637.23
	09/11/15	3679.85	42.61	-	-	3637.24
	12/14/15	3679.85	42.60	-	-	3637.25
	03/09/16	3679.85	42.67	-	-	3637.18
	06/08/16	3679.85	42.71	-	-	3637.14
	09/21/16	3679.85	42.88	-	-	3636.97
	12/07/16	3679.85	43.10	-	-	3636.75
MW-8			Diameter: 2 in.	Screened Interval: 35 ft. to 50 ft.		TD: 49.97 ft.
	03/28/14	3679.07	44.71	42.18	2.53	3636.47
	05/29/14	3679.07	44.19	42.50	1.69	3636.29
	08/28/14	3679.07	44.04	42.47	1.57	3636.34
	01/09/15	3679.07	43.53	41.86	1.67	3636.93
	03/10/15	3679.07	44.08	42.22	1.86	3636.54
	07/03/15	3679.07	43.45	42.69	0.76	3636.25
	09/11/15	3679.07	43.55	42.69	0.86	3636.24
	12/14/15	3679.07	43.59	42.62	0.97	3636.29
	03/09/16	3679.07	43.74	42.65	1.09	3636.24
	06/08/16	3679.07	43.72	42.76	0.96	3636.15
	09/21/16	3679.07	44.22	42.94	1.28	3635.92
	12/07/16	3679.07	44.80	43.19	1.61	3635.61



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: <u>2</u> in.	Screened Interval: <u>37</u> ft. to <u>52</u> ft.		TD: <u>52</u> ft.
	03/28/14	3678.76	42.80	-	-	3635.96
	05/29/14	3678.76	43.21	43.20	0.01	3635.56
	08/28/14	3678.76	43.40	43.17	0.23	3635.55
	01/09/15	3678.76	43.42	42.44	0.98	3636.16
	03/10/15	3678.76	44.24	42.75	1.49	3635.76
	07/03/15	3678.76	42.95	42.71	0.24	3636.01
	09/11/15	3678.76	44.75	43.06	1.69	3635.42
	12/14/15	3678.76	44.90	43.00	1.90	3635.45
	03/09/16	3678.76	45.26	43.00	2.26	3635.39
	06/08/16	3678.76	45.72	42.92	2.80	3635.38
	09/21/16	3678.76	46.00	43.17	2.83	3635.12
	12/07/16	3678.76	46.42	43.49	2.93	3634.79
MW-10			Diameter: <u>2</u> in.	Screened Interval: <u>37</u> ft. to <u>52</u> ft.		TD: <u>52</u> ft.
	03/28/14	3678.36	43.43	43.17	0.26	3635.15
	05/29/14	3678.36	44.51	43.10	1.41	3635.03
	08/28/14	3678.36	43.40	43.31	0.09	3635.04
	01/09/15	3678.36	43.46	42.52	0.94	3635.68
	03/10/15	3678.36	45.30	42.65	2.65	3635.27
	07/06/15	3678.36	43.58	43.22	0.36	3635.08
	09/11/15	3678.36	44.19	43.29	0.90	3634.92
	12/14/15	3678.36	44.21	43.25	0.96	3634.95
	03/09/16	3678.36	45.35	43.10	2.25	3634.89
	06/08/16	3678.36	44.52	43.25	1.27	3634.90
	09/21/16	3678.36	45.02	43.47	1.55	3634.63
	12/07/16	3678.36	45.53	43.82	1.71	3634.26
MW-11			Diameter: <u>4</u> in.	Screened Interval: <u>36</u> ft. to <u>51</u> ft.		TD: <u>51</u> ft.
	03/28/14	3678.03	43.25	43.05	0.20	3634.95
	05/29/14	3678.03	43.28	43.18	0.10	3634.83
	08/28/14	3678.03	43.25	43.15	0.10	3634.86
	01/09/15	3678.03	43.90	42.18	1.72	3635.57
	03/10/15	3678.03	43.37	42.78	0.59	3635.15
	07/06/15	3678.03	43.15	43.10	0.05	3634.92
	09/11/15	3678.03	43.30	43.25	0.05	3634.77
	12/14/15	3678.03	43.28	43.22	0.06	3634.80
	03/09/16	3678.03	43.29	43.26	0.03	3634.77
	06/08/16	3678.03	44.64	43.06	1.58	3634.71
	09/21/16	3678.03	43.60	43.54	0.06	3634.48
	12/07/16	3678.03	44.01	-	-	3634.02
MW-12			Diameter: <u>4</u> in.	Screened Interval: <u>36</u> ft. to <u>51</u> ft.		TD: <u>51</u> ft.
	03/28/14	3679.63	48.57	42.89	5.68	3635.80
	05/29/14	3679.63	48.50	43.05	5.45	3635.68
	08/28/14	3679.63	43.97	43.79	0.18	3635.81
	01/09/15	3679.63	45.90	42.70	3.20	3636.40
	03/10/15	3679.63	45.75	43.17	2.58	3636.03
	07/06/15	3679.63	46.86	43.18	3.68	3635.84
	09/11/15	3679.63	46.15	43.55	2.60	3635.65
	12/14/15	3679.63	46.55	43.30	3.25	3635.79
	03/09/16	3679.63	45.68	43.58	2.10	3635.70
	06/08/16	3679.63	47.40	43.20	4.20	3635.74
	09/21/16	3679.63	46.85	43.70	3.15	3635.41
	12/07/16	3679.63	45.55	44.56	0.99	3634.91



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: <u>2</u> in.	Screened Interval: <u>36.3</u> ft. to <u>51.3</u> ft.		TD: <u>51.27</u> ft.
	03/28/14	3681.42	43.95	-	-	3637.47
	05/29/14	3681.42	44.43	-	-	3636.99
	08/28/14	3681.42	44.38	-	-	3637.04
	01/09/15	3681.42	43.73	-	-	3637.69
	03/10/15	3681.42	43.87	-	-	3637.55
	07/02/15	3681.42	44.46	-	-	3636.96
	09/11/15	3681.42	44.42	-	-	3637.00
	12/14/15	3681.42	44.40	-	-	3637.02
	03/09/16	3681.42	44.45	-	-	3636.97
	06/08/16	3681.42	44.50	-	-	3636.92
	09/21/16	3681.42	44.69	-	-	3636.73
	12/07/16	3681.42	44.93	-	-	3636.49
MW-14			Diameter: <u>4</u> in.	Screened Interval: <u>36</u> ft. to <u>51</u> ft.		TD: <u>51</u> ft.
	03/28/14	3679.00	47.47	42.30	5.17	3635.85
	05/29/14	3679.00	46.61	42.41	4.20	3635.90
	08/28/14	3679.00	47.73	42.41	5.32	3635.71
	01/09/15	3679.00	45.60	42.05	3.55	3636.36
	03/10/15	3679.00	45.90	42.47	3.43	3635.96
	07/03/15	3679.00	44.27	43.33	0.94	3635.51
	09/11/15	3679.00	44.72	43.18	1.54	3635.57
	12/14/15	3679.00	45.20	43.00	2.20	3635.64
	03/09/16	3679.00	44.65	43.15	1.50	3635.60
	06/08/16	3679.00	46.78	42.72	4.06	3635.61
	09/21/16	3679.00	45.15	43.36	1.79	3635.34
	12/07/16	3679.00	44.33	43.99	0.34	3634.95
MW-15			Diameter: <u>4</u> in.	Screened Interval: <u>34</u> ft. to <u>49</u> ft.		TD: <u>49.03</u> ft.
	03/28/14	3674.92	40.70	39.41	1.29	3635.30
	05/29/14	3674.92	40.40	39.75	0.65	3635.06
	08/28/14	3674.92	41.49	39.40	2.09	3635.18
	01/09/15	3674.92	41.75	38.50	3.25	3635.88
	03/10/15	3674.92	42.05	39.00	3.05	3635.42
	07/06/15	3674.92	41.25	39.15	2.10	3635.42
	09/11/15	3674.92	41.58	39.97	1.61	3634.68
	12/14/15	3674.92	41.35	39.55	1.80	3635.07
	03/09/16	3674.92	40.82	39.72	1.10	3635.02
	06/08/16	3674.92	42.91	39.24	3.67	3635.07
	09/21/16	3674.92	41.58	39.84	1.74	3634.79
	12/07/16	3674.92	41.06	40.53	0.53	3634.30
MW-16			Diameter: <u>4</u> in.	Screened Interval: <u>33</u> ft. to <u>48</u> ft.		TD: <u>48</u> ft.
	03/28/14	3676.86	43.58	40.31	3.27	3636.01
	05/29/14	3676.86	42.95	40.70	2.25	3635.79
	08/28/14	3676.86	43.23	39.52	3.71	3636.73
	01/09/15	3676.86	42.45	39.92	2.53	3636.52
	03/10/15	3676.86	43.05	40.33	2.72	3636.08
	07/06/15	3676.86	43.10	41.60	1.50	3635.01
	09/11/15	3676.86	42.91	40.80	2.11	3635.71
	12/14/15	3676.86	43.40	40.65	2.75	3635.76
	03/09/16	3676.86	43.81	40.61	3.20	3635.72
	06/08/16	3676.86	43.60	40.70	2.90	3635.68
	09/21/16	3676.86	44.10	40.89	3.21	3635.44
	12/07/16	3676.86	44.20	41.31	2.89	3635.07



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: <u>4</u> in.	Screened Interval: <u>36</u> ft. to <u>51</u> ft.		TD: <u>51</u> ft.
	03/28/14	3679.01	Block	-	-	Block
	05/29/14	3679.01	48.29	42.40	5.89	3635.64
	08/28/14	3679.01	48.26	42.68	5.58	3635.41
	01/09/15	3679.01	46.47	42.22	4.25	3636.09
	03/10/15	3679.01	46.75	42.63	4.12	3635.70
	07/06/15	3679.01	47.51	42.76	4.75	3635.47
	09/11/15	3679.01	47.15	43.07	4.08	3635.27
	12/14/15	3679.01	47.95	42.81	5.14	3635.35
	03/09/16	3679.01	46.20	43.18	3.02	3635.33
	06/08/16	3679.01	48.02	42.83	5.19	3635.32
	09/21/16	3679.01	48.51	43.12	5.39	3635.00
	12/07/16	3679.01	45.56	44.14	1.42	3634.64
MW-18			Diameter: <u>2</u> in.	Screened Interval: <u>30</u> ft. to <u>45</u> ft.		TD: <u>45</u> ft.
	03/28/14	3675.68	39.28	-	-	3636.40
	05/29/14	3675.68	39.79	-	-	3635.89
	08/28/14	3675.68	39.68	-	-	3636.00
	01/09/15	3675.68	39.50	-	-	3636.18
	03/10/15	3675.68	39.21	-	-	3636.47
	07/02/15	3675.68	39.75	-	-	3635.93
	09/11/15	3675.68	39.76	-	-	3635.92
	12/14/15	3675.68	39.72	-	-	3635.96
	03/09/16	3675.68	39.79	-	-	3635.89
	06/08/16	3675.68	39.78	-	-	3635.90
	09/21/16	3675.68	40.00	-	-	3635.68
	12/07/16	3675.68	40.31	-	-	3635.37
MW-19			Diameter: <u>2</u> in.	Screened Interval: <u>31</u> ft. to <u>46</u> ft.		TD: <u>46</u> ft.
	03/28/14	3674.96	41.78	38.42	3.36	3635.99
	05/29/14	3674.96	41.94	39.34	2.60	3635.19
	08/28/14	3674.96	39.90	39.58	0.32	3635.33
	01/09/15	3674.96	39.57	38.91	0.66	3635.94
	03/10/15	3674.96	39.90	39.33	0.57	3635.54
	07/06/15	3674.96	39.85	39.55	0.30	3635.36
	09/11/15	3674.96	39.82	39.80	0.02	3635.16
	12/14/15	3674.96	39.72	39.70	0.02	3635.26
	03/09/16	3674.96	40.30	39.70	0.60	3635.16
	06/08/16	3674.96	40.78	39.60	1.18	3635.17
	09/21/16	3674.96	40.15	40.08	0.07	3634.87
	12/07/16	3674.96	40.52	40.48	0.04	3634.47
MW-20			Diameter: <u>2</u> in.	Screened Interval: <u>31</u> ft. to <u>46</u> ft.		TD: <u>46</u> ft.
	03/28/14	3674.38	40.18	39.57	0.61	3634.71
	05/29/14	3674.38	41.40	39.53	1.87	3634.54
	08/28/14	3674.38	NG	-	-	NG
	01/09/15	3674.38	40.72	38.80	1.92	3635.26
	07/06/15	3674.38	40.68	39.62	1.06	3634.59
	09/11/15	3674.38	39.95	39.82	0.13	3634.54
	12/14/15	3674.38	40.75	39.75	1.00	3634.46
	03/09/16	3674.38	40.82	39.72	1.10	3634.48
	06/08/16	3674.38	43.39	39.18	4.21	3634.51
	09/21/16	3674.38	44.17	39.52	4.65	3634.09
	12/07/16	3674.38	44.08	39.99	4.09	3633.72



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: <u>2</u> in.	Screened Interval: <u>23</u> ft. to <u>53</u> ft.		TD: <u>53.04</u> ft.
	03/28/14	3674.38	39.66	-	-	3634.72
	05/29/14	3674.38	40.15	-	-	3634.23
	08/28/14	3674.38	40.03	-	-	3634.35
	01/09/15	3674.38	39.46	-	-	3634.92
	03/10/15	3674.38	39.59	-	-	3634.79
	07/02/15	3674.38	40.15	-	-	3634.23
	09/11/15	3674.38	40.18	-	-	3634.20
	12/14/15	3674.38	40.18	-	-	3634.20
	03/09/16	3674.38	40.21	-	-	3634.17
	06/08/16	3674.38	40.15	-	-	3634.23
	09/21/16	3674.38	40.40	-	-	3633.98
	12/07/16	3674.38	40.75	-	-	3633.63
MW-22			Diameter: <u>2</u> in.	Screened Interval: <u>20</u> ft. to <u>50</u> ft.		TD: <u>50</u> ft.
	03/28/14	3674.07	39.42	-	-	3634.65
	05/29/14	3674.07	39.98	-	-	3634.09
	08/28/14	3674.07	39.81	-	-	3634.26
	01/09/15	3674.07	39.25	-	-	3634.82
	03/10/15	3674.07	39.39	-	-	3634.68
	07/02/15	3674.07	39.22	-	-	3634.85
	09/11/15	3674.07	39.98	-	-	3634.09
	12/14/15	3674.07	39.95	-	-	3634.12
	03/09/16	3674.07	40.10	-	-	3633.97
	06/08/16	3674.07	39.95	-	-	3634.12
	09/21/16	3674.07	40.20	-	-	3633.87
	12/07/16	3674.07	40.55	-	-	3633.52
MW-23			Diameter: <u>2</u> in.	Screened Interval: <u>29</u> ft. to <u>49</u> ft.		TD: <u>49</u> ft.
	03/28/14	3672.39	39.18	-	-	3633.21
	05/29/14	3672.39	39.60	-	-	3632.79
	08/28/14	3672.39	39.49	-	-	3632.90
	01/09/15	3672.39	39.07	-	-	3633.32
	03/10/15	3672.39	39.25	-	-	3633.14
	07/02/15	3672.39	39.53	-	-	3632.86
	09/11/15	3672.39	39.65	-	-	3632.74
	12/14/15	3672.39	39.70	-	-	3632.69
	03/09/16	3672.39	39.80	-	-	3632.59
	06/08/16	3672.39	39.77	-	-	3632.62
	09/21/16	3672.39	40.02	-	-	3632.37
	12/07/16	3672.39	40.18	-	-	3632.21
MW-24			Diameter: <u>2</u> in.	Screened Interval: <u>30</u> ft. to <u>50</u> ft.		TD: <u>50</u> ft.
	03/28/14	3672.79	39.08	-	-	3633.71
	05/29/14	3672.79	39.54	-	-	3633.25
	08/28/14	3672.79	39.40	-	-	3633.39
	01/09/15	3672.79	38.94	-	-	3633.85
	03/10/15	3672.79	39.10	-	-	3633.69
	07/02/15	3672.79	39.51	-	-	3633.28
	09/11/15	3672.79	39.55	-	-	3633.24
	12/14/15	3672.79	39.62	-	-	3633.17
	03/09/16	3672.79	39.66	-	-	3633.13
	06/08/16	3672.79	39.64	-	-	3633.15
	09/21/16	3672.79	39.89	-	-	3632.90
	12/07/16	3672.79	40.06	-	-	3632.73



