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November 15, 2019

New Mexico Oil Conservation Division, District 1
1625 N. French Drive
Hobbs, NM 88240

Re: Lovington Paddock Remediation Site
2018 Annual Groundwater Monitoring Report
Case No. 1R272, OGRID No. 4323
Lea County, New Mexico

Dear whom it concerns,

Please find enclosed for your files, a copy of the following report:

- Lovington Paddock Remediation Site – 2018 Annual Groundwater Monitoring Report, south ½ of the southeast ¼ of Section 1, Township 17 South, Range 36 East; Lea County; New Mexico.

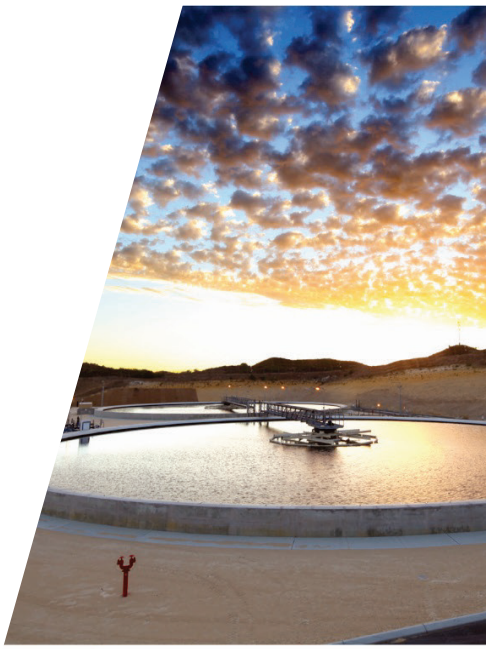
The submittal was prepared by GHD Services, Inc. (GHD) on behalf of Chevron Environmental Management Company (CEMC).

Please do not hesitate to call Scott Foord with Arcadis at 713-953-4853 or myself at 832-854-5601, should you have any questions.

Sincerely,

Jason Michelson

Encl. Lovington Paddock Remediation Site – 2018 Annual Groundwater Monitoring Report



2018 Annual Groundwater Monitoring Report

Lovington Paddock Remediation Site
Case No. 1R272, OGRID No. 4323
Lea County, New Mexico

Chevron Environmental Management Company

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1. Introduction

GHD Services Inc. (GHD) has prepared this report, on behalf of Chevron Environmental Management Company (CEMC), summarizing semiannual groundwater monitoring conducted at the Lovington Paddock remediation site (Site). Data presented in this report were collected during semiannual groundwater monitoring events conducted in March and September 2018.

The Site is located within the Lovington Paddock Unit, an active oil production field located in Lea County, New Mexico, and approximately 6.2 miles southeast of the City of Lovington (COL). The Site is located in the south ½ of the southeast ¼ of Section 1, Township 17 South, Range 36 East in Lea County, New Mexico. The Site vicinity is presented on Figure 1, and Site details are shown on Figure 2.

There are currently two active pipelines on the Site, as well as multiple inactive pipes. The Site is monitored with 25 monitoring wells. The City of Lovington sold the 40-acre tract on which the Site resides to Buster Goff in March 2001. At that time, AST West began leasing the Site for use in the distribution of soaps and detergents. Mr. Goff then sold the Site to Lea County Electric Cooperative (LCEC) in October 2001. Mico Oilfield Services (Mico) of Hobbs, New Mexico, a supplier of frac tanks to the oil and gas business, began leasing the former AST building and southwestern portion of the Site in 2012. The LCEC sold the property to Divine Ventures LLC in March 2015.

2. Background

2.1 Historical Investigation

Previous investigations conducted from 1998 to 2007 to identify the source and extent of groundwater impacts related to a former pit and possible historic pipeline leak indicated two separate plumes. These field activities have included excavation of sludge from the former pit, the advancement of 11 soil borings (BH-1 through BH-11), installation of 33 monitoring wells (MW-1 through MW-10, MW-A through MW-J, MW-L through MW-W, and MW-D2) and installation of three bio-sparge wells (BW-1 through BW-3). In March 2000, light non-aqueous phase liquid (LNAPL) was observed in MW-4 and MW-10. In March 2001 and on behalf of EOTT Energy, LLC (EOTT), 300 feet (ft) of pipeline in the vicinity of the impacts were uncovered and inspected by Environmental Plus, Inc. (EPI). Based on EPI's observations, no previous repairs or replacement pipeline were evident.

AST West installed a water supply well (AST well) at the southwestern portion of the Site in 2001. Also in 2001, Goff Dairy (Goff) installed four irrigation wells (WW-1, WW-2, WW-3, and WW-4) adjacent to the eastern and southern boundaries of the Site. Each Goff well was designed to pump approximately 600 to 800 gallons per minute (gpm), and pumping from these irrigation wells resulted in groundwater levels in monitoring wells at the Site being lowered by several feet. As a result, the groundwater gradient direction shifted from northeast to southeast, and monitoring wells MW-1 to MW-10 became dry in 2002. LNAPL has not been observed at the Site since these wells became dry.

From 2003 through 2005, Arcadis installed 17 groundwater monitoring wells (MW-A to MW-J, and MW-L to MW-R), one well (MW-D2) to investigate potential impact by chlorides, and three biosparge remediation wells (BW-1 through BW-3). Wells MW-A through J were installed to replace MW-1 to MW-10 that became dry due to pumping of the recently installed Goff and AST wells. Wells MW-L to MW-R were also installed to deeper depths to accommodate the lower water levels. Former wells MW-1 through MW-9 were plugged and abandoned.

The collective investigations resulted in the identification of two separate dissolved phase petroleum hydrocarbon plumes in groundwater. No evidence of chloride impact was found in MW-D2. One plume (east plume) was found below and surrounding an abandoned pit, while another plume (west plume) was observed near the EOTT pipeline. The west plume is located upgradient of the east plume.

After conducting a 180-day study of the expanded biosparge system, Arcadis concluded in a March 2006 report that the biosparge system had prevented further downgradient movement of the plumes. SECOR continued operation of the biosparge system after acquiring the project from Arcadis, and installed five additional monitoring wells (MW-S to MW-W) in 2006 and 2007. MW-T was converted to a biosparge well after failure of BW-2, and MW-U, MW-V and MW-W were installed to better evaluate the biosparge system. Based on results through 2007, the greatest impact to groundwater was in MW-H and MW-T located near the intersection of the EOTT pipeline and an inactive pipeline.

Based on data collected in 2006 and 2008, Stantec (formerly SECOR) defined the following stratigraphic profile in the Comprehensive Soil Investigation Report dated March 2010.

- A caliche interval extending from near ground surface to approximately 10 to 25 feet below ground surface (feet bgs),
- An underlying fine-grained sand interval extending to approximately 75 to 95 feet bgs, and including a relatively thin (2-foot thickness) sandstone layer between 35 and 50 feet bgs,
- A medium-grained sand interval extending from the base of the fine-grained sand interval to at least 120 feet bgs.

The results of the soil investigation indicated the source of total petroleum hydrocarbons (TPH) in the west plume appeared to be in the vicinity of wells MW-H and MW-T, and near the intersection of the EOTT pipeline and an inactive pipeline. The vertical distribution of chemical concentrations indicated TPH concentrations increased with depth and spread to the maximum lateral extent at 60 to 70 feet bgs where the highest TPH concentrations were located. The magnitude and lateral extent of TPH concentrations rapidly decreased below 70 feet bgs.

The maximum concentrations and lateral extent at 70 feet bgs, and rapidly decreasing concentrations below that depth, are believed to be an artifact of a historical (higher) groundwater elevation at the time of the release. After the AST West and Goff wells were installed in 2001, groundwater levels (measured relative to ground surface in nearby MW-H) declined from 80.18 feet bgs in 2003, to 95.20 feet bgs in 2009, to 99.55 feet bgs in March 2017, a net decline of nearly 20 feet over 12 years. Therefore, it is believed possible that groundwater levels at some time prior to 2001 could have been within the range of 60 to 70 feet bgs, and that the release occurred during that time.

As a result of falling water levels, LNAPL historically observed at the Site (i.e., MW-4 and MW-10) is thought to be retained in soil pores at or near residual (immobile) saturations.

2.2 GHD Investigations

GHD (formerly Conestoga-Rovers & Associates) began providing environmental consulting services at the Site in November 2010. Groundwater monitoring is conducted on a semiannual schedule with annual reporting. The biosparge system has not operated since 2011 when wildfires damaged some of the system's surface equipment, but its effectiveness had significantly diminished prior to that time.

As noted above, the groundwater flow direction at the Site has changed substantially over time due to intermittent pumping from the Goff irrigation wells. Prior to installation of the Goff wells, the groundwater flow direction remained consistently toward the northeast. Since the Goff wells began pumping in 2001, the groundwater flow direction gradually shifted from northeast to southeast. Continued pumping of the Goff wells through 2012 and 2013 lowered the water table and caused numerous monitoring wells to be dry during monitoring events. Information obtained from the New Mexico Office of State Engineer (NMOSE) website in 2014 indicated that Goff changed their permitted groundwater usage locations (i.e., points of diversion, a.k.a. "PODs") from wells located to the east (WW-3 and WW-4) to wells located further south (WW-1 and WW-2).

