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TALON LPE

2016 ANNUAL GROUNDWATER MONITORING REPORT

KIMBROUGH SWEET 8”
LEA COUNTY, NEW MEXICO
SRS #2000—10757
NMOCD REF. # AP-0029

Prepared For:
PLAINS MARKETING, L.P.
333 CLAY STREET, SUITE 1600
HOUSTON, TEXAS

Prepared By:
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2901 S. State Highway 349
Midland, Texas 79706

April, 2017

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TALON/LPE PROJECT NO. 700376.050.04

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

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1.0 INTRODUCTION AND OBJECTIVES

1.1 Objectives and Site Background

The Kimbrough Sweet 8" (site) is located approximately seven (7) miles northwest of Hobbs, Lea County, New Mexico, on property owned by the State of New Mexico. There are no residences, groundwater wells, or surface water bodies within a 1,000-foot radius of the site. The initial release occurred from the 8-inch steel pipeline on October 25, 2000. At the time of the release, the pipeline was owned by EOTT Energy Pipeline. Subsequently, EOTT changed its name to Link Energy in October 2003, and Plains Marketing, L.P. (Plains) purchased the assets of Link Energy on April 1, 2004. Initial reports estimated that 60 barrels (bbls) of crude oil were released and impacted approximately 15,613 feet of surface area. Approximately 22 bbls of crude oil was recovered during initial remediation activities.

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

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

The average elevation of the site area is approximately 3,720-feet above mean sea level with a slight slope to the southeast. The regional slope of the land surface in the Southern High Plains is approximately 100 feet per mile in a southeasterly direction.

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

1.2 Site Geology

The surface deposits in Lea County are composed of Blackwater Draw (Illinoian) sediments, Ogallala sediments and undivided Quaternary alluvium, which is also termed 'cover sands'. The soil in the upper two (2) feet at the site is composed of gravelly loam that 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 18 groundwater monitor wells have been installed in the vicinity of the release (see Figure 1). With New Mexico Oil Conservation Division (NMOCD) approval and landowner concurrence, groundwater monitor wells MW-1, MW-2, MW-3, and MW-4 were installed in January 2002. Groundwater monitor wells MW-5, MW-7, MW-8, and MW-9 were installed in July 2004, and monitor wells MW-6, MW-10, and MW-11 were installed in December 2004. Monitor wells MW-12 and MW-13 were installed on March 11, 2009 and monitor wells MW-14 and MW-15 were installed in January of 2011. Replacement monitor well MW-1A and new monitor wells MW-16, MW-17, and MW-18 were installed in November of 2013. Monitor Well MW-1 was plugged and abandoned.

Phase-separated hydrocarbon (PSH) recovery operations have been performed at the site since January 2002, initially by hand bailing. In 2007, an automated skimmer recovery system was installed at the site. In March of 2011, solar panels were installed at the site and two (2) 12-volt (12V) total fluid pumps were installed in monitor wells MW-5 and MW-6. In November of 2011, additional 12V-powered total fluids pumps were installed in monitor wells MW-2 and MW-11. In October 2012, an internal combustion engine (ICE) system for running pumps and vapor extraction was installed on site. There are five (5) total fluids pumps, powered by an the ICE unit, in monitor wells MW-5, MW-6, MW-7, MW-8, MW-11, and two (2) solar powered electric pumps in MW-2, and MW-9.

Approximately 437.12 bbls of combined liquid and vapor PSH has been recovered to date. Approximately 154.63 bbls consisted of vapor phase, and 282.49 bbls of liquid phase PSH.

1.4 Regulatory Framework

Groundwater analytical data from this site was evaluated to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards.

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

The following sections provide summaries of the groundwater monitoring activities conducted at the site as well as analytical results from each groundwater sampling event of 2016. Analytical results for the four (4) sampling events are summarized in Table 2 and Table 3 in Appendix B, and Figures 3a through 3d in Appendix A. Laboratory analytical data reports and chains of custody documentation are included in Appendix C.

2.0 SITE ACTIVITIES

The sections that follow summarize groundwater monitoring and PSH recovery activities conducted at the subject site during 2016. The primary function of groundwater monitoring is to measure the depths to fluids and to collect groundwater samples from monitor wells for laboratory analysis. The objective of groundwater monitoring is to evaluate the status of the dissolved-phase and PSH plumes in order to verify the effectiveness of the remediation system as to inhibiting plume migration, reducing the volume of PSH impacting the groundwater and determining if modifications to the remediation system would improve its performance and efficiency.

2.1 Groundwater Monitoring Activities

A total of four (4) groundwater monitoring events were conducted by Talon during the year 2016 on March 10, May 27, September 9, and December 6. During all of the groundwater monitoring events, the depths to fluids were measured in all of the monitoring wells using an oil/water interface probe.

During the four (4) sampling events, groundwater samples were collected from 9 monitor wells (MW-1A, MW-3, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, and MW-18). Samples were collected from all nine monitor wells with no presence of PSH during all four (4) sampling events. Details of the gauging, purging, and sample collection activities are presented in Section 2.2 below.

2.2 Groundwater Gauging, Purging, and Sample Collection Procedures

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

Subsequent to gauging, all monitor wells not impacted with PSH were purged a minimum of three (3) casing volumes using a 12-volt, submersible pump equipped with vinyl tubing. The purge pump and tubing were decontaminated with Alconox® detergent and rinsed with distilled water after each use. Recovered purge water and water used in the decontamination process was contained in on-site 55-gallon drums. After the groundwater monitoring event, all retained water was removed with a vacuum truck. Approximately 421 gallons of purged groundwater and decontamination water during the monitoring events of 2016.

Groundwater samples were collected from all monitor wells using dedicated disposable polyethylene bailers. Each groundwater sample was contained in laboratory supplied sample containers with the appropriate preservative required for the analysis requested.

The groundwater samples were maintained on ice, in the custody of Talon personnel, until they were delivered to TraceAnalysis, Inc. or Xenco Laboratory in Midland, Texas for

analyses. The groundwater samples collected during all four events were quantified for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method SW-846 8021B. The groundwater samples collected from MW-1A, MW-16, MW-17 and MW-18 during March 2016 were quantified for Polyaromatic Hydrocarbons (PAH) by EPA Method 8270D.

2.3 Phase Separated Hydrocarbon Recovery

PSH recovery has been conducted at the site since 2002, initially by hand bailing. In 2007, an automated skimmer recovery system was installed at the site. In March of 2011, solar panels were installed at the site and two (2) 12-volt (12V) total fluid pumps were installed in monitor wells MW-5 and MW-6. In November of 2011, additional 12V-powered total fluids pumps were installed in monitor wells MW-2 and MW-11. In October 2012, an ICE system for running pumps and vapor extraction was installed on site.

The system utilizes five (5) pneumatic total fluid pumps in monitor wells MW-5, MW-6, MW-7, MW-8, and MW-11 and two (2) 12V total fluids pumps in MW-2 and MW-9 to recover PSH and to inhibit migration of the PSH plume. The ICE assembly consists of pneumatic total fluid pumps combined with vapor suction. Since there is no electricity at the site; the ICE system is powered by propane and vapors from listed wells. The 12V total fluids pumps operate off 12V batteries, which are charged by solar panels.

Fluid recovered by the pumps is retained in two (2) polyethylene tanks, a 3,000-gallon and a 2,500-gallon that was added in 2011. The tanks are coupled together and are equipped with high-level shut-off switches to prevent overflow. In addition, the tanks are located within a secondary recovery compound that is equipped with a polyethylene liner. Periodically, recovered groundwater is removed from the tanks and transported to an NMOCD approved disposal facility. PSH is also periodically removed with a vacuum truck and is re-introduced to the Plains' pipeline system at the Scharb Station and/or 34 Junction South pipeline. In May 2016, the technician discovered that the engine for the ICE assembly was damaged. Pending repair or replacement of the engine, PSH recovery was completed with a mobile dual-phase extraction (MDPE) unit for the remainder of 2016.

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

- 1st Quarter – 0 bbls PSH and 0 bbls of groundwater
- 2nd Quarter – 32.4 bbls PSH and 292 bbls of groundwater
- 3rd Quarter – 12.2 bbls PSH and 20.5 bbls of groundwater
- 4th Quarter – 11.9 bbls PSH and 49.1 bbls groundwater

Approximately 437.12 bbls of PSH (154.63 vapor phase/ 282.49 liquid phase) have 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 data reports and chains of custody documentation are provided in Appendix C. The following sections present the results from the four groundwater monitoring events conducted on the first water-bearing zone underlying the 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 six (6) counties in New Mexico.

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

The Ogallala Aquifer is generally unconfined and the poteniometric surface 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 with a specific yield averaging 16%. The depth to groundwater at the site ranged from 60.59 feet below ground surface (bgs) to 66.05 feet bgs and the groundwater flow direction is to the east northeast. The saturated thickness of the Ogallala formation on the High Plains ranges from 25 feet to 175 feet. The variable thickness is due to the irregularly eroded Triassic surface that underlies it.

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

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

The collected data was used to construct potentiometric surface maps in order to interpret the

groundwater gradient and flow direction. The maps, designated Figures 2a through 2d, are presented in Appendix A.

The potentiometric surface maps constructed for each of the four (4) groundwater monitoring events in 2016 indicates that the groundwater flow direction is to east northeast with average gradient of 0.0042 feet per foot or approximately 22 feet per mile. Groundwater levels at the subject site have exhibited a steady decline of an average of 0.52 feet for the year 2016 that appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.

3.3 Phase Separated Hydrocarbon (PSH)

An oil/water interface probe was used to determine the thicknesses of PSH during the four (4) groundwater monitoring events. Generally, PSH thicknesses have fluctuated from quarter to quarter during the year 2016 but have remained relatively stable throughout the year.

In addition to potentiometric surface maps, isopleth maps were prepared depicting the measured PSH thicknesses and PSH plume geometry. PSH plume delineation and thickness maps are presented in Appendix A as Figures 3a through 3d.

- In March of 2016, PSH was observed in monitor wells MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.97 feet to 4.80 feet.
- In May of 2016, PSH was observed in monitor wells MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.10 feet to 3.17 feet.
- In September of 2016, PSH was observed in monitor wells MW-2, MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.34 feet to 2.04 feet.
- In December of 2016, PSH was observed in monitor wells MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.62 feet to 1.10 feet.

PSH recovery operations have been performed at the site since 2002. A summary of the historical groundwater and PSH gauging is provided in Table 1 in Appendix B. Approximately 437.12 bbls of PSH (154.63 vapor / 282.49 liquid) have been recovered to date.

3.4 Groundwater Sampling Results

During the first quarter, March 2016, the following monitor wells were sampled: MW-1A, MW-3, MW-12 through MW-18. Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000223 mg/L in MW-1A and MW-12 through MW-18 to 0.00110 mg/L in MW-3. Benzene concentrations did not exceed the NMWQCC groundwater standard of 0.010 mg/L in any of the monitor wells sampled this quarter.
- Toluene concentrations ranged from <0.000238 mg/L in MW-1A, MW-3, MW-12 through MW-15, and MW-18 to 0.000500 mg/L in MW-17. Toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the

monitor wells sampled this quarter.

- Ethylbenzene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore, below the NMWQCC groundwater standard of 0.750 mg/L in any of the wells sampled this quarter.

- Xylene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.620 mg/L.

- PAH concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.030 mg/L for naphthalene and 0.007 mg/L for benzo[a]pyrene in any of the wells sampled this quarter.

During the May 2016 sampling event, the following wells were sampled: MW-1A, MW-3, MW-12 through MW-18. Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from 0.000800 mg/L in MW-14 and MW-16 to 0.00500 mg/L in MW-3. Benzene concentrations did not exceed the NMWQCC groundwater standard of 0.010 mg/L in any of the monitor wells sampled this quarter.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000238 mg/L in MW-1A, MW-14, MW-15, MW-16, and MW-18 to 0.000400 mg/L in MW-12 and MW-13. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the monitor wells sampled this quarter.
- Xylene concentrations ranged from <0.000243 mg/L in MW-1A, MW-3, MW-14 through MW-18 to 0.000300 mg/L in MW-12 and MW-13. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the monitor wells sampled this quarter.

During the September 2016 sampling event, the following wells were sampled: MW-1A, MW-3, MW-12 through MW-18 were sampled. Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.00504 mg/L in wells MW-1A, MW-12 through MW-15, MW-17, and MW-18 to 0.00180 mg/L in MW-3. The benzene concentrations did not exceed the NMWQCC groundwater standard of 0.010 mg/L.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard

of 0.750 mg/L.

- Xylene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard 0.620 mg/L in any groundwater samples collected.

During the December 2016 sampling event, the following wells were sampled: MW-1A, MW-3, MW-12 through MW-18. Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.000408 mg/L in wells MW-12 through MW-15, MW-17, and MW-18 to 0.0269 mg/L in MW-3. Benzene concentrations in MW-3 exceeded the NMWQCC benzene standard of 0.0100 mg/L during the 4th quarterly sampling event.
- Toluene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.000657 mg/L in wells MW-1A and MW-12 through MW-18 to 0.00341 mg/L in MW-3. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the wells sampled this quarter.
- Xylene concentrations were below laboratory method detection limits in all wells sampled this quarter and therefore below the NMWQCC groundwater standard of 0.620 mg/L.

The dissolved-phase plume is currently delineated to NMWQCC groundwater standards except to the south due to MW-4 being dry. The dissolved-phase concentrations are depicted on the groundwater concentration maps 3a through 3d in Appendix A. The laboratory analytical results for BTEX are summarized in Table 2 – Summary of Historical Groundwater Analytical Results in Appendix B. We are not delineated to south since MW-4 is dry.

Newly-installed monitor wells, MW-1A and MW-16 through MW-18, are monitored for PAH at least two (2) consecutive years on an annual basis after regulated PAH constituents are below NMWQCC standards. These wells were analyzed for PAH during the March 2016 sampling event. Similarly, monitor wells that formerly contained PSH follow the same regimen. The laboratory analytical results 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 groundwater monitoring events conducted at the Kimbrough Sweet 8" site and Section 4.2 provides recommendations for future corrective action.

4.1 Summary of Findings

- The groundwater flow direction is to east northeast with an average gradient of 0.0042 ft/ft or approximately 22 feet per mile based on the water level measurement data collected in 2016.
- Groundwater levels at the subject site have declined 0.52 feet for the year 2016, which is consistent with the regional trend of declining groundwater levels in the Ogallala Aquifer.
- PSH is impacting monitor wells MW-5 through MW-9, and MW-11.
- PSH thicknesses have fluctuated over the year 2016 but have continued to decline over the years. Approximately 57.12 bbls of PSH was recovered during the year 2016.
- Dissolved-phase concentrations were stable over the year 2016. Down-gradient monitor well MW-12 continues to show a declining trend in dissolved-phase concentrations. The benzene concentration in MW-3 exceeded the NMWQCC groundwater standard of 0.010 mg/L during the December event.

4.2 Recommendations

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

- Conduct monthly MDPE events.
- Perform quarterly groundwater monitoring events in accordance with NMOCD directives.
- The NMOCD approved Proposed Monitor Well Location Map and Proposed Recovery Well Locations Map are provided as Figure 4 and Proposed Plugging Locations Map is Figure 5 in Appendix A. The proposed monitor wells will be installed in 2017 pending permitting and landowner approval.

APPENDIX A

Figures

Figure 1 - Site Plan

Figure 2a - Groundwater Gradient Map - 03/10/2016

Figure 2b - Groundwater Gradient Map - 05/27/2016

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

Figure 2d - Groundwater Gradient Map - 12/06/2016

Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/10/2016

Figure 3b - PSH Thickness & Groundwater Concentration Map - 05/27/2016

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

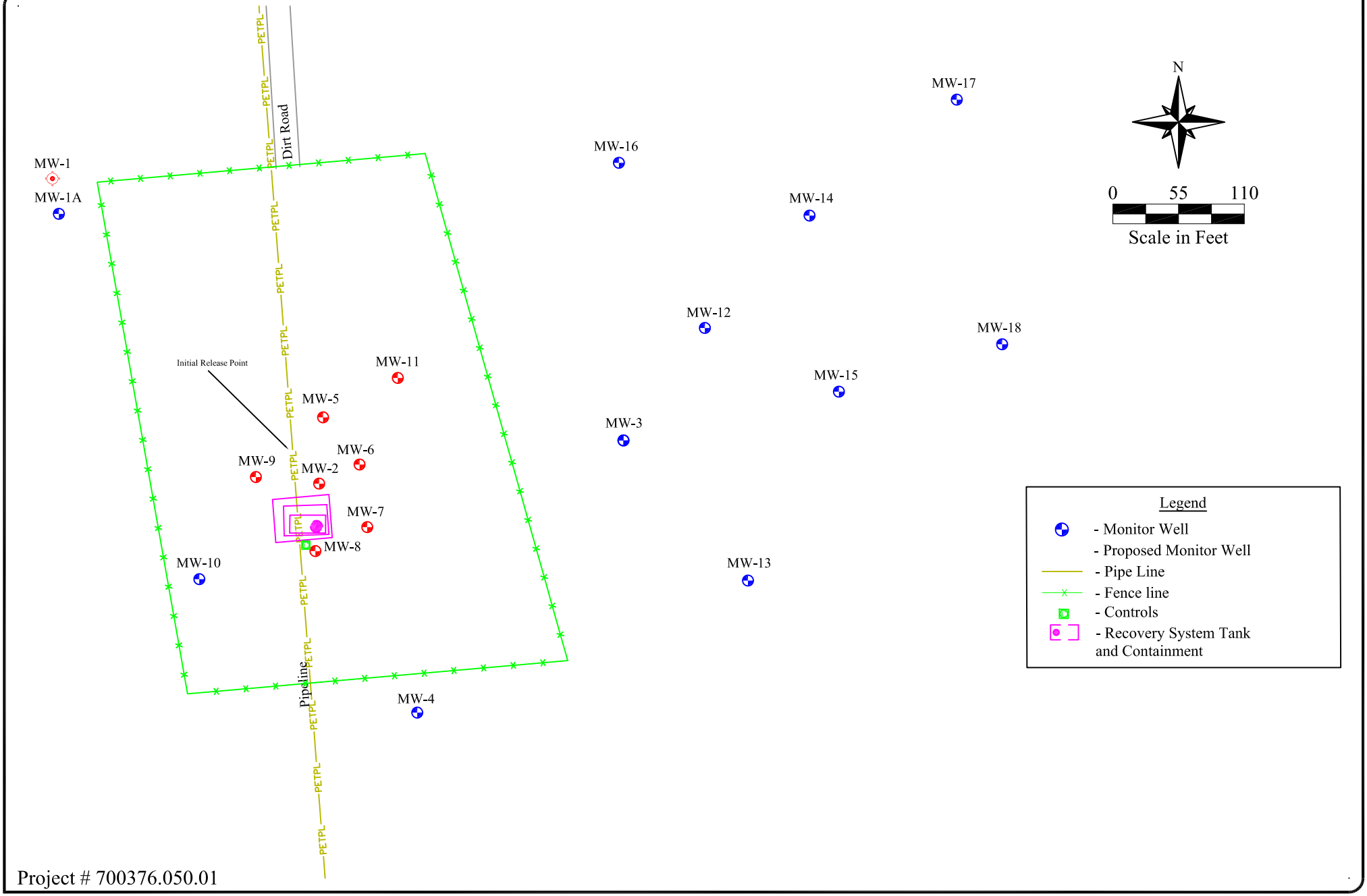
Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/06/2016