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

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: 37 ft. to 57 ft.		TD: 57.03 ft.
	03/28/14	3676.83	42.30	41.85	0.45	3634.91
	05/29/14	3676.83	42.55	41.95	0.60	3634.78
	08/28/14	3676.83	42.61	41.90	0.71	3634.81
	01/09/15	3676.83	42.03	41.23	0.80	3635.47
	03/10/15	3676.83	42.31	41.67	0.64	3635.05
	07/06/15	3676.83	42.25	41.85	0.40	3634.91
	09/11/15	3676.83	42.43	42.08	0.35	3634.69
	12/14/15	3676.83	42.45	42.00	0.45	3634.76
	03/09/16	3676.83	42.55	42.06	0.49	3634.69
	06/08/16	3676.83	Block	-	-	Block
	09/21/16	3676.83	42.91	42.33	0.58	3634.40
	12/07/16	3676.83	42.80	-	-	3634.03
MW-26			Diameter: 4 in.	Screened Interval: 36.5 ft. to 56.5 ft.		TD: 56.48 ft.
	03/28/14	3677.17	43.58	41.60	1.98	3635.24
	05/29/14	3677.17	44.25	41.60	2.65	3635.13
	08/28/14	3677.17	43.04	42.80	0.24	3634.33
	01/09/15	3677.17	42.65	41.07	1.58	3635.84
	03/10/15	3677.17	43.56	41.37	2.19	3635.44
	07/06/15	3677.17	42.90	41.79	1.11	3635.20
	09/11/15	3677.17	42.95	41.96	0.99	3635.05
	12/14/15	3677.17	43.05	41.89	1.16	3635.09
	03/09/16	3677.17	43.46	41.88	1.58	3635.03
	06/08/16	3677.17	44.67	41.56	3.11	3635.10
	09/21/16	3677.17	43.50	42.16	1.34	3634.79
	12/07/16	3677.17	43.12	42.77	0.35	3634.34
MW-27			Diameter: in.	Screened Interval: 34.5 ft. to 54.5 ft.		TD: 54.53 ft.
	03/28/14	3674.98	43.03	38.89	4.14	3635.41
	05/29/14	3674.98	40.71	39.63	1.08	3635.17
	08/28/14	3674.98	42.71	39.09	3.62	3635.29
	01/09/15	3674.98	41.63	38.51	3.12	3635.96
	03/10/15	3674.98	41.90	38.98	2.92	3635.52
	07/06/15	3674.98	41.83	39.81	2.02	3634.84
	09/11/15	3674.98	41.55	39.50	2.05	3635.14
	12/14/15	3674.98	43.25	39.05	4.20	3635.24
	03/09/16	3674.98	41.91	39.41	2.50	3635.16
	06/08/16	3674.98	43.25	39.10	4.15	3635.20
	09/21/16	3674.98	42.95	39.53	3.42	3634.89
	12/07/16	3674.98	41.89	40.34	1.55	3634.38
MW-28			Diameter: 2 in.	Screened Interval: 40 ft. to 60 ft.		TD: 62.12 ft.
	07/02/15	3679.86	43.36	-	-	3636.50
	09/11/15	3679.86	43.36	-	-	3636.50
	12/14/15	3679.86	43.88	-	-	3635.98
	03/09/16	3679.86	43.43	-	-	3636.43
	06/08/16	3679.86	43.45	-	-	3636.41
	09/21/16	3679.86	43.65	-	-	3636.21
	12/07/16	3679.86	43.85	-	-	3636.01
MW-29			Diameter: 4 in.	Screened Interval: 40 ft. to 60 ft.		TD: 59.1 ft.
	07/02/15	3674.37	39.61	-	-	3634.76
	09/11/15	3674.37	Block	-	-	Block
	12/14/15	3674.37	Block	-	-	Block
	03/09/16	3674.37	39.49	-	-	3634.88
	06/08/16	3674.37	41.24	39.18	2.06	3634.68
	09/21/16	3674.37	42.91	39.22	3.69	3634.23
	12/07/16	3674.37	43.30	39.72	3.58	3633.76



Table 1 - Summary of Historical Fluid Level Measurements
Hobbs Junction Main Line
SRS #: 2003-0017

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-30			Diameter: <u>4</u> in.	Screened Interval: <u>40</u> ft. to <u>60</u> ft.		TD: <u>60.3</u> ft.
	07/02/15	3675.39	39.96	-	-	3635.43
	09/11/15	3675.39	39.98	39.97	0.01	3635.42
	12/14/15	3675.39	39.95	39.90	0.05	3635.48
	03/09/16	3675.39	39.96	39.95	0.01	3635.44
	06/08/16	3675.39	42.30	39.46	2.84	3635.22
	09/21/16	3675.39	40.94	40.10	0.84	3635.08
	12/07/16	3675.39	41.93	40.58	1.35	3634.47
MW-31			Diameter: <u>2</u> in.	Screened Interval: <u>40</u> ft. to <u>60</u> ft.		TD: <u>59.51</u> ft.
	07/02/15	3674.36	39.55	-	-	3634.81
	09/11/15	3674.36	39.60	-	-	3634.76
	12/14/15	3674.36	39.55	-	-	3634.81
	03/09/16	3674.36	39.60	-	-	3634.76
	06/08/16	3674.36	40.55	-	-	3633.81
	09/21/16	3674.36	39.80	-	-	3634.56
	12/07/16	3674.36	40.20	-	-	3634.16
MW-32			Diameter: <u>2</u> in.	Screened Interval: <u>40</u> ft. to <u>60</u> ft.		TD: <u>57.2</u> ft.
	07/02/15	3672.48	39.52	-	-	3632.96
	09/11/15	3672.48	39.50	-	-	3632.98
	12/14/15	3672.48	39.58	-	-	3632.90
	03/09/16	3672.48	39.62	-	-	3632.86
	06/08/16	3672.48	39.63	-	-	3632.85
	09/21/16	3672.48	39.85	-	-	3632.63
	12/07/16	3672.48	40.04	-	-	3632.44
MW-33			Diameter: <u>2</u> in.	Screened Interval: <u>40</u> ft. to <u>60</u> ft.		TD: <u>63.85</u> ft.
	07/02/15	3679.19	43.98	-	-	3635.21
	09/11/15	3679.19	43.94	-	-	3635.25
	12/14/15	3679.19	44.01	-	-	3635.18
	03/09/16	3679.19	44.07	-	-	3635.12
	06/08/16	3679.19	44.08	-	-	3635.11
	09/21/16	3679.19	44.28	-	-	3634.91
	12/07/16	3679.19	44.53	-	-	3634.66

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
Hobbs Junction Main Line
SRS #: 2003-0017

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-7	03/28/14	<0.000238	<0.000181	<0.000247	<0.000189
	01/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/15	<0.00100	<0.00100	<0.00100	<0.00100
	07/02/15	0.00160	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000400 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-9	03/28/14	0.00230	0.00190	0.00940	0.0143
MW-13	03/28/14	<0.000238	<0.000181	<0.000247	<0.000189
	01/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/15	<0.00100	<0.00100	<0.00100	<0.00100
	07/02/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	<0.000223	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	0.000504 J	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-18	03/28/14	<0.000238	<0.000181	<0.000247	<0.000189
	05/29/14	<0.00100	<0.00100	<0.00100	0.00300
	08/28/14	<0.00100	<0.00100	<0.00100	<0.00100
	01/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/11/15	0.00930	<0.00100	0.00360	0.00140
	07/02/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000400 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642



Table 2 - Summary of Groundwater Analytical Results - BTEX
Hobbs Junction Main Line
SRS #: 2003-0017

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-21	03/28/14	13.0	<0.00905	0.742	0.275
	05/29/14	3.49	<0.00100	0.160	0.00300
	08/28/14	18.4	<0.00500	1.24	0.412
	01/13/15	15.4	<0.0500	1.23	0.799
	03/10/15	2.14	<0.200	0.380	<0.200
	07/02/15	2.24	<0.0200	0.214	0.0414
	09/11/15	1.82	<0.0500	0.162	<0.0500
	12/15/15	1.26	<0.0500	0.255	<0.0500
	03/09/16	1.75	<0.00476	0.294	0.0383
	06/08/16	1.74	<0.0248	0.280	0.0467
	09/21/16	3.38	<0.0329	0.364	0.158
	12/07/16	5.32	<0.0250	0.485	0.344
MW-22	03/28/14	14.0	<0.00905	0.811	<0.00945
	05/29/14	4.36	<0.00100	<0.00100	0.00300
	08/28/14	11.8	<0.00500	0.824	<0.0500
	01/13/15	8.36	<0.0500	0.785	0.393
	03/10/15	6.80	<0.200	0.705	<0.200
	07/02/15	8.38	<0.0500	0.945	<0.0500
	09/11/15	3.25	<0.100	0.418	<0.100
	12/15/15	1.47	<0.0200	0.203	<0.0200
	03/09/16	2.05	<0.00476	0.304	<0.00486
	06/08/16	1.88	<0.0248	0.247	<0.0102
	09/21/16	3.20	<0.0329	0.452	0.109
	12/07/16	1.28	<0.0200	0.152	<0.0128



Table 2 - Summary of Groundwater Analytical Results - BTEX
Hobbs Junction Main Line
SRS #: 2003-0017

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-23	03/28/14	<0.000238	<0.000181	<0.000247	<0.000189
	05/29/14	<0.00100	<0.00100	<0.00100	0.00300
	08/28/14	<0.00100	<0.00100	<0.00100	<0.00100
	01/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/15	<0.00100	<0.00100	<0.00100	<0.00100
	07/02/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	0.00140	<0.00100	0.00530	<0.00100
	03/09/16	0.000500 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-24	03/28/14	<0.000238	<0.000181	<0.000247	<0.000189
	05/29/14	<0.00100	<0.00100	<0.00100	0.00300
	08/28/14	<0.00100	<0.00100	<0.00100	<0.00100
	01/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/15	<0.00100	<0.00100	<0.00100	<0.00100
	07/02/15	0.00110	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000300 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-28	07/02/15	0.00740	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000900 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	0.00130	<0.000621	<0.000763	<0.000256
	12/07/16	0.00485	<0.00100	<0.000657	<0.000642
MW-29	07/02/15	1.50	0.391	0.115	0.129



Table 2 - Summary of Groundwater Analytical Results - BTEX
Hobbs Junction Main Line
SRS #: 2003-0017

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-30	07/02/15	5.62	3.92	0.634	0.792
MW-31	07/02/15	0.00120	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000500 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	0.000600 J	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-32	07/21/15	0.00110	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	<0.000223	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-33	07/02/15	0.00400	<0.00100	<0.00100	<0.00100
	09/11/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/15/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/09/16	0.000700 J	<0.000238	<0.000238	<0.000243
	06/08/16	<0.000504	<0.000621	<0.000763	<0.000256
	09/21/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/07/16	<0.000408	<0.00100	<0.000657	<0.000642

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



Table 3 - Summary of Groundwater Analytical Results - PAH Supplement
Hobbs Junction Main Line
SRS #: 2003-0017

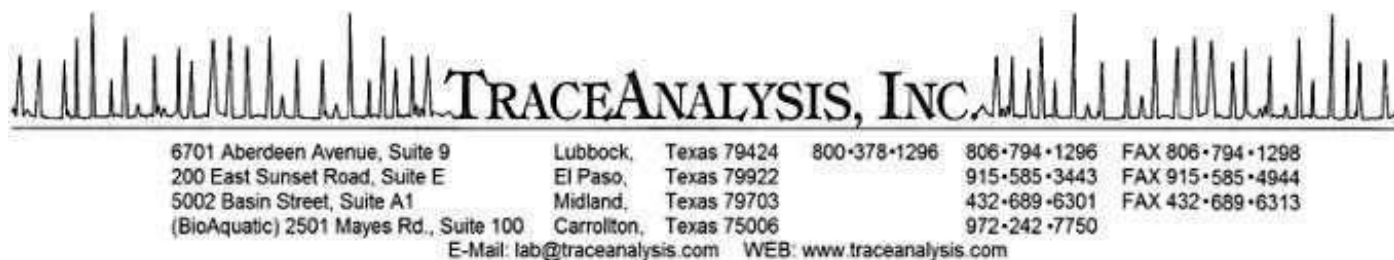
Sample Designation	Date Sampled	Concentration (mg/L)																		
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
MW-21	05/29/14	0.0101	0.00649	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000868	<0.000200	0.000391	<0.000200	0.0185	<0.000200	<0.000200
	03/09/16	0.000509	0.000191 J	<0.0000410	<0.0000718	<0.0000396	<0.0000890	<0.0000516	<0.0000877	<0.0000641	<0.0000693	<0.000100	<0.0000694	0.000199 J	<0.0000788	<0.0000973	<0.0000663	0.000362	<0.0000637	<0.0000512
MW-22	05/29/14	0.00260	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000297	<0.000200	<0.000200	<0.000200	0.000237	<0.000200	<0.000200
	03/09/16	0.000506	<0.0000521	<0.0000335	<0.0000587	<0.0000324	<0.0000728	<0.0000422	<0.0000717	<0.0000524	<0.0000567	<0.0000819	<0.0000568	<0.0000613	<0.0000644	<0.0000796	<0.0000542	0.000138 J	<0.0000521	<0.0000419
MW-28	09/11/15	0.000225	0.000268	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	0.000252	<0.000199	<0.000199
	03/09/16	<0.0000745	<0.0000580	<0.0000373	<0.0000653	<0.0000361	<0.0000810	<0.0000470	<0.0000798	<0.0000583	<0.0000630	<0.0000912	<0.0000632	<0.0000682	<0.0000717	<0.0000886	<0.0000604	<0.0000737	<0.0000580	<0.0000466
MW-31	09/11/15	<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
	03/09/16	<0.0000721	<0.0000561	<0.0000361	<0.0000632	<0.0000349	<0.0000784	<0.0000454	<0.0000772	<0.0000564	<0.0000610	<0.0000882	<0.0000611	<0.0000660	<0.0000694	<0.0000856	<0.0000584	<0.0000713	<0.0000561	<0.0000451
MW-32	07/21/15	<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
	03/09/16	<0.0000850	<0.0000662	<0.0000426	<0.0000745	<0.0000412	<0.0000924	<0.0000536	<0.0000910	<0.0000665	<0.0000719	<0.000104	<0.0000720	<0.0000778	<0.0000818	<0.000101	<0.0000688	<0.0000841	<0.0000662	<0.0000532
MW-33	09/11/15	0.000225	0.000255	<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
	03/09/16	<0.0000660	<0.0000513	<0.0000330	<0.0000578	<0.0000319	<0.0000717	<0.0000416	<0.0000706	<0.0000516	<0.0000558	<0.0000807	<0.0000559	<0.0000604	<0.0000635	<0.0000784	<0.0000534	<0.0000653	<0.0000513	<0.0000413

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 Chains of Custody Documentation



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: March 31, 2016

Work Order: 16031013



Project Location: Hobbs, NM
Project Name: Hobbs Junction Mainline
Project Number: 700376.052.02
SRS #: 2003-00017

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
415759	MW-7	water	2016-03-09	10:20	2016-03-10
415760	MW-28	water	2016-03-09	11:00	2016-03-10
415761	MW-33	water	2016-03-09	11:10	2016-03-10
415762	MW-32	water	2016-03-09	11:20	2016-03-10
415763	MW-24	water	2016-03-09	11:30	2016-03-10
415764	MW-31	water	2016-03-09	11:50	2016-03-10
415765	MW-18	water	2016-03-09	13:25	2016-03-10
415766	MW-13	water	2016-03-09	13:40	2016-03-10
415767	MW-23	water	2016-03-09	14:00	2016-03-10
415768	MW-21	water	2016-03-09	14:15	2016-03-10
415769	MW-22	water	2016-03-09	14:30	2016-03-10

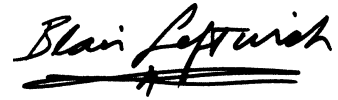
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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.