A soil vapor extraction (SVE) pilot test was conducted in August 2013 using five wells located in the west plume. MW-H, which was dry at the time, was selected as the extraction well due to high TPH levels in influent vapors. Vacuum communication was established in all observation wells (MW-T, MW-10, BW-2 and MW-I) during the six-hour test period. The observation wells were located at distances ranging from 47 feet (MW-T) to 88 feet (MW-I) from the extraction well (MW-H). The test results indicated that SVE should be an effective remediation method for residual hydrocarbons in soil if the induced vacuum remains below a specified limit and groundwater depths remain at the relatively low levels.

In April 2015, GHD conducted a Fit-for-Service evaluation on the former biosparge air compressors and associated air receivers. The evaluation revealed the equipment could potentially be functional after appropriate repairs (i.e., replacement of oil, belts, pressure safety valve, etc.). However, preliminary cost comparisons indicated new compressors would be less expensive than repairing the existing ones. The remnants of the biosparge system were removed in 2018.

Recovering water levels caused fewer wells to be dry in October 2015 relative to the prior year (October 2014) event, and no wells were dry during the following event of March 2016. However, declining water levels resumed in the subsequent months leading up to the October 2016 monitoring event, resulting in water levels falling an average of 8.45 feet and causing 11 wells to be dry or with insufficient water for sampling. The falling water levels were apparently due to resumed pumping of the Goff irrigation wells.

3. Groundwater Remediation Standards

The NMOCD provides guidance for remediation of contaminants of oil field wastes or products in Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993). These guidelines

require remediation of groundwater to the human health standards of the New Mexico Water Quality Control Commission (NMWQCC) set forth in New Mexico Administrative Code 20.6.2.3103. NMWQCC standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX) are listed below:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62

TPH is not included as standards are not established.

4. Groundwater Monitoring

The Site includes 25 existing monitoring wells (MW-C-R, MW-O-R, MW-B, MW-D through MW-J, MW-L, MW-M, MW-N, MW-P through MW-W, and MW D2, and former biosparge wells BW-1, BW-2 and BW-3). Well MW-A has not been gauged or sampled since its casing collapsed in 2008.

Semiannual groundwater monitoring events were conducted March 12 through 16 and September 10 through 12, 2018. Recovering water levels following the October 2017 monitoring event (when 11 wells were dry) enabled all wells to be sampled during the March 2018 event. However, subsequently falling water levels resulted in dry conditions that prevented sampling in 17 wells during the September 2018 event.

4.1 Field Methods

Field equipment was decontaminated with an Alconox™ wash and distilled water rinse before beginning field activities and between wells. Groundwater gauging was conducted prior to sampling activities. Water levels were measured to the nearest hundredth of a foot from the top of casing using an electronic water level meter.

Wells were sampled using low-flow methodology. During purging, the flow rate was adjusted in order to achieve minimal drawdown from the static water level. Temperature, oxidation reduction potential (ORP), pH, conductivity, and dissolved oxygen (DO) were monitored during purging, which continued until at least three of these parameters were stabilized within a 10 percent range for three consecutive measurements. Samples were then collected, labeled, recorded on a chain of custody form, and placed on ice in an insulated cooler to maintain a temperature of approximately 40°F (4°C).

Groundwater samples were submitted under chain-of-custody protocol to Xenco Laboratories (Xenco) in Midland, Texas for analysis of dissolved BTEX by EPA Method 8021B, and TPH in the gasoline range (GRO) and diesel range (DRO) by EPA Method 8015B.

4.2 Groundwater Gradient

Groundwater levels measured during 2018 are summarized in Table 1. Potentiometric surface maps for the March and September 2018 monitoring events are presented on Figures 3 and 4, respectively. The overall groundwater flow direction during both events was toward the

east/southeast and is consistent with historical data since the adjacent Goff irrigation wells began pumping in 2001. Historical groundwater levels are provided in Appendix A.

Groundwater elevations from March 12, 2018 ranged from 3715.80 feet above mean sea level (feet msl) in upgradient well MW-S, to 3703.09 feet msl in downgradient well MW-R, a difference of 12.71 feet across the Site at an average gradient of 0.01 ft/ft (Figure 3). These water levels rose an average of approximately 9.95 feet across the Site since the previous event of September 2017.

In wells that contained water during the September 10, 2018 event, water levels ranged from 3709.12 feet msl in upgradient well MW-S, to 3685.89 feet msl in downgradient well MW-R, a difference of 23.23 feet across the Site at an average gradient of 0.02 ft/ft (Figure 4). These water levels fell an average of approximately 13.25 feet across the Site since the previous event in March 2018.

Although the groundwater flow directions were similar during both 2018 events, the gradient during the second event (0.02 ft/ft) was double compared to the first event (0.01 ft/ft). The increased gradient during the second event indicates that the extent of the decline in water levels between the two events progressively increased across the Site from west to the southeast. For example, the water level in upgradient well MW-S fell 6.68 feet from March to September 2018, while the water level in downgradient well MW-R fell 17.20 feet during the same period.

The increased groundwater gradient in September 2018 is likely a result of resumed pumping from the Goff irrigation wells. As previously discussed in Section 2.1, the installation of the Goff wells in 2001 was followed by wells MW-1 to MW-10 becoming dry in 2002, and the groundwater gradient shifting from northeast to southeast.

4.3 Analytical Results

Groundwater analytical results from the March and September 2018 monitoring events are summarized in Table 2. The distribution of constituents and approximate limits of the benzene plumes during the respective events are displayed in map view on Figures 5 and 6. Historical groundwater analytical results are provided in Appendix B. Charts displaying the trends of chemical concentrations through time in various wells are provided in Appendix C. The analytical laboratory reports are provided in Appendix D.

Highlights of the 2018 analytical results are summarized below. As noted earlier, low water levels or dry conditions prevented sampling from three wells (MW-E, MW-H, and MW-Q) during March 2018 and from 15 wells during September 2018.

- Benzene exceeded the NMWQCC standard during March 2018 in three monitoring wells (MW-B, MW-I, and MW-T) and the two former biosparge wells (BW-1 and BW-3).
- Benzene exceedances were detected in MW-B and MW-T for September 2018 event. Former biosparge wells BW-1 and BW-2 exceeded the standard in the September 2018 event.
- Additional BTEX constituents were detected at concentrations below NMWQCC standards in MW-B, MW-I, MW-T, BW-2 and BW-3.
- TPH detections accompanied benzene exceedances in MW-B and MW-T. No NMWQCC standards exist for TPH.

Historical data indicates the following trends.

- The highest benzene concentrations at the Site have remained in upgradient well MW-T since the concentration "plateaued" in 2011. MW-H has historically been high as well, but remained dry through both sampling events in 2018. These wells are located on opposite sides of the EOTT pipeline and near its intersection with the inactive pipeline. The source of the release for the west plume is believed to be in this vicinity.
- Benzene exceedances in MW-T remained within the concentration range of 10 mg/L since 2011 before dropping to 2.23 mg/L in September 2017. Benzene increased back to historical concentration levels in both 2018 sampling events. A similar trend was present in MW-H, where benzene exceedances remained within the concentration range of 5 mg/L since 2011 before decreasing to 2.65 mg/L in September 2017.
- After spiking to over 4 mg/L in 2011, benzene exceedances in MW-I (located adjacent to MW-T) had remained stable within the general concentration range of 1.0 mg/L from 2012 to 2016. In 2018, benzene concentrations dropped to 0.267 mg/L.
- Historically elevated concentrations of benzene in MW-B, located in the downgradient, southeastern area of the west plume, dropped from above 4 mg/L in 2015-2016 to 0.125 mg/L in March 2017, reaching its lowest concentration since 2010. However, concentrations increased to 2.05 mg/L in March 2018.
- Benzene exceedances in former biosparge wells BW-1 and BW-2 (located in the central area of the west plume) have remained relatively stable, fluctuating in BW-1 within the concentration range of 0.1 mg/L since March 2014, and intermittently exceeding the benzene standard of 0.01 mg/L in BW-2 since 2005.
- Benzene in MW-C-R (which replaced MW-C in 2016) in the downgradient, northeastern area of the west plume, continued the trend of intermittent exceedances. After dropping and remaining below the standard from 2008 to 2013, benzene increased and remained above the standard until October 2016. In 2017, concentrations fluctuated above and below the standard; they fell below the detection limit both 2018 events.
- Benzene exceedances in former biosparge well BW-3 (east plume) had remained relatively stable within the concentration range of 0.1 mg/L since 2014. In March 2018 benzene decreased to 0.0815 mg/L.
- Benzene in east plume well MW-V rarely exceeded the standard prior to 2014, but has intermittently exceeded the standard since March 2016. In March 2018 benzene concentrations in MW-V were not detected above laboratory detection limits.

4.4 Groundwater Geochemical Parameters

The collection of select monitored natural attenuation (MNA) geochemical indicator parameters from select monitoring wells in addition to the current groundwater sample analysis performed during both semi-annual groundwater sampling events was conducted in 2018. Geochemical data collected from 10 select wells (upgradient, impacted, and downgradient) was collected to begin evaluation of trending groundwater conditions (aerobic/anaerobic) needed to promote petroleum hydrocarbon

biodegradative processes in groundwater. MNA geochemical data will continue to be collected and evaluated during the 2019 semiannual sampling events to determine if additional augmentation is necessary to enhance biodegradation by addition of nutrients or oxygen to the aquifer and/or to determine the need and cost effectiveness of alternate remedial technologies for the Site. Geochemical parameters are presented in Table 3, presented in map view on Figure 7, and geochemical trend graphs are presented in Appendix E.