Figure 4 – Site Map with Proposed Monitor Well Locations

Figure 4 – Site Map with Proposed Recovery Well Locations

Figure 5 – Site Map with Proposed Plugging Locations – Monitoring Wells

Figure 5 – Site Map with Proposed Plugging Locations – Recovery Wells



Project # 700376.050.01

TALON LPE

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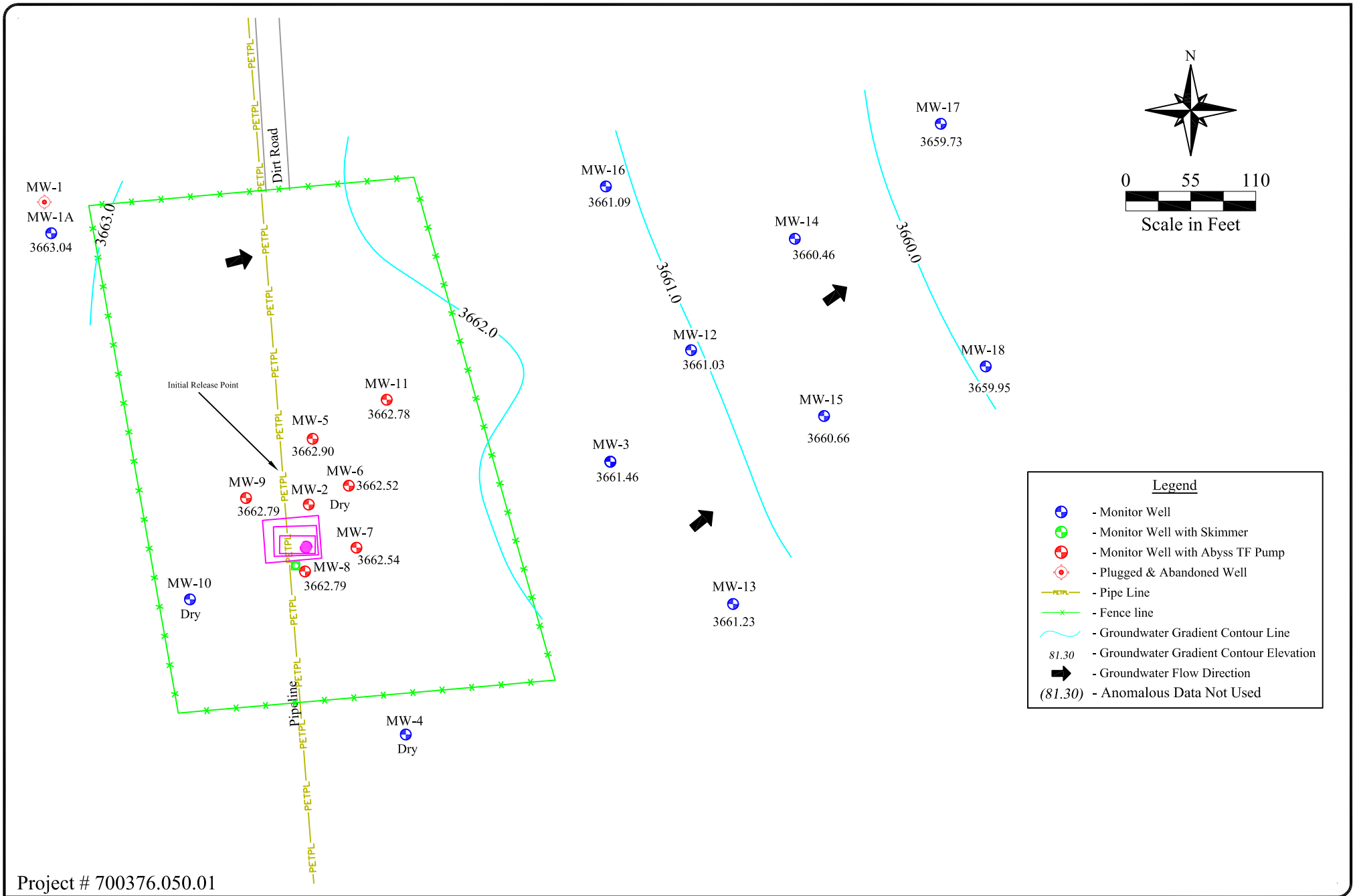
Drawn By:	TJS

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 1 - Site Plan (12/30/13)



Project # 700376.050.01

TALON LPE

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Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029
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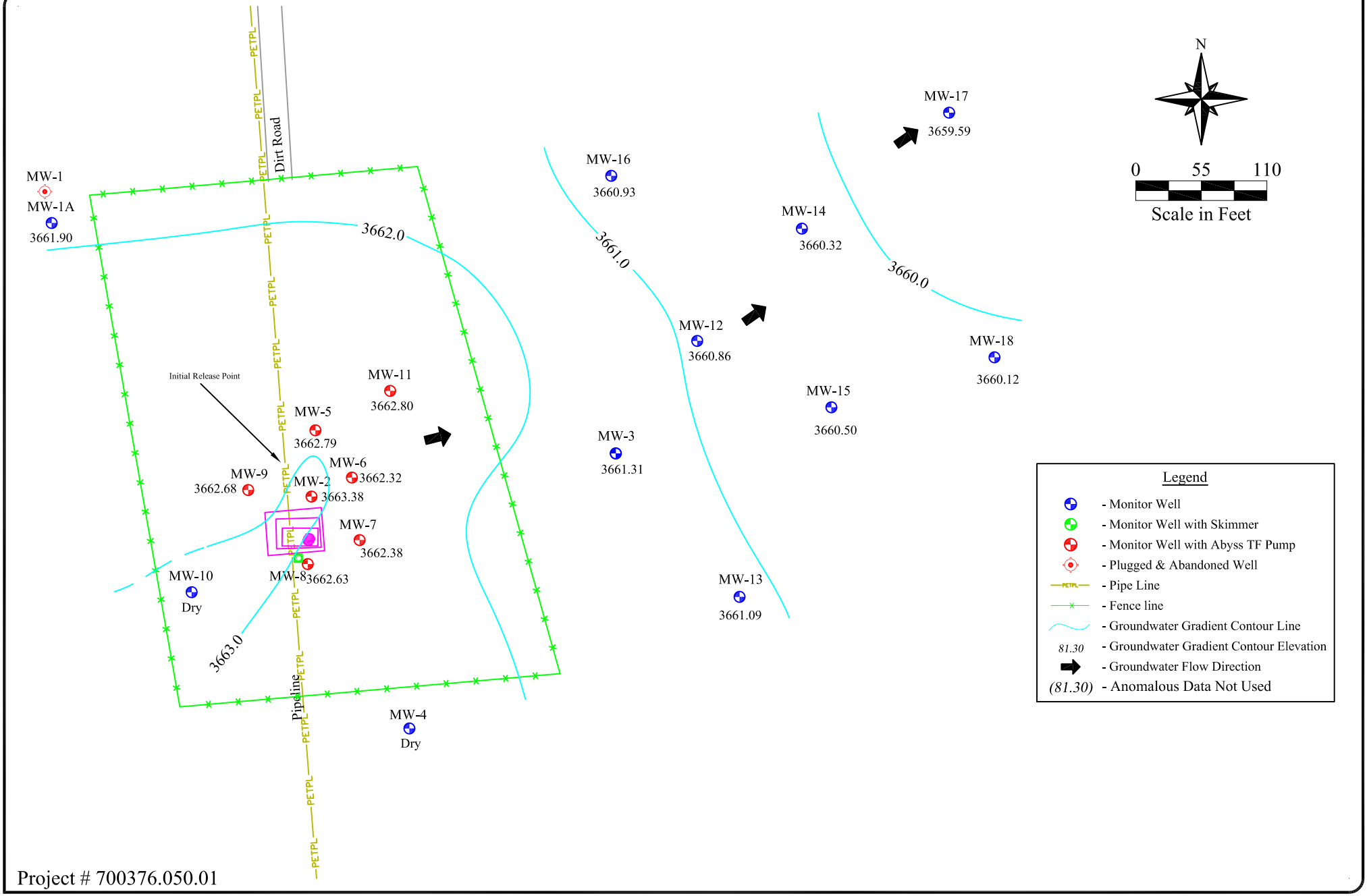
Figure 2a - Groundwater Gradient Map - 03/10/2016



Project # 700376.050.01

TALON LPE

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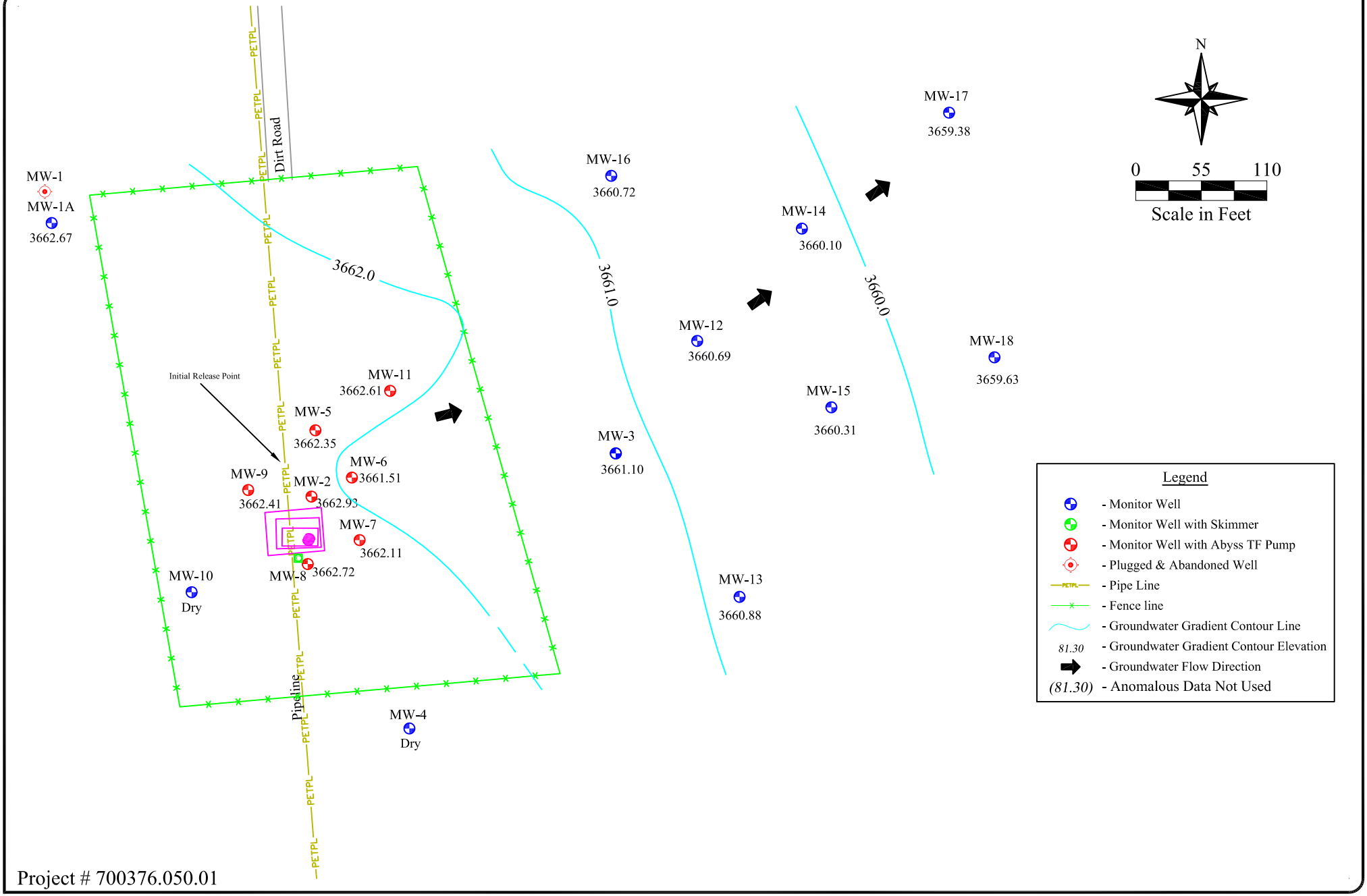
Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 2b - Groundwater Gradient Map - 05/27/2016



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Date:	03/29/2017
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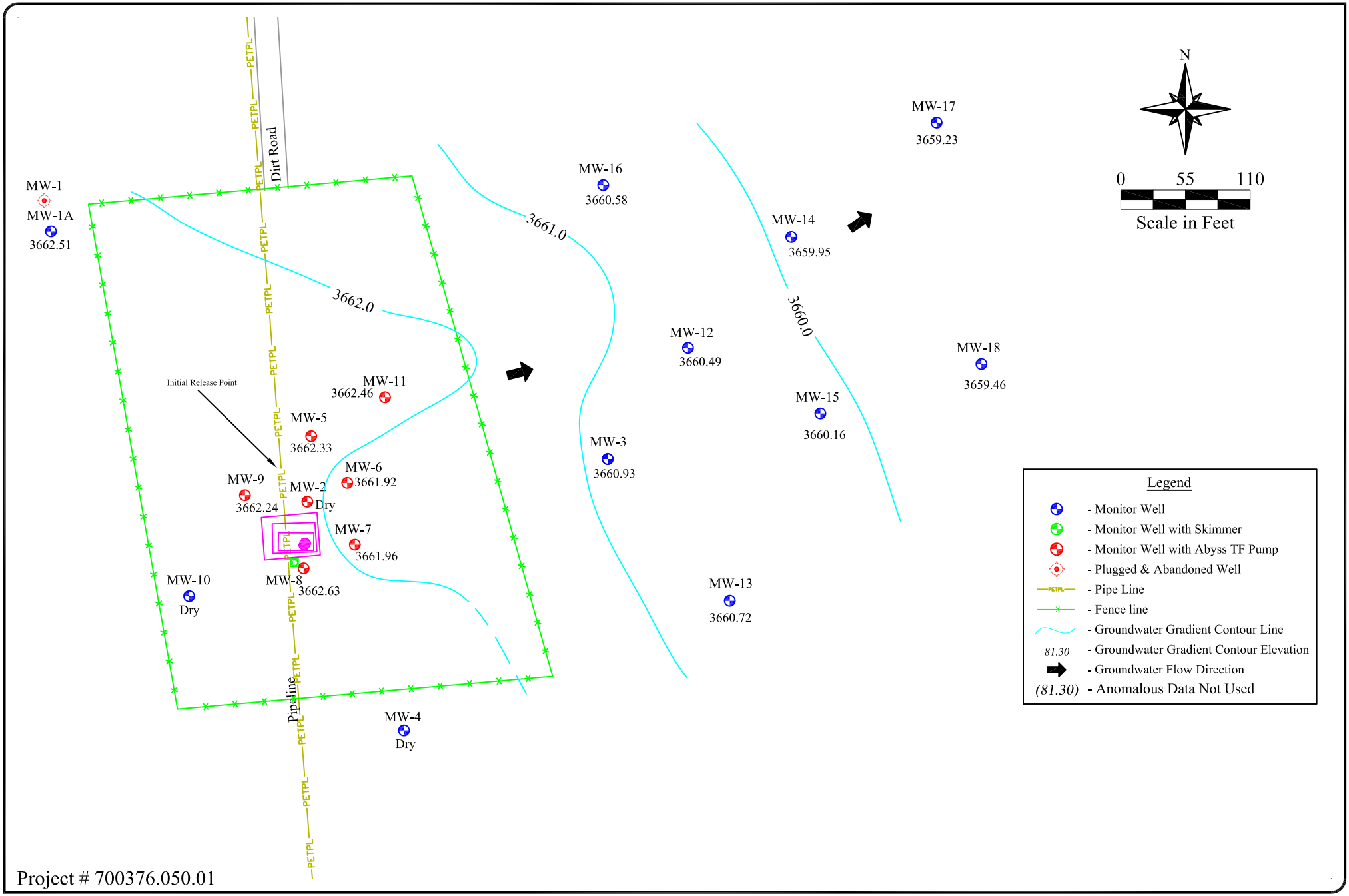
SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