Notes:

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

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a prominent horizontal line underneath the name.

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

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Case Narrative

Samples for project Hobbs Junction Mainline were received by TraceAnalysis, Inc. on 2016-03-10 and assigned to work order 16031013. Samples for work order 16031013 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	109071	2016-03-11 at 11:05	128795	2016-03-10 at 02:43
BTEX	S 8021B	109098	2016-03-11 at 14:54	128826	2016-03-11 at 14:54
PAH	S 8270D	109412	2016-03-16 at 15:00	129176	2016-03-31 at 11:27

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 16031013 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: 415759 - MW-7

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 128826
Prep Batch: 109098

Analytical Method: S 8021B
Date Analyzed: 2016-03-11
Sample Preparation: 2016-03-11

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	F	C	SDL	SQL	Method	Units	Dilution	SDL	SQL	MDL
			Based Result	Based Result	Blank Result				(Unadjusted)	(Unadjusted)
Benzene	J, Qr	1,2,3,4,5	0.000400	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	Qr, U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	Qr, U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	Qr, U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.101	mg/L	1	0.100	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.103	mg/L	1	0.100	103	70 - 120

Sample: 415760 - MW-28

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 128826
Prep Batch: 109098

Analytical Method: S 8021B
Date Analyzed: 2016-03-11
Sample Preparation: 2016-03-11

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	F	C	SDL	SQL	Method	Units	Dilution	SDL	SQL	MDL
			Based Result	Based Result	Blank Result				(Unadjusted)	(Unadjusted)
Benzene	J, Qr	1,2,3,4,5	0.000900	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	Qr, U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	Qr, U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	Qr, U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.101	mg/L	1	0.100	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.102	mg/L	1	0.100	102	70 - 120

Sample: 415760 - MW-28

Report Date: March 31, 2016
700376.052.02

Work Order: 16031013
Hobbs Junction Mainline

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Hobbs, NM

Laboratory: Lubbock
Analysis: PAH
QC Batch: 129176
Prep Batch: 109412

Analytical Method: S 8270D
Date Analyzed: 2016-03-31
Sample Preparation: 2016-03-16

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	F	C	SDL	MQL	Method	Units	Dilution	SDL	MQL	MDL
			Based Result	Based Result	Blank Result				(Unadjusted)	(Unadjusted)
Naphthalene	U	1,2,3,4,5	<0.0000737	<0.000225	<0.0000737 mg/L	1.124	0.0000737	0.0002	6.56e-05	
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000580	<0.000225	<0.0000580 mg/L	1.124	0.0000580	0.0002	5.16e-05	
1-Methylnaphthalene	U	1	<0.0000745	<0.000225	<0.0000745 mg/L	1.124	0.0000745	0.0002	6.63e-05	
Acenaphthylene	U	1,2,3,4,5	<0.0000653	<0.000225	<0.0000653 mg/L	1.124	0.0000653	0.0002	5.81e-05	
Acenaphthene	U	1,2,3,4,5	<0.0000373	<0.000225	<0.0000373 mg/L	1.124	0.0000373	0.0002	3.32e-05	
Dibenzofuran	U	1,2,3,4,5	<0.0000682	<0.000225	<0.0000682 mg/L	1.124	0.0000682	0.0002	6.07e-05	
Fluorene	U	1,2,3,4,5	<0.0000886	<0.000225	<0.0000886 mg/L	1.124	0.0000886	0.0002	7.88e-05	
Anthracene	U	1,2,3,4,5	<0.0000361	<0.000225	<0.0000361 mg/L	1.124	0.0000361	0.0002	3.21e-05	
Phenanthrene	U	1,2,3,4,5	<0.0000580	<0.000225	<0.0000580 mg/L	1.124	0.0000580	0.0002	5.16e-05	
Fluoranthene	U	1,2,3,4,5	<0.0000717	<0.000225	<0.0000717 mg/L	1.124	0.0000717	0.0002	6.38e-05	
Pyrene	U	1,2,3,4,5	<0.0000466	<0.000225	<0.0000466 mg/L	1.124	0.0000466	0.0002	4.15e-05	
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000810	<0.000225	<0.0000810 mg/L	1.124	0.0000810	0.0002	7.21e-05	
Chrysene	U	1,2,3,4,5	<0.0000912	<0.000225	<0.0000912 mg/L	1.124	0.0000912	0.0002	8.11e-05	
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000798	<0.000225	<0.0000798 mg/L	1.124	0.0000798	0.0002	7.1e-05	
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000630	<0.000225	<0.0000630 mg/L	1.124	0.0000630	0.0002	5.61e-05	
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000470	<0.000225	<0.0000470 mg/L	1.124	0.0000470	0.0002	4.18e-05	
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000604	<0.000225	<0.0000604 mg/L	1.124	0.0000604	0.0002	5.37e-05	
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000632	<0.000225	<0.0000632 mg/L	1.124	0.0000632	0.0002	5.62e-05	
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000583	<0.000225	<0.0000583 mg/L	1.124	0.0000583	0.0002	5.19e-05	

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0621	mg/L	1.124	0.0800	78	10 - 120
2-Fluorobiphenyl			0.0893	mg/L	1.124	0.0800	112	35.9 - 120
Terphenyl-d14		Q _{sr}	0.121	mg/L	1.124	0.0800	151	23.2 - 120

Sample: 415761 - MW-33

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 128826
Prep Batch: 109098

Analytical Method: S 8021B
Date Analyzed: 2016-03-11
Sample Preparation: 2016-03-11

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	F	C	SDL	MQL	Method	Units	Dilution	SDL	MQL	MDL
			Based Result	Based Result	Blank Result				(Unadjusted)	(Unadjusted)
Benzene	J, Q _r	1,2,3,4,5	0.000700	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	Q _r , U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	Q _r , U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238

continued ...

Report Date: March 31, 2016
700376.052.02

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Hobbs Junction Mainline

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sample 415761 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Xylene	Qr,U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.101	mg/L	1	0.100	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.102	mg/L	1	0.100	102	70 - 120

Sample: 415761 - MW-33

Laboratory: Lubbock
Analysis: PAH
QC Batch: 129176
Prep Batch: 109412

Analytical Method: S 8270D
Date Analyzed: 2016-03-31
Sample Preparation: 2016-03-16

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Naphthalene	U	1,2,3,4,5	<0.0000653	<0.000199	<0.0000653	mg/L	0.995	0.0000653	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000513	<0.000199	<0.0000513	mg/L	0.995	0.0000513	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000660	<0.000199	<0.0000660	mg/L	0.995	0.0000660	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000578	<0.000199	<0.0000578	mg/L	0.995	0.0000578	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000330	<0.000199	<0.0000330	mg/L	0.995	0.0000330	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000604	<0.000199	<0.0000604	mg/L	0.995	0.0000604	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000784	<0.000199	<0.0000784	mg/L	0.995	0.0000784	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000319	<0.000199	<0.0000319	mg/L	0.995	0.0000319	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000513	<0.000199	<0.0000513	mg/L	0.995	0.0000513	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000635	<0.000199	<0.0000635	mg/L	0.995	0.0000635	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000413	<0.000199	<0.0000413	mg/L	0.995	0.0000413	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000717	<0.000199	<0.0000717	mg/L	0.995	0.0000717	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000807	<0.000199	<0.0000807	mg/L	0.995	0.0000807	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000706	<0.000199	<0.0000706	mg/L	0.995	0.0000706	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000558	<0.000199	<0.0000558	mg/L	0.995	0.0000558	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000416	<0.000199	<0.0000416	mg/L	0.995	0.0000416	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000534	<0.000199	<0.0000534	mg/L	0.995	0.0000534	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000559	<0.000199	<0.0000559	mg/L	0.995	0.0000559	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000516	<0.000199	<0.0000516	mg/L	0.995	0.0000516	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0857	mg/L	0.995	0.0800	107	10 - 120
2-Fluorobiphenyl			0.0912	mg/L	0.995	0.0800	114	35.9 - 120
Terphenyl-d14		Qsr	0.146	mg/L	0.995	0.0800	182	23.2 - 120

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Sample: 415762 - MW-32

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128795

Prep Batch: 109071

Analytical Method: S 8021B

Date Analyzed: 2016-03-10

Sample Preparation: 2016-03-10

Prep Method: S 5030B

Analyzed By: ST

Prepared By: ST

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.000223	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.103	mg/L	1	0.100	103	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.106	mg/L	1	0.100	106	70 - 120

Sample: 415762 - MW-32

Laboratory: Lubbock

Analysis: PAH

QC Batch: 129176

Prep Batch: 109412

Analytical Method: S 8270D

Date Analyzed: 2016-03-31

Sample Preparation: 2016-03-16

Prep Method: S 3510C

Analyzed By: MN

Prepared By: MN

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Naphthalene	U	1,2,3,4,5	<0.0000841	<0.000256	<0.0000841	mg/L	1.282	0.0000841	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000662	<0.000256	<0.0000662	mg/L	1.282	0.0000662	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000850	<0.000256	<0.0000850	mg/L	1.282	0.0000850	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000745	<0.000256	<0.0000745	mg/L	1.282	0.0000745	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000426	<0.000256	<0.0000426	mg/L	1.282	0.0000426	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000778	<0.000256	<0.0000778	mg/L	1.282	0.0000778	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.000101	<0.000256	<0.000101	mg/L	1.282	0.000101	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000412	<0.000256	<0.0000412	mg/L	1.282	0.0000412	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000662	<0.000256	<0.0000662	mg/L	1.282	0.0000662	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000818	<0.000256	<0.0000818	mg/L	1.282	0.0000818	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000532	<0.000256	<0.0000532	mg/L	1.282	0.0000532	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000924	<0.000256	<0.0000924	mg/L	1.282	0.0000924	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.000104	<0.000256	<0.000104	mg/L	1.282	0.000104	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000910	<0.000256	<0.0000910	mg/L	1.282	0.0000910	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000719	<0.000256	<0.0000719	mg/L	1.282	0.0000719	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000536	<0.000256	<0.0000536	mg/L	1.282	0.0000536	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000688	<0.000256	<0.0000688	mg/L	1.282	0.0000688	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000720	<0.000256	<0.0000720	mg/L	1.282	0.0000720	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000665	<0.000256	<0.0000665	mg/L	1.282	0.0000665	0.0002	5.19e-05

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Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	Qsr		0.107	mg/L	1.282	0.0800	134	10 - 120
2-Fluorobiphenyl	Qsr		0.102	mg/L	1.282	0.0800	128	35.9 - 120
Terphenyl-d14	Qsr		0.121	mg/L	1.282	0.0800	151	23.2 - 120

Sample: 415763 - MW-24

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128795

Prep Batch: 109071

Analytical Method: S 8021B

Date Analyzed: 2016-03-10

Sample Preparation: 2016-03-10

Prep Method: S 5030B

Analyzed By: ST

Prepared By: ST

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	0.000300	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.102	mg/L	1	0.100	102	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.103	mg/L	1	0.100	103	70 - 120

Sample: 415764 - MW-31

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128795

Prep Batch: 109071

Analytical Method: S 8021B

Date Analyzed: 2016-03-10

Sample Preparation: 2016-03-10

Prep Method: S 5030B

Analyzed By: ST

Prepared By: ST

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	0.000500	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.103	mg/L	1	0.100	103	71.6 - 120

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sample continued ...