5. Summary of Findings

The two isolated dissolved phase plumes have not migrated beyond wells previously exhibiting groundwater exceedances. Due to the apparent stability of the plumes, the preferred remedial alternative for the Site has been MNA. Although continued pumping of the Goff irrigation wells could potentially affect the stability of the plumes, the pumping may enhance the effectiveness of SVE for residual hydrocarbons in soil by maintaining low groundwater levels. MNA would remain a component of any remedial alternative. Findings of groundwater monitoring events conducted at the Site during 2018 are summarized below.

- Wells MW-C and MW-O were plugged and abandoned on July 19, 2017 because they were frequently dry dating back to 2011. These wells were replaced in June 2016 by deeper wells MW-C-R and MW-O-R. Both replacement wells contained sufficient water in September 2018 and did not have any exceedances.
- Groundwater elevations rose an average of 9.1 feet across the Site during the first semiannual period ending in March 2018, and then fell an average of 11.97 feet across the Site since the subsequent semiannual period in September 2018.
- The groundwater flow directions were similar during both 2018 events, but the gradient during the second event (0.02 ft/ft) was substantially steeper relative to the first event (0.01 ft/ft). The extent of the decline in water levels during the second event progressively increased across the Site from west to the southeast, falling only 6.68 feet in upgradient well MW-S vs. 17.2 feet in downgradient well MW-R.
- The overall groundwater flow direction during both 2018 events was toward the east/southeast and is consistent with historical data since the Goff irrigation wells began pumping in 2001. The falling water levels are believed due to pumping of the Goff wells.
- Benzene exceeded the NMWQCC standard during March 2018 in three monitoring wells and the two former biosparge wells.
- MW-I, which routinely exhibits benzene exceedances, had sufficient water for sampling for the first time since March 2016. Both the March 2018 and September 2018 events showed exceedances.
- Benzene was detected during both sampling events in BW-1, MW-I, and MW-T. Benzene was also detected during March 2018 in BW-3 and MW-B, but both wells were dry during the second event. BW-2 only exhibited benzene exceedances during the second sampling event.

- No exceedances were detected in either event for toluene, xylenes, or ethylbenzene. TPH detections accompanied benzene exceedances in MW-B, MW-I, and MW-T. No NMWQCC standards exist for TPH.
- The highest benzene concentrations are consistently located in the southwestern part of the west plume. The geographic trend of elevated concentrations in MW-T, MW-H and MW-B extends downgradient and crosses under the EOTT pipeline. Of all the wells MW-T had the highest levels of benzene (9.2 mg/L in March and 12.2 mg/L in September 2018).
- Benzene concentrations in MW-T and MW-I (upgradient section of the west plume) and in MW-H (dry throughout 2018) within the central part of the west plume have remained stable since 2011.
- Benzene concentrations in former biosparge wells BW-1, BW-2 (west plume), and BW-3 (east plume) within the west plume have remained relatively stable. Concentrations in BW-2 have fluctuated around the NMWQCC standard of 0.01 mg/L and have remained above the standard in BW-3.
- Benzene concentrations in east plume well MW-V have fluctuated above and below the NMWQCC standard since March 2016, and have dropped to a non-detectable concentration below the NMWQCC standard since September 2017.

6. 2019 Assessment Activities

Semiannual groundwater monitoring events are scheduled for March and September 2019. Due to the relative stability of the dissolved plume, the most appropriate remedial alternative for the Site is currently considered to be MNA. MNA geochemical indicators in groundwater will continue to be tested for and evaluated during 2019. Alternate remedial methods are additionally being evaluated for the Site.

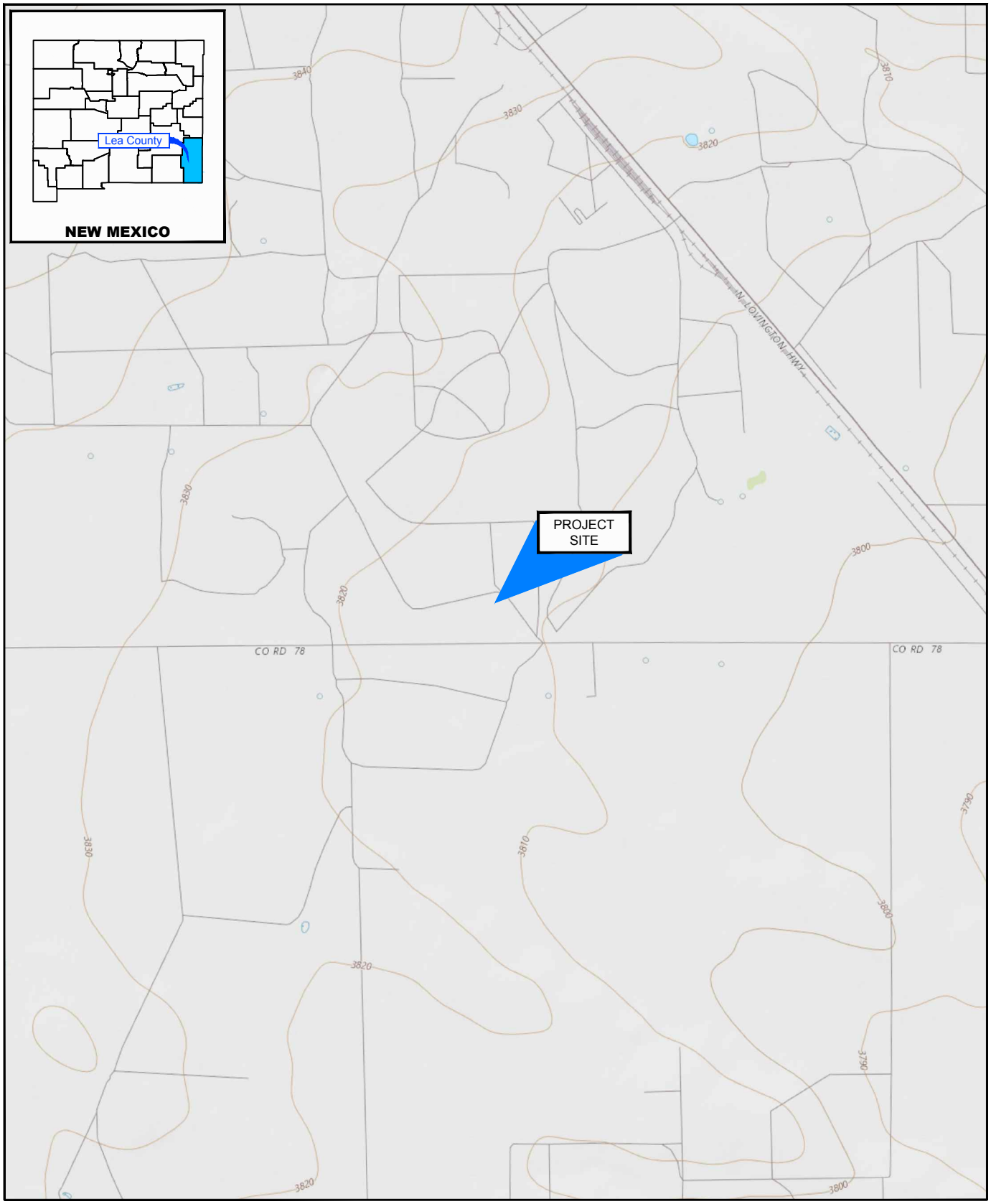
All of Which is Respectfully Submitted,

GHD

Paige Hall
Project Manager

Raaj Patel, P. G.
Program Manager

Figures



Source: USGS 7.5 Minute Quad "Lovington SE, New Mexico"