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



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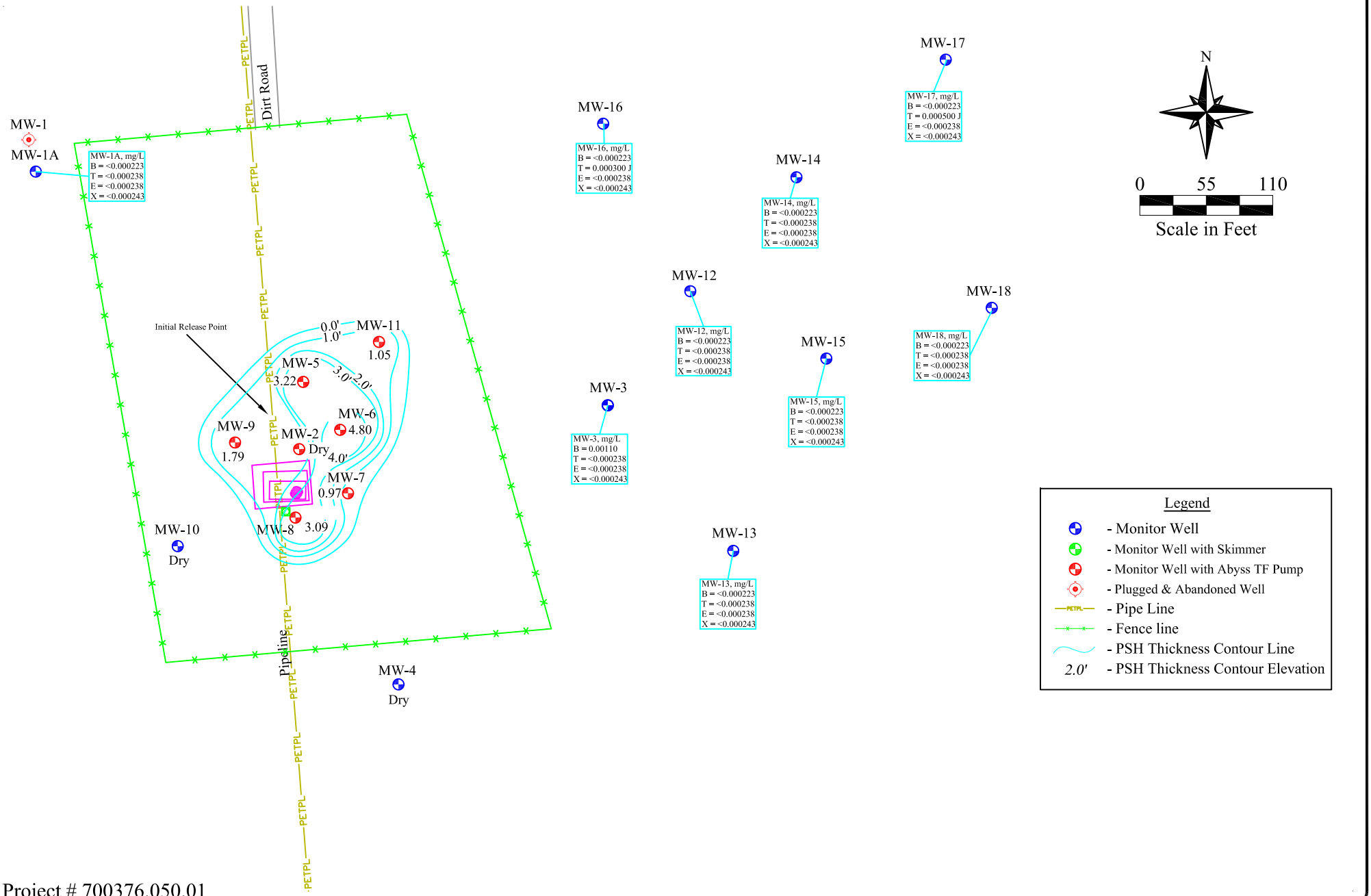
Scale: 1" = 110'
Drawn By: KLW

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029
SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico
Figure 2d - Groundwater Gradient Map - 12/06/2016



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Kimbrough Sweet 8"

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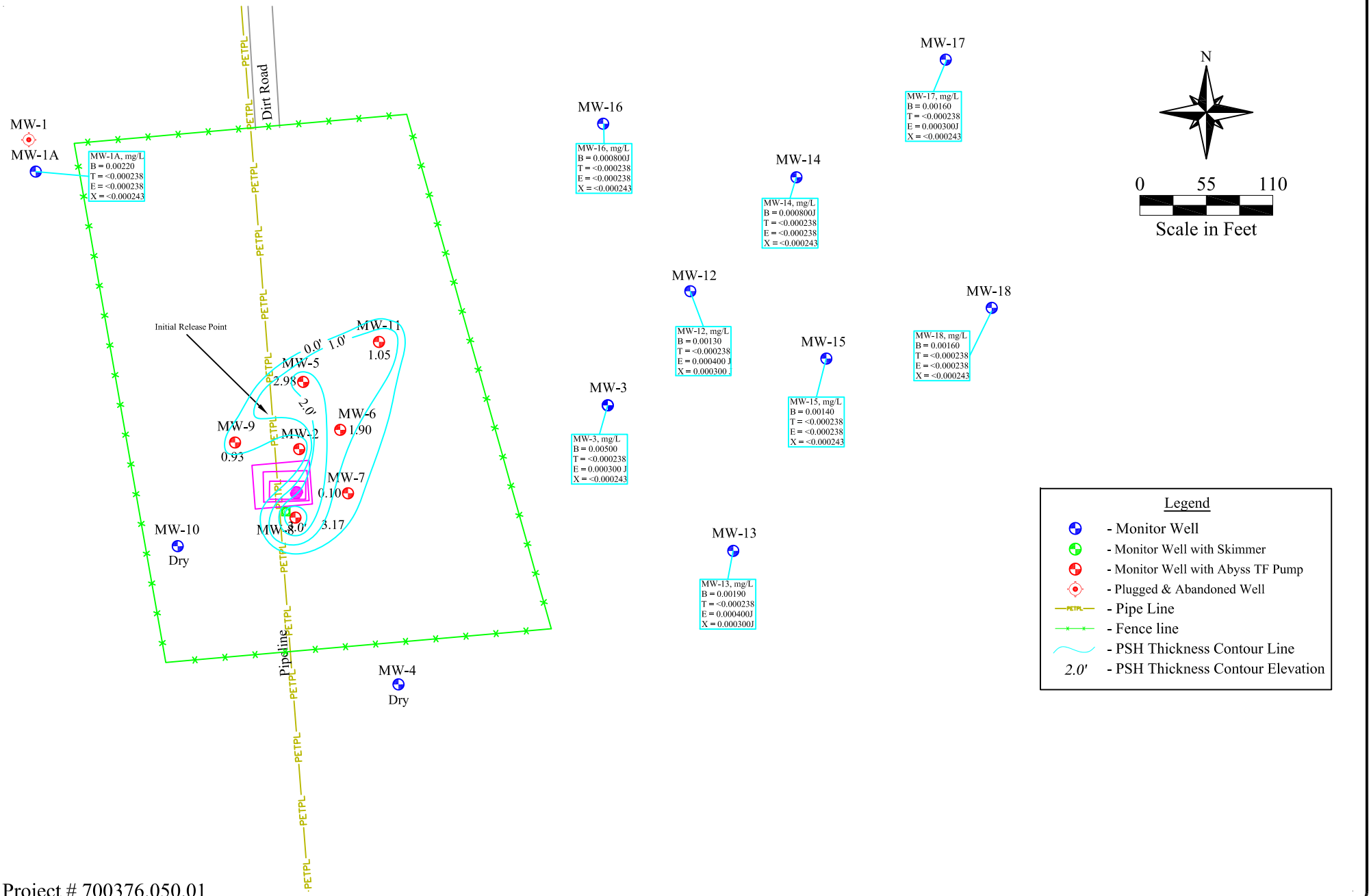
SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/10/2016



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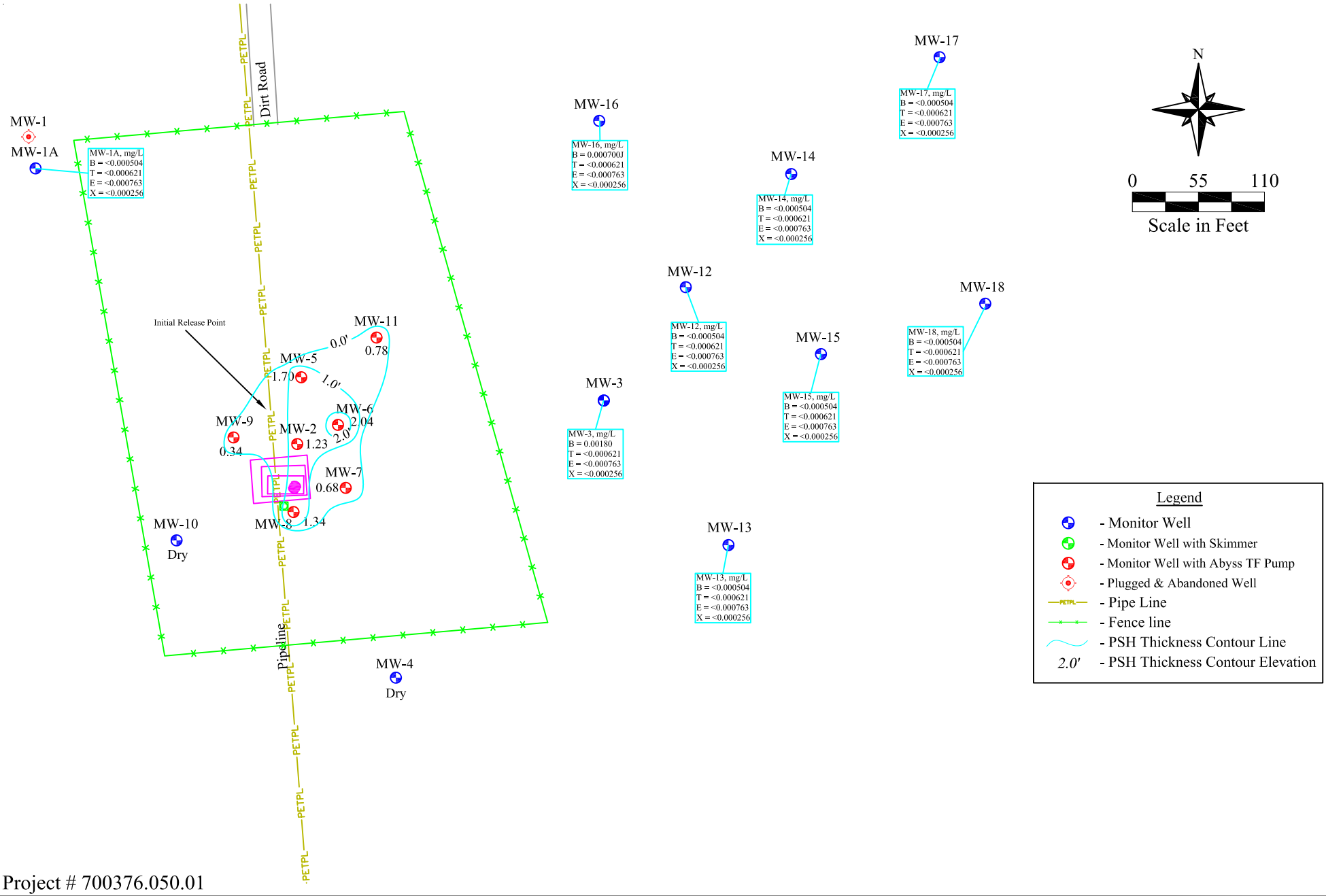
Drawn By:	KLW

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 3b - PSH Thickness & Groundwater Concentration Map - 05/26/2016



Project # 700376.050.01

TALON LPE

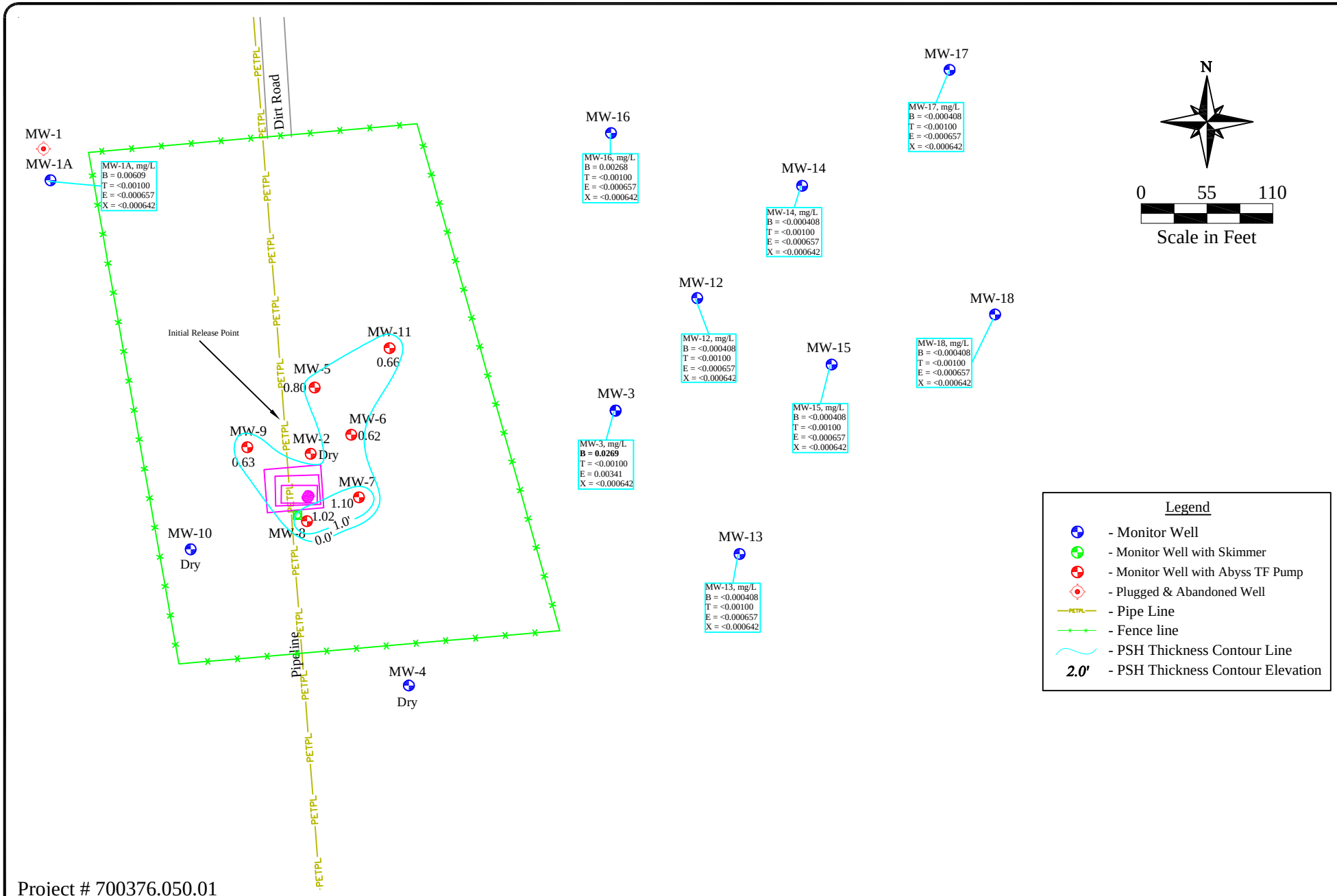
Date:	03/29/2017
Scale:	1" = 110'
Drawn By:	KLW

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

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



Project # 700376.050.01

TALON LPE

Date: 03/29/2017

Scale: 1" = 110'