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		5	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415764 - MW-31

Laboratory: Lubbock
Analysis: PAH
QC Batch: 129176
Prep Batch: 109412

Analytical Method: S 8270D
Date Analyzed: 2016-03-31
Sample Preparation: 2016-03-16

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Naphthalene	U	1,2,3,4,5	<0.0000713	<0.000217	<0.0000713	mg/L	1.087	0.0000713	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000561	<0.000217	<0.0000561	mg/L	1.087	0.0000561	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000721	<0.000217	<0.0000721	mg/L	1.087	0.0000721	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000632	<0.000217	<0.0000632	mg/L	1.087	0.0000632	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000361	<0.000217	<0.0000361	mg/L	1.087	0.0000361	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000660	<0.000217	<0.0000660	mg/L	1.087	0.0000660	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000856	<0.000217	<0.0000856	mg/L	1.087	0.0000856	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000349	<0.000217	<0.0000349	mg/L	1.087	0.0000349	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000561	<0.000217	<0.0000561	mg/L	1.087	0.0000561	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000694	<0.000217	<0.0000694	mg/L	1.087	0.0000694	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000451	<0.000217	<0.0000451	mg/L	1.087	0.0000451	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000784	<0.000217	<0.0000784	mg/L	1.087	0.0000784	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000882	<0.000217	<0.0000882	mg/L	1.087	0.0000882	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000772	<0.000217	<0.0000772	mg/L	1.087	0.0000772	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000610	<0.000217	<0.0000610	mg/L	1.087	0.0000610	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000454	<0.000217	<0.0000454	mg/L	1.087	0.0000454	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000584	<0.000217	<0.0000584	mg/L	1.087	0.0000584	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000611	<0.000217	<0.0000611	mg/L	1.087	0.0000611	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000564	<0.000217	<0.0000564	mg/L	1.087	0.0000564	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0520	mg/L	1.087	0.0800	65	10 - 120
2-Fluorobiphenyl			0.0764	mg/L	1.087	0.0800	96	35.9 - 120
Terphenyl-d14		Qsr	0.112	mg/L	1.087	0.0800	140	23.2 - 120

Sample: 415765 - MW-18

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 128795

Analytical Method: S 8021B
Date Analyzed: 2016-03-10

Prep Method: S 5030B
Analyzed By: ST

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Prep Batch: 109071

Sample Preparation: 2016-03-10

Prepared By: ST

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	0.000400	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.102	mg/L	1	0.100	102	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415766 - MW-13

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128795

Prep Batch: 109071

Analytical Method: S 8021B

Date Analyzed: 2016-03-10

Sample Preparation: 2016-03-10

Prep Method: S 5030B

Analyzed By: ST

Prepared By: ST

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.000223	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.103	mg/L	1	0.100	103	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415767 - MW-23

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128795

Prep Batch: 109071

Analytical Method: S 8021B

Date Analyzed: 2016-03-10

Sample Preparation: 2016-03-10

Prep Method: S 5030B

Analyzed By: ST

Prepared By: ST

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Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	0.000500	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	U	1,2,3,4,5	<0.000238	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	U	1,2,3,4,5	<0.000243	<0.00100	<0.000243	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.102	mg/L	1	0.100	102	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415768 - MW-21

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 128826
Prep Batch: 109098

Analytical Method: S 8021B
Date Analyzed: 2016-03-11
Sample Preparation: 2016-03-11

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr	1,2,3,4,5	1.75	1.75	<0.00446	mg/L	20	0.00446	0.001	0.000223
Toluene	Qr,U	1,2,3,4,5	<0.00476	<0.0200	<0.00476	mg/L	20	0.00476	0.001	0.000238
Ethylbenzene	Qr	1,2,3,4,5	0.294	0.294	<0.00476	mg/L	20	0.00476	0.001	0.000238
Xylene	Qr	1,2,3,4,5	0.0383	0.0383	<0.00486	mg/L	20	0.00486	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.02	mg/L	20	2.00	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	2.11	mg/L	20	2.00	106	70 - 120

Sample: 415768 - MW-21

Laboratory: Lubbock
Analysis: PAH
QC Batch: 129176
Prep Batch: 109412

Analytical Method: S 8270D
Date Analyzed: 2016-03-31
Sample Preparation: 2016-03-16

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Naphthalene		1,2,3,4,5	0.000362	0.000362	<0.0000810	mg/L	1.235	0.0000810	0.0002	6.56e-05
2-Methylnaphthalene	J	1,2,3,4,5	0.000191	<0.000247	<0.0000637	mg/L	1.235	0.0000637	0.0002	5.16e-05
1-Methylnaphthalene		1	0.000509	0.000509	<0.0000819	mg/L	1.235	0.0000819	0.0002	6.63e-05

continued ...

sample 415768 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Acenaphthylene	U	1,2,3,4,5	<0.0000718	<0.000247	<0.0000718	mg/L	1.235	0.0000718	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000410	<0.000247	<0.0000410	mg/L	1.235	0.0000410	0.0002	3.32e-05
Dibenzofuran	J	1,2,3,4,5	0.000199	<0.000247	<0.0000750	mg/L	1.235	0.0000750	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000973	<0.000247	<0.0000973	mg/L	1.235	0.0000973	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000396	<0.000247	<0.0000396	mg/L	1.235	0.0000396	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000637	<0.000247	<0.0000637	mg/L	1.235	0.0000637	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000788	<0.000247	<0.0000788	mg/L	1.235	0.0000788	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000512	<0.000247	<0.0000512	mg/L	1.235	0.0000512	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000890	<0.000247	<0.0000890	mg/L	1.235	0.0000890	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.000100	<0.000247	<0.000100	mg/L	1.235	0.000100	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000877	<0.000247	<0.0000877	mg/L	1.235	0.0000877	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000693	<0.000247	<0.0000693	mg/L	1.235	0.0000693	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000516	<0.000247	<0.0000516	mg/L	1.235	0.0000516	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000663	<0.000247	<0.0000663	mg/L	1.235	0.0000663	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000694	<0.000247	<0.0000694	mg/L	1.235	0.0000694	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000641	<0.000247	<0.0000641	mg/L	1.235	0.0000641	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0589	mg/L	1.235	0.0800	74	10 - 120
2-Fluorobiphenyl			0.0850	mg/L	1.235	0.0800	106	35.9 - 120
Terphenyl-d14		Q _{sr}	0.136	mg/L	1.235	0.0800	170	23.2 - 120

Sample: 415769 - MW-22

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 128826

Prep Batch: 109098

Analytical Method: S 8021B

Date Analyzed: 2016-03-11

Sample Preparation: 2016-03-11

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	Q _r	1,2,3,4,5	2.05	2.05	<0.00446	mg/L	20	0.00446	0.001	0.000223
Toluene	Q _{r,U}	1,2,3,4,5	<0.00476	<0.0200	<0.00476	mg/L	20	0.00476	0.001	0.000238
Ethylbenzene	Q _r	1,2,3,4,5	0.304	0.304	<0.00476	mg/L	20	0.00476	0.001	0.000238
Xylene	Q _{r,U}	1,2,3,4,5	<0.00486	<0.0200	<0.00486	mg/L	20	0.00486	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.99	mg/L	20	2.00	100	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	2.06	mg/L	20	2.00	103	70 - 120

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Sample: 415769 - MW-22

Laboratory: Lubbock

Analysis: PAH

QC Batch: 129176

Prep Batch: 109412

Analytical Method: S 8270D

Date Analyzed: 2016-03-31

Sample Preparation: 2016-03-16

Prep Method: S 3510C

Analyzed By: MN

Prepared By: MN

Parameter	F	C	SDL	MQL	Method	Units	Dilution	SDL	MQL	MDL
			Based Result	Based Result	Blank Result				(Unadjusted)	(Unadjusted)
Naphthalene	J	1,2,3,4,5	0.000138	<0.000202	<0.0000662	mg/L	1.01	0.0000662	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000521	<0.000202	<0.0000521	mg/L	1.01	0.0000521	0.0002	5.16e-05
1-Methylnaphthalene		1	0.000506	0.000506	<0.0000670	mg/L	1.01	0.0000670	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000587	<0.000202	<0.0000587	mg/L	1.01	0.0000587	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000335	<0.000202	<0.0000335	mg/L	1.01	0.0000335	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000613	<0.000202	<0.0000613	mg/L	1.01	0.0000613	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000796	<0.000202	<0.0000796	mg/L	1.01	0.0000796	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000324	<0.000202	<0.0000324	mg/L	1.01	0.0000324	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000521	<0.000202	<0.0000521	mg/L	1.01	0.0000521	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000644	<0.000202	<0.0000644	mg/L	1.01	0.0000644	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000419	<0.000202	<0.0000419	mg/L	1.01	0.0000419	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000728	<0.000202	<0.0000728	mg/L	1.01	0.0000728	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000819	<0.000202	<0.0000819	mg/L	1.01	0.0000819	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000717	<0.000202	<0.0000717	mg/L	1.01	0.0000717	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000567	<0.000202	<0.0000567	mg/L	1.01	0.0000567	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000422	<0.000202	<0.0000422	mg/L	1.01	0.0000422	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000542	<0.000202	<0.0000542	mg/L	1.01	0.0000542	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000568	<0.000202	<0.0000568	mg/L	1.01	0.0000568	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000524	<0.000202	<0.0000524	mg/L	1.01	0.0000524	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0335	mg/L	1.01	0.0800	42	10 - 120
2-Fluorobiphenyl			0.0320	mg/L	1.01	0.0800	40	35.9 - 120
Terphenyl-d14			0.0441	mg/L	1.01	0.0800	55	23.2 - 120

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Method Blanks

Method Blank (1)

QC Batch: 128795
Prep Batch: 109071

Date Analyzed: 2016-03-10
QC Preparation: 2016-03-11

Analyzed By: ST
Prepared By: ST

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1,2,3,4,5	<0.000223	mg/L	0.000223
Toluene		1,2,3,4,5	<0.000238	mg/L	0.000238
Ethylbenzene		1,2,3,4,5	<0.000238	mg/L	0.000238
Xylene		1,2,3,4,5	<0.000243	mg/L	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.101	mg/L	1	0.100	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.101	mg/L	1	0.100	101	70 - 120

Method Blank (1)

QC Batch: 128826
Prep Batch: 109098

Date Analyzed: 2016-03-11
QC Preparation: 2016-03-11

Analyzed By: MT
Prepared By: MT

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1,2,3,4,5	<0.000223	mg/L	0.000223
Toluene		1,2,3,4,5	<0.000238	mg/L	0.000238
Ethylbenzene		1,2,3,4,5	<0.000238	mg/L	0.000238
Xylene		1,2,3,4,5	<0.000243	mg/L	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.100	mg/L	1	0.100	100	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.102	mg/L	1	0.100	102	70 - 120

Method Blank (1)

QC Batch: 129176
Prep Batch: 109412

Date Analyzed: 2016-03-31
QC Preparation: 2016-03-16

Analyzed By: MN
Prepared By: MN

Parameter	F	C	Result	Units	Reporting Limits
Naphthalene		1,2,3,4,5	<0.0000656	mg/L	6.56e-05
2-Methylnaphthalene		1,2,3,4,5	<0.0000516	mg/L	5.16e-05
1-Methylnaphthalene		1	<0.0000663	mg/L	6.63e-05
Acenaphthylene		1,2,3,4,5	<0.0000581	mg/L	5.81e-05
Acenaphthene		1,2,3,4,5	<0.0000332	mg/L	3.32e-05
Dibenzofuran		1,2,3,4,5	<0.0000607	mg/L	6.07e-05
Fluorene		1,2,3,4,5	<0.0000788	mg/L	7.88e-05
Anthracene		1,2,3,4,5	<0.0000321	mg/L	3.21e-05
Phenanthrene		1,2,3,4,5	<0.0000516	mg/L	5.16e-05
Fluoranthene		1,2,3,4,5	<0.0000638	mg/L	6.38e-05
Pyrene		1,2,3,4,5	<0.0000415	mg/L	4.15e-05
Benzo(a)anthracene		1,2,3,4,5	<0.0000721	mg/L	7.21e-05
Chrysene		1,2,3,4,5	<0.0000811	mg/L	8.11e-05
Benzo(b)fluoranthene		1,2,3,4,5	<0.0000710	mg/L	7.1e-05
Benzo(k)fluoranthene		1,2,3,4,5	<0.0000561	mg/L	5.61e-05
Benzo(a)pyrene		1,2,3,4,5	<0.0000418	mg/L	4.18e-05
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	<0.0000537	mg/L	5.37e-05
Dibenzo(a,h)anthracene		1,2,3,4,5	<0.0000562	mg/L	5.62e-05
Benzo(g,h,i)perylene		1,2,3,4,5	<0.0000519	mg/L	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0555	mg/L	1	0.0800	69	10 - 120
2-Fluorobiphenyl			0.0585	mg/L	1	0.0800	73	35.9 - 120
Terphenyl-d14			0.0614	mg/L	1	0.0800	77	23.2 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 128795
Prep Batch: 109071

Date Analyzed: 2016-03-10
QC Preparation: 2016-03-11

Analyzed By: ST
Prepared By: ST

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0992	mg/L	1	0.100	<0.000223	99	78.9 - 120
Toluene		1,2,3,4,5	0.101	mg/L	1	0.100	<0.000238	101	79.8 - 120
Ethylbenzene		1,2,3,4,5	0.101	mg/L	1	0.100	<0.000238	101	79.7 - 120
Xylene		1,2,3,4,5	0.303	mg/L	1	0.300	<0.000243	101	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	0.0996	mg/L	1	0.100	<0.000223	100	78.9 - 120	0	20
Toluene		1,2,3,4,5	0.101	mg/L	1	0.100	<0.000238	101	79.8 - 120	0	20
Ethylbenzene		1,2,3,4,5	0.102	mg/L	1	0.100	<0.000238	102	79.7 - 120	1	20
Xylene		1,2,3,4,5	0.307	mg/L	1	0.300	<0.000243	102	78.2 - 120	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)		5	0.103	0.103	mg/L	1	0.100	103	103	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.106	0.106	mg/L	1	0.100	106	106	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 128826
Prep Batch: 109098

Date Analyzed: 2016-03-11
QC Preparation: 2016-03-11

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0968	mg/L	1	0.100	<0.000223	97	78.9 - 120
Toluene		1,2,3,4,5	0.0990	mg/L	1	0.100	<0.000238	99	79.8 - 120
Ethylbenzene		1,2,3,4,5	0.101	mg/L	1	0.100	<0.000238	101	79.7 - 120
Xylene		1,2,3,4,5	0.306	mg/L	1	0.300	<0.000243	102	78.2 - 120

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	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.100	mg/L	1	0.100	<0.000223	100	78.9 - 120	3	20
Toluene		1,2,3,4,5	0.102	mg/L	1	0.100	<0.000238	102	79.8 - 120	2	20
Ethylbenzene		1,2,3,4,5	0.102	mg/L	1	0.100	<0.000238	102	79.7 - 120	2	20
Xylene		1,2,3,4,5	0.312	mg/L	1	0.300	<0.000243	104	78.2 - 120	2	20

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

Surrogate	F	C	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)		5	0.102	0.102	mg/L	1	0.100	102	102	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.108	0.107	mg/L	1	0.100	108	107	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 129176
Prep Batch: 109412

Date Analyzed: 2016-03-31
QC Preparation: 2016-03-16

Analyzed By: MN
Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,5	0.0673	mg/L	1	0.0800	<0.0000656	84	49.7 - 120
2-Methylnaphthalene		1,2,3,4,5	0.0639	mg/L	1	0.0800	<0.0000516	80	44.6 - 120
1-Methylnaphthalene		1	0.0541	mg/L	1	0.0800	<0.0000663	68	10 - 189
Acenaphthylene		1,2,3,4,5	0.0757	mg/L	1	0.0800	<0.0000581	95	40.9 - 120
Acenaphthene		1,2,3,4,5	0.0694	mg/L	1	0.0800	<0.0000332	87	49.9 - 120
Dibenzofuran		1,2,3,4,5	0.0664	mg/L	1	0.0800	<0.0000607	83	34 - 120
Fluorene		1,2,3,4,5	0.0676	mg/L	1	0.0800	<0.0000788	84	49.7 - 120
Anthracene		1,2,3,4,5	0.0664	mg/L	1	0.0800	<0.0000321	83	11.4 - 155
Phenanthrene		1,2,3,4,5	0.0669	mg/L	1	0.0800	<0.0000516	84	41 - 120
Fluoranthene		1,2,3,4,5	0.0690	mg/L	1	0.0800	<0.0000638	86	35.7 - 120
Pyrene		1,2,3,4,5	0.0812	mg/L	1	0.0800	<0.0000415	102	19.5 - 139
Benzo(a)anthracene		1,2,3,4,5	0.0698	mg/L	1	0.0800	<0.0000721	87	53.4 - 120
Chrysene		1,2,3,4,5	0.0626	mg/L	1	0.0800	<0.0000811	78	10 - 170
Benzo(b)fluoranthene		1,2,3,4,5	0.0526	mg/L	1	0.0800	<0.0000710	66	29.2 - 120
Benzo(k)fluoranthene		1,2,3,4,5	0.0511	mg/L	1	0.0800	<0.0000561	64	23.4 - 120
Benzo(a)pyrene		1,2,3,4,5	0.0544	mg/L	1	0.0800	<0.0000418	68	23.4 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	0.0531	mg/L	1	0.0800	<0.0000537	66	10 - 129
Dibenzo(a,h)anthracene		1,2,3,4,5	0.0527	mg/L	1	0.0800	<0.0000562	66	10 - 174
Benzo(g,h,i)perylene		1,2,3,4,5	0.0546	mg/L	1	0.0800	<0.0000519	68	30.6 - 120