Lat/Long: 32.8586° North, 103.3015° West

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

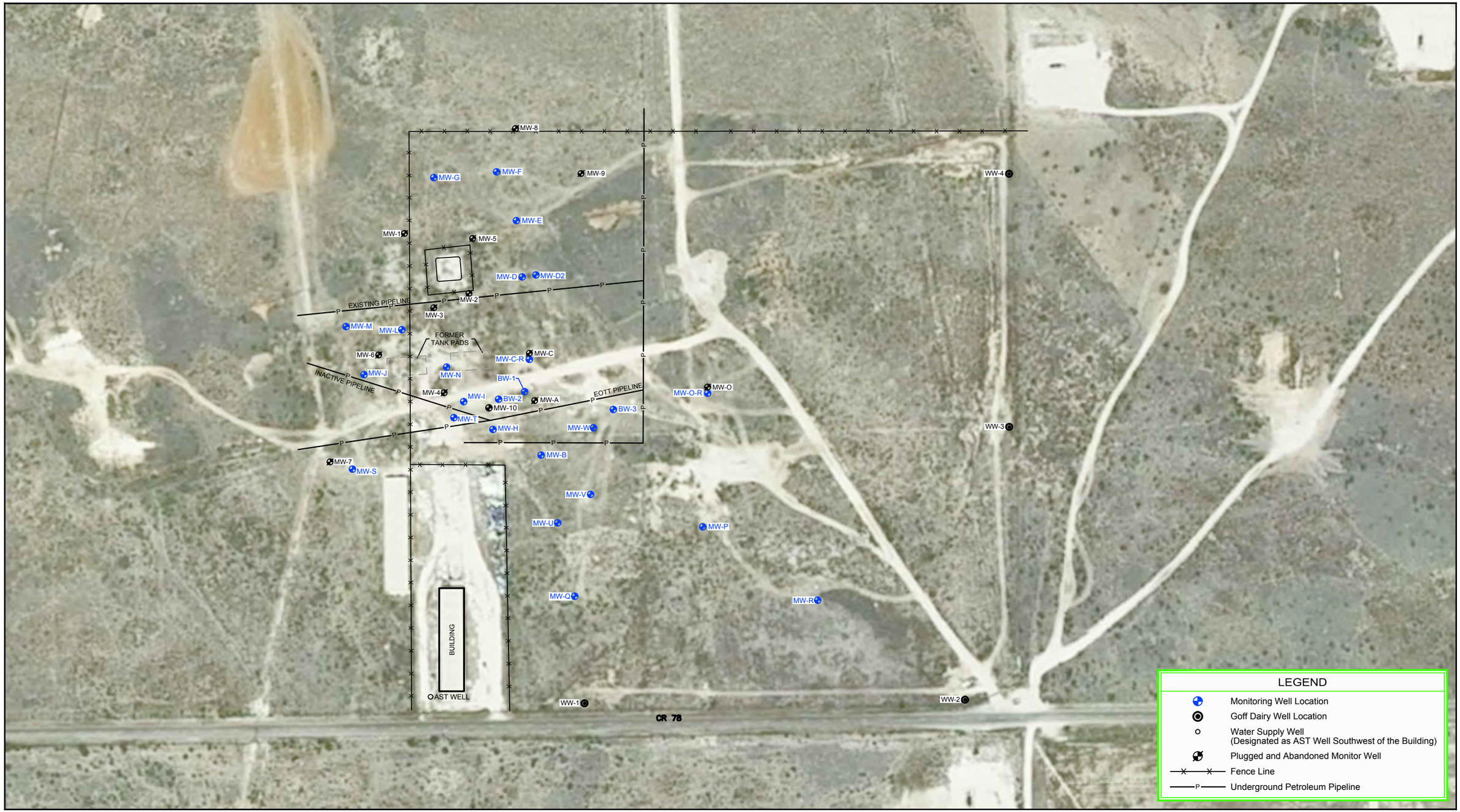
CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

073020-2018
Apr 4, 2018

SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

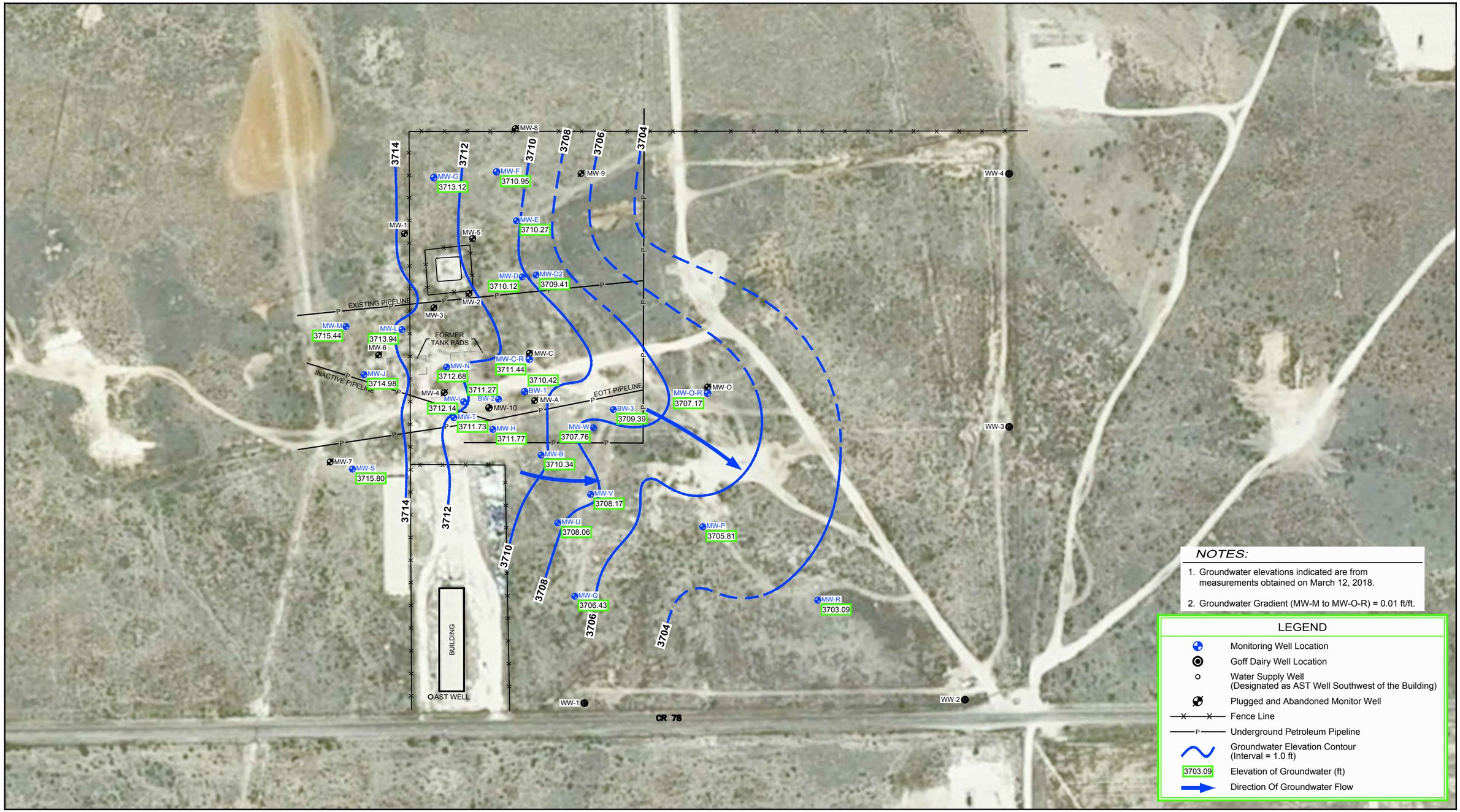
073020-2018

Apr 4, 2018

SITE DETAILS MAP

FIGURE 2

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



NOTES:

1. Groundwater elevations indicated are from measurements obtained on March 12, 2018.
2. Groundwater Gradient (MW-M to MW-O-R) = 0.01 ft/ft.

LEGEND

- Monitoring Well Location
- Goff Dairy Well Location
- Water Supply Well (Designated as AST Well Southwest of the Building)
- Plugged and Abandoned Monitor Well
- Fence Line
- Underground Petroleum Pipeline
- Groundwater Elevation Contour (Interval = 1.0 ft)
- 3703.09 Elevation of Groundwater (ft)
- Direction Of Groundwater Flow

Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

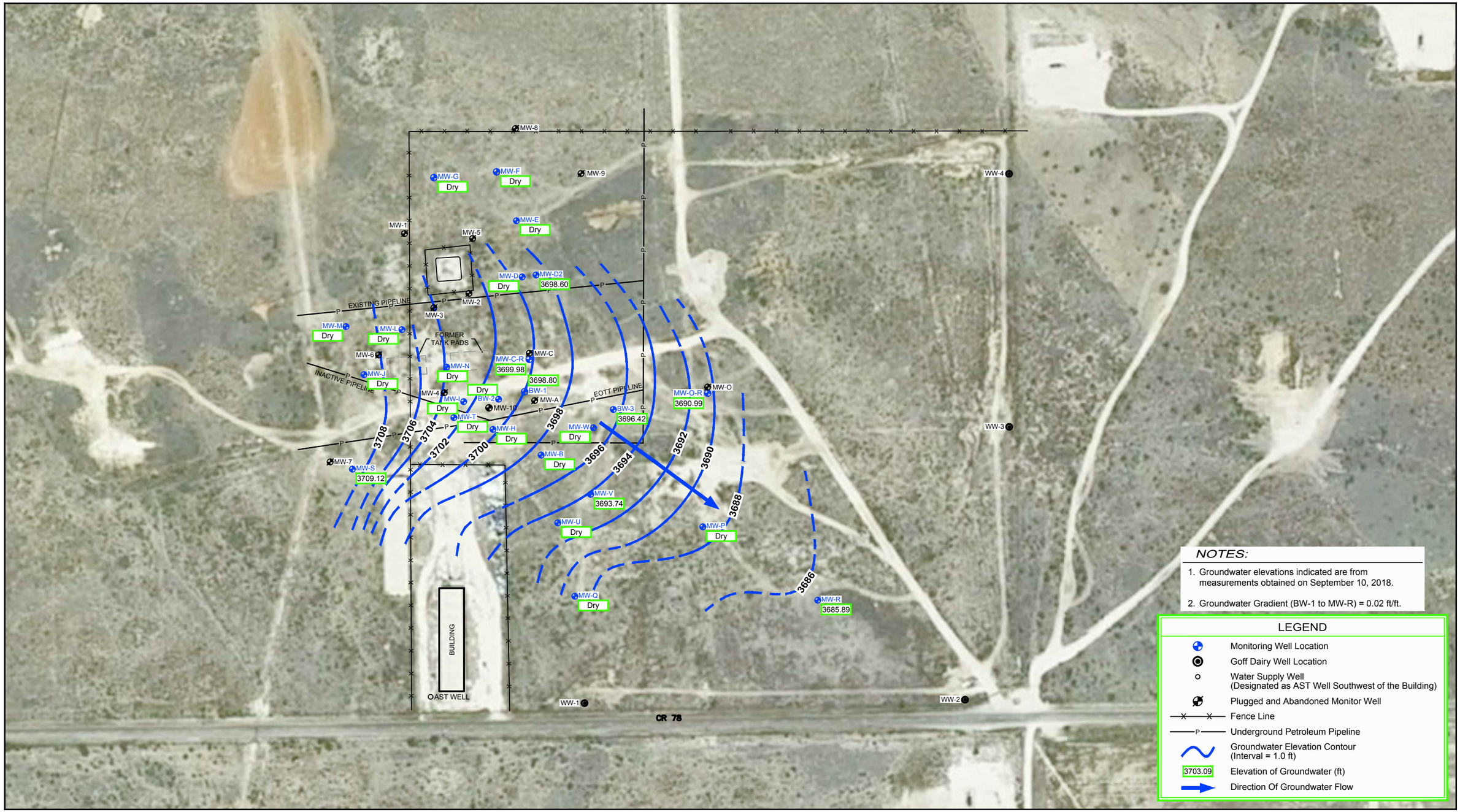
CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