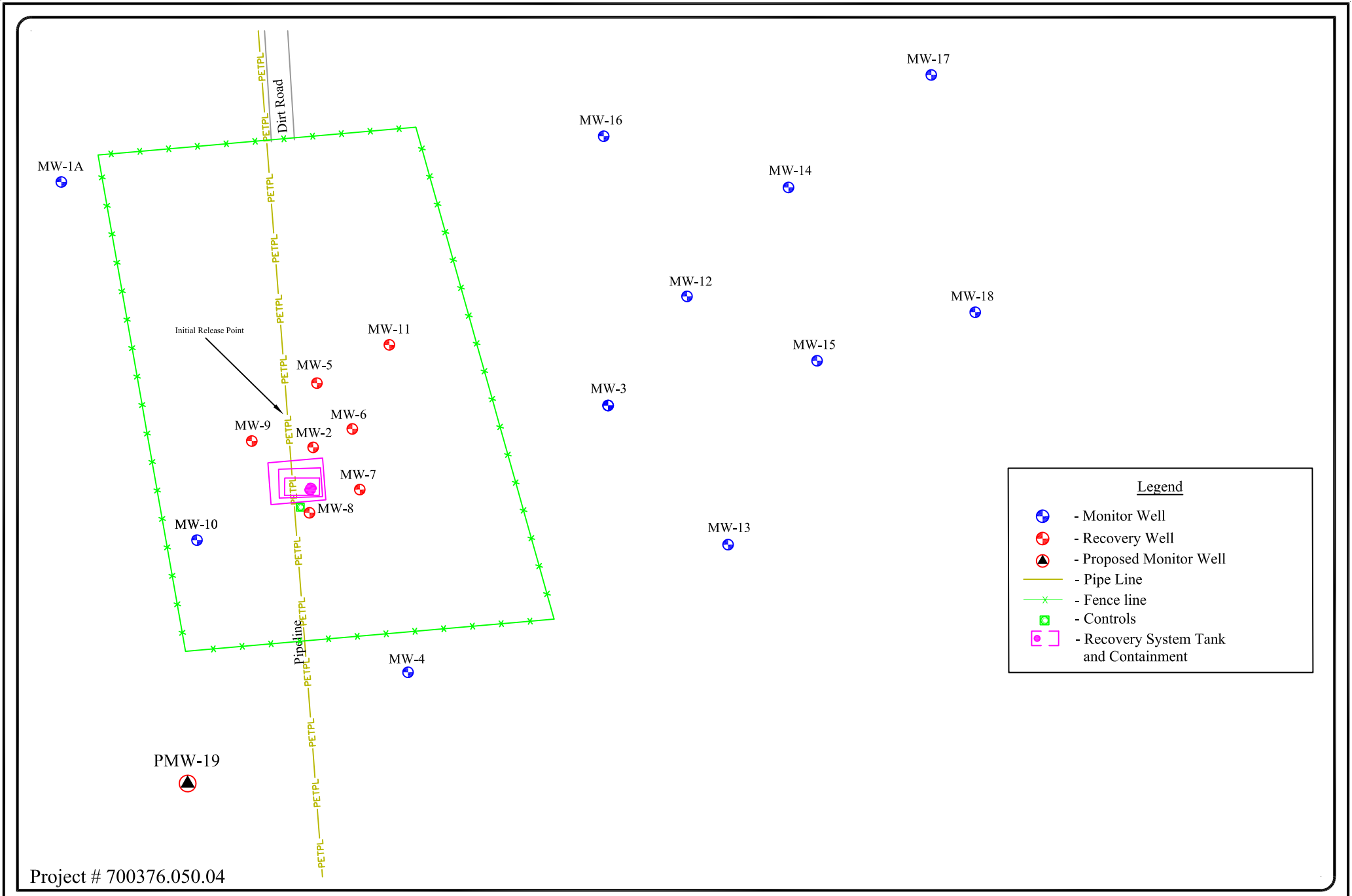
Drawn By: KLW

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/06/2016



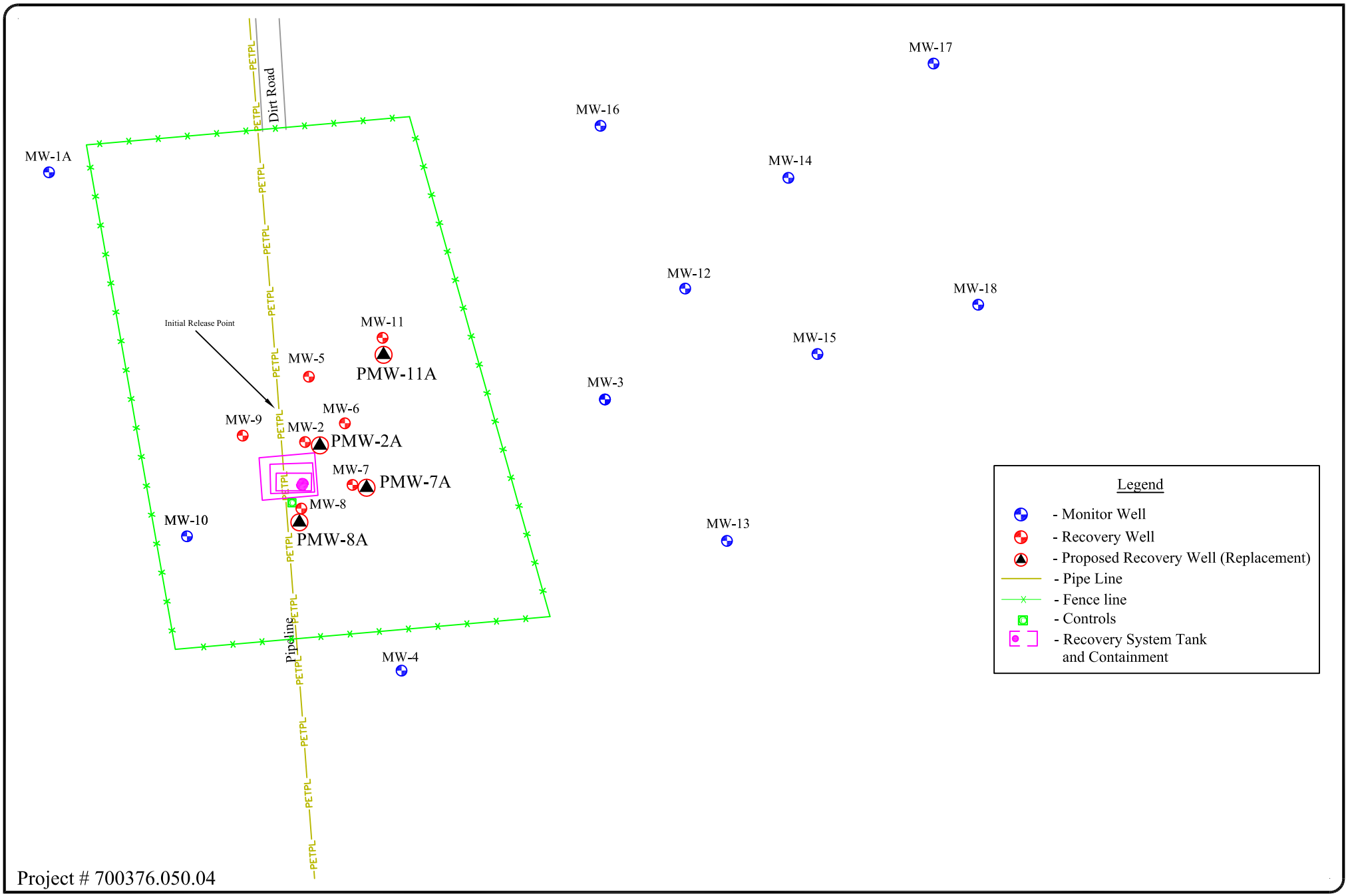
Project # 700376.050.04

TALON LPE

Date: 08/19/2016
Scale: 1" = 110'
Drawn By: BJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029
SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico
Figure 4 - Site Map w/ Proposed Monitor Well Locations



Project # 700376.050.04

TALON LPE

Date: 08/19/2016

Scale: 1" = 110'

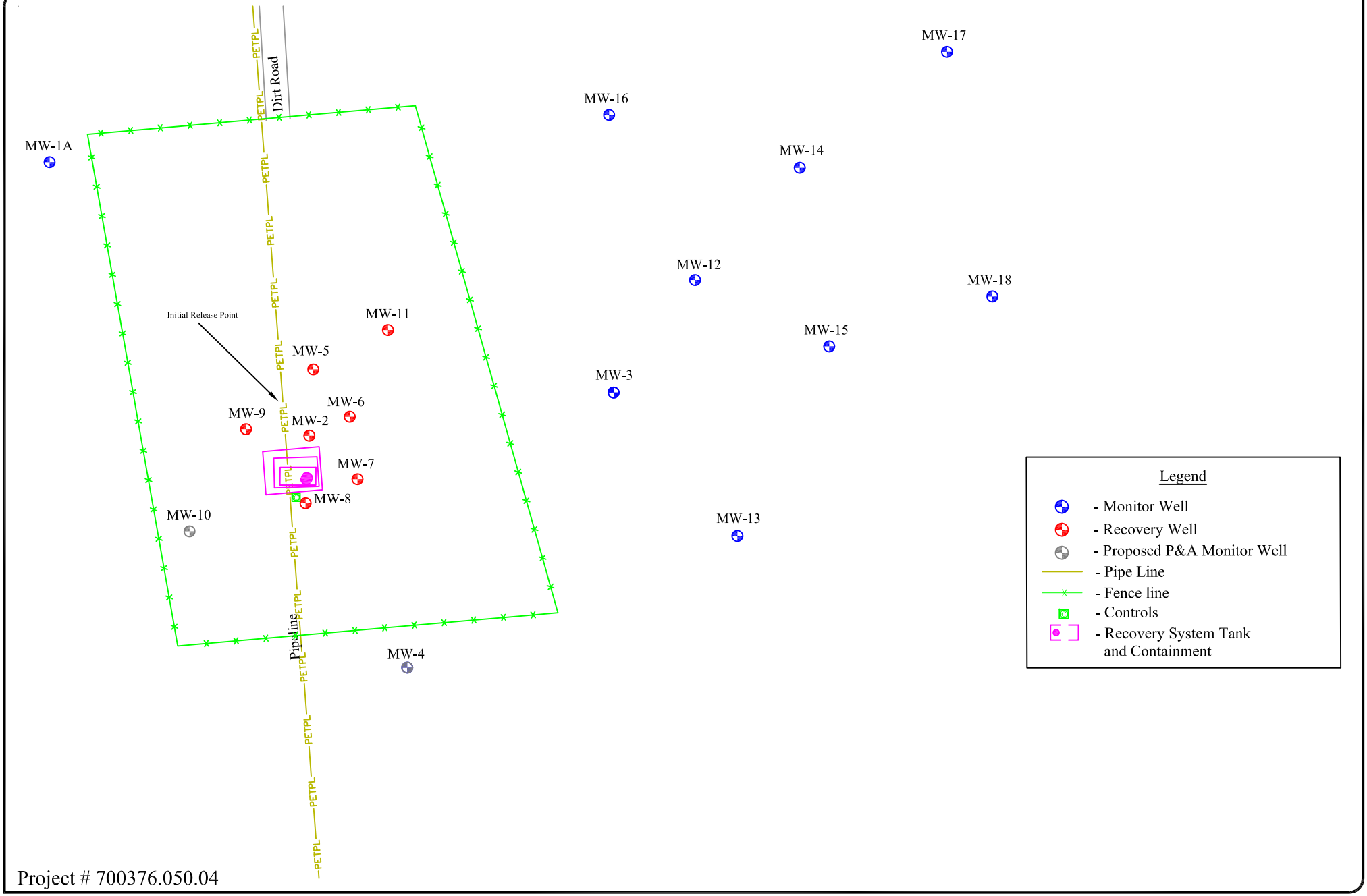
Drawn By: BJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 4 - Site Map w/ Proposed Recovery Well Locations



Project # 700376.050.04

TALON LPE

Date: 08/19/2016

Scale: 1" = 110'

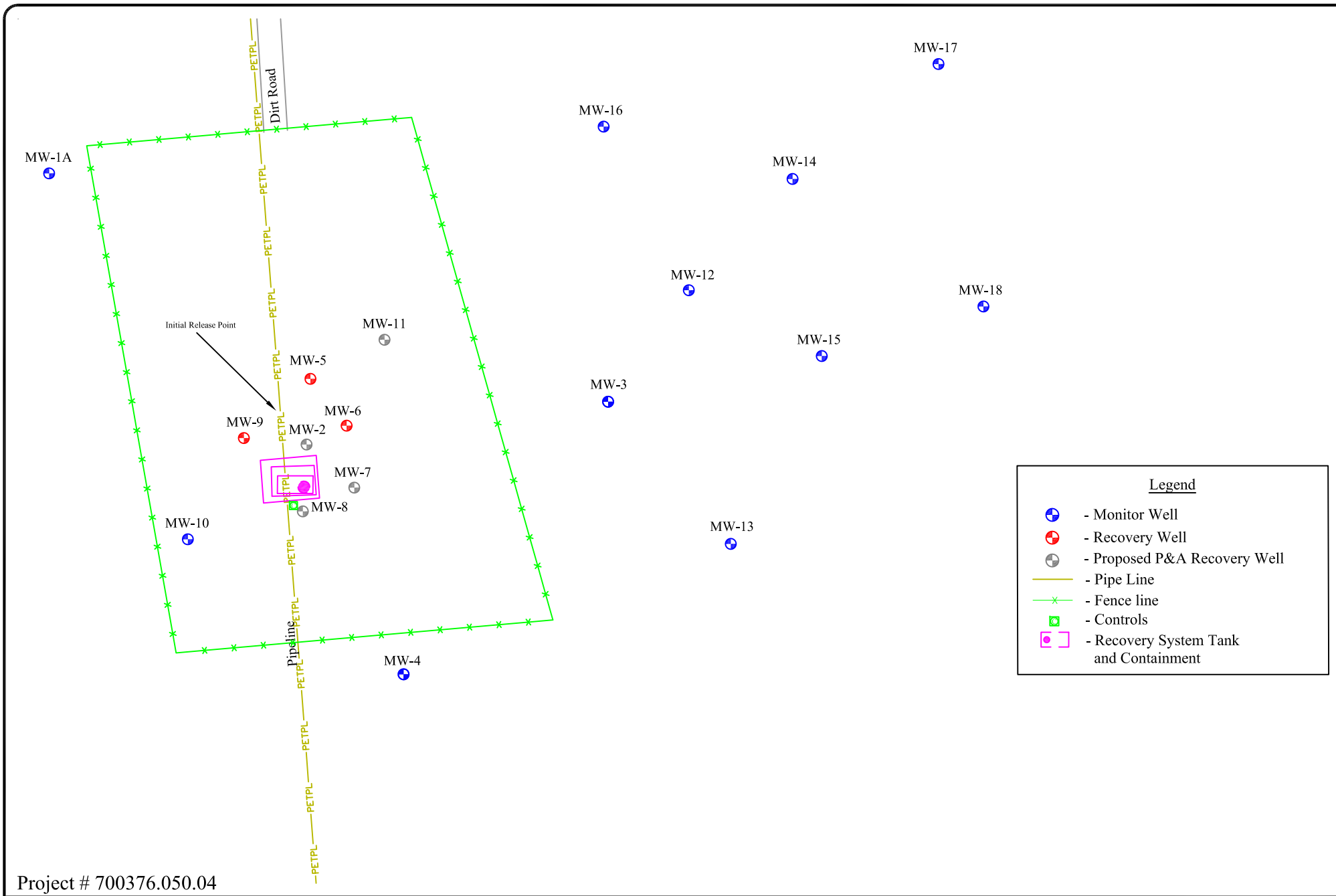
Drawn By: BJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 5 - Site Map w/ Proposed Plugging Locations



Project # 700376.050.04

TALON LPE

Date:	08/19/2016
Scale:	1" = 110'
Drawn By:	BJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 5 - Site Map w/ Proposed Plugging Locations

APPENDIX B

Tables

Table 1 - Summary of Historical Fluid Level Measurements
Kimbrough Sweet 8"
SRS#: 2000-10757

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-1A			Diameter: 2 in.	Screened Interval:	55.7 ft. to 85.7 ft.	TD: 85.65 ft.
	03/27/14	3723.56	59.03	-	-	3664.53
	06/05/14	3723.56	59.13	-	-	3664.43
	09/11/14	3723.56	59.38	-	-	3664.18
	12/23/14	3723.56	59.55	-	-	3664.01
	03/12/15	3723.56	59.78	-	-	3663.78
	06/17/15	3723.56	59.96	-	-	3663.60
	09/09/15	3723.56	60.16	-	-	3663.40
	12/03/15	3723.56	60.29	-	-	3663.27
	03/10/16	3723.56	60.52	-	-	3663.04
	05/27/16	3723.56	61.66	-	-	3661.90
	09/09/16	3723.56	60.89	-	-	3662.67
	12/06/16	3723.56	61.05	-	-	3662.51
MW-2			Diameter: 4 in.	Screened Interval:	41 ft. to 61 ft.	TD: 61 ft.
	03/27/14	3723.32	59.50	58.35	1.15	3664.78
	06/05/14	3723.32	59.50	58.74	0.76	3664.45
	09/11/14	3723.32	61.50	58.75	2.75	3664.12
	12/23/14	3723.32	61.48	58.96	2.52	3663.94
	03/12/15	3723.32	61.50	59.12	2.38	3663.81
	06/10/15	3723.32	NG		-	NG
	09/09/15	3723.32	61.55	59.49	2.06	3663.49
	12/03/15	3723.32	Dry	-	-	Dry
	03/10/16	3723.32	Dry	-	-	Dry
	05/27/16	3723.32	59.94	-	-	3663.38
	09/09/16	3723.32	61.42	60.19	1.23	3662.93
	12/01/16	3723.32	Dry		-	Dry
MW-3			Diameter: 2 in.	Screened Interval:	43.4 ft. to 63.4 ft.	TD: 63.43 ft.
	03/27/14	3721.52	58.54	-	-	3662.98
	06/05/14	3721.52	58.66	-	-	3662.86
	09/11/14	3721.52	58.90	-	-	3662.62
	12/23/14	3721.52	59.15	-	-	3662.37
	03/12/15	3721.52	59.32	-	-	3662.20
	06/10/15	3721.52	59.46	-	-	3662.06
	09/09/15	3721.52	59.73	-	-	3661.79
	12/03/15	3721.52	59.84	-	-	3661.68
	03/10/16	3721.52	60.06	-	-	3661.46
	05/27/16	3721.52	60.21	-	-	3661.31
	09/09/16	3721.52	60.42	-	-	3661.10
	12/06/16	3721.52	60.59	-	-	3660.93
MW-4			Diameter: 2 in.	Screened Interval:	39.7 ft. to 59.7 ft.	TD: 59.67 ft.
	03/27/14	3721.94	57.87	-	-	3664.07
	06/05/14	3721.94	58.00	-	-	3663.94
	09/11/14	3721.94	58.25	-	-	3663.69
	12/23/14	3721.94	58.55	-	-	3663.39
	03/12/15	3721.94	58.77	-	-	3663.17
	06/10/15	3721.94	Dry		-	Dry
	09/09/15	3721.94	59.01	-	-	3662.93
	12/03/15	3721.94	59.18	-	-	3662.76
	03/10/16	3721.94	Dry	-	-	Dry
	05/27/16	3721.94	Dry	-	-	Dry
	09/09/16	3721.94	Dry		-	Dry
	12/06/16	3721.94	Dry		-	Dry

Table 1 - Summary of Historical Fluid Level Measurements
Kimbrough Sweet 8"
SRS#: 2000-10757

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: 45 ft. to 65 ft.		TD: 65 ft.
	03/27/14	3724.08	63.01	59.60	3.41	3663.92
	06/05/14	3724.08	61.00	59.95	1.05	3663.96
	09/11/14	3724.08	63.95	59.96	3.99	3663.46
	12/23/14	3724.08	61.20	60.96	0.24	3663.08
	03/12/15	3724.08	61.75	60.71	1.04	3663.20
	06/11/15	3724.08	61.97	60.64	1.33	3663.22
	09/09/15	3724.08	63.95	60.50	3.45	3663.01
	12/03/15	3724.08	63.06	61.01	2.05	3662.73
	03/10/16	3724.08	63.87	60.65	3.22	3662.90
	05/27/16	3724.08	63.78	60.80	2.98	3662.79
	09/09/16	3724.08	63.15	61.45	1.70	3662.35
	12/01/16	3724.08	62.42	61.62	0.80	3662.33
MW-6			Diameter: 4 in.	Screened Interval: 44 ft. to 64 ft.		TD: 64 ft.
	03/27/14	3722.16	61.38	57.65	3.73	3663.89
	06/05/14	3722.16	59.55	58.10	1.45	3663.82
	09/11/14	3722.16	62.35	57.92	4.43	3663.51
	12/23/14	3722.16	59.09	58.94	0.15	3663.20
	03/12/15	3722.16	60.21	58.80	1.41	3663.13
	06/11/15	3722.16	61.09	58.72	2.37	3663.05
	09/09/15	3722.16	63.40	58.68	4.72	3662.70
	12/03/15	3722.16	61.51	59.05	2.46	3662.70
	03/10/16	3722.16	63.65	58.85	4.80	3662.52
	05/27/16	3722.16	61.43	59.53	1.90	3662.32
	09/09/16	3722.16	62.35	60.31	2.04	3661.51
	12/01/16	3722.16	60.76	60.14	0.62	3661.92
MW-7			Diameter: 4 in.	Screened Interval: 44 ft. to 64 ft.		TD: 64 ft.
	03/27/14	3723.23	59.65	59.20	0.45	3663.96
	06/05/14	3723.23	59.36	59.30	0.06	3663.92
	09/11/14	3723.23	60.23	59.54	0.69	3663.58
	12/23/14	3723.23	59.88	59.86	0.02	3663.37
	03/12/15	3723.23	60.10	60.00	0.10	3663.21
	06/11/15	3723.23	61.07	59.99	1.08	3663.06
	09/09/15	3723.23	62.32	59.90	2.42	3662.93
	12/03/15	3723.23	60.59	60.45	0.14	3662.76
	03/10/16	3723.23	61.50	60.53	0.97	3662.54
	05/27/16	3723.23	60.93	60.83	0.10	3662.38
	09/09/16	3723.23	61.69	61.01	0.68	3662.11
	12/01/16	3723.23	62.19	61.09	1.10	3661.96
MW-8			Diameter: 4 in.	Screened Interval: 41 ft. to 61 ft.		TD: 63.5 ft.
	03/27/14	3723.41	61.40	58.77	2.63	3664.21
	06/05/14	3723.41	61.30	58.80	2.50	3664.20
	09/11/14	3723.41	62.00	59.20	2.80	3663.75
	12/23/14	3723.41	61.62	59.46	2.16	3663.59
	03/12/15	3723.41	62.15	-	-	3661.26
	06/11/15	3723.41	61.81	59.65	2.16	3663.40
	09/09/15	3723.41	61.00	59.75	1.25	3663.45
	12/03/15	3723.41	61.00	59.90	1.10	3663.33
	03/10/16	3723.41	63.20	60.11	3.09	3662.79
	05/27/16	3723.41	63.43	60.26	3.17	3662.63
	09/09/16	3723.41	61.81	60.47	1.34	3662.72
	12/01/16	3723.41	61.63	60.61	1.02	3662.63