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
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1,2,3,4,5	0.0691	mg/L	1	0.0800	<0.0000656	86	49.7 - 120	3	20
2-Methylnaphthalene		1,2,3,4,5	0.0650	mg/L	1	0.0800	<0.0000516	81	44.6 - 120	2	20
1-Methylnaphthalene		1	0.0551	mg/L	1	0.0800	<0.0000663	69	10 - 189	2	20
Acenaphthylene		1,2,3,4,5	0.0772	mg/L	1	0.0800	<0.0000581	96	40.9 - 120	2	20
Acenaphthene		1,2,3,4,5	0.0712	mg/L	1	0.0800	<0.0000332	89	49.9 - 120	3	20
Dibenzofuran		1,2,3,4,5	0.0682	mg/L	1	0.0800	<0.0000607	85	34 - 120	3	20
Fluorene		1,2,3,4,5	0.0688	mg/L	1	0.0800	<0.0000788	86	49.7 - 120	2	20
Anthracene		1,2,3,4,5	0.0690	mg/L	1	0.0800	<0.0000321	86	11.4 - 155	4	20
Phenanthrene		1,2,3,4,5	0.0690	mg/L	1	0.0800	<0.0000516	86	41 - 120	3	20
Fluoranthene		1,2,3,4,5	0.0712	mg/L	1	0.0800	<0.0000638	89	35.7 - 120	3	20
Pyrene		1,2,3,4,5	0.0838	mg/L	1	0.0800	<0.0000415	105	19.5 - 139	3	20
Benzo(a)anthracene		1,2,3,4,5	0.0719	mg/L	1	0.0800	<0.0000721	90	53.4 - 120	3	20
Chrysene		1,2,3,4,5	0.0647	mg/L	1	0.0800	<0.0000811	81	10 - 170	3	20
Benzo(b)fluoranthene		1,2,3,4,5	0.0535	mg/L	1	0.0800	<0.0000710	67	29.2 - 120	2	20
Benzo(k)fluoranthene		1,2,3,4,5	0.0531	mg/L	1	0.0800	<0.0000561	66	23.4 - 120	4	20
Benzo(a)pyrene		1,2,3,4,5	0.0560	mg/L	1	0.0800	<0.0000418	70	23.4 - 120	3	20
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	0.0550	mg/L	1	0.0800	<0.0000537	69	10 - 129	4	20
Dibenzo(a,h)anthracene		1,2,3,4,5	0.0544	mg/L	1	0.0800	<0.0000562	68	10 - 174	3	20
Benzo(g,h,i)perylene		1,2,3,4,5	0.0563	mg/L	1	0.0800	<0.0000519	70	30.6 - 120	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
Nitrobenzene-d5			0.0614	0.0639	mg/L	1	0.0800	77	80	10 - 120
2-Fluorobiphenyl			0.0655	0.0674	mg/L	1	0.0800	82	84	35.9 - 120
Terphenyl-d14			0.0700	0.0730	mg/L	1	0.0800	88	91	23.2 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 415748

QC Batch: 128795
Prep Batch: 109071

Date Analyzed: 2016-03-10
QC Preparation: 2016-03-11

Analyzed By: ST
Prepared By: ST

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0347	mg/L	1	0.100	0.0008	34	18.2 - 149
Toluene		1,2,3,4,5	0.0344	mg/L	1	0.100	<0.000238	34	13 - 157
Ethylbenzene		1,2,3,4,5	0.0348	mg/L	1	0.100	<0.000238	35	12.9 - 156
Xylene		1,2,3,4,5	0.104	mg/L	1	0.300	<0.000243	35	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		1,2,3,4,5	0.0331	mg/L	1	0.100	0.0008	32	18.2 - 149	5	20
Toluene		1,2,3,4,5	0.0326	mg/L	1	0.100	<0.000238	33	13 - 157	5	20
Ethylbenzene		1,2,3,4,5	0.0335	mg/L	1	0.100	<0.000238	34	12.9 - 156	4	20
Xylene		1,2,3,4,5	0.101	mg/L	1	0.300	<0.000243	34	22 - 150	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)		5	0.103	0.103	mg/L	1	0.1	103	103	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.105	0.106	mg/L	1	0.1	105	106	70 - 120

Matrix Spike (MS-1) Spiked Sample: 415823

QC Batch: 128826
Prep Batch: 109098

Date Analyzed: 2016-03-11
QC Preparation: 2016-03-11

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	1,2,3,4,5	0.0127	mg/L	1	0.100	<0.000223	13	18.2 - 149
Toluene	Qs	1,2,3,4,5	0.0129	mg/L	1	0.100	<0.000238	13	13 - 157
Ethylbenzene	Qs	1,2,3,4,5	0.0128	mg/L	1	0.100	<0.000238	13	12.9 - 156
Xylene	Qs	1,2,3,4,5	0.0378	mg/L	1	0.300	<0.000243	13	22 - 150

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
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	1,2,3,4,5	0.0205	mg/L	1	0.100	<0.000223	20	18.2 - 149	47	20
Toluene	Qr	1,2,3,4,5	0.0207	mg/L	1	0.100	<0.000238	21	13 - 157	46	20
Ethylbenzene	Qr	1,2,3,4,5	0.0205	mg/L	1	0.100	<0.000238	20	12.9 - 156	46	20
Xylene	Qr,Qs	1,2,3,4,5	0.0612	mg/L	1	0.300	<0.000243	20	22 - 150	47	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)		5	0.100	0.101	mg/L	1	0.1	100	101	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.103	0.104	mg/L	1	0.1	103	104	70 - 120

Calibration Standards

Standard (CCV-2)

QC Batch: 128795

Date Analyzed: 2016-03-10

Analyzed By: ST

Param	F	C	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	0.0995	100	80 - 120	2016-03-10
Toluene		1,2,3,4,5	mg/L	0.100	0.102	102	80 - 120	2016-03-10
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.100	100	80 - 120	2016-03-10
Xylene		1,2,3,4,5	mg/L	0.300	0.302	101	80 - 120	2016-03-10

Standard (CCV-3)

QC Batch: 128795

Date Analyzed: 2016-03-10

Analyzed By: ST

Param	F	C	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	0.102	102	80 - 120	2016-03-10
Toluene		1,2,3,4,5	mg/L	0.100	0.103	103	80 - 120	2016-03-10
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.103	103	80 - 120	2016-03-10
Xylene		1,2,3,4,5	mg/L	0.300	0.312	104	80 - 120	2016-03-10

Standard (CCV-1)

QC Batch: 128826

Date Analyzed: 2016-03-11

Analyzed By: MT

Param	F	C	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	0.101	101	80 - 120	2016-03-11
Toluene		1,2,3,4,5	mg/L	0.100	0.102	102	80 - 120	2016-03-11
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.102	102	80 - 120	2016-03-11
Xylene		1,2,3,4,5	mg/L	0.300	0.308	103	80 - 120	2016-03-11

Standard (CCV-2)

QC Batch: 128826

Date Analyzed: 2016-03-11

Analyzed By: MT

Report Date: March 31, 2016
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Param	F	C	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	0.0998	100	80 - 120	2016-03-11
Toluene		1,2,3,4,5	mg/L	0.100	0.101	101	80 - 120	2016-03-11
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.102	102	80 - 120	2016-03-11
Xylene		1,2,3,4,5	mg/L	0.300	0.311	104	80 - 120	2016-03-11

Standard (CCV-3)

QC Batch: 128826

Date Analyzed: 2016-03-11

Analyzed By: MT

Param	F	C	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	0.0993	99	80 - 120	2016-03-11
Toluene		1,2,3,4,5	mg/L	0.100	0.100	100	80 - 120	2016-03-11
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.101	101	80 - 120	2016-03-11
Xylene		1,2,3,4,5	mg/L	0.300	0.305	102	80 - 120	2016-03-11

Standard (CCV-1)

QC Batch: 129176

Date Analyzed: 2016-03-31

Analyzed By: MN

Param	F	C	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	60.8	101	80 - 120	2016-03-31
2-Methylnaphthalene		1,2,3,4,5	mg/L	60.0	58.0	97	80 - 120	2016-03-31
1-Methylnaphthalene		1	mg/L	60.0	53.6	89	80 - 120	2016-03-31
Acenaphthylene		1,2,3,4,5	mg/L	60.0	64.3	107	80 - 120	2016-03-31
Acenaphthene		1,2,3,4,5	mg/L	60.0	60.9	102	80 - 120	2016-03-31
Dibenzofuran		1,2,3,4,5	mg/L	60.0	62.6	104	80 - 120	2016-03-31
Fluorene		1,2,3,4,5	mg/L	60.0	64.1	107	80 - 120	2016-03-31
Anthracene		1,2,3,4,5	mg/L	60.0	61.6	103	80 - 120	2016-03-31
Phenanthrene		1,2,3,4,5	mg/L	60.0	58.1	97	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	69.3	116	80 - 120	2016-03-31
Benzo(a)anthracene		1,2,3,4,5	mg/L	60.0	60.7	101	80 - 120	2016-03-31
Chrysene		1,2,3,4,5	mg/L	60.0	58.7	98	80 - 120	2016-03-31
Benzo(b)fluoranthene		1,2,3,4,5	mg/L	60.0	67.2	112	80 - 120	2016-03-31
Benzo(k)fluoranthene		1,2,3,4,5	mg/L	60.0	63.2	105	80 - 120	2016-03-31
Benzo(a)pyrene		1,2,3,4,5	mg/L	60.0	67.1	112	80 - 120	2016-03-31
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	mg/L	60.0	65.9	110	80 - 120	2016-03-31
Dibenzo(a,h)anthracene		1,2,3,4,5	mg/L	60.0	66.2	110	80 - 120	2016-03-31
Benzo(g,h,i)perylene		1,2,3,4,5	mg/L	60.0	64.2	107	80 - 120	2016-03-31

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Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			63.3	mg/L	1	60.0	106	-
2-Fluorobiphenyl			62.4	mg/L	1	60.0	104	-
Terphenyl-d14			65.8	mg/L	1	60.0	110	-

Standard (CCV-2)

QC Batch: 129176

Date Analyzed: 2016-03-31

Analyzed By: MN

Param	F	C	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	60.2	100	80 - 120	2016-03-31
2-Methylnaphthalene		1,2,3,4,5	mg/L	60.0	57.8	96	80 - 120	2016-03-31
1-Methylnaphthalene		1	mg/L	60.0	52.9	88	80 - 120	2016-03-31
Acenaphthylene		1,2,3,4,5	mg/L	60.0	63.9	106	80 - 120	2016-03-31
Acenaphthene		1,2,3,4,5	mg/L	60.0	60.8	101	80 - 120	2016-03-31
Dibenzofuran		1,2,3,4,5	mg/L	60.0	62.9	105	80 - 120	2016-03-31
Fluorene		1,2,3,4,5	mg/L	60.0	65.0	108	80 - 120	2016-03-31
Anthracene		1,2,3,4,5	mg/L	60.0	61.8	103	80 - 120	2016-03-31
Phenanthrene		1,2,3,4,5	mg/L	60.0	58.8	98	80 - 120	2016-03-31
Fluoranthene		1,2,3,4,5	mg/L	60.0	58.8	98	80 - 120	2016-03-31
Pyrene		1,2,3,4,5	mg/L	60.0	69.9	116	80 - 120	2016-03-31
Benzo(a)anthracene		1,2,3,4,5	mg/L	60.0	61.4	102	80 - 120	2016-03-31
Chrysene		1,2,3,4,5	mg/L	60.0	59.0	98	80 - 120	2016-03-31
Benzo(b)fluoranthene		1,2,3,4,5	mg/L	60.0	66.8	111	80 - 120	2016-03-31
Benzo(k)fluoranthene		1,2,3,4,5	mg/L	60.0	63.0	105	80 - 120	2016-03-31
Benzo(a)pyrene		1,2,3,4,5	mg/L	60.0	67.5	112	80 - 120	2016-03-31
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	mg/L	60.0	66.4	111	80 - 120	2016-03-31
Dibenzo(a,h)anthracene		1,2,3,4,5	mg/L	60.0	67.4	112	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	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			64.0	mg/L	1	60.0	107	-
2-Fluorobiphenyl			62.0	mg/L	1	60.0	103	-
Terphenyl-d14			66.3	mg/L	1	60.0	110	-

Standard (CCV-3)

QC Batch: 129176

Date Analyzed: 2016-03-31

Analyzed By: MN

Param	F	C	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	F	C	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	-

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike	Pass
					Amount	
BTEX	S 8021B	water	GC-9	Benzene	0.000650	Pass
BTEX	S 8021B	water	GC-9	Toluene	0.000650	Pass
BTEX	S 8021B	water	GC-9	Ethylbenzene	0.000650	Pass
BTEX	S 8021B	water	GC-9	Xylene	0.000650	Pass
PAH	S 8270D	water	6890 Semi	Naphthalene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	2-Methylnaphthalene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	1-Methylnaphthalene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Acenaphthylene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Acenaphthene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Dibenzofuran	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Fluorene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Anthracene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Phenanthrene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Fluoranthene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Pyrene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Benzo(a)anthracene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Chrysene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Benzo(b)fluoranthene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Benzo(k)fluoranthene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Benzo(a)pyrene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Indeno(1,2,3-cd)pyrene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Dibenzo(a,h)anthracene	0.00150	Pass
PAH	S 8270D	water	6890 Semi	Benzo(g,h,i)perylene	0.00150	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	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 than 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

Report Date: March 31, 2016
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Work Order: 16031013
Hobbs Junction Mainline

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Hobbs, NM

The scanned attachments will follow this page.