073020-2018
Oct 8, 2018

POTENTIOMETRIC SURFACE MAP - MARCH 2018

FIGURE 3

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



NOTES:

1. Groundwater elevations indicated are from measurements obtained on September 10, 2018.
2. Groundwater Gradient (BW-1 to MW-R) = 0.02 ft/ft.

LEGEND

- Monitoring Well Location
- Goff Dairy Well Location
- Water Supply Well (Designated as AST Well Southwest of the Building)
- Plugged and Abandoned Monitor Well
- Fence Line
- Underground Petroleum Pipeline
- Groundwater Elevation Contour (Interval = 1.0 ft)
- 3703.09 Elevation of Groundwater (ft)
- Direction Of Groundwater Flow

Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

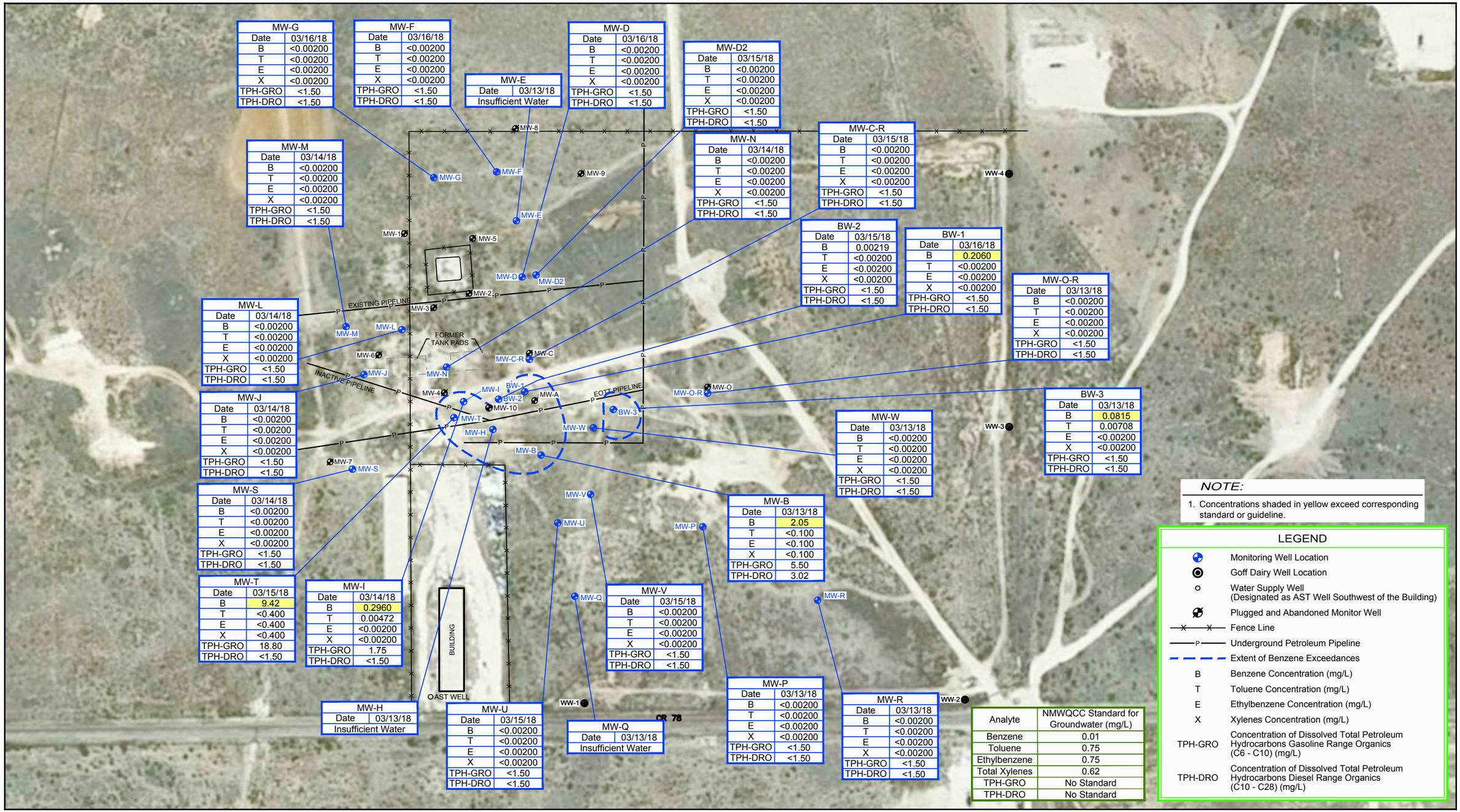
CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

073020-2018
Mar 21, 2019

POTENTIOMETRIC SURFACE MAP - SEPTEMBER 2018

FIGURE 4

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



MW-G	
Date	03/16/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-F	
Date	03/16/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-E	
Date	03/13/18
Insufficient Water	

MW-D	
Date	03/16/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-D2	
Date	03/15/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-N	
Date	03/14/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-C-R	
Date	03/15/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-M	
Date	03/14/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

BW-2	
Date	03/15/18
B	0.00219
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

BW-1	
Date	03/16/18
B	0.2060
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-O-R	
Date	03/13/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-L	
Date	03/14/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-J	
Date	03/14/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-W	
Date	03/13/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

BW-3	
Date	03/13/18
B	0.0815
T	0.00708
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-S	
Date	03/14/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-T	
Date	03/15/18
B	9.42
T	<0.400
E	<0.400
X	<0.400
TPH-GRO	18.80
TPH-DRO	<1.50

MW-I	
Date	03/14/18
B	0.2960
T	0.00472
E	<0.00200
X	<0.00200
TPH-GRO	1.75
TPH-DRO	<1.50

MW-B	
Date	03/13/18
B	2.05
T	<0.100
E	<0.100
X	<0.100
TPH-GRO	5.50
TPH-DRO	3.02

MW-H	
Date	03/13/18
Insufficient Water	

MW-U	
Date	03/15/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-V	
Date	03/15/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-Q	
Date	03/13/18
Insufficient Water	

MW-P	
Date	03/13/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

MW-R	
Date	03/13/18
B	<0.00200
T	<0.00200
E	<0.00200
X	<0.00200
TPH-GRO	<1.50
TPH-DRO	<1.50

NOTE:

1. Concentrations shaded in yellow exceed corresponding standard or guideline.

LEGEND

- Monitoring Well Location
- Goff Dairy Well Location
- Water Supply Well (Designated as AST Well Southwest of the Building)
- Plugged and Abandoned Monitor Well
- Fence Line
- Underground Petroleum Pipeline
- Extent of Benzene Exceedances
- B — Benzene Concentration (mg/L)
- T — Toluene Concentration (mg/L)
- E — Ethylbenzene Concentration (mg/L)
- X — Xylenes Concentration (mg/L)
- TPH-GRO — Concentration of Dissolved Total Petroleum Hydrocarbons Gasoline Range Organics (C6 - C10) (mg/L)
- TPH-DRO — Concentration of Dissolved Total Petroleum Hydrocarbons Diesel Range Organics (C10 - C28) (mg/L)

Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62
TPH-GRO	No Standard
TPH-DRO	No Standard

Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

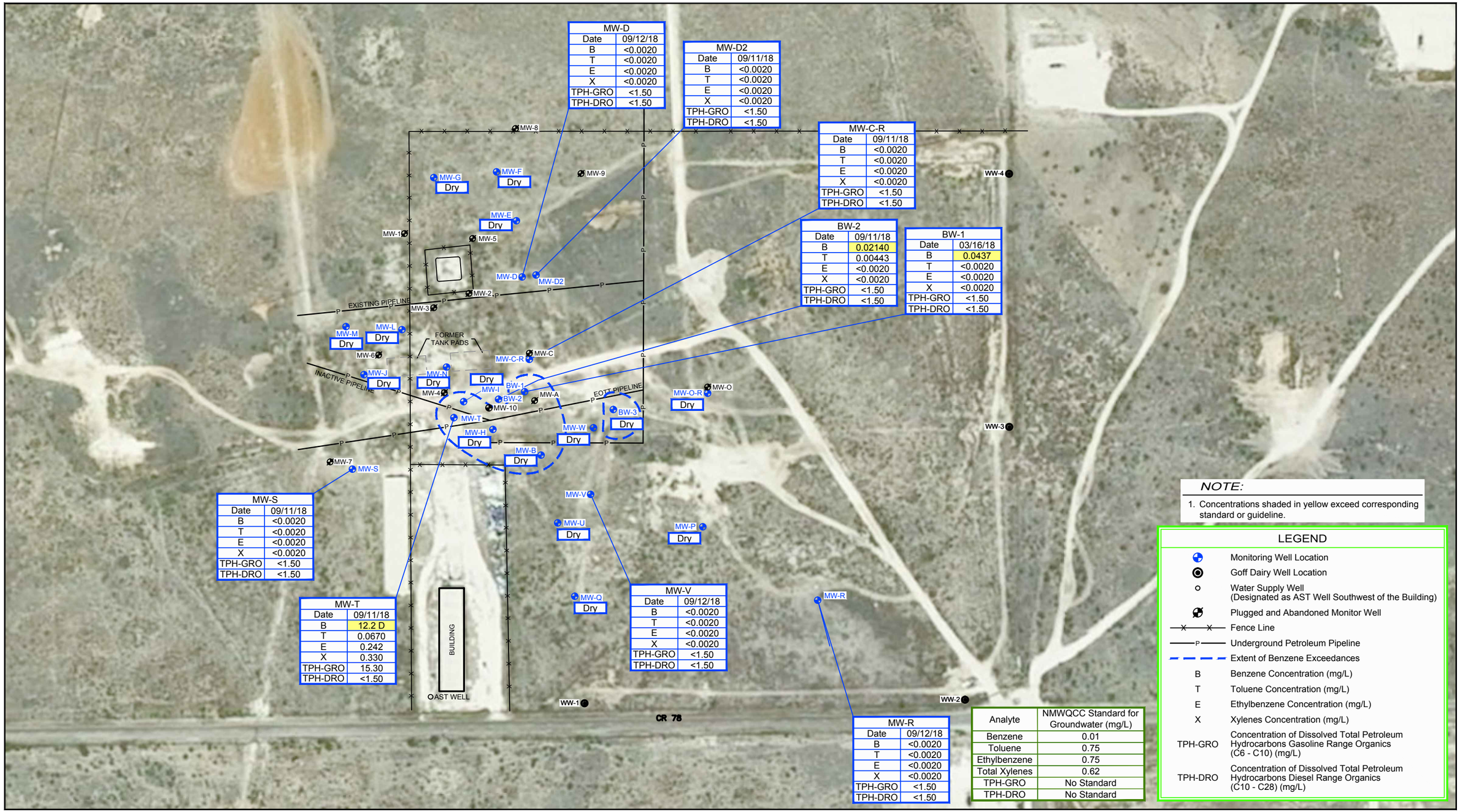
DISSOLVED HYDROCARBONS CONCENTRATION MAP - MARCH 2018

073020-2018

Nov 26, 2018

FIGURE 5

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62
TPH-GRO	No Standard
TPH-DRO	No Standard

Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

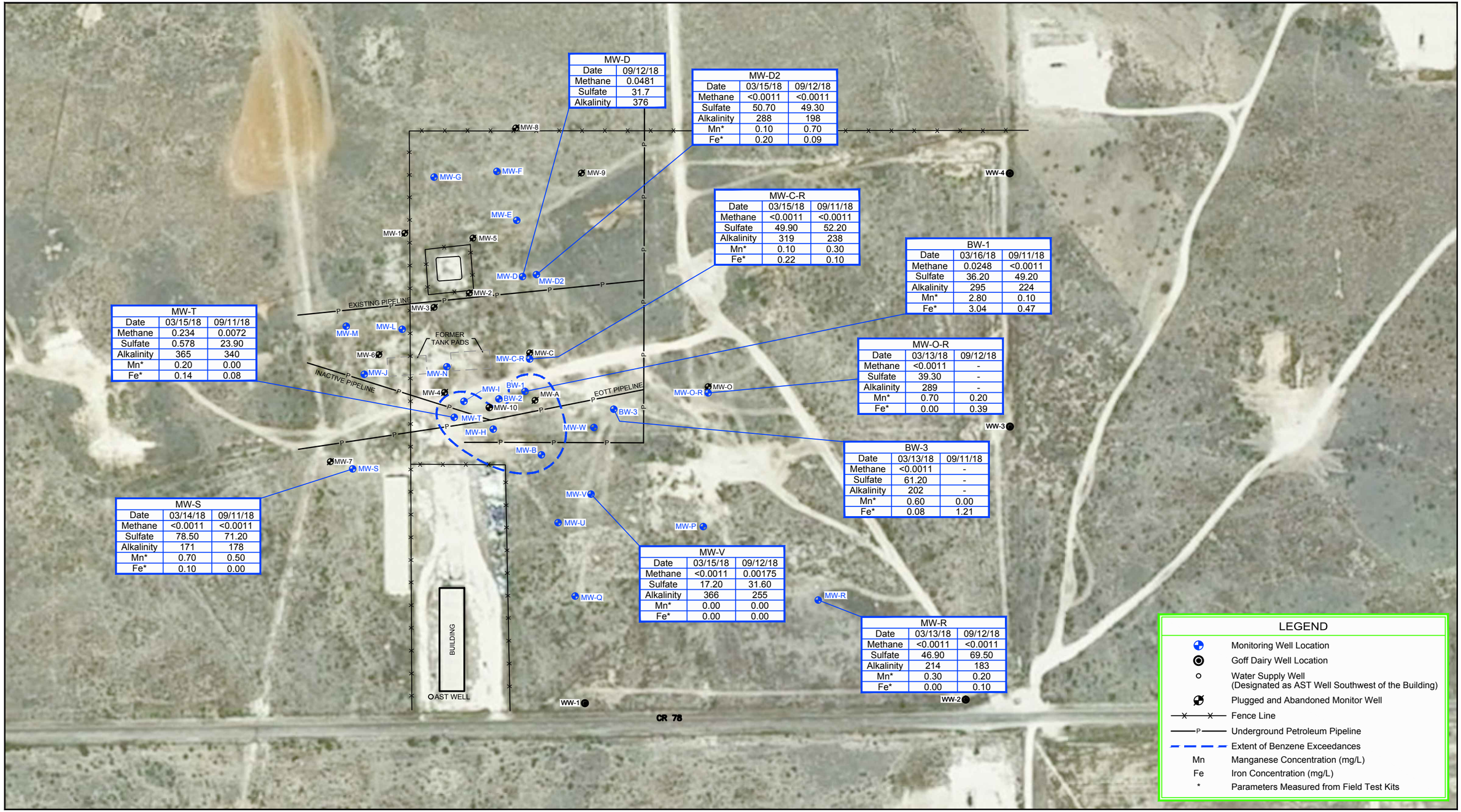
DISSOLVED HYDROCARBONS CONCENTRATION MAP - SEPTEMBER 2018

073020-2018

Nov 26, 2018

FIGURE 6

CAD File: I:\CAD\Files\07----\073---\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg



Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.8586° North, 103.3015° West

0 100 200ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

CEMC
LEA COUNTY, NEW MEXICO
LOVINGTON PADDOCK SITE

GEOCHEMICAL INDICATOR MAP - MARCH AND SEPTEMBER 2018

073020-2018

Jan 4, 2019

FIGURE 7

CAD File: I:\CAD\Files\07----\073----\073020-Chevron-Loington Paddock Site\073020-2018\073020-2018(010)\073020-2018(010)GN-DL001.dwg

Tables

Table 1

2018 Groundwater Level Measurement
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	Casing Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl
BW-1	3816.14	3/12/2018	105.72	3710.42
		9/10/2018	117.34	3698.80
BW-2	3816.57	3/12/2018	105.30	3711.27
		9/10/2018	------- not measured -------	
BW-3	3815.82	3/12/2018	106.43	3709.39
		9/10/2018	119.40	3696.42
MW-A	3816.04	3/12/2018	---------- destroyed ----------	
		9/10/2018	---------- destroyed ----------	
MW-B	3816.09	3/12/2018	105.75	3710.34
		9/10/2018	------- not measured -------	
MW-C	3817.04	3/12/2018	------- not measured -------	
		9/10/2018	------- not measured -------	
MW-C-R	3817.99	3/12/2018	106.55	3711.44
		9/10/2018	118.01	3699.98
MW-D	3816.08	3/12/2018	105.96	3710.12
		9/10/2018	------- not measured -------	
MW-D2	3815.93	3/12/2018	106.52	3709.41
		9/10/2018	117.33	3698.60
MW-E	3816.31	3/12/2018	106.04	3710.27
		9/10/2018	------- not measured -------	
MW-F	3816.69	3/12/2018	105.74	3710.95
		9/10/2018	------- not measured -------	
MW-G	3818.23	3/12/2018	105.11	3713.12
		9/10/2018	------- not measured -------	
MW-H	3816.74	3/12/2018	104.97	3711.77
		9/10/2018	------- not measured -------	
MW-I	3816.94	3/12/2018	104.80	3712.14
		9/10/2018	------- not measured -------	
MW-J	3817.66	3/12/2018	102.68	3714.98
		9/10/2018	------- not measured -------	
MW-L	3818.35	3/12/2018	104.41	3713.94
		9/10/2018	------- not measured -------	
MW-M	3817.88	3/12/2018	102.44	3715.44
		9/10/2018	------- not measured -------	
MW-N	3817.70	3/12/2018	105.02	3712.68
		9/10/2018	------- not measured -------	