Table 1 - Summary of Historical Fluid Level Measurements
Kimbrough Sweet 8"
SRS#: 2000-10757

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-9			Diameter: 4 in.	Screened Interval: 43 ft. to 63 ft.		TD: 63 ft.
	03/27/14	3723.25	59.22	58.94	0.28	3664.26
	06/05/14	3723.25	59.87	58.85	1.02	3664.23
	09/11/14	3723.25	60.82	59.07	1.75	3663.89
	12/23/14	3723.25	61.50	59.20	2.30	3663.67
	03/12/15	3723.25	62.15	59.29	2.86	3663.49
	06/11/15	3723.25	60.29	59.79	0.50	3663.38
	09/09/15	3723.25	61.18	60.18	1.00	3662.90
	12/03/15	3723.25	61.42	59.99	1.43	3663.02
	03/10/16	3723.25	61.95	60.16	1.79	3662.79
	05/27/16	3723.25	61.35	60.42	0.93	3662.68
	09/09/16	3723.25	61.12	60.78	0.34	3662.41
	12/01/16	3723.25	61.54	60.91	0.63	3662.24
MW-10			Diameter: 2 in.	Screened Interval: 40.1 ft. to 60.1 ft.		TD: 60.09 ft.
	03/27/14	3724.14	59.45	-	-	3664.69
	06/05/14	3724.14	59.59	-	-	3664.55
	09/11/14	3724.14	59.80	-	-	3664.34
	12/23/14	3724.14	60.00	-	-	3664.14
	03/12/15	3724.14	60.25	-	-	3663.89
	06/11/15	3724.14	60.41	-	-	3663.73
	09/09/15	3724.14	60.55	-	-	3663.59
	12/03/15	3724.14	60.72	-	-	3663.42
	03/10/16	3724.14	Dry	-	-	Dry
	05/27/16	3724.14	Dry	-	-	Dry
	09/09/16	3724.14	Dry		-	Dry
	12/06/16	3724.14	Dry		-	Dry
MW-11			Diameter: 2 in.	Screened Interval: 40.7 ft. to 60.7 ft.		TD: 60.73 ft.
	03/27/14	3722.55	60.62	58.58	2.04	3663.63
	06/05/14	3722.55	59.80	58.73	1.07	3663.64
	09/11/14	3722.55	60.50	58.90	1.60	3663.39
	12/23/14	3722.55	60.68	59.12	1.56	3663.17
	03/12/15	3722.55	60.64	59.47	1.17	3662.89
	06/11/15	3722.55	60.66	59.24	1.42	3663.08
	09/09/15	3722.55	60.73	59.75	0.98	3662.64
	12/03/15	3722.55	60.60	59.44	1.16	3662.92
	03/10/16	3722.55	60.65	59.60	1.05	3662.78
	05/27/16	3722.55	60.63	59.58	1.05	3662.80
	09/09/16	3722.55	60.59	59.81	0.78	3662.61
	12/01/16	3722.55	60.64	59.98	0.66	3662.46
MW-12			Diameter: 2 in.	Screened Interval: 43 ft. to 73 ft.		TD: 73 ft.
	03/27/14	3724.11	61.55	-	-	3662.56
	06/05/14	3724.11	61.69	-	-	3662.42
	09/11/14	3724.11	61.95	-	-	3662.16
	12/23/14	3724.11	62.17	-	-	3661.94
	03/12/15	3724.11	62.35	-	-	3661.76
	06/17/15	3724.11	62.50	-	-	3661.61
	09/09/15	3724.11	62.66	-	-	3661.45
	12/03/15	3724.11	62.86	-	-	3661.25
	03/10/16	3724.11	63.08	-	-	3661.03
	05/27/16	3724.11	63.25	-	-	3660.86
	09/09/16	3724.11	63.42	-	-	3660.69
	12/06/16	3724.11	63.62	-	-	3660.49

Table 1 - Summary of Historical Fluid Level Measurements
Kimbrough Sweet 8"
SRS#: 2000-10757

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: 2 in.	Screened Interval:	43 ft. to 73 ft.	TD: 73 ft.
	03/27/14	3723.19	60.40	-	-	3662.79
	06/05/14	3723.19	60.55	-	-	3662.64
	09/11/14	3723.19	60.80	-	-	3662.39
	12/23/14	3723.19	61.03	-	-	3662.16
	03/12/15	3723.19	61.20	-	-	3661.99
	06/17/15	3723.19	61.38	-	-	3661.81
	09/09/15	3723.19	61.55	-	-	3661.64
	12/03/15	3723.19	61.73	-	-	3661.46
	03/10/16	3723.19	61.96	-	-	3661.23
	05/27/16	3723.19	62.10	-	-	3661.09
	09/09/16	3723.19	62.31	-	-	3660.88
	12/06/16	3723.19	62.47	-	-	3660.72
MW-14			Diameter: 4 in.	Screened Interval:	62.3 ft. to 82.3 ft.	TD: 82.3 ft.
	03/27/14	3725.10	63.09	-	-	3662.01
	06/05/14	3725.10	63.22	-	-	3661.88
	09/11/14	3725.10	63.45	-	-	3661.65
	12/23/14	3725.10	63.73	-	-	3661.37
	03/12/15	3725.10	63.20	-	-	3661.90
	06/17/15	3725.10	64.07	-	-	3661.03
	09/09/15	3725.10	64.21	-	-	3660.89
	12/03/15	3725.10	64.42	-	-	3660.68
	03/10/16	3725.10	64.64	-	-	3660.46
	05/27/16	3725.10	64.78	-	-	3660.32
	09/09/16	3725.10	65.00	-	-	3660.10
	12/06/16	3725.10	65.15	-	-	3659.95
MW-15			Diameter: 4 in.	Screened Interval:	59.2 ft. to 79.2 ft.	TD: 79.2 ft.
	03/27/14	3726.06	63.85	-	-	3662.21
	06/05/14	3726.06	63.98	-	-	3662.08
	09/11/14	3726.06	64.21	-	-	3661.85
	12/23/14	3726.06	64.50	-	-	3661.56
	03/12/15	3726.06	64.65	-	-	3661.41
	06/17/15	3726.06	64.82	-	-	3661.24
	09/09/15	3726.06	64.97	-	-	3661.09
	12/03/15	3726.06	65.19	-	-	3660.87
	03/10/16	3726.06	65.40	-	-	3660.66
	05/27/16	3726.06	65.56	-	-	3660.50
	09/09/16	3726.06	65.75	-	-	3660.31
	12/06/16	3726.06	65.90	-	-	3660.16
MW-16			Diameter: 2 in.	Screened Interval:	52.7 ft. to 82.7 ft.	TD: 82.67 ft.
	03/27/14	3722.32	59.70	-	-	3662.62
	06/05/14	3722.32	59.82	-	-	3662.50
	09/11/14	3722.32	60.05	-	-	3662.27
	12/23/14	3722.32	60.35	-	-	3661.97
	03/12/15	3722.32	60.50	-	-	3661.82
	06/17/15	3722.32	60.66	-	-	3661.66
	09/09/15	3722.32	60.80	-	-	3661.52
	12/03/15	3722.32	61.02	-	-	3661.30
	03/10/16	3722.32	61.23	-	-	3661.09
	05/27/16	3722.32	61.39	-	-	3660.93
	09/09/16	3722.32	61.60	-	-	3660.72
	12/06/16	3722.32	61.74	-	-	3660.58

Table 1 - Summary of Historical Fluid Level Measurements
Kimbrough Sweet 8"
SRS#: 2000-10757

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: 2 in.	Screened Interval: 56.6 ft. to 86.6 ft.		TD: 86.57 ft.
	03/27/14	3725.28	64.99	-	-	3660.29
	06/05/14	3725.28	64.10	-	-	3661.18
	09/11/14	3725.28	64.37	-	-	3660.91
	12/23/14	3725.28	64.64	-	-	3660.64
	03/12/15	3725.28	64.80	-	-	3660.48
	06/17/15	3725.28	64.96	-	-	3660.32
	09/09/15	3725.28	65.11	-	-	3660.17
	12/03/15	3725.28	65.31	-	-	3659.97
	03/10/16	3725.28	65.55	-	-	3659.73
	05/27/16	3725.28	65.69	-	-	3659.59
	09/09/16	3725.28	65.90	-	-	3659.38
	12/06/16	3725.28	66.05	-	-	3659.23
MW-18			Diameter: 2 in.	Screened Interval: 55.8 ft. to 85.8 ft.		TD: 85.75 ft.
	03/27/14	3724.75	63.17	-	-	3661.58
	06/05/14	3724.75	63.34	-	-	3661.41
	09/11/14	3724.75	63.59	-	-	3661.16
	12/23/14	3724.75	63.85	-	-	3660.90
	03/12/15	3724.75	64.03	-	-	3660.72
	06/17/15	3724.75	64.19	-	-	3660.56
	09/09/15	3724.75	64.35	-	-	3660.40
	12/03/15	3724.75	64.56	-	-	3660.19
	03/10/16	3724.75	64.80	-	-	3659.95
	05/27/16	3724.75	64.63	-	-	3660.12
	09/09/16	3724.75	65.12	-	-	3659.63
	12/06/16	3724.75	65.29	-	-	3659.46

Specific Gravity: 0.75

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
Kimbrough Sweet 8"
SRS#: 2000-10757

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1A	03/27/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/05/14	0.00330	<0.00100	<0.00100	<0.00100
	09/11/14	0.00120	<0.00100	<0.00100	<0.00100
	12/23/14	0.00270	<0.00100	<0.00100	<0.00100
	03/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	0.00110	<0.00100	<0.00100	<0.00100
	12/04/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.00220	<0.000238	<0.000238	<0.000243
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	0.00609	<0.00100	<0.000657	<0.000642
MW-3	03/27/14	0.0101	<0.000181	0.00260	<0.000189
	06/05/14	0.00330	<0.00100	<0.00100	<0.00100
	10/02/14	0.00490	0.00250	0.00300	0.00710
	12/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/13/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	0.00560	<0.00100	0.00290	<0.00100
	09/09/15	<0.00500	<0.00500	<0.00500	<0.00500
	12/03/15	0.00130	<0.00100	<0.00100	<0.00100
	03/10/16	0.00110	<0.000238	<0.000238	<0.000243
	05/27/16	0.00500	<0.000238	0.000300 J	<0.000243
	09/09/16	0.00180	<0.000621	<0.000763	<0.000256
	12/06/16	0.0269	<0.00100	0.00341	<0.000642
MW-4	03/27/14	<0.00119	<0.000905	<0.00124	<0.000945
	06/05/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/23/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/13/15	<0.00100	<0.00100	<0.00100	<0.00100

Table 2 - Summary of Groundwater Analytical Results- BTEX
Kimbrough Sweet 8"
SRS#: 2000-10757

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-10	03/27/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/05/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/23/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/13/15	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	03/27/14	0.0852	<0.000181	0.130	<0.000189
	06/05/14	0.0178	<0.000200	0.0612	<0.000200
	10/02/14	0.0148	<0.00100	0.0365	<0.00100
	12/24/14	0.00760	<0.00100	0.0225	0.00750
	03/17/15	0.00220	<0.00100	0.00240	<0.00100
	06/17/15	0.00400	<0.00100	<0.00100	<0.00100
	09/09/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/03/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.00130	<0.000238	0.000400 J	0.000300 J
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-13	03/27/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/05/14	<0.00100	<0.00100	<0.00100	<0.00100
	10/02/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/23/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	0.00170	<0.00100	<0.00100	<0.00100
	12/03/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.00190	<0.000238	0.000400 J	0.000300 J
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results- BTEX
Kimbrough Sweet 8"
SRS#: 2000-10757

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-14	03/27/14	<0.000238	<0.000181	<0.000247	0.00320
	06/05/14	0.0811	<0.00100	<0.00100	<0.00100
	09/11/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/04/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.000800 J	<0.000238	<0.000238	<0.000243
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642
MW-15	03/27/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/05/14	<0.00100	<0.00100	<0.00100	<0.00100
	09/11/14	0.00140	<0.00100	<0.00100	<0.00100
	12/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/04/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.00140	<0.000238	<0.000238	<0.000243
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results- BTEX
Kimbrough Sweet 8"
SRS#: 2000-10757

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-16	03/27/14	<0.000238	<0.000181	<0.000247	<0.000189
	06/05/14	0.00210	<0.00100	<0.00100	<0.00100
	10/02/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/24/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/04/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	0.000300 J	<0.000238	<0.000243
	05/27/16	0.000800 J	<0.000238	<0.000238	<0.000243
	09/09/16	0.000700 J	<0.000621	<0.000763	<0.000256
	12/06/16	0.00268	<0.00100	<0.000657	<0.000642
MW-17	03/27/14	0.191	<0.000181	<0.000247	0.00560
	06/05/14	1.18	<0.00100	<0.00100	<0.00100
	06/27/14	2.66	<0.00100	<0.00100	0.452
	10/02/14	2.77	<0.00100	<0.00100	<0.00100
	12/24/14	2.65	<0.0500	<0.0500	0.433
	03/23/15	0.0397	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	0.0245	<0.00100	<0.00100	<0.00100
	12/03/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	0.000500 J	<0.000238	<0.000243
	05/27/16	0.00160	<0.000238	0.000300 J	<0.000243
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642

Table 2 - Summary of Groundwater Analytical Results- BTEX
Kimbrough Sweet 8"
SRS#: 2000-10757

Sample Designation	Date Sampled	Concentration (mg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-18	03/27/14	0.00250	<0.000181	<0.000247	<0.000189
	06/05/14	<0.00100	<0.00100	<0.00100	<0.00100
	10/02/14	<0.00100	<0.00100	<0.00100	<0.00100
	12/23/14	<0.00100	<0.00100	<0.00100	<0.00100
	03/23/15	<0.00100	<0.00100	<0.00100	<0.00100
	06/17/15	<0.00100	<0.00100	<0.00100	<0.00100
	09/09/15	<0.00100	<0.00100	<0.00100	<0.00100
	12/03/15	<0.00100	<0.00100	<0.00100	<0.00100
	03/10/16	<0.000223	<0.000238	<0.000238	<0.000243
	05/27/16	0.00160	<0.000238	<0.000238	<0.000243
	09/09/16	<0.000504	<0.000621	<0.000763	<0.000256
	12/06/16	<0.000408	<0.00100	<0.000657	<0.000642

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

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

Table 3 - Summary of Groundwater Analytical Results - PAH Supplement
Kimbrough Sweet 8"
SRS#: 2000-10757

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-1A	06/05/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	03/10/16	<0.0000729	<0.0000567	<0.0000365	<0.0000638	<0.0000353	<0.0000792	<0.0000459	<0.0000780	<0.0000570	<0.0000616	<0.0000891	<0.0000618	<0.0000667	<0.0000701	<0.0000866	<0.0000590	<0.0000721	<0.0000567	<0.0000456
MW-3	10/02/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-12	06/05/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000769	<0.000200	<0.000200	<0.000200	<0.000200	0.000883	<0.000200
MW-14	09/11/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-15	09/11/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-16	06/05/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	03/10/16	<0.0000698	<0.0000543	<0.0000350	<0.0000612	<0.0000338	<0.0000759	<0.0000440	<0.0000748	<0.0000546	<0.0000591	<0.0000854	<0.0000592	<0.0000639	<0.0000672	<0.0000830	<0.0000565	<0.0000691	<0.0000543	<0.0000437
MW-17	06/05/14	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	06/27/14	0.00684	0.00566	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000198	<0.000200	<0.000200	<0.000200	0.0101	<0.000200	<0.000200
	03/10/16	<0.0000713	<0.0000555	<0.0000357	<0.0000624	<0.0000345	<0.0000775	<0.0000449	<0.0000763	<0.0000558	<0.0000603	<0.0000872	<0.0000604	<0.0000652	<0.0000686	<0.0000847	<0.0000577	<0.0000705	<0.0000555	<0.0000446
MW-18	06/05/14	0.00237	0.00200	<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	0.00431	<0.000200	<0.000200
	03/10/16	<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

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

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

APPENDIX C

Laboratory Analytical Data Reports and Chain of Custody Documentation

TRACEANALYSIS, INC.