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

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

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:

Phone #: 416 (cell.) 806-787-8078
Fax #: or 432-522-2133

Address: _____ (Street, City, Zip)

Fax #: 752-522-2133

Contact Person:

E-mail: aizard@talon.be.com

Invoice to:

Plains All American Pipeline SRS # 2003-00017

Project #:

Project Name:

700376.052.02
Hobbs Junction Mainline
Samuel Signatures

Sampler Signature:

Sampler Signature: 

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME	
765	MW-13	3	40 ml	✓				✓					✓		3-9-16	1340
766	MW-23			✓									✓			1400
767	MW-21			✓				✓					✓			1415
768	MW-22	1	1 L	✓									✓			1415
769	MW-22	3	40 ml	✓				✓					✓			1430
770	MW-29	1	1 L	✓									✓			1430
771	MW-29	3	40 ml	✓				✓					✓			1515
772	MW-29	1	1 L	✓									✓			1515

[illegible]

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by:

Company:	Date:
----------	-------

Time:

Received by:

Company:

Time:

[illegible]

LABISE

REMARKS:

REMARKS: BTEx £ PAH Only. Please use SRS # 2003-00017 as the P.O. and make sure it is on the invoice to Plains.

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

Relinquished by:

Company: _____ Date: _____

Time:

Received by _____

Company:

Time%

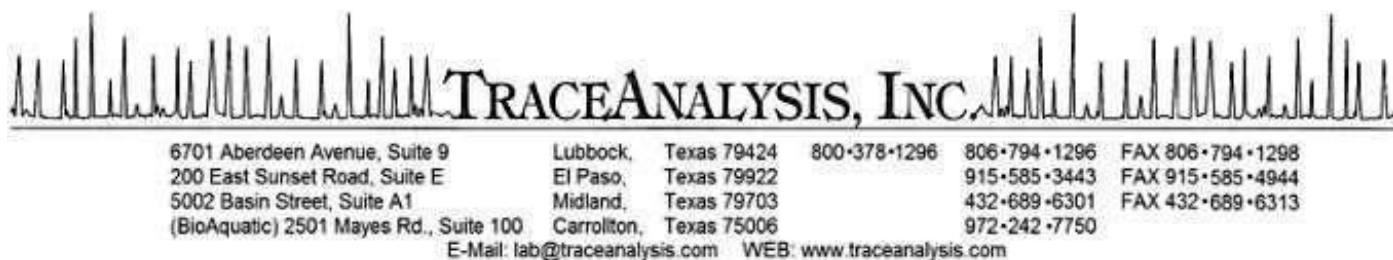
24.

7

Dry Weight Ba

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

and Conditions listed on



Certifications

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Analytical and Quality Control Report

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

Report Date: June 14, 2016

Work Order: 16060902



Project Location: Hobbs, NM
Project Name: Hobbs Junction Mainline
Project Number: 700376.052.02
SRS #: 2003-00017

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
421083	MW-7	water	2016-06-08	10:45	2016-06-09
421084	MW-13	water	2016-06-08	12:40	2016-06-09
421085	MW-18	water	2016-06-08	12:30	2016-06-09
421086	MW-21	water	2016-06-08	13:15	2016-06-09
421087	MW-22	water	2016-06-08	13:05	2016-06-09
421088	MW-23	water	2016-06-08	11:45	2016-06-09
421089	MW-24	water	2016-06-08	12:10	2016-06-09
421090	MW-28	water	2016-06-08	11:00	2016-06-09
421091	MW-31	water	2016-06-08	12:20	2016-06-09
421092	MW-32	water	2016-06-08	12:00	2016-06-09
421093	MW-33	water	2016-06-08	11:25	2016-06-09

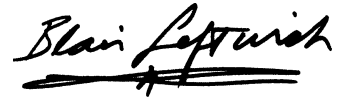
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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 19 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.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a prominent horizontal line underneath the name.

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

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Case Narrative

Samples for project Hobbs Junction Mainline were received by TraceAnalysis, Inc. on 2016-06-09 and assigned to work order 16060902. Samples for work order 16060902 were received intact at a temperature of 3.9 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	110728	2016-06-10 at 07:52	130715	2016-06-13 at 11:09
BTEX	S 8021B	110746	2016-06-10 at 14:41	130737	2016-06-13 at 09:23

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 16060902 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: 421083 - MW-7

Laboratory: Midland

Analysis: BTEX

QC Batch: 130715

Prep Batch: 110728

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0988	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0884	mg/L	1	0.100	88	70 - 130

Sample: 421084 - MW-13

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Prep Batch: 110746

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0976	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0838	mg/L	1	0.100	84	70 - 130

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Sample: 421085 - MW-18

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Prep Batch: 110746

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

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)			0.0954	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0815	mg/L	1	0.100	82	70 - 130

Sample: 421086 - MW-21

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Prep Batch: 110746

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	1.74	1.74	<0.0202	mg/L	40	0.0202	0.001	0.000504
Toluene	u	1	<0.0248	<0.0400	<0.0248	mg/L	40	0.0248	0.001	0.000621
Ethylbenzene		1	0.280	0.280	<0.0305	mg/L	40	0.0305	0.001	0.000763
Xylene		1	0.0467	0.0467	<0.0102	mg/L	40	0.0102	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.83	mg/L	40	4.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			3.30	mg/L	40	4.00	82	70 - 130

Sample: 421087 - MW-22

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Prep Method: S 5030B

Analyzed By: AK

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Prep Batch: 110746

Sample Preparation: 2016-06-10

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene		1	1.88	1.88	<0.0202	mg/L	40	0.0202	0.001	0.000504
Toluene	u	1	<0.0248	<0.0400	<0.0248	mg/L	40	0.0248	0.001	0.000621
Ethylbenzene		1	0.247	0.247	<0.0305	mg/L	40	0.0305	0.001	0.000763
Xylene	u	1	<0.0102	<0.0400	<0.0102	mg/L	40	0.0102	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.82	mg/L	40	4.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			3.30	mg/L	40	4.00	82	70 - 130

Sample: 421088 - MW-23

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Prep Batch: 110746

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0957	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0820	mg/L	1	0.100	82	70 - 130

Sample: 421089 - MW-24

Laboratory: Midland

Analysis: BTEX

QC Batch: 130737

Prep Batch: 110746

Analytical Method: S 8021B

Date Analyzed: 2016-06-13

Sample Preparation: 2016-06-10

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

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Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0950	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0804	mg/L	1	0.100	80	70 - 130

Sample: 421090 - MW-28

Laboratory: Midland
Analysis: BTEX
QC Batch: 130737
Prep Batch: 110746

Analytical Method: S 8021B
Date Analyzed: 2016-06-13
Sample Preparation: 2016-06-10

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0961	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0799	mg/L	1	0.100	80	70 - 130

Sample: 421091 - MW-31

Laboratory: Midland
Analysis: BTEX
QC Batch: 130737
Prep Batch: 110746

Analytical Method: S 8021B
Date Analyzed: 2016-06-13
Sample Preparation: 2016-06-10

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

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

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sample 421091 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0952	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0801	mg/L	1	0.100	80	70 - 130

Sample: 421092 - MW-32

Laboratory: Midland
Analysis: BTEX
QC Batch: 130737
Prep Batch: 110746

Analytical Method: S 8021B
Date Analyzed: 2016-06-13
Sample Preparation: 2016-06-10

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0964	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0829	mg/L	1	0.100	83	70 - 130

Sample: 421093 - MW-33

Laboratory: Midland
Analysis: BTEX
QC Batch: 130737
Prep Batch: 110746

Analytical Method: S 8021B
Date Analyzed: 2016-06-13
Sample Preparation: 2016-06-10

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

continued ...

sample 421093 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (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)			0.0963	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0816	mg/L	1	0.100	82	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 130715
Prep Batch: 110728

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
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)			0.0932	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0813	mg/L	1	0.100	81	70 - 130

Method Blank (1)

QC Batch: 130737
Prep Batch: 110746

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
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)			0.0991	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0863	mg/L	1	0.100	86	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 130715
Prep Batch: 110728

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.101	mg/L	1	0.100	<0.000504	101	70 - 130
Toluene		1	0.104	mg/L	1	0.100	<0.000621	104	70 - 130
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000763	104	70 - 130
Xylene		1	0.312	mg/L	1	0.300	<0.000256	104	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	0.0995	mg/L	1	0.100	<0.000504	100	70 - 130	2	20
Toluene		1	0.102	mg/L	1	0.100	<0.000621	102	70 - 130	2	20
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000763	104	70 - 130	0	20
Xylene		1	0.307	mg/L	1	0.300	<0.000256	102	70 - 130	2	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)			0.0952	0.0953	mg/L	1	0.100	95	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	0.101	mg/L	1	0.100	100	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130737
Prep Batch: 110746

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.100	mg/L	1	0.100	<0.000504	100	70 - 130
Toluene		1	0.103	mg/L	1	0.100	<0.000621	103	70 - 130
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000763	104	70 - 130
Xylene		1	0.309	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	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0995	mg/L	1	0.100	<0.000504	100	70 - 130	0	20
Toluene		1	0.103	mg/L	1	0.100	<0.000621	103	70 - 130	0	20
Ethylbenzene		1	0.103	mg/L	1	0.100	<0.000763	103	70 - 130	1	20
Xylene		1	0.309	mg/L	1	0.300	<0.000256	103	70 - 130	0	20

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

Surrogate	F	C	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0994	0.0981	mg/L	1	0.100	99	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.104	0.104	mg/L	1	0.100	104	104	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 420946

QC Batch: 130715
Prep Batch: 110728

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000504	104	70 - 130
Toluene		1	0.106	mg/L	1	0.100	<0.000621	106	70 - 130
Ethylbenzene		1	0.107	mg/L	1	0.100	<0.000763	107	70 - 130
Xylene		1	0.313	mg/L	1	0.300	<0.000256	104	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		1	0.105	mg/L	1	0.100	<0.000504	105	70 - 130	1	20
Toluene		1	0.107	mg/L	1	0.100	<0.000621	107	70 - 130	1	20
Ethylbenzene		1	0.108	mg/L	1	0.100	<0.000763	108	70 - 130	1	20
Xylene		1	0.323	mg/L	1	0.300	<0.000256	108	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)			0.0941	0.0990	mg/L	1	0.1	94	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0991	0.0993	mg/L	1	0.1	99	99	70 - 130

Matrix Spike (MS-1) Spiked Sample: 421084

QC Batch: 130737
Prep Batch: 110746

Date Analyzed: 2016-06-13
QC Preparation: 2016-06-10

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000504	104	70 - 130
Toluene		1	0.106	mg/L	1	0.100	<0.000621	106	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000763	106	70 - 130
Xylene		1	0.313	mg/L	1	0.300	<0.000256	104	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
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0888	mg/L	1	0.100	<0.000504	89	70 - 130	16	20
Toluene		1	0.0917	mg/L	1	0.100	<0.000621	92	70 - 130	14	20
Ethylbenzene		1	0.0935	mg/L	1	0.100	<0.000763	94	70 - 130	12	20
Xylene		1	0.278	mg/L	1	0.300	<0.000256	93	70 - 130	12	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)			0.0971	0.0982	mg/L	1	0.1	97	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	0.103	mg/L	1	0.1	102	103	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 130715

Date Analyzed: 2016-06-13

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	0.100	100	80 - 120	2016-06-13
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2016-06-13
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2016-06-13
Xylene		1	mg/L	0.300	0.302	101	80 - 120	2016-06-13

Standard (CCV-3)

QC Batch: 130715

Date Analyzed: 2016-06-13

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	0.102	102	80 - 120	2016-06-13
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2016-06-13
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-13
Xylene		1	mg/L	0.300	0.306	102	80 - 120	2016-06-13

Standard (CCV-1)

QC Batch: 130737

Date Analyzed: 2016-06-13

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	0.102	102	80 - 120	2016-06-13
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2016-06-13
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-13
Xylene		1	mg/L	0.300	0.306	102	80 - 120	2016-06-13

Standard (CCV-2)

QC Batch: 130737

Date Analyzed: 2016-06-13

Analyzed By: AK

Report Date: June 14, 2016
700376.052.02

Work Order: 16060902
Hobbs Junction Mainline

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Hobbs, NM

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2016-06-13
Toluene		1	mg/L	0.100	0.103	103	80 - 120	2016-06-13
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2016-06-13
Xylene		1	mg/L	0.300	0.303	101	80 - 120	2016-06-13

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike	Pass
					Amount	
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 than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

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Company Name: Talon LPE Phone #: 432-522-2133
Address: (Street, City, Zip)
Contact Person: Melissa Decker E-mail: mdecker@talonlpe
Invoice to: Plains All American Pipeline SPS# 2003-00017
Project #: 200776052.02 Project Name: Hobbs Junction Mainline
Project Location (including state): Hobbs, NM Sample Signature: [Signature]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX	PRESERVATIVE METHOD	SAMPLING DATE	TIME	Turn Around Time if different from standard
481083	MW-7	3	40ml	WATER	ICE	6/8	10:45	
1084	MW-13	1	1	SLUDGE	NaOH		12:40	
1085	MW-18	1	1	AIR	H ₂ SO ₄		12:30	
1086	MW-21	1	1	SOIL	HNO ₃		13:15	
1087	MW-22	1	1	WATER	HCl		13:05	
1088	MW-23	1	1	SLUDGE	NaOH		11:45	
1089	MW-24	1	1	AIR	H ₂ SO ₄		12:10	
1090	MW-28	1	1	SOIL	HNO ₃		11:00	
1091	MW-31	1	1	WATER	ICE		12:20	
1092	MW-32	1	1	SLUDGE	NaOH		12:00	
1093	MW-33	1	1	AIR	H ₂ SO ₄		11:25	

Relinquished by: Company: Date: 6-9-2004 8:10 Received by: Company: Date: 6-9-16 8:26 INST: 8:26 OBS: 8:26 COR: 8:26

Relinquished by: Company: Date: 6-9-2004 8:10 Received by: Company: Date: 6-9-16 8:26 INST: 8:26 OBS: 8:26 COR: 8:26

Relinquished by: Company: Date: 6-9-2004 8:10 Received by: Company: Date: 6-9-16 8:26 INST: 8:26 OBS: 8:26 COR: 8:26

REMARKS: BTEX only
Please use plains SPS # for PO #. Thank You

Intact Y/N Y Headspace Y/N N Log-In-Review Y

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

Carrier # 0000

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

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

(Corrected Report)

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

Report Date: October 6, 2016

Work Order: 16092202



Project Location: Lovington, NM
Project Name: Hobbs Junction Mainline
Project Number: 700376.052.01
SRS#: 2003-00017

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
428583	MW-7	water	2016-09-21	12:30	2016-09-22
428584	MW-13	water	2016-09-21	14:20	2016-09-22
428585	MW-18	water	2016-09-21	14:00	2016-09-22
428586	MW-21	water	2016-09-21	15:00	2016-09-22
428587	MW-22	water	2016-09-21	14:45	2016-09-22
428588	MW-23	water	2016-09-21	13:00	2016-09-22
428589	MW-24	water	2016-09-21	13:25	2016-09-22
428590	MW-28	water	2016-09-21	12:00	2016-09-22
428591	MW-31	water	2016-09-21	13:45	2016-09-22
428592	MW-32	water	2016-09-21	13:15	2016-09-22
428593	MW-33	water	2016-09-21	12:15	2016-09-22

Report Corrections (Work Order 16092202)

- 10/6/16: Corrected sample 428583.

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

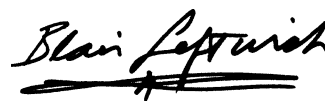
basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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 20 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.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a horizontal line underneath.