Table 1

2018 Groundwater Level Measurement
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	*Casing Elevation ft msl*	*Date*	*Depth to Groundwater ft toc*	*Groundwater Elevation ft msl*
MW-O	3814.74	3/12/2018	------- not measured -------	
		9/10/2018	------- not measured -------	
MW-O-R	3815.90	3/12/2018	108.73	3707.17
		9/10/2018	124.91	3690.99
MW-P	3814.24	3/12/2018	108.43	3705.81
		9/10/2018	------- not measured -------	
MW-Q	3814.23	3/12/2018	107.80	3706.43
		9/10/2018	------- not measured -------	
MW-R	3810.89	3/12/2018	107.80	3703.09
		9/10/2018	125.00	3685.89
MW-S	3816.52	3/12/2018	100.72	3715.80
		9/10/2018	107.40	3709.12
MW-T	3816.71	3/12/2018	104.98	3711.73
		9/10/2018	115.31	3701.40
MW-U	3814.94	3/12/2018	106.88	3708.06
		9/10/2018	------- not measured -------	
MW-V	3815.04	3/12/2018	106.87	3708.17
		9/10/2018	121.30	3693.74
MW-W	3815.09	3/12/2018	107.33	3707.76
		9/10/2018	------- not measured -------	

Notes:
ft msl = feet above mean sea level.
toc = top of casing

Table 2

2018 Groundwater Analytical Results
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	TPH-ORO mg/L
NMWQCC Standards		***0.0100***	***0.75000***	***0.75***	***0.62***	***--***	***--***	***--***
BW-1	3/16/2018	**0.2060**	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/11/2018	**0.0437**	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
BW-2	3/15/2018	**0.00219**	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/11/2018	**0.02140**	**0.00443**	<0.0020	<0.0020	<1.50	<1.50	<1.50
BW-3	3/13/2018	**0.0815**	**0.00708**	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-B	3/13/2018	**2.0500**	<0.100	<0.100	<0.100	**5.50**	**3.02**	<1.50
MW-C-R	3/15/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-D	3/16/2016	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-D2	3/15/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-E	3/13/2018	--	--	--	--	--	--	--
MW-F	3/16/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-G	3/16/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
Dup	3/16/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-H	3/13/2018	--	--	--	--	--	--	--
MW-I	3/14/2018	**0.2960**	**0.00472**	<0.0020	<0.0020	**1.75**	<1.50	<1.50
Dup	3/14/2018	**0.2670**	**0.00399**	<0.0020	<0.0020	**1.51**	<1.50	<1.50
MW-J	3/14/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-L	3/14/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50

Table 2

2018 Groundwater Analytical Results
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	TPH-ORO mg/L
NMWQCC Standards		***0.0100***	***0.75000***	***0.75***	***0.62***	***--***	***--***	***--***
MW-M	3/14/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-N	3/14/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-O-R	3/13/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-P	3/13/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-Q	3/13/2018	--	--	--	--	--	--	--
MW-R	3/13/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
Dup	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-S	3/14/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-T	3/15/2018	**9.4200**	<0.400	<0.400	<0.400	**18.80**	<1.50	<1.50
	9/11/2018	**12.2 D**	**0.0670**	**0.242**	**0.330**	**15.30**	<1.50	**15.30**
MW-U	3/15/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-V	3/15/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50
MW-W	3/13/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50

Notes:
mg/L - milligrams per liter
TPH - total petroleum hydrocarbons
TPH GRO - total petroleum hydrocarbons gasoline range organic (C_6-C_{10})
TPH DRO - total petroleum hydrocarbons diesel range organic (>C_{10}-C_{28})
TPH ORO - total petroleum hydrocarbons oil range organic NMWQCC HHSGR - New Mexico Water Quality Control Commission Human Health for groundwater (NMAC 20.6.2.3103A)
Cells shaded yellow exceed NMWQCC standards
J - estimated value which is less than the quantitation limit.
D - sample was diluted for analysis
NS = not sampled

Table 3

2018 Groundwater Geochemical Parameters
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	Date	Methane	Sulfate	Alkalinity	Mn* mg/L	Fe^{2+}* mg/L
BW-1	3/16/2018	0.0248	36.20	295	2.80	3.04
	9/11/2018	<0.0011	49.20	224	0.10	0.47
BW-2	3/15/2018	--	--	--	--	--
BW-3	3/13/2018	<0.0011	61.20	202	0.60	0.08
	9/11/2018				0.00	1.21
MW-B	3/13/2018	--	--	--		
MW-C-R	3/15/2018	<0.0011	49.90	319	0.10	0.22
	9/11/2018	<0.0011	52.20	238	0.30	0.10
MW-D	3/16/2018	--	--	--	--	--
	9/12/2018	0.0481	31.7	376		
MW-D2	3/15/2018	<0.0011	50.70	288	0.10	0.20
	9/12/2018	<0.0011	49.30	198	0.70	0.09
MW-E	3/13/2018	--	--	--	--	--
MW-F	3/16/2018	--	--	--	--	--
MW-G	3/16/2018	--	--	--	--	--
MW-G (Dup)	3/16/2018	--	--	--	--	--
MW-H	3/13/2018	--	--	--	--	--
MW-I	3/14/2018	--	--	--	--	--
MW-I (Dup)	3/14/2018	--	--	--	--	--
MW-J	3/14/2018	--	--	--	--	--
MW-L	3/14/2018	--	--	--	--	--
MW-M	3/14/2018	--	--	--	--	--
MW-N	3/14/2018	--	--	--	--	--
MW-O-R	3/13/2018	<0.0011	39.30	289	0.70	0.00
	9/12/2018				0.20	0.39
MW-P	3/13/2018	--	--	--	--	--
MW-Q	3/13/2018	--	--	--	--	--
MW-R	3/13/2018	<0.0011	46.90	214	0.30	0.00
	9/12/2018	<0.0011	69.50	183	0.20	0.10
MW-R (Dup)	9/12/2018	<0.0011	69.30	183		
MW-S	3/14/2018	<0.0011	78.50	171	0.70	0.10
	9/11/2018	<0.0011	71.20	178	0.50	0.00
MW-T	3/15/2018	0.234	0.578	365	0.20	0.14
	9/11/2018	0.0072	23.900	340	0.00	0.08
MW-U	3/15/2018	--	--	--	--	--

Table 3

2018 Groundwater Geochemical Parameters
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	*Date*	*Methane*	*Sulfate*	*Alkalinity*	*Mn* mg/L*	*Fe^{2+} * mg/L*
MW-V	3/15/2018	<0.0011	17.20	366	0.00	0.00
	9/12/2018	0.00175	31.60	255	0.00	0.00
MW-W	3/13/2018	--	--	--	--	--

Notes:
* Parameters measured from field test kits.
mg/L - milligrams per liter

Appendices

Appendix A
Summary of Historical Groundwater Gauging Data

Summary of Historical Groundwater Gauging Data
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-1	3817.26	10/1/1998	65.86	3751.40	--	--	--
MW-1	3817.26	1/6/2000	66.56	3750.70	--	--	--
MW-1	3817.26	10/5/2001	68.02	3749.24	--	--	--
MW-1	3817.26	10/17/2001	68.21	3749.05	--	--	--
MW-1	3817.26	2/12/2002	69.57	3747.69	--	--	--
MW-2	3816.07	10/1/1998	64.75	3751.32	--	--	--
MW-2	3816.07	1/6/2000	65.45	3750.62	--	--	--
MW-2	3816.07	10/5/2001	66.97	3749.10	--	--	--
MW-2	3816.07	10/17/2001	67.33	3748.74	--	--	--
MW-2	3816.07	2/12/2002	68.69	3747.38	--	--	--
MW-3	3817.41	10/1/1998	65.83	3751.58	--	--	--
MW-3	3817.41	1/6/2000	66.56	3750.85	--	--	--
MW-3	3817.41	10/5/2001	68.03	3749.38	--	--	--
MW-3	3817.41	10/17/2001	68.37	3749.04	--	--	--
MW-3	3817.41	2/12/2002	69.72	3747.69	--	--	--
MW-4	3816.86	10/2/1998	64.91	3751.93	--	--	--
MW-4	3816.86	1/6/2000	65.65	3751.19	--	0.04	--
MW-4	3816.86	3/31/2000	64.85	3751.99	--	0.03	--
MW-4	3816.86	10/5/2001	67.22	3749.62	67.18	0.04	--
MW-4	3816.86	10/17/2001	67.83	3749.01	67.82	0.01	--
MW-4	3816.86	2/12/2002	--	--	--	trace	--
MW-5	3816.23	1/27/1999	65.24	3750.99	--	--	--
MW-5	3816.23	1/6/2000	65.96	3750.27	--	--	--
MW-5	3816.23	10/5/2001	67.44	3748.79	--	--	--
MW-5	3816.23	10/17/2001	67.69	3748.54	--	--	--
MW-5	3816.23	2/12/2002	69.07	3747.16	--	--	--
MW-6	3817.51	1/27/1999	65.36	3752.15	--	--	--
MW-6	3817.51	1/6/2000	66.07	3751.44	--	--	--
MW-6	3817.51	10/5/2001	67.54	3749.97	--	--	--
MW-6	3817.51	10/17/2001	67.90	3749.61	--	--	--
MW-6	3817.51	2/12/2002	69.21	3748.30	--	--	--
MW-7	3816.25	3/24/1999	63.28	3752.97	--	--	--
MW-7	3816.25	1/6/2000	63.97	3752.28	--	--	--
MW-7	3816.25	10/5/2001	65.46	3750.79	--	--	--
MW-7	3816.25	10/17/2001	65.98	3750.27	--	--	--
MW-7	3816.25	2/12/2002	67.15	3749.10	--	--	--