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: March 31, 2016

Work Order: 16031111

Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8”
Project Number: 700376.050.01
SRS #: 2000-10757

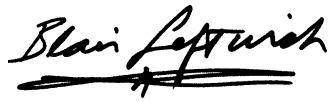
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
415823	MW-1A	water	2016-03-10	11:55	2016-03-11
415824	MW-17	water	2016-03-10	12:30	2016-03-11
415825	MW-18	water	2016-03-10	12:45	2016-03-11
415826	MW-15	water	2016-03-10	13:00	2016-03-11
415827	MW-14	water	2016-03-10	13:30	2016-03-11
415828	MW-16	water	2016-03-10	13:50	2016-03-11
415829	MW-12	water	2016-03-10	14:10	2016-03-11
415830	MW-13	water	2016-03-10	14:20	2016-03-11
415831	MW-3	water	2016-03-10	14:35	2016-03-11

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

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

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



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

Report Contents

Case Narrative

Samples for project Kimbrough Sweet 8” were received by TraceAnalysis, Inc. on 2016-03-11 and assigned to work order 16031111. Samples for work order 16031111 were received intact at a temperature of 1.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	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 16031111 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: 415823 - MW-1A

Laboratory: Lubbock
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 128826 | Date Analyzed: 2016-03-11 | Analyzed By: MT
Prep Batch: 109098 | Sample Preparation: 2016-03-11 | Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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,Qs,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: 415823 - MW-1A

Laboratory: Lubbock
Analysis: PAH | Analytical Method: S 8270D | Prep Method: S 3510C
QC Batch: 129176 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109412 | Sample Preparation: 2016-03-16 | 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	<0.0000721	<0.000220	<0.0000721	mg/L	1.099	0.0000721	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000567	<0.000220	<0.0000567	mg/L	1.099	0.0000567	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000729	<0.000220	<0.0000729	mg/L	1.099	0.0000729	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000638	<0.000220	<0.0000638	mg/L	1.099	0.0000638	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000365	<0.000220	<0.0000365	mg/L	1.099	0.0000365	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000667	<0.000220	<0.0000667	mg/L	1.099	0.0000667	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000866	<0.000220	<0.0000866	mg/L	1.099	0.0000866	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000353	<0.000220	<0.0000353	mg/L	1.099	0.0000353	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000567	<0.000220	<0.0000567	mg/L	1.099	0.0000567	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000701	<0.000220	<0.0000701	mg/L	1.099	0.0000701	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000456	<0.000220	<0.0000456	mg/L	1.099	0.0000456	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000792	<0.000220	<0.0000792	mg/L	1.099	0.0000792	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000891	<0.000220	<0.0000891	mg/L	1.099	0.0000891	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000780	<0.000220	<0.0000780	mg/L	1.099	0.0000780	0.0002	7.1e-05

continued ...

sample 415823 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000616	<0.000220	<0.0000616	mg/L	1.099	0.0000616	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000459	<0.000220	<0.0000459	mg/L	1.099	0.0000459	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000590	<0.000220	<0.0000590	mg/L	1.099	0.0000590	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000618	<0.000220	<0.0000618	mg/L	1.099	0.0000618	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000570	<0.000220	<0.0000570	mg/L	1.099	0.0000570	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0357	mg/L	1.099	0.0800	45	10 - 120
2-Fluorobiphenyl			0.0359	mg/L	1.099	0.0800	45	35.9 - 120
Terphenyl-d14			0.0611	mg/L	1.099	0.0800	76	23.2 - 120

Sample: 415824 - MW-17

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11	Analyzed By:	MT
Prep Batch:	109098	Sample Preparation:	2016-03-11	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	J,Qr	1,2,3,4,5	**0.000500**	<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	0.100	mg/L	1	0.100	100	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.102	mg/L	1	0.100	102	70 - 120

Sample: 415824 - MW-17

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129176	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109412	Sample Preparation:	2016-03-16	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	<0.0000705	<0.000215	<0.0000705	mg/L	1.075	0.0000705	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000555	<0.000215	<0.0000555	mg/L	1.075	0.0000555	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000713	<0.000215	<0.0000713	mg/L	1.075	0.0000713	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000624	<0.000215	<0.0000624	mg/L	1.075	0.0000624	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000357	<0.000215	<0.0000357	mg/L	1.075	0.0000357	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000652	<0.000215	<0.0000652	mg/L	1.075	0.0000652	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000847	<0.000215	<0.0000847	mg/L	1.075	0.0000847	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000345	<0.000215	<0.0000345	mg/L	1.075	0.0000345	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000555	<0.000215	<0.0000555	mg/L	1.075	0.0000555	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000686	<0.000215	<0.0000686	mg/L	1.075	0.0000686	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000446	<0.000215	<0.0000446	mg/L	1.075	0.0000446	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000775	<0.000215	<0.0000775	mg/L	1.075	0.0000775	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000872	<0.000215	<0.0000872	mg/L	1.075	0.0000872	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000763	<0.000215	<0.0000763	mg/L	1.075	0.0000763	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000603	<0.000215	<0.0000603	mg/L	1.075	0.0000603	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000449	<0.000215	<0.0000449	mg/L	1.075	0.0000449	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000577	<0.000215	<0.0000577	mg/L	1.075	0.0000577	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000604	<0.000215	<0.0000604	mg/L	1.075	0.0000604	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000558	<0.000215	<0.0000558	mg/L	1.075	0.0000558	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0548	mg/L	1.075	0.0800	68	10 - 120
2-Fluorobiphenyl			0.0550	mg/L	1.075	0.0800	69	35.9 - 120
Terphenyl-d14			0.0768	mg/L	1.075	0.0800	96	23.2 - 120

Sample: 415825 - MW-18

Laboratory:	Lubbock					
Analysis:	BTEX	Analytical Method:	S 8021B		Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11		Analyzed By:	MT
Prep Batch:	109098	Sample Preparation:	2016-03-11		Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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

continued ...

sample continued . . .

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

Sample: 415825 - MW-18

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	129176	Date Analyzed:	2016-03-31	Analyzed By:	MN
Prep Batch:	109412	Sample Preparation:	2016-03-16	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	<0.0000737	<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			0.0289	mg/L	1.124	0.0800	36	10 - 120
2-Fluorobiphenyl			0.0319	mg/L	1.124	0.0800	40	35.9 - 120
Terphenyl-d14			0.0624	mg/L	1.124	0.0800	78	23.2 - 120

Sample: 415826 - MW-15

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11	Analyzed By:	MT

Prep Batch: 109098 Sample Preparation: 2016-03-11 Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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	0.100	mg/L	1	0.100	100	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.101	mg/L	1	0.100	101	70 - 120

Sample: 415827 - MW-14

Laboratory: Lubbock
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 128826 Date Analyzed: 2016-03-11 Analyzed By: MT
Prep Batch: 109098 Sample Preparation: 2016-03-11 Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415828 - MW-16

Laboratory: Lubbock
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 128826 Date Analyzed: 2016-03-11 Analyzed By: MT
Prep Batch: 109098 Sample Preparation: 2016-03-11 Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<0.00100	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	J,Qr	1,2,3,4,5	**0.000300**	<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	0.0990	mg/L	1	0.100	99	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0999	mg/L	1	0.100	100	70 - 120

Sample: 415828 - MW-16

Laboratory: Lubbock
Analysis: PAH | Analytical Method: S 8270D | Prep Method: S 3510C
QC Batch: 129176 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109412 | Sample Preparation: 2016-03-16 | 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	<0.0000691	<0.000211	<0.0000691	mg/L	1.053	0.0000691	0.0002	6.56e-05
2-Methylnaphthalene	U	1,2,3,4,5	<0.0000543	<0.000211	<0.0000543	mg/L	1.053	0.0000543	0.0002	5.16e-05
1-Methylnaphthalene	U	1	<0.0000698	<0.000211	<0.0000698	mg/L	1.053	0.0000698	0.0002	6.63e-05
Acenaphthylene	U	1,2,3,4,5	<0.0000612	<0.000211	<0.0000612	mg/L	1.053	0.0000612	0.0002	5.81e-05
Acenaphthene	U	1,2,3,4,5	<0.0000350	<0.000211	<0.0000350	mg/L	1.053	0.0000350	0.0002	3.32e-05
Dibenzofuran	U	1,2,3,4,5	<0.0000639	<0.000211	<0.0000639	mg/L	1.053	0.0000639	0.0002	6.07e-05
Fluorene	U	1,2,3,4,5	<0.0000830	<0.000211	<0.0000830	mg/L	1.053	0.0000830	0.0002	7.88e-05
Anthracene	U	1,2,3,4,5	<0.0000338	<0.000211	<0.0000338	mg/L	1.053	0.0000338	0.0002	3.21e-05
Phenanthrene	U	1,2,3,4,5	<0.0000543	<0.000211	<0.0000543	mg/L	1.053	0.0000543	0.0002	5.16e-05
Fluoranthene	U	1,2,3,4,5	<0.0000672	<0.000211	<0.0000672	mg/L	1.053	0.0000672	0.0002	6.38e-05
Pyrene	U	1,2,3,4,5	<0.0000437	<0.000211	<0.0000437	mg/L	1.053	0.0000437	0.0002	4.15e-05
Benzo(a)anthracene	U	1,2,3,4,5	<0.0000759	<0.000211	<0.0000759	mg/L	1.053	0.0000759	0.0002	7.21e-05
Chrysene	U	1,2,3,4,5	<0.0000854	<0.000211	<0.0000854	mg/L	1.053	0.0000854	0.0002	8.11e-05
Benzo(b)fluoranthene	U	1,2,3,4,5	<0.0000748	<0.000211	<0.0000748	mg/L	1.053	0.0000748	0.0002	7.1e-05
Benzo(k)fluoranthene	U	1,2,3,4,5	<0.0000591	<0.000211	<0.0000591	mg/L	1.053	0.0000591	0.0002	5.61e-05
Benzo(a)pyrene	U	1,2,3,4,5	<0.0000440	<0.000211	<0.0000440	mg/L	1.053	0.0000440	0.0002	4.18e-05
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.0000565	<0.000211	<0.0000565	mg/L	1.053	0.0000565	0.0002	5.37e-05
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.0000592	<0.000211	<0.0000592	mg/L	1.053	0.0000592	0.0002	5.62e-05
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.0000546	<0.000211	<0.0000546	mg/L	1.053	0.0000546	0.0002	5.19e-05

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0658	mg/L	1.053	0.0800	82	10 - 120
2-Fluorobiphenyl			0.0667	mg/L	1.053	0.0800	83	35.9 - 120
Terphenyl-d14	Qsr		0.0998	mg/L	1.053	0.0800	125	23.2 - 120

Sample: 415829 - MW-12

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11	Analyzed By:	MT
Prep Batch:	109098	Sample Preparation:	2016-03-11	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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	0.100	mg/L	1	0.100	100	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.102	mg/L	1	0.100	102	70 - 120

Sample: 415830 - MW-13

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11	Analyzed By:	MT
Prep Batch:	109098	Sample Preparation:	2016-03-11	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr,U	1,2,3,4,5	<0.000223	<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	0.104	mg/L	1	0.100	104	70 - 120

Sample: 415831 - MW-3

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	128826	Date Analyzed:	2016-03-11	Analyzed By:	MT

Prep Batch: 109098 | Sample Preparation: 2016-03-11 | Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr	1,2,3,4,5	**0.00110**	**0.00110**	<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	0.104	mg/L	1	0.100	104	70 - 120

Method Blanks

Method Blank (1)

QC Batch: 128826 | Date Analyzed: 2016-03-11 | Analyzed By: MT
Prep Batch: 109098 | QC Preparation: 2016-03-11 | 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 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109412 | QC Preparation: 2016-03-16 | 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: 128826 | Date Analyzed: 2016-03-11 | Analyzed By: MT
Prep Batch: 109098 | QC Preparation: 2016-03-11 | 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.

Param	F	C	LCSD 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	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2016-03-31 | Analyzed By: MN
Prep Batch: 109412 | QC Preparation: 2016-03-16 | 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

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
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.

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: 415823

QC Batch: 128826 | Date Analyzed: 2016-03-11 | Analyzed By: MT
Prep Batch: 109098 | QC Preparation: 2016-03-11 | 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.

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-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

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-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

continued ...

standard continued ...

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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 Amount	Pass
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 then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 1603111

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
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200 East Sunset Rd., Suite E
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Fax (915) 585-4944
1 (888) 588-3443

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

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

Company Name: Talon LPE
Phone #: 432-522-2133 Alan cell 806-787-8078
Address: (Street, City, Zip) 2901 HWY 349, Midland, TX 79706
Fax #:
Contact Person: Alan Izard
E-mail: AIzard@TalonLPE.com
Invoice to: (If different from above) Plains All American SRS # 2000-10757
Project #: 700378.050.
Project Name: Kimbrough Sweet 8"
Project Location (including state):
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
415823	MW-1A	3	40ml	X				X				X		3/10	11:55		X			X																						
	MW-1A	1	1lt	X									X	3/10	11:55					X																						
824	MW-17	3	40ml	X				X				X		3/10	12:30		X																										
	MW-17	1	1lt	X									X	3/10	12:30					X																						
825	MW-18	3	40ml	X				X				X		3/10	12:45		X																										
	MW-18	1	1lt	X							no		X	3/10	12:45					X																						
826	MW-15	3	40ml	X				X				X		3/10	13:00		X																										
827	MW-14	3	40ml	X				X				X		3/10	13:30		X																										
828	MW-16	3	40ml	X				X				X		3/10	13:50		X																										
	MW-16	1	1lt	X									X	3/10	13:50					X																						
829	MW-12	3	40ml	X				X				X		3/10	14:10		X																										

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Alan Izard	Talon	3/11/16	11:40					INST ____ OBS ____ °C COR ____ °C
								INST ____ OBS ____ °C COR ____ °C
				Abbie	Talon	3/11/16	11:40	INST 1.3 OBS 1.3 °C COR 1.3 °C

Submittal of sam... stitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Courier

LAB USE ONLY
Intact Y N
Headspace Y N NA
Log-in-Review
- Dry Weight Basis Required
- TRRP Report Required
- Check If Special Reporting Limits Are Needed

REMARKS:
BTEX only + 4 PAH
Please use SRS# for PO#
Put the SRS # on the Plains involce

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LAB Order ID # 1603111

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
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Tel (972) 242-7750

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

Company Name: Talon LPE
Phone #: 432-522-2133 Alan cell ↓ 806-787-8078
Address: (Street, City, Zip) 2901 HWY 349, Midland, TX 79706
Fax #:
Contact Person: Alan Izard
E-mail: AIzard@TalonLPE.com
Invoice to: (If different from above) Plains All American SRS # 2000-10757
Project #: 700378.050.
Project Name: Kimbrough Sweet 8"
Project Location (including state):
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
415823	MW-1A	3	40ml	X				X				X		3/10	11:55
	MW-1A	1	1lt	X									X	3/10	11:55
824	MW-17	3	40ml	X				X				X		3/10	12:30
	MW-17	1	1lt	X									X	3/10	12:30
825	MW-18	3	40ml	X				X				X		3/10	12:45
	MW-18	1	1lt	X							no	X		3/10	12:45
826	MW-15	3	40ml	X				X				X		3/10	13:00
827	MW-14	3	40ml	X				X				X		3/10	13:30
828	MW-16	3	40ml	X				X				X		3/10	13:50
	MW-16	1	1lt	X									X	3/10	13:50
829	MW-12	3	40ml	X				X				X		3/10	14:10

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

Relinquished by: Alan Izard **Company:** Talon **Date:** 3/11/16 **Time:** 11:40
Received by: **Company:** **Date:** **Time:** INST ____ OBS ____ °C COR ____ °C

Relinquished by: **Company:** **Date:** **Time:**
Received by: **Company:** **Date:** **Time:** INST ____ OBS ____ °C COR ____ °C

Relinquished by: **Company:** **Date:** **Time:**
Received by: **Company:** **Date:** **Time:** INST PRS OBS 1.3 °C COR 1.3 °C

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

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Intact Y N
Headspace Y N NA
Log-in-Review

REMARKS:
BTEX only + 4 PAH
Please use SRS# for PO#
Put the SRS # on the Plains invoice

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

Carrier # Carrier

LAB Order ID # 1603111

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Alan (cell.)

Company Name: Talon LPE
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Invoice to: (If different from above) Plains All American Pipe Line SRS#2000-10757
Project #: 700376.050.
Project Name: Kimbrough Sweet 8"
Project Location (including state): Hobbs, New Mexico
Sampler Signature:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	BTEX 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC							Turn Around Time if different from standard	Hold
4 5830	MW-13	3	40ml	X				X				X		3-10	14:20		X																								
831	MW-3	3	L	X				X				X		3-10-16	14:35		X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Alan Izard	Talon	3/11/16	11:40					INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST HR °C OBS 1.3 °C COR 1.3 °C

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

REMARKS: BTEX only + 4 PAH
Please use SRS # for PO #
Please put the SRS # on the Plains invoice.

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

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TRACEANALYSIS, INC.