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

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Case Narrative

Samples for project Hobbs Junction Mainline were received by TraceAnalysis, Inc. on 2016-09-22 and assigned to work order 16092202. Samples for work order 16092202 were received intact at a temperature of 1.6 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	112788	2016-10-03 at 08:43	133104	2016-10-04 at 13:38
BTEX	S 8021B	112881	2016-10-05 at 15:00	133162	2016-10-05 at 23:40

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 16092202 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: 428583 - MW-7

Laboratory: Midland

Analysis: BTEX

QC Batch: 133162

Prep Batch: 112881

Analytical Method: S 8021B

Date Analyzed: 2016-10-05

Sample Preparation: 2016-10-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	Qr,U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	Qr,U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	Qr,U	4	<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)			0.0779	mg/L	1	0.100	78	70 - 130

Sample: 428584 - MW-13

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Prep Batch: 112788

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Sample Preparation: 2016-10-03

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0922	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0816	mg/L	1	0.100	82	70 - 130

Report Date: October 6, 2016
700376.052.01

Work Order: 16092202
Hobbs Junction Mainline

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Sample: 428585 - MW-18

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Prep Batch: 112788

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Sample Preparation: 2016-10-03

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0945	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}		0.166	mg/L	1	0.100	166	70 - 130

Sample: 428586 - MW-21

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Prep Batch: 112788

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Sample Preparation: 2016-10-03

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		4	3.38	3.38	<0.0267	mg/L	53	0.0267	0.001	0.000504
Toluene	U	4	<0.0329	<0.0530	<0.0329	mg/L	53	0.0329	0.001	0.000621
Ethylbenzene		4	0.364	0.364	<0.0404	mg/L	53	0.0404	0.001	0.000763
Xylene		4	0.158	0.158	<0.0136	mg/L	53	0.0136	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.74	mg/L	53	5.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			4.33	mg/L	53	5.00	87	70 - 130

Sample: 428587 - MW-22

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Prep Method: S 5030B

Analyzed By: AK

Report Date: October 6, 2016
700376.052.01

Work Order: 16092202
Hobbs Junction Mainline

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Prep Batch: 112788

Sample Preparation: 2016-10-03

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene		4	3.20	3.20	<0.0267	mg/L	53	0.0267	0.001	0.000504
Toluene	U	4	<0.0329	<0.0530	<0.0329	mg/L	53	0.0329	0.001	0.000621
Ethylbenzene		4	0.452	0.452	<0.0404	mg/L	53	0.0404	0.001	0.000763
Xylene		4	0.109	0.109	<0.0136	mg/L	53	0.0136	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			5.02	mg/L	53	5.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			4.62	mg/L	53	5.00	92	70 - 130

Sample: 428588 - MW-23

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Prep Batch: 112788

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Sample Preparation: 2016-10-03

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0934	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0829	mg/L	1	0.100	83	70 - 130

Sample: 428589 - MW-24

Laboratory: Midland

Analysis: BTEX

QC Batch: 133104

Prep Batch: 112788

Analytical Method: S 8021B

Date Analyzed: 2016-10-04

Sample Preparation: 2016-10-03

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Report Date: October 6, 2016
700376.052.01

Work Order: 16092202
Hobbs Junction Mainline

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Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0920	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0815	mg/L	1	0.100	82	70 - 130

Sample: 428590 - MW-28

Laboratory: Midland
Analysis: BTEX
QC Batch: 133104
Prep Batch: 112788

Analytical Method: S 8021B
Date Analyzed: 2016-10-04
Sample Preparation: 2016-10-03

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene		4	0.00130	0.00130	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0816	mg/L	1	0.100	82	70 - 130

Sample: 428591 - MW-31

Laboratory: Midland
Analysis: BTEX
QC Batch: 133104
Prep Batch: 112788

Analytical Method: S 8021B
Date Analyzed: 2016-10-04
Sample Preparation: 2016-10-03

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	4	0.000600	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

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sample 428591 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0919	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0815	mg/L	1	0.100	82	70 - 130

Sample: 428592 - MW-32

Laboratory: Midland
Analysis: BTEX
QC Batch: 133104
Prep Batch: 112788

Analytical Method: S 8021B
Date Analyzed: 2016-10-04
Sample Preparation: 2016-10-03

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0905	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0825	mg/L	1	0.100	82	70 - 130

Sample: 428593 - MW-33

Laboratory: Midland
Analysis: BTEX
QC Batch: 133104
Prep Batch: 112788

Analytical Method: S 8021B
Date Analyzed: 2016-10-04
Sample Preparation: 2016-10-03

Prep Method: S 5030B
Analyzed By: AK
Prepared By: AK

continued ...

sample 428593 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
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Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	4	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	4	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	4	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	4	<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)			0.0801	mg/L	1	0.100	80	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 133104
Prep Batch: 112788

Date Analyzed: 2016-10-04
QC Preparation: 2016-10-03

Analyzed By: AK
Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		4	<0.000504	mg/L	0.000504
Toluene		4	<0.000621	mg/L	0.000621
Ethylbenzene		4	<0.000763	mg/L	0.000763
Xylene		4	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0916	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0822	mg/L	1	0.100	82	70 - 130

Method Blank (1)

QC Batch: 133162
Prep Batch: 112881

Date Analyzed: 2016-10-05
QC Preparation: 2016-10-05

Analyzed By: AK
Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		4	<0.000504	mg/L	0.000504
Toluene		4	<0.000621	mg/L	0.000621
Ethylbenzene		4	<0.000763	mg/L	0.000763
Xylene		4	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0873	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0774	mg/L	1	0.100	77	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 133104
Prep Batch: 112788

Date Analyzed: 2016-10-04
QC Preparation: 2016-10-03

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0966	mg/L	1.06	0.100	<0.000534	97	70 - 130
Toluene		4	0.0927	mg/L	1.06	0.100	<0.000658	93	70 - 130
Ethylbenzene		4	0.0984	mg/L	1.06	0.100	<0.000809	98	70 - 130
Xylene		4	0.299	mg/L	1.06	0.300	<0.000271	100	70 - 130

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		4	0.0954	mg/L	1.06	0.100	<0.000534	95	70 - 130	1	20
Toluene		4	0.0928	mg/L	1.06	0.100	<0.000658	93	70 - 130	0	20
Ethylbenzene		4	0.0993	mg/L	1.06	0.100	<0.000809	99	70 - 130	1	20
Xylene		4	0.302	mg/L	1.06	0.300	<0.000271	101	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	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0962	0.0925	mg/L	1.06	0.100	96	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0890	0.0877	mg/L	1.06	0.100	89	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 133162
Prep Batch: 112881

Date Analyzed: 2016-10-05
QC Preparation: 2016-10-05

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.124	mg/L	1.06	0.100	<0.000534	124	70 - 130
Toluene		4	0.128	mg/L	1.06	0.100	<0.000658	128	70 - 130
Ethylbenzene	Qs	4	0.145	mg/L	1.06	0.100	<0.000809	145	70 - 130
Xylene	Qs	4	0.433	mg/L	1.06	0.300	<0.000271	144	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
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Q _r	4	0.0993	mg/L	1.06	0.100	<0.000534	99	70 - 130	22	20
Toluene	Q _r	4	0.0950	mg/L	1.06	0.100	<0.000658	95	70 - 130	30	20
Ethylbenzene	Q _r	4	0.0994	mg/L	1.06	0.100	<0.000809	99	70 - 130	37	20
Xylene	Q _r	4	0.301	mg/L	1.06	0.300	<0.000271	100	70 - 130	36	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)			0.102	0.0969	mg/L	1.06	0.100	102	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0936	0.0859	mg/L	1.06	0.100	94	86	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 428609

QC Batch: 133104
Prep Batch: 112788

Date Analyzed: 2016-10-04
QC Preparation: 2016-10-03

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0940	mg/L	1.06	0.100	<0.000534	94	70 - 130
Toluene		4	0.0894	mg/L	1.06	0.100	<0.000658	89	70 - 130
Ethylbenzene		4	0.0910	mg/L	1.06	0.100	<0.000809	91	70 - 130
Xylene		4	0.273	mg/L	1.06	0.300	<0.000271	91	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		4	0.0983	mg/L	1.06	0.100	<0.000534	98	70 - 130	4	20
Toluene		4	0.0934	mg/L	1.06	0.100	<0.000658	93	70 - 130	4	20
Ethylbenzene		4	0.0983	mg/L	1.06	0.100	<0.000809	98	70 - 130	8	20
Xylene		4	0.298	mg/L	1.06	0.300	<0.000271	99	70 - 130	9	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)			0.0956	0.0962	mg/L	1.06	0.1	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0883	0.0890	mg/L	1.06	0.1	88	89	70 - 130

Matrix Spike (MS-1) Spiked Sample: 429122

QC Batch: 133162
Prep Batch: 112881

Date Analyzed: 2016-10-05
QC Preparation: 2016-10-05

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0962	mg/L	1.06	0.100	<0.000534	96	70 - 130
Toluene		4	0.0905	mg/L	1.06	0.100	<0.000658	90	70 - 130
Ethylbenzene		4	0.0914	mg/L	1.06	0.100	<0.000809	91	70 - 130
Xylene		4	0.274	mg/L	1.06	0.300	<0.000271	91	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
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		4	0.0915	mg/L	1.06	0.100	<0.000534	92	70 - 130	5	20
Toluene		4	0.0888	mg/L	1.06	0.100	<0.000658	89	70 - 130	2	20
Ethylbenzene		4	0.0942	mg/L	1.06	0.100	<0.000809	94	70 - 130	3	20
Xylene		4	0.284	mg/L	1.06	0.300	<0.000271	95	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	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0959	0.0899	mg/L	1.06	0.1	96	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0855	0.0822	mg/L	1.06	0.1	86	82	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 133104

Date Analyzed: 2016-10-04

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		4	mg/L	0.100	0.0926	93	80 - 120	2016-10-04
Toluene		4	mg/L	0.100	0.0877	88	80 - 120	2016-10-04
Ethylbenzene		4	mg/L	0.100	0.0883	88	80 - 120	2016-10-04
Xylene		4	mg/L	0.300	0.263	88	80 - 120	2016-10-04

Standard (CCV-2)

QC Batch: 133104

Date Analyzed: 2016-10-04

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		4	mg/L	0.100	0.0928	93	80 - 120	2016-10-04
Toluene		4	mg/L	0.100	0.0877	88	80 - 120	2016-10-04
Ethylbenzene		4	mg/L	0.100	0.0892	89	80 - 120	2016-10-04
Xylene		4	mg/L	0.300	0.267	89	80 - 120	2016-10-04

Standard (CCV-3)

QC Batch: 133104

Date Analyzed: 2016-10-04

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		4	mg/L	0.100	0.0980	98	80 - 120	2016-10-04
Toluene		4	mg/L	0.100	0.0928	93	80 - 120	2016-10-04
Ethylbenzene		4	mg/L	0.100	0.0944	94	80 - 120	2016-10-04
Xylene		4	mg/L	0.300	0.282	94	80 - 120	2016-10-04

Standard (CCV-1)

QC Batch: 133162

Date Analyzed: 2016-10-05

Analyzed By: AK

Report Date: October 6, 2016
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Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		4	mg/L	0.100	0.0979	98	80 - 120	2016-10-05
Toluene		4	mg/L	0.100	0.0929	93	80 - 120	2016-10-05
Ethylbenzene		4	mg/L	0.100	0.0931	93	80 - 120	2016-10-05
Xylene		4	mg/L	0.300	0.279	93	80 - 120	2016-10-05

Standard (CCV-2)

QC Batch: 133162

Date Analyzed: 2016-10-05

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		4	mg/L	0.100	0.0933	93	80 - 120	2016-10-05
Toluene		4	mg/L	0.100	0.0901	90	80 - 120	2016-10-05
Ethylbenzene		4	mg/L	0.100	0.0927	93	80 - 120	2016-10-05
Xylene		4	mg/L	0.300	0.276	92	80 - 120	2016-10-05

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike	Pass
					Amount	
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	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	NELAP	T104704219-16-12	Lubbock
4	NELAP	T104704392-14-8	Midland
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 than 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

Report Date: October 6, 2016
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The scanned attachments will follow this page.

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



Certificate of Analysis Summary 541636

Talon/LPE Co., Midland, TX

Project Name: Hobbs Junction Mainline



Project Id: SRS#2003-00017

Contact: Ben Arguijo

Project Location:

Date Received in Lab: Thu Dec-08-16 08:45 am

Report Date: 15-DEC-16

Project Manager: Alex Montoya

Analysis Requested	Lab Id:	541636-001	541636-002	541636-003	541636-004	541636-005	541636-006
	Field Id:	MW-7	MW-13	MW-18	MW-21	MW-22	MW-23
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	Dec-07-16 10:40	Dec-07-16 13:00	Dec-07-16 12:45	Dec-07-16 13:40	Dec-07-16 13:20	Dec-07-16 11:45
BTEX by EPA 8021B	Extracted:	Dec-09-16 16:30	Dec-09-16 16:30	Dec-09-16 16:30	Dec-12-16 10:00	Dec-12-16 10:00	Dec-12-16 10:00
	Analyzed:	Dec-10-16 22:11	Dec-10-16 23:16	Dec-10-16 23:33	Dec-12-16 18:22	Dec-12-16 18:54	Dec-12-16 17:17
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	5.32 0.0500	1.28 0.0400	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.0500 0.0500	<0.0400 0.0400	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.485 0.0500	0.152 0.0400	<0.00200 0.00200
m_p-Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.256 0.0500	<0.0400 0.0400	<0.00200 0.00200
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.0883 0.0500	<0.0400 0.0400	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.344 0.0500	<0.0400 0.0400	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	6.15 0.0500	1.43 0.0400	<0.00200 0.00200

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 541636

Talon/LPE Co., Midland, TX

Project Name: Hobbs Junction Mainline



Project Id: SRS#2003-00017

Contact: Ben Arguijo

Project Location:

Date Received in Lab: Thu Dec-08-16 08:45 am

Report Date: 15-DEC-16

Project Manager: Alex Montoya

Analysis Requested	Lab Id:	541636-007	541636-008	541636-009	541636-010	541636-011	
	Field Id:	MW-24	MW-28	MW-31	MW-32	MW-33	
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	
	Sampled:	Dec-07-16 12:10	Dec-07-16 11:00	Dec-07-16 12:25	Dec-07-16 11:55	Dec-07-16 11:15	
BTEX by EPA 8021B	Extracted:	Dec-09-16 16:30	Dec-09-16 16:30	Dec-09-16 16:30	Dec-09-16 16:30	Dec-09-16 16:30	
	Analyzed:	Dec-11-16 00:21	Dec-11-16 00:38	Dec-11-16 00:54	Dec-11-16 01:10	Dec-11-16 01:27	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		<0.00200 0.00200	0.00485 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
m_p-Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX		<0.00200 0.00200	0.00485 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Analytical Report 541636

**for
Talon/LPE Co.**

Project Manager: Ben Arguijo

Hobbs Junction Mainline

SRS#2003-00017

15-DEC-16

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)



15-DEC-16

Project Manager: **Ben Arguijo**

Talon/LPE Co.

2901 S State Highway 349

Midland, TX 79706

Reference: XENCO Report No(s): **541636**

Hobbs Junction Mainline

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) 541636. 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. 541636 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Sample Cross Reference 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-7	W	12-07-16 10:40		541636-001
MW-13	W	12-07-16 13:00		541636-002
MW-18	W	12-07-16 12:45		541636-003
MW-21	W	12-07-16 13:40		541636-004
MW-22	W	12-07-16 13:20		541636-005
MW-23	W	12-07-16 11:45		541636-006
MW-24	W	12-07-16 12:10		541636-007
MW-28	W	12-07-16 11:00		541636-008
MW-31	W	12-07-16 12:25		541636-009
MW-32	W	12-07-16 11:55		541636-010
MW-33	W	12-07-16 11:15		541636-011



CASE NARRATIVE



Client Name: *Talon/LPE Co.*

Project Name: *Hobbs Junction Mainline*

Project ID: *SRS#2003-00017*
Work Order Number(s): *541636*

Report Date: *15-DEC-16*
Date Received: *12/08/2016*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-7**
Lab Sample Id: 541636-001

Matrix: Ground Water
Date Collected: 12.07.16 10.40

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 22.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	80-120	12.10.16 22.11		
4-Bromofluorobenzene	460-00-4	89	%	80-120	12.10.16 22.11		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-13**
Lab Sample Id: 541636-002

Matrix: Ground Water
Date Collected: 12.07.16 13.00

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 23.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	80-120	12.10.16 23.16		
4-Bromofluorobenzene	460-00-4	96	%	80-120	12.10.16 23.16		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-18**
Lab Sample Id: 541636-003

Matrix: Ground Water
Date Collected: 12.07.16 12.45

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 23.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	12.10.16 23.33		
4-Bromofluorobenzene	460-00-4	97	%	80-120	12.10.16 23.33		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-21**
Lab Sample Id: 541636-004

Matrix: Ground Water
Date Collected: 12.07.16 13.40

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.12.16 10.00

Seq Number: 3005448

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	5.32	0.0500	mg/L	12.12.16 18.22		25
Toluene	108-88-3	<0.0500	0.0500	mg/L	12.12.16 18.22	U	25
Ethylbenzene	100-41-4	0.485	0.0500	mg/L	12.12.16 18.22		25
m_p-Xylenes	179601-23-1	0.256	0.0500	mg/L	12.12.16 18.22		25
o-Xylene	95-47-6	0.0883	0.0500	mg/L	12.12.16 18.22		25
Total Xylenes	1330-20-7	0.344	0.0500	mg/L	12.12.16 18.22		25
Total BTEX		6.15	0.0500	mg/L	12.12.16 18.22		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	80-120	12.12.16 18.22		
4-Bromofluorobenzene	460-00-4	107	%	80-120	12.12.16 18.22		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-22**
Lab Sample Id: 541636-005

Matrix: Ground Water
Date Collected: 12.07.16 13.20

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.12.16 10.00

Seq Number: 3005448

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	1.28	0.0400	mg/L	12.12.16 18.54		20
Toluene	108-88-3	<0.0400	0.0400	mg/L	12.12.16 18.54	U	20
Ethylbenzene	100-41-4	0.152	0.0400	mg/L	12.12.16 18.54		20
m_p-Xylenes	179601-23-1	<0.0400	0.0400	mg/L	12.12.16 18.54	U	20
o-Xylene	95-47-6	<0.0400	0.0400	mg/L	12.12.16 18.54	U	20
Total Xylenes	1330-20-7	<0.0400	0.0400	mg/L	12.12.16 18.54	U	20
Total BTEX		1.43	0.0400	mg/L	12.12.16 18.54		20
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	80-120	12.12.16 18.54		
4-Bromofluorobenzene	460-00-4	98	%	80-120	12.12.16 18.54		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-23**
Lab Sample Id: 541636-006

Matrix: Ground Water
Date Collected: 12.07.16 11.45

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.12.16 10.00

Seq Number: 3005448

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.12.16 17.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	12.12.16 17.17		
4-Bromofluorobenzene	460-00-4	95	%	80-120	12.12.16 17.17		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-24**
Lab Sample Id: 541636-007

Matrix: Ground Water
Date Collected: 12.07.16 12.10

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.11.16 00.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	12.11.16 00.21		
4-Bromofluorobenzene	460-00-4	94	%	80-120	12.11.16 00.21		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-28**
Lab Sample Id: 541636-008

Matrix: Ground Water
Date Collected: 12.07.16 11.00

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00485	0.00200	mg/L	12.11.16 00.38		1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.16 00.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.16 00.38	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.11.16 00.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.16 00.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.11.16 00.38	U	1
Total BTEX		0.00485	0.00200	mg/L	12.11.16 00.38		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	80-120	12.11.16 00.38		
4-Bromofluorobenzene	460-00-4	94	%	80-120	12.11.16 00.38		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-31**
Lab Sample Id: 541636-009

Matrix: Ground Water
Date Collected: 12.07.16 12.25

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.11.16 00.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	80-120	12.11.16 00.54		
4-Bromofluorobenzene	460-00-4	91	%	80-120	12.11.16 00.54		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-32**
Lab Sample Id: 541636-010

Matrix: Ground Water
Date Collected: 12.07.16 11.55

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.11.16 01.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	80-120	12.11.16 01.10		
4-Bromofluorobenzene	460-00-4	95	%	80-120	12.11.16 01.10		



Certificate of Analytical Results 541636



Talon/LPE Co., Midland, TX

Hobbs Junction Mainline

Sample Id: **MW-33**
Lab Sample Id: 541636-011

Matrix: Ground Water
Date Collected: 12.07.16 11.15

Date Received: 12.08.16 08.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 16.30

Seq Number: 3005411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.11.16 01.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	80-120	12.11.16 01.27		
4-Bromofluorobenzene	460-00-4	100	%	80-120	12.11.16 01.27		

- 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

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 9701 Harry Hines Blvd , Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 1211 W Florida Ave, Midland, TX 79701
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	

Talon/LPE Co.
Hobbs Junction Mainline

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005411

MB Sample Id: 717080-1-BLK

Matrix: Water

LCS Sample Id: 717080-1-BKS

Prep Method: SW5030B

Date Prep: 12.09.16

LCSD Sample Id: 717080-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0902	90	0.0932	93	70-125	3	25	mg/L	12.10.16 18:08	
Toluene	<0.00200	0.100	0.0853	85	0.0888	89	70-125	4	25	mg/L	12.10.16 18:08	
Ethylbenzene	<0.00200	0.100	0.0901	90	0.0938	94	71-129	4	25	mg/L	12.10.16 18:08	
m_p-Xylenes	<0.00200	0.200	0.181	91	0.188	94	70-131	4	25	mg/L	12.10.16 18:08	
o-Xylene	<0.00200	0.100	0.0908	91	0.0955	96	71-133	5	25	mg/L	12.10.16 18:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		114		80-120	%	12.10.16 18:08
4-Bromofluorobenzene	95		96		112		80-120	%	12.10.16 18:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005448

MB Sample Id: 717120-1-BLK

Matrix: Water

LCS Sample Id: 717120-1-BKS

Prep Method: SW5030B

Date Prep: 12.12.16

LCSD Sample Id: 717120-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0843	84	0.0866	87	70-125	3	25	mg/L	12.12.16 09:43	
Toluene	<0.00200	0.100	0.0806	81	0.0814	81	70-125	1	25	mg/L	12.12.16 09:43	
Ethylbenzene	<0.00200	0.100	0.0858	86	0.0887	89	71-129	3	25	mg/L	12.12.16 09:43	
m_p-Xylenes	<0.00200	0.200	0.172	86	0.178	89	70-131	3	25	mg/L	12.12.16 09:43	
o-Xylene	<0.00200	0.100	0.0849	85	0.0883	88	71-133	4	25	mg/L	12.12.16 09:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		100		80-120	%	12.12.16 09:43
4-Bromofluorobenzene	94		102		109		80-120	%	12.12.16 09:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005411

Parent Sample Id: 541635-001

Matrix: Ground Water

MS Sample Id: 541635-001 S

Prep Method: SW5030B

Date Prep: 12.09.16

MSD Sample Id: 541635-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00609	0.100	0.0863	80	0.0828	77	70-125	4	25	mg/L	12.10.16 18:40	
Toluene	<0.00200	0.100	0.0768	77	0.0736	74	70-125	4	25	mg/L	12.10.16 18:40	
Ethylbenzene	<0.00200	0.100	0.0833	83	0.0800	80	71-129	4	25	mg/L	12.10.16 18:40	
m_p-Xylenes	<0.00200	0.200	0.164	82	0.158	79	70-131	4	25	mg/L	12.10.16 18:40	
o-Xylene	<0.00200	0.100	0.0821	82	0.0786	79	71-133	4	25	mg/L	12.10.16 18:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		80-120	%	12.10.16 18:40
4-Bromofluorobenzene	94		96		80-120	%	12.10.16 18:40



Talon/LPE Co.
Hobbs Junction Mainline

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005448

Parent Sample Id: 541751-001

Matrix: Ground Water

MS Sample Id: 541751-001 S

Prep Method: SW5030B

Date Prep: 12.12.16

MSD Sample Id: 541751-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0833	83	0.0795	80	70-125	5	25	mg/L	12.12.16 10:51	
Toluene	<0.00200	0.100	0.0772	77	0.0749	75	70-125	3	25	mg/L	12.12.16 10:51	
Ethylbenzene	<0.00200	0.100	0.0822	82	0.0792	79	71-129	4	25	mg/L	12.12.16 10:51	
m_p-Xylenes	<0.00200	0.200	0.164	82	0.157	79	70-131	4	25	mg/L	12.12.16 10:51	
o-Xylene	<0.00200	0.100	0.0846	85	0.0825	83	71-133	3	25	mg/L	12.12.16 10:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		80-120	%	12.12.16 10:51
4-Bromofluorobenzene	106		108		80-120	%	12.12.16 10:51



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Odessa: 12600 West L20 East Odessa, TX 79765 (432)563-1800

Page 1 of 2
LAB W.O.#: 511636
Field billable Hrs: 0

CHAIN OF CUSTODY RECORD

Company: Talon/LPE		Phone: (806)549-9597		TAT Work Days = D		Need results by: _____ Time: _____															
Address: 2901 State Highway 349		Fax: (432)522-2180		Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other _____																	
City: Midland		State: TX Zip: 79706		ANALYSES REQUESTED																	
PM/Attn: Ben Argujio		Email: cjbryant@paap.com, bjacquillo@talonlpe.com		Cont Type* VC VP																	
Project ID: Hobbs Junction Mainline SRS #2003-00017		PO#: PAA-C. Bryant		Pres Type** E, I																	
Invoice To: Camille Bryant Plains All American		Quote #:		Example Volatiles by 8260 BTEX																	
Sampler Name: Ben Caswell		Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A		Matrix Type Codes																	
Sample #		Sample ID		Collect Date		Collect Time		Matrix Code		Field Filtered		Integrity OK (Y/N)		Total # of containers		# Cont		Hold Sample (CALL _____) Run PAH on Highest TPH _____ Only If _____		REMARKS	
1		MMW-7	12/7/16	10:40	GW																
2		MMW-13	12/7/16	13:00	GW																
3		MMW-18	12/7/16	12:45	GW																
4		MMW-21	12/7/16	13:40	GW																
5		MMW-22	12/7/16	13:20	GW																
6		MMW-23	12/7/16	11:45	GW																
7		MMW-24	12/7/16	12:10	GW																
8		MMW-28	12/7/16	11:00	GW																
9		MMW-31	12/7/16	12:25	GW																
0		MMW-32	12/7/16	11:55	GW																
Reg. Program / Clean-up Std		STATE for Certs & Regs		QA/QC Level & Certification		EDDS		COC & Labels		Coolers		Temp °C		Lab Use Only		YES NO N/A					
CTLS TRRP DW NPDES LPST DryCh Other:		FL TX GA NC SC NJ PA OK		1 2 3 4 CLP AFCEE OAPP		Match Absent		Incomplete Unclear		1 2 3		Time		Non-Conformances found?							
Relinquished by		Affiliation		Date		Received by		Affiliation		Date		Time		Samples intact upon arrival?							
1 Mar 1, 2015		Talon		12-8		8:45		J. V. HARRIS		Xenco		12-8		9:45							
2																					
3																					
4																					

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

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed. Past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Temp: IR ID: R-8
CF: + 0.1009
Corrected Temp: 1.0



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Odessa: 12600 West 1-20 East Odessa, TX 79765 (432)563-1800

LAB W.O. #: 54110310
Field billable Hrs.:

CHAIN OF CUSTODY RECORD

Company: Talon/PE Phone: (806)549-9597

Address: 2901 State Highway 349 Fax: (432)522-2180

City: Midland State: TX Zip: 79706

PM/Attn: Ben Arguio Email: cbyrant@paap.com, blarguio@talonpe.com

Project ID: Hobbs Junction Mainline SPS #2003-00017 PO#: PAA-C. Bryant

Invoice To: Camille Bryant Plains All American Quote #:

Sampler Name: Ben Caswell

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample # Sample ID Collect Date Collect Time Matrix Code ^ Field Filtered Integrity OK (Y/N) Total # of containers

1 MW-33 12/7/16 11:15 GW 3

2

3

4

5

6

7

8

9

0

Reg. Program / Clean-up Std STATE for Certs & Regs QA/QC Level & Certification

CTLS TRRP DW NPDES LPST DryCh Other: FL TX GA NC SC NJ PA OK NEAC DDD-ELAP Other:

Relinquished by Affiliation Date Time

1 Mark Davis Taken 12.8 8:45

2

3

4

TAT Work Days = D Need results by: Time:

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

ANALYSES REQUESTED

Cont Type ^ VC VP

Pres Type** E, I

Example Volatiles by 8260 BTEX

Cont

X

* 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. HNO₃ F. MeOH J. MCAA

C. H₂SO₄ G. Na₂S₂O₈ K. ZnAc&NaOH

D. NaOH H. NaHSO₄ L. Aspic 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

Lab Use Only YES NO N/A

Non-Conformances found?

Samples init'd 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?

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

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previousl

past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

C.O.C. Serial # Temp: IR ID: R-8

CF: + 0.1 0.9

Corrected Temp: 1.0

days, and all



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Talon/LPE Co.

Date/ Time Received: 12/08/2016 08:45:00 AM

Work Order #: 541636

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)?	1
#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 HNO ₃ , HCL, H ₂ SO ₄ ? 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 NaAsO ₂ +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: 12/08/2016

Checklist reviewed by:

Alex Montoya

Alex Montoya

Date: 12/09/2016

APPENDIX D

Regulatory Documentation

NMOCD Initial 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

Form C-141

Revised March 17, 1999

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit 2 Copies to appropriate

District Office in accordance

with Rule 116 on back

side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

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

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

LOCATION OF RELEASE

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

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 50 bbl	Volume Recovered 24 bbl
Source of Release Steel Pipeline	Date and Hour of Occurrence 1/23/03-8:00 AM	Date and Hour of Discovery 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-ft² 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: 	<u>OIL CONSERVATION DIVISION</u>	
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