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5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: June 22, 2016

Work Order: 16053103

Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8”
Project Number: 700376.050.04
SRS #: 2000-10757

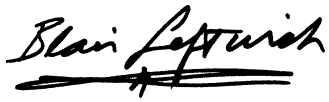
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
420273	MW-1A	water	2016-05-27	12:40	2016-05-28
420274	MW-3	water	2016-05-27	16:00	2016-05-28
420275	MW-12	water	2016-05-27	14:50	2016-05-28
420276	MW-13	water	2016-05-27	14:30	2016-05-28
420277	MW-14	water	2016-05-27	15:10	2016-05-28
420278	MW-15	water	2016-05-27	14:00	2016-05-28
420279	MW-16	water	2016-05-27	15:30	2016-05-28
420280	MW-17	water	2016-05-27	13:00	2016-05-28
420281	MW-18	water	2016-05-27	13:30	2016-05-28

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

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

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



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

Report Contents

Case Narrative

Samples for project Kimbrough Sweet 8” were received by TraceAnalysis, Inc. on 2016-05-28 and assigned to work order 16053103. Samples for work order 16053103 were received intact at a temperature of 4.6 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	110574	2016-06-01 at 10:40	130504	2016-06-01 at 10:40
BTEX	S 8021B	110602	2016-06-03 at 13:08	130542	2016-06-03 at 13:08

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 16053103 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: 420273 - MW-1A

Laboratory:	Lubbock					
Analysis:	BTEX	Analytical Method:	S 8021B		Prep Method:	S 5030B
QC Batch:	130542	Date Analyzed:	2016-06-03		Analyzed By:	MT
Prep Batch:	110602	Sample Preparation:	2016-06-03		Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr	1,2,3,4,5	**0.00220**	**0.00220**	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	B,Qr,U	1,2,3,4,5	<0.000238	<0.00100	0.000900	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	B,Qr,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0949	mg/L	1	0.100	95	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0957	mg/L	1	0.100	96	70 - 120

Sample: 420274 - MW-3

Laboratory:	Lubbock					
Analysis:	BTEX	Analytical Method:	S 8021B		Prep Method:	S 5030B
QC Batch:	130542	Date Analyzed:	2016-06-03		Analyzed By:	MT
Prep Batch:	110602	Sample Preparation:	2016-06-03		Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qr	1,2,3,4,5	**0.00500**	**0.00500**	<0.000223	mg/L	1	0.000223	0.001	0.000223
Toluene	B,Qr,U	1,2,3,4,5	<0.000238	<0.00100	0.000900	mg/L	1	0.000238	0.001	0.000238
Ethylbenzene	J,Qr	1,2,3,4,5	**0.000300**	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	B,Qr,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0949	mg/L	1	0.100	95	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0957	mg/L	1	0.100	96	70 - 120

Sample: 420275 - MW-12

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	130504	Date Analyzed:	2016-06-01	Analyzed By:	MT
Prep Batch:	110574	Sample Preparation:	2016-06-01	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1,2,3,4,5	**0.00130**	**0.00130**	<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	J	1,2,3,4,5	**0.000400**	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	B,Jb	1,2,3,4,5	**0.000300**	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0974	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0960	mg/L	1	0.100	96	70 - 120

Sample: 420276 - MW-13

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	130504	Date Analyzed:	2016-06-01	Analyzed By:	MT
Prep Batch:	110574	Sample Preparation:	2016-06-01	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1,2,3,4,5	**0.00190**	**0.00190**	<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	J	1,2,3,4,5	**0.000400**	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	B,Jb	1,2,3,4,5	**0.000300**	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0975	mg/L	1	0.100	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0991	mg/L	1	0.100	99	70 - 120

Sample: 420277 - MW-14

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	130504	Date Analyzed:	2016-06-01	Analyzed By:	MT

Prep Batch: 110574 | Sample Preparation: 2016-06-01 | Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	**0.000800**	<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	B,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0979	mg/L	1	0.100	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0978	mg/L	1	0.100	98	70 - 120

Sample: 420278 - MW-15

Laboratory: Lubbock
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 130504 | Date Analyzed: 2016-06-01 | Analyzed By: MT
Prep Batch: 110574 | Sample Preparation: 2016-06-01 | Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1,2,3,4,5	**0.00140**	**0.00140**	<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	B,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0968	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0959	mg/L	1	0.100	96	70 - 120

Sample: 420279 - MW-16

Laboratory: Lubbock
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 130504 | Date Analyzed: 2016-06-01 | Analyzed By: MT
Prep Batch: 110574 | Sample Preparation: 2016-06-01 | Prepared By: MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	**0.000800**	<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	B,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0969	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0969	mg/L	1	0.100	97	70 - 120

Sample: 420280 - MW-17

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	130504	Date Analyzed:	2016-06-01	Analyzed By:	MT
Prep Batch:	110574	Sample Preparation:	2016-06-01	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1,2,3,4,5	**0.00160**	**0.00160**	<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	J	1,2,3,4,5	**0.000300**	<0.00100	<0.000238	mg/L	1	0.000238	0.001	0.000238
Xylene	B,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0970	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0964	mg/L	1	0.100	96	70 - 120

Sample: 420281 - MW-18

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	130504	Date Analyzed:	2016-06-01	Analyzed By:	MT
Prep Batch:	110574	Sample Preparation:	2016-06-01	Prepared By:	MT

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		1,2,3,4,5	**0.00160**	**0.00160**	<0.000223	mg/L	1	0.000223	0.001	0.000223

continued ...

sample 420281 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
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	B,U	1,2,3,4,5	<0.000243	<0.00100	0.000500	mg/L	1	0.000243	0.001	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0966	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0960	mg/L	1	0.100	96	70 - 120

Method Blanks

Method Blank (1)

QC Batch: 130504 | Date Analyzed: 2016-06-01 | Analyzed By: MT
Prep Batch: 110574 | QC Preparation: 2016-06-01 | 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	B	1,2,3,4,5	0.000500	mg/L	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0965	mg/L	1	0.100	96	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0962	mg/L	1	0.100	96	70 - 120

Method Blank (1)

QC Batch: 130542 | Date Analyzed: 2016-06-03 | Analyzed By: MT
Prep Batch: 110602 | QC Preparation: 2016-06-03 | Prepared By: MT

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1,2,3,4,5	<0.000223	mg/L	0.000223
Toluene	B	1,2,3,4,5	0.000900	mg/L	0.000238
Ethylbenzene		1,2,3,4,5	<0.000238	mg/L	0.000238
Xylene	B	1,2,3,4,5	0.000500	mg/L	0.000243

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0949	mg/L	1	0.100	95	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0950	mg/L	1	0.100	95	70 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 130504 | Date Analyzed: 2016-06-01 | Analyzed By: MT
Prep Batch: 110574 | QC Preparation: 2016-06-01 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0948	mg/L	1	0.100	<0.000223	95	78.9 - 120
Toluene		1,2,3,4,5	0.0953	mg/L	1	0.100	<0.000238	95	79.8 - 120
Ethylbenzene		1,2,3,4,5	0.0955	mg/L	1	0.100	<0.000238	96	79.7 - 120
Xylene		1,2,3,4,5	0.289	mg/L	1	0.300	0.0005	96	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	0.0956	mg/L	1	0.100	<0.000223	96	78.9 - 120	1	20
Toluene		1,2,3,4,5	0.0960	mg/L	1	0.100	<0.000238	96	79.8 - 120	1	20
Ethylbenzene		1,2,3,4,5	0.0950	mg/L	1	0.100	<0.000238	95	79.7 - 120	0	20
Xylene		1,2,3,4,5	0.286	mg/L	1	0.300	0.0005	95	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	0.0975	0.0980	mg/L	1	0.100	98	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0997	0.0992	mg/L	1	0.100	100	99	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 130542 | Date Analyzed: 2016-06-03 | Analyzed By: MT
Prep Batch: 110602 | QC Preparation: 2016-06-03 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0957	mg/L	1	0.100	<0.000223	96	78.9 - 120
Toluene		1,2,3,4,5	0.0971	mg/L	1	0.100	0.0009	96	79.8 - 120
Ethylbenzene		1,2,3,4,5	0.0992	mg/L	1	0.100	<0.000238	99	79.7 - 120
Xylene		1,2,3,4,5	0.302	mg/L	1	0.300	0.0005	100	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	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.0903	mg/L	1	0.100	<0.000223	90	78.9 - 120	6	20
Toluene		1,2,3,4,5	0.0943	mg/L	1	0.100	0.0009	93	79.8 - 120	3	20
Ethylbenzene		1,2,3,4,5	0.0933	mg/L	1	0.100	<0.000238	93	79.7 - 120	6	20
Xylene		1,2,3,4,5	0.280	mg/L	1	0.300	0.0005	93	78.2 - 120	8	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	0.0952	0.0943	mg/L	1	0.100	95	94	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.100	0.0960	mg/L	1	0.100	100	96	70 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 420366

QC Batch: 130504 | Date Analyzed: 2016-06-01 | Analyzed By: MT
Prep Batch: 110574 | QC Preparation: 2016-06-01 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0948	mg/L	1	0.100	<0.000223	95	18.2 - 149
Toluene		1,2,3,4,5	0.0953	mg/L	1	0.100	<0.000238	95	13 - 157
Ethylbenzene		1,2,3,4,5	0.0955	mg/L	1	0.100	<0.000238	96	12.9 - 156
Xylene		1,2,3,4,5	0.290	mg/L	1	0.300	<0.000243	96	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	0.0916	mg/L	1	0.100	<0.000223	92	18.2 - 149	3	20
Toluene		1,2,3,4,5	0.0932	mg/L	1	0.100	<0.000238	93	13 - 157	2	20
Ethylbenzene		1,2,3,4,5	0.0928	mg/L	1	0.100	<0.000238	93	12.9 - 156	3	20
Xylene		1,2,3,4,5	0.282	mg/L	1	0.300	<0.000243	94	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	0.0969	0.0969	mg/L	1	0.1	97	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0995	0.0982	mg/L	1	0.1	100	98	70 - 120

Matrix Spike (MS-1) Spiked Sample: 420646

QC Batch: 130542 | Date Analyzed: 2016-06-03 | Analyzed By: MT
Prep Batch: 110602 | QC Preparation: 2016-06-03 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	1,2,3,4,5	0.00980	mg/L	1	0.100	<0.000223	10	18.2 - 149
Toluene	Qs	1,2,3,4,5	0.00930	mg/L	1	0.100	<0.000238	9	13 - 157
Ethylbenzene	Qs	1,2,3,4,5	0.00970	mg/L	1	0.100	<0.000238	10	12.9 - 156
Xylene	Qs	1,2,3,4,5	0.0288	mg/L	1	0.300	<0.000243	10	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
Benzene	Qr	1,2,3,4,5	0.0237	mg/L	1	0.100	<0.000223	24	18.2 - 149	83	20
Toluene	Qr	1,2,3,4,5	0.0239	mg/L	1	0.100	<0.000238	24	13 - 157	88	20
Ethylbenzene	Qr	1,2,3,4,5	0.0245	mg/L	1	0.100	<0.000238	24	12.9 - 156	86	20
Xylene	Qr	1,2,3,4,5	0.0735	mg/L	1	0.300	<0.000243	24	22 - 150	87	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	0.0958	0.0955	mg/L	1	0.1	96	96	71.6 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0938	0.0977	mg/L	1	0.1	94	98	70 - 120

Calibration Standards

Standard (CCV-2)

QC Batch: 130504 | Date Analyzed: 2016-06-01 | 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	0.0948	95	80 - 120	2016-06-01
Toluene		1,2,3,4,5	mg/L	0.100	0.0961	96	80 - 120	2016-06-01
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0973	97	80 - 120	2016-06-01
Xylene		1,2,3,4,5	mg/L	0.300	0.290	97	80 - 120	2016-06-01

Standard (CCV-3)

QC Batch: 130504 | Date Analyzed: 2016-06-01 | 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	0.0971	97	80 - 120	2016-06-01
Toluene		1,2,3,4,5	mg/L	0.100	0.0987	99	80 - 120	2016-06-01
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.115	115	80 - 120	2016-06-01
Xylene		1,2,3,4,5	mg/L	0.300	0.309	103	80 - 120	2016-06-01

Standard (CCV-1)

QC Batch: 130542 | Date Analyzed: 2016-06-03 | 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	0.0949	95	80 - 120	2016-06-03
Toluene		1,2,3,4,5	mg/L	0.100	0.0956	96	80 - 120	2016-06-03
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0953	95	80 - 120	2016-06-03
Xylene		1,2,3,4,5	mg/L	0.300	0.286	95	80 - 120	2016-06-03

Standard (CCV-2)

QC Batch: 130542 | Date Analyzed: 2016-06-03 | 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	0.0969	97	80 - 120	2016-06-03
Toluene		1,2,3,4,5	mg/L	0.100	0.0980	98	80 - 120	2016-06-03
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0967	97	80 - 120	2016-06-03
Xylene		1,2,3,4,5	mg/L	0.300	0.290	97	80 - 120	2016-06-03

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
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

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	T104704219-16-12	Lubbock
5		2015-066	Lubbock

Standard Flags

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

Attachments

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

LAB Order ID # 160353103

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

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

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

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

Company Name: Talon-LPE
Phone #: 806-787-8078
Address: (Street, City, Zip) 2901 S. Hwy. 349, Midland, TX
Fax #: —
Contact Person: Alan Izard
E-mail: aizard@talonlpe.com
Invoice to: (If different from above) Plains' SRS # 2000-10757
Project #: 700376.050.04
Project Name: Kimbrough Sweet 8"
Project Location (including state): Hobbs, NM
Sampler Signature: Alan Izard

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
H20273	MW-1A	3	40 ml	✓				✓				✓		5-27-16	1240
274	MW-3			✓				✓				✓			1600
275	MW-12			✓				✓				✓			1450
276	MW-13			✓				✓				✓			1430
277	MW-14			✓				✓				✓			1510
278	MW-15			✓				✓				✓			1400
279	MW-16			✓				✓				✓			1530
280	MW-17			✓				✓				✓			1300
281	MW-18			✓				✓				✓			1330

ANALYSIS REQUEST (Circle or Specify Method No.)	Turn Around Time if different from standard	Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624	✓	
TPH 418.1 / TX1005 / TX1005 Ext(C35)		
TPH 8015 GRO / DRO / TVHC		
PAH 8270 / 625		
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
TCLP Semi Volatiles		
TCLP Pesticides		
RCI		
GC/MS Vol. 8260 / 624		
GC/MS Semi. Vol. 8270 / 625		
PCB's 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity		
Na, Ca, Mg, K, TDS, EC		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Alan Izard	Talon LPE	5-28-16	1260					INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by: Brenda Ward	Company: TA Lubbock	Date: 5/28/16	Time: 1200	INST IR 3 OBS 4.2 °C COR 4.6 °C

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

REMARKS: Please put Plains' SRS # 2000-10757 on the invoice, thank you.

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

Carrier # Courier

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

ORIGINAL COPY

TRACEANALYSIS, INC.

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: September 21, 2016

Work Order: 16091226

Project Location: Lovington, NM
Project Name: Kimbrough Sweet 8-Inch
Project Number: 700376.050.01
SRS #: 2000-10757

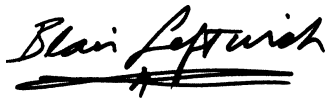
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
427991	MW-1A	water	2016-09-09	14:40	2016-09-12
427992	MW-3	water	2016-09-09	14:50	2016-09-12
427993	MW-12	water	2016-09-09	13:50	2016-09-12
427994	MW-13	water	2016-09-09	14:30	2016-09-12
427995	MW-14	water	2016-09-09	13:40	2016-09-12
427996	MW-15	water	2016-09-09	14:00	2016-09-12
427997	MW-16	water	2016-09-09	13:30	2016-09-12
427998	MW-17	water	2016-09-09	14:10	2016-09-12
427999	MW-18	water	2016-09-09	14:20	2016-09-12

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

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

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



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

Report Contents

Case Narrative

Samples for project Kimbrough Sweet 8-Inch were received by TraceAnalysis, Inc. on 2016-09-12 and assigned to work order 16091226. Samples for work order 16091226 were received intact at a temperature of 2.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	112474	2016-09-13 at 08:43	132729	2016-09-14 at 10:24
BTEX	S 8021B	112518	2016-09-14 at 13:00	132753	2016-09-15 at 07:32

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 16091226 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: 427991 - MW-1A

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B	
QC Batch:	132729	Date Analyzed:	2016-09-14	Analyzed By:	AK	
Prep Batch:	112474	Sample Preparation:	2016-09-13	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)			0.0850	mg/L	1	0.100	85	70 - 130

Sample: 427992 - MW-3

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B	
QC Batch:	132729	Date Analyzed:	2016-09-14	Analyzed By:	AK	
Prep Batch:	112474	Sample Preparation:	2016-09-13	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene		4	**0.00180**	**0.00180**	<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)			0.0917	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0841	mg/L	1	0.100	84	70 - 130

Sample: 427993 - MW-12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	132729	Date Analyzed:	2016-09-14	Analyzed By:	AK
Prep Batch:	112474	Sample Preparation:	2016-09-13	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)			0.0957	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0847	mg/L	1	0.100	85	70 - 130

Sample: 427994 - MW-13

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	132729	Date Analyzed:	2016-09-14	Analyzed By:	AK
Prep Batch:	112474	Sample Preparation:	2016-09-13	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)			0.0924	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0834	mg/L	1	0.100	83	70 - 130

Sample: 427995 - MW-14

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	132729	Date Analyzed:	2016-09-14	Analyzed By:	AK

Prep Batch: 112474 | Sample Preparation: 2016-09-13 | 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)			0.0943	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0841	mg/L	1	0.100	84	70 - 130

Sample: 427996 - MW-15

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 132729 | Date Analyzed: 2016-09-14 | Analyzed By: AK
Prep Batch: 112474 | Sample Preparation: 2016-09-13 | 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)			0.0943	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0841	mg/L	1	0.100	84	70 - 130

Sample: 427997 - MW-16

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5030B
QC Batch: 132729 | Date Analyzed: 2016-09-14 | Analyzed By: AK
Prep Batch: 112474 | Sample Preparation: 2016-09-13 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	4	**0.000700**	<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)			0.0942	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0838	mg/L	1	0.100	84	70 - 130

Sample: 427998 - MW-17

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	132753	Date Analyzed:	2016-09-15	Analyzed By:	AK
Prep Batch:	112518	Sample Preparation:	2016-09-14	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)			0.0990	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0886	mg/L	1	0.100	89	70 - 130

Sample: 427999 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	132753	Date Analyzed:	2016-09-15	Analyzed By:	AK
Prep Batch:	112518	Sample Preparation:	2016-09-14	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

continued ...

sample 427999 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (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)			0.0939	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0842	mg/L	1	0.100	84	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 132729 | Date Analyzed: 2016-09-14 | Analyzed By: AK
Prep Batch: 112474 | QC Preparation: 2016-09-13 | 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)			0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0883	mg/L	1	0.100	88	70 - 130

Method Blank (1)

QC Batch: 132753 | Date Analyzed: 2016-09-15 | Analyzed By: AK
Prep Batch: 112518 | QC Preparation: 2016-09-14 | 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)			0.0990	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0882	mg/L	1	0.100	88	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 132729 | Date Analyzed: 2016-09-14 | Analyzed By: AK
Prep Batch: 112474 | QC Preparation: 2016-09-13 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0920	mg/L	1.06	0.100	<0.000534	92	70 - 130
Toluene		4	0.0931	mg/L	1.06	0.100	<0.000658	93	70 - 130
Ethylbenzene		4	0.103	mg/L	1.06	0.100	<0.000809	103	70 - 130
Xylene		4	0.314	mg/L	1.06	0.300	<0.000271	105	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		4	0.0897	mg/L	1.06	0.100	<0.000534	90	70 - 130	2	20
Toluene		4	0.0911	mg/L	1.06	0.100	<0.000658	91	70 - 130	2	20
Ethylbenzene		4	0.0988	mg/L	1.06	0.100	<0.000809	99	70 - 130	4	20
Xylene		4	0.302	mg/L	1.06	0.300	<0.000271	101	70 - 130	4	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.101	0.102	mg/L	1.06	0.100	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0949	0.0941	mg/L	1.06	0.100	95	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 132753 | Date Analyzed: 2016-09-15 | Analyzed By: AK
Prep Batch: 112518 | QC Preparation: 2016-09-14 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0913	mg/L	1.06	0.100	<0.000534	91	70 - 130
Toluene		4	0.0928	mg/L	1.06	0.100	<0.000658	93	70 - 130
Ethylbenzene		4	0.101	mg/L	1.06	0.100	<0.000809	101	70 - 130
Xylene		4	0.306	mg/L	1.06	0.300	<0.000271	102	70 - 130

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		4	0.0918	mg/L	1.06	0.100	<0.000534	92	70 - 130	0	20
Toluene		4	0.0945	mg/L	1.06	0.100	<0.000658	94	70 - 130	2	20
Ethylbenzene		4	0.102	mg/L	1.06	0.100	<0.000809	102	70 - 130	1	20
Xylene		4	0.312	mg/L	1.06	0.300	<0.000271	104	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)			0.0995	0.101	mg/L	1.06	0.100	100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0939	0.0953	mg/L	1.06	0.100	94	95	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 427843

QC Batch: 132729 | Date Analyzed: 2016-09-14 | Analyzed By: AK
Prep Batch: 112474 | QC Preparation: 2016-09-13 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	4	0.0637	mg/L	1.06	0.100	<0.000534	64	70 - 130
Toluene	Qs	4	0.0639	mg/L	1.06	0.100	<0.000658	64	70 - 130
Ethylbenzene	Qs	4	0.0645	mg/L	1.06	0.100	<0.000809	64	70 - 130
Xylene	Qs	4	0.192	mg/L	1.06	0.300	<0.000271	64	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	0.0701	mg/L	1.06	0.100	<0.000534	70	70 - 130	10	20
Toluene	Qs	4	0.0690	mg/L	1.06	0.100	<0.000658	69	70 - 130	8	20
Ethylbenzene		4	0.0716	mg/L	1.06	0.100	<0.000809	72	70 - 130	10	20
Xylene		4	0.215	mg/L	1.06	0.300	<0.000271	72	70 - 130	11	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)			0.106	0.106	mg/L	1.06	0.1	106	106	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0978	0.0980	mg/L	1.06	0.1	98	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 427998

QC Batch: 132753 | Date Analyzed: 2016-09-15 | Analyzed By: AK
Prep Batch: 112518 | QC Preparation: 2016-09-14 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		4	0.0918	mg/L	1.06	0.100	<0.000534	92	70 - 130
Toluene		4	0.0940	mg/L	1.06	0.100	<0.000658	94	70 - 130
Ethylbenzene		4	0.0965	mg/L	1.06	0.100	<0.000809	96	70 - 130
Xylene		4	0.289	mg/L	1.06	0.300	<0.000271	96	70 - 130

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

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		4	0.0938	mg/L	1.06	0.100	<0.000534	94	70 - 130	2	20
Toluene		4	0.0966	mg/L	1.06	0.100	<0.000658	97	70 - 130	3	20
Ethylbenzene		4	0.102	mg/L	1.06	0.100	<0.000809	102	70 - 130	6	20
Xylene		4	0.309	mg/L	1.06	0.300	<0.000271	103	70 - 130	7	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)			0.104	0.104	mg/L	1.06	0.1	104	104	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0962	0.0958	mg/L	1.06	0.1	96	96	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 132729 | Date Analyzed: 2016-09-14 | 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	0.0903	90	80 - 120	2016-09-14
Toluene		4	mg/L	0.100	0.0905	90	80 - 120	2016-09-14
Ethylbenzene		4	mg/L	0.100	0.0936	94	80 - 120	2016-09-14
Xylene		4	mg/L	0.300	0.282	94	80 - 120	2016-09-14

Standard (CCV-3)

QC Batch: 132729 | Date Analyzed: 2016-09-14 | 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	0.0905	90	80 - 120	2016-09-14
Toluene		4	mg/L	0.100	0.0928	93	80 - 120	2016-09-14
Ethylbenzene		4	mg/L	0.100	0.0962	96	80 - 120	2016-09-14
Xylene		4	mg/L	0.300	0.288	96	80 - 120	2016-09-14

Standard (CCV-1)

QC Batch: 132753 | Date Analyzed: 2016-09-15 | 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	0.0905	90	80 - 120	2016-09-15
Toluene		4	mg/L	0.100	0.0928	93	80 - 120	2016-09-15
Ethylbenzene		4	mg/L	0.100	0.0962	96	80 - 120	2016-09-15
Xylene		4	mg/L	0.300	0.288	96	80 - 120	2016-09-15

Standard (CCV-2)

QC Batch: 132753 | Date Analyzed: 2016-09-15 | 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	0.0908	91	80 - 120	2016-09-15
Toluene		4	mg/L	0.100	0.0916	92	80 - 120	2016-09-15
Ethylbenzene		4	mg/L	0.100	0.0943	94	80 - 120	2016-09-15
Xylene		4	mg/L	0.300	0.283	94	80 - 120	2016-09-15

Limits of Detection (LOD)

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

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	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 then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 160911226

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

5002 Basin Street, Suite A1
Midland,Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

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

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

Company Name: Talon/LPE	**Phone #:** (806) 549-9597
Address: 2901 State Highway 349, Midland, TX 79706	**Fax #:** (432)522-2180
Contact Person: Ben J. Arguijo	**E-mail:** bjarguijo@talonlpe.com
Invoice to: Camille Bryant - Plains All American	**P.O. #** PAA-C. Bryant
Project #: SRS #2000-10757	**Project Name:** Kimbrough Sweet 8-Inch
Project Location: (include state) Lovington, NM	**Sampler Signature:**

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC			Turn Around Time if different from standard	Hold
991	MW-1A	3	40ml	X				X				X		9/9/16	14:40		X																				
992	MW-3	3	40ml	X				X				X		9/9/16	14:50		X																				
993	MW-12	3	40ml	X				X				X		9/9/16	13:50		X																				
994	MW-13	3	40ml	X				X				X		9/9/16	14:30		X																				
995	MW-14	3	40ml	X				X				X		9/9/16	13:40		X																				
996	MW-15	3	40ml	X				X				X		9/9/16	14:40		X																				
997	MW-16	3	40ml	X				X				X		9/9/16	13:30		X																				
998	MW-17	3	40ml	X				X				X		9/9/16	14:10		X																				
999	MW-18	3	40ml	X				X				X		9/9/16	14:20		X																				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
[signature]	Talon	9-12-16	16:17	[signature]	H TA	9-12-16	16:17	INST FedEx OBS 2.1 °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N /NA

Log-in Review ____

Carrier # carry-in

REMARKS:

Please use SQS# for PO#
Thank you

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

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

Certificate of Analysis Summary 541635

Talon/LPE Co., Midland, TX

Project Name: Kimbrough Sweet 8inch

Project Id: SRS#2000-10757
Contact: Ben Arguijo
Project Location:

Date Received in Lab: Thu Dec-08-16 08:45 am
Report Date: 13-DEC-16
Project Manager: Alex Montoya

Analysis Requested													
	Lab Id:	541635-001		541635-002		541635-003		541635-004		541635-005		541635-006	
	Field Id:	MW-1A		MW-3		MW-12		MW-13		MW-14		MW-15	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Dec-06-16 10:15		Dec-06-16 12:30		Dec-06-16 12:10		Dec-06-16 12:20		Dec-06-16 11:00		Dec-06-16 12:00	
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		Dec-09-16 16:30	
	Analyzed:	Dec-10-16 19:45		Dec-10-16 20:01		Dec-10-16 20:18		Dec-10-16 20:34		Dec-10-16 20:50		Dec-10-16 21:06	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.00609	0.00200	0.0269	0.00200	<0.00200	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	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	0.00341	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	<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	<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	<0.00200	0.00200
Total BTEX		0.00609	0.00200	0.0303	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 541635

Talon/LPE Co., Midland, TX

Project Name: Kimbrough Sweet 8inch

Project Id: SRS#2000-10757
Contact: Ben Arguijo
Project Location:

Date Received in Lab: Thu Dec-08-16 08:45 am
Report Date: 13-DEC-16
Project Manager: Alex Montoya

Analysis Requested											
	Lab Id:	541635-007		541635-008		541635-009					
	Field Id:	MW-16		MW-17		MW-18					
	Depth:										
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER					
	Sampled:	Dec-06-16 10:40		Dec-06-16 11:20		Dec-06-16 11:40					
BTEX by EPA 8021B	***Extracted:***	Dec-09-16 16:30		Dec-09-16 16:30		Dec-09-16 16:30					
	Analyzed:	Dec-10-16 21:23		Dec-10-16 21:39		Dec-10-16 21:55					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		0.00268	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<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				
m_p-Xylenes		<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				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		0.00268	0.00200	<0.00200	0.00200	<0.00200	0.00200				

Kelsey Brooks
Project Manager

Analytical Report 541635

for

Talon/LPE Co.

Project Manager: Ben Arguijo

Kimbrough Sweet 8inch

SRS#2000-10757

13-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)

13-DEC-16

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

Reference: XENCO Report No(s): **541635**
Kimbrough Sweet 8inch
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) 541635. 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. 541635 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1A	W	12-06-16 10:15		541635-001
MW-3	W	12-06-16 12:30		541635-002
MW-12	W	12-06-16 12:10		541635-003
MW-13	W	12-06-16 12:20		541635-004
MW-14	W	12-06-16 11:00		541635-005
MW-15	W	12-06-16 12:00		541635-006
MW-16	W	12-06-16 10:40		541635-007
MW-17	W	12-06-16 11:20		541635-008
MW-18	W	12-06-16 11:40		541635-009

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-1A**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-001	Date Collected:	12.06.16 10.15		
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	**0.00609**	0.00200	mg/L	12.10.16 19.45		1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 19.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 19.45	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 19.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 19.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 19.45	U	1
Total BTEX		**0.00609**	0.00200	mg/L	12.10.16 19.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	80-120	12.10.16 19.45	
4-Bromofluorobenzene	460-00-4	101	%	80-120	12.10.16 19.45	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-3**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-002	Date Collected:	12.06.16 12.30		
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	**0.0269**	0.00200	mg/L	12.10.16 20.01		1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 20.01	U	1
Ethylbenzene	100-41-4	**0.00341**	0.00200	mg/L	12.10.16 20.01		1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 20.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 20.01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 20.01	U	1
Total BTEX		**0.0303**	0.00200	mg/L	12.10.16 20.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	80-120	12.10.16 20.01	
4-Bromofluorobenzene	460-00-4	108	%	80-120	12.10.16 20.01	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-12**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-003	Date Collected:	12.06.16 12.10		
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 20.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 20.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 20.18	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 20.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 20.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 20.18	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 20.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	80-120	12.10.16 20.18	
4-Bromofluorobenzene	460-00-4	98	%	80-120	12.10.16 20.18	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-13**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-004	Date Collected:	12.06.16 12.20		
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 20.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 20.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 20.34	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 20.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 20.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 20.34	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	12.10.16 20.34	
4-Bromofluorobenzene	460-00-4	90	%	80-120	12.10.16 20.34	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-14**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-005	Date Collected:	12.06.16 11.00		
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 20.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 20.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 20.50	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 20.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 20.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 20.50	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 20.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	12.10.16 20.50	
4-Bromofluorobenzene	460-00-4	94	%	80-120	12.10.16 20.50	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-15**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-006	Date Collected:	12.06.16 12.00		
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 21.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 21.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 21.06	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 21.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 21.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 21.06	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 21.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	12.10.16 21.06	
4-Bromofluorobenzene	460-00-4	104	%	80-120	12.10.16 21.06	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-16**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-007	Date Collected:	12.06.16 10.40		
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	**0.00268**	0.00200	mg/L	12.10.16 21.23		1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 21.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 21.23	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 21.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 21.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 21.23	U	1
Total BTEX		**0.00268**	0.00200	mg/L	12.10.16 21.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	12.10.16 21.23	
4-Bromofluorobenzene	460-00-4	97	%	80-120	12.10.16 21.23	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-17**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-008	Date Collected:	12.06.16 11.20		
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 21.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 21.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 21.39	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 21.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 21.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 21.39	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 21.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	80-120	12.10.16 21.39	
4-Bromofluorobenzene	460-00-4	93	%	80-120	12.10.16 21.39	

Certificate of Analytical Results 541635

Talon/LPE Co., Midland, TX

Kimbrough Sweet 8inch

Sample Id:	**MW-18**	Matrix:	Ground Water	Date Received:	12.08.16 08.45
Lab Sample Id:	541635-009	Date Collected:	12.06.16 11.40		
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 21.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 21.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 21.55	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 21.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 21.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 21.55	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	12.10.16 21.55	
4-Bromofluorobenzene	460-00-4	102	%	80-120	12.10.16 21.55	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Talon/LPE Co.

Kimbrough Sweet 8inch

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3005411 Matrix: Water Date Prep: 12.09.16

MB Sample Id: 717080-1-BLK LCS Sample Id: 717080-1-BKS 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** Prep Method: SW5030B

Seq Number: 3005411 Matrix: Ground Water Date Prep: 12.09.16

Parent Sample Id: 541635-001 MS Sample Id: 541635-001 S 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

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Asbestos Radiochemistry

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

Page 1 of 1

LAB W.O#: 541635

Field billable Hrs :

Company:	Talon/LPE	Phone:	(806)549-9597
Address:	2901 State Highway 349	Fax:	(432)522-2180
City:	Midland	State: TX	Zip: 79706
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, biarguijo@talonlpe.com
Project ID:	Kimbrough Sweet 8-Inch SRS #2000-10757	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	
Sampler Name:	Mark Davis	Circle One Event:	Daily Weekly Monthly Quartely Semi-Annual Annual N/A

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

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

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260 BTEX	VP	E,I	Hold Sample (CALL) Run PAH on Highest TPH Only if
								# Cont					
1	MW-1A	12/6/16	10:15	GW			3			X			
2	MW-3	12/6/16	12:30	GW			3			X			
3	MW-12	12/6/16	12:10	GW			3			X			
4	MW-13	12/6/16	12:20	GW			3			X			
5	MW-14	12/6/16	11:00	GW			3			X			
6	MW-15	12/6/16	12:00	GW			3			X			
7	MW-16	12/6/16	10:40	GW			3			X			
8	MW-17	12/6/16	11:20	GW			3			X			
9	MW-18	12/6/16	11:40	GW			3			X			
0										X			

* Container Type Codes

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

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

** Preservative Type Codes

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

^ Matrix Type Codes

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

REMARKS

Reg. Program / Clean-up Std: CTLs TRRP DW NPDES LPST DryCln Other:

STATE for Certs & Regs: FL TX GA NC SC NJ PA OK LA AL NM Other:

QA/QC Level & Certification: 1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:

EDDs: ADaPT SEDD ERPIMS XLS Other:

COC & Labels: Match Incomplete Absent Unclear

Coolers Temp °C: 1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Mark Davis	Talon	12-8	8:45	[signature]	Xenco	12-8	845
2								
3								
4								

Lab Use Only

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

C.O.C. Serial #

XA 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
S Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Temp: IR ID:R-8
CF:+ 0.1 0.0

ays, 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 #: 541635

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 HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**Yes**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 12/08/2016

Checklist reviewed by: Alex Montoya
Alex Montoya
Date: 12/09/2016

APPENDIX D

NMOCD C-141

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company: **Plains Pipeline, L.P.**	Contact: **Camille Reynolds**
Address **P.O. Box 3119 Midland, Texas 79702**	Telephone No. **505.396.3341 (CJReynolds@paalp.com)**
Facility Name **Kimbrough Sweet #2000-10757**	Facility Type **8" Steel Pipeline**
Surface Owner: **State of New Mexico**	Mineral Owner / Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:
G	**3**	**T18S**	**R37E**					Lea

Latitude: 32°46'48"N **Longitude:** 103°14'18"W

NATURE OF RELEASE

Type of Release **Crude Oil**	Volume of Release **60 bbls barrels**	Volume Recovered **22 bbls barrels**
Source of Release **8" Steel Pipeline**	Date and Hour of Occurrence **10/25/2000**	Date and Hour of Discovery **10/25/2000**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Donna Williams**	
By Whom? **Wayne Brunette**	Date and Hour **10-25-00@5:15PM**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **NA**	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
***8" Steel Pipeline*: The release was caused by internal corrosion. Approximately 60 barrels of crude oil was released and approximately 22 barrels recovered and reintroduced to the system. The leak was excavated and repaired and the line placed back in service.**

Describe Area Affected and Cleanup Action Taken.*
15,613 sqft 200' x 200': In 2001, the NMOCD approved a Soil and Groundwater Abatement Plan. Impacted soil down to 15'bgs was excavated, shredded, and treated. A 2-foot thick compacted clay barrier was installed in the bottom of the excavation and the treated soil used to bring to grade. Remedial Goals: TPH 8015m = 100 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.

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

Signature:	**OIL CONSERVATION DIVISION**	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
E-mail Address: CJReynolds@paalp.com	Approval Date:	Expiration Date:
Title: District Environmental Supervisor	Conditions of Approval:	Attached ☐
Date: Phone: 505.396.3341		

* Attach Additional Sheets If Necessary

PLAINS ALL AMERICAN Site Information and Metrics	Incident Date: 10/25/2000	NMOCD Notified: 10-25-00@5:15PM

SITE: Kimbrough Sweet	Assigned Site Reference #: 2000-10757
Company: Plains Pipeline, L.P.	
Street Address: P.O. Box 3119	
Mailing Address:	
City, State, Zip: Midland, Texas 79702	
Representative: Camille Reynolds	
Representative Telephone: 505.396.3341 (CJReynolds@paalp.com)	
Telephone:	
Fluid volume released (bbls): 60 bbls	Recovered (bbls): 22 bbls
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: Kimbrough Sweet	
Source of contamination: 8" Steel Pipeline	
Land Owner, i.e., BLM, ST, Fee, Other: State of New Mexico	
LSP Dimensions 200' x 200'	
LSP Area: 15,613 ft²	
Location of Reference Point (RP)	
Location distance and direction from RP	
Latitude: 32°46'48"N	
Longitude: 103°14'18"W	
Elevation above mean sea level: 3,720'amsl	
Feet from South Section Line	
Feet from West Section Line	
Location- Unit or ¼¼: SW¼ of the NE¼	Unit Letter: G
Location- Section: 3	
Location- Township: T18S	
Location- Range: R37E	
Surface water body within 1000 ' radius of site: none	
Domestic water wells within 1000' radius of site: none	
Agricultural water wells within 1000' radius of site: none	
Public water supply wells within 1000' radius of site: none	
Depth from land surface to ground water (DG) 50'bgs	
Depth of contamination (DC) – 50'bgs	
Depth to ground water (DG – DC = DtGW) - zero feet	

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

Total Site Ranking Score and Acceptable Concentrations

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

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