Summary of Historical Groundwater Gauging Data
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-8	3816.38	3/24/1999	66.09	3750.29	--	--	--
MW-8	3816.38	1/6/2000	66.78	3749.60	--	--	--
MW-8	3816.38	10/5/2001	68.31	3748.07	--	--	--
MW-8	3816.38	10/17/2001	68.45	3747.93	--	--	--
MW-8	3816.38	2/12/2002	69.82	3746.56	--	--	--
MW-9	3815.72	3/24/1999	65.55	3750.14	--	--	--
MW-9	3815.72	1/6/2000	66.24	3749.45	--	--	--
MW-9	3815.72	10/5/2001	67.80	3747.89	--	--	--
MW-9	3815.72	10/17/2001	68.08	3747.61	--	--	--
MW-9	3815.72	2/12/2002	69.45	3746.24	--	--	--
MW-10	3815.74	3/31/2000	66.78	--	66.45	0.33	--
MW-10	3815.74	10/5/2001	74.19	--	64.45	9.74	--
MW-10	3815.74	10/17/2001	75.46	--	65.33	10.13	--
MW-10	3815.74	2/12/2002	--	--	--	--	--
WW-1	--	10/5/2001	62.22	--	--	--	--
WW-1	--	10/17/2001	85.10	--	--	--	--
WW-1	--	2/12/2002	64.35	--	--	--	--
WW-2	--	10/5/2001	62.51	--	--	--	--
WW-2	--	10/7/2001	82.70	--	--	--	--
WW-2	--	2/12/2002	64.90	--	--	--	--
WW-3	--	10/5/2001	65.00	--	--	--	--
WW-3	--	10/17/2001	85.45	--	--	--	--
WW-3	--	2/12/2002	67.20	--	--	--	--
WW-4	--	10/5/2001	67.55	--	--	--	--
WW-4	--	10/17/2001	69.42	--	--	--	--
WW-4	--	2/12/2002	69.30	--	--	--	--
BW-1	3816.14	6/16/2005	86.75	3729.39	--	--	--
BW-1	3816.14	7/27/2005	92.32	3723.82	--	--	--
BW-1	3816.14	9/21/2005	90.41	3725.73	--	--	--
BW-1	3816.14	12/9/2005	88.38	3727.76	--	--	--
BW-1	3816.14	5/9/2007	--	--	--	--	--
BW-1	3816.14	6/13/2008	94.25	3721.89	--	--	--
BW-1	3816.14	9/17/2008	97.51	3718.63	--	--	--
BW-1	3816.14	1/26/2009	91.08	3725.06	--	--	--
BW-1	3816.14	7/9/2009	98.83	3717.31	--	--	--
BW-1	3816.14	1/25/2010	95.08	3721.06	--	--	--
BW-1	3816.14	7/6/2010	100.81	3715.33	--	--	--
BW-1	3816.14	1/25/2011	98.03	3718.11	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
BW-1	3816.14	7/11/2011	107.50	3708.64	--	--	--
BW-1	3816.14	10/15/2012	110.31	3705.83	--	--	--
BW-1	3816.14	1/21/2013	102.92	3713.22	--	--	--
BW-1	3816.14	7/22/2013	109.41	3706.73	--	--	--
BW-1	3816.14	3/4/2014	100.75	3715.39	--	--	--
BW-1	3816.14	10/15/2014	109.21	3706.93	--	--	--
BW-1	3816.14	3/20/2015	99.83	3716.31	--	--	--
BW-1	3816.14	10/12/2015	106.81	3709.33	--	--	--
BW-1	3816.14	3/14/2016	101.45	3714.69	--	--	--
BW-1	3816.14	10/3/2016	110.06	3706.08	--	--	--
BW-1	3816.14	3/13/2017	103.00	3713.14	--	--	--
BW-1	3816.14	9/11/2017	114.04	3702.10	--	--	--
BW-1	3816.14	3/12/2018	105.72	3710.42	--	--	--
BW-1	3816.14	9/10/2018	117.34	3698.80	--	--	--
							--
BW-2	3816.57	6/16/2005	86.38	3730.19	--	--	--
BW-2	3816.57	7/27/2005	90.70	3725.87	--	--	--
BW-2	3816.57	9/21/2005	89.99	3726.58	--	--	--
BW-2	3816.57	12/9/2005	88.21	3728.36	--	--	--
BW-2	3816.57	5/9/2007	--	--	--	--	--
BW-2	3816.57	6/13/2008	95.16	3721.41	--	--	--
BW-2	3816.57	9/17/2008	96.92	3719.65	--	--	--
BW-2	3816.57	1/26/2009	91.13	3725.44	--	--	--
BW-2	3816.57	7/9/2009	98.47	3718.10	--	--	--
BW-2	3816.57	7/6/2010	100.10	3716.47	--	--	--
BW-2	3816.57	1/27/2011	97.76	3718.81	--	--	--
BW-2	3816.57	7/11/2011	107.91	3708.66	--	--	--
BW-2	3816.57	10/15/2012	109.20	3707.37	--	--	--
BW-2	3816.57	1/21/2013	102.53	3714.04	--	--	--
BW-2	3816.57	7/22/2013	108.42	3708.15	--	--	--
BW-2	3816.57	3/4/2014	100.51	3716.06	--	--	--
BW-2	3816.57	10/15/2014	108.39	3708.18	--	--	--
BW-2	3816.57	3/16/2015	99.65	3716.92	--	--	--
BW-2	3816.57	10/12/2015	106.23	3710.34	--	--	--
BW-2	3816.57	3/14/2016	101.13	3715.44	--	--	--
BW-2	3816.57	10/3/2016	109.72	3706.85	--	--	--
BW-2	3816.57	3/13/2017	102.65	3713.92	--	--	--
BW-2	3816.57	9/11/2017	112.91	3703.66	--	--	--
BW-2	3816.57	3/12/2018	105.72	3710.42	--	--	--
BW-2	3816.57	9/10/2018	116.12	3700.45	--	--	--
BW-3	3815.82	6/16/2005	87.39	3728.43	--	--	123.09
BW-3	3815.82	7/27/2005	92.72	3723.10	--	--	--
BW-3	3815.82	9/22/2005	91.07	3724.75	--	--	--
BW-3	3815.82	12/9/2005	88.46	3727.36	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
BW-3	3815.82	5/9/2007	--	--	--	--	--
BW-3	3815.82	9/17/2008	98.57	3717.25	--	--	--
BW-3	3815.82	1/26/2009	92.44	3723.38	--	--	--
BW-3	3815.82	7/9/2009	100.44	3715.38	--	--	--
BW-3	3815.82	7/6/2010	101.96	3713.86	--	--	--
BW-3	3815.82	1/25/2011	---------- not gauged ----------				
BW-3	3815.82	7/11/2011	108.64	3707.18	--	--	--
BW-3	3815.82	10/15/2012	111.87	3703.95	--	--	--
BW-3	3815.82	1/21/2013	103.38	3712.44	--	--	--
BW-3	3815.82	7/22/2013	110.71	3705.11	--	--	--
BW-3	3815.82	3/4/2014	101.10	3714.72	--	--	--
BW-3	3815.82	10/15/2014	110.22	3705.60	--	--	--
BW-3	3815.82	3/16/2015	100.18	3715.64	--	--	--
BW-3	3815.82	10/12/2015	102.88	3712.94	--	--	--
BW-3	3815.82	3/14/2016	102.10	3713.72	--	--	--
BW-3	3815.82	10/3/2016	112.00	3703.82	--	--	--
BW-3	3815.82	3/13/2017	103.60	3712.22	--	--	--
BW-3	3815.82	9/11/2017	115.90	3699.92	--	--	--
BW-3	3815.82	3/12/2018	106.43	3709.39	--	--	--
BW-3	3815.82	9/10/2018	119.40	3696.42			
MW-A	3816.04	6/16/2005	86.75	3729.29	--	--	100.51
MW-A	3816.04	7/25/2005	---------- not gauged ----------				
MW-A	3816.04	9/19/2005	90.41	3725.63	--	--	--
MW-A	3816.04	12/5/2005	88.38	3727.66	--	--	--
MW-A	3816.04	5/9/2007	---------- not gauged ----------				
MW-A	3816.04	7/1/2008	---------- destroyed ----------				
							--
MW-B	3816.09	6/16/2005	87.15	3728.94	--	--	108.11
MW-B	3816.09	7/25/2005	92.55	3723.54	--	--	--
MW-B	3816.09	9/19/2005	90.82	3725.27	--	--	--
MW-B	3816.09	12/5/2005	88.73	3727.36	--	--	--
MW-B	3816.09	5/9/2007	91.78	3724.31	--	--	--
MW-B	3816.09	10/2/2007	92.94	3723.15	--	--	--
MW-B	3816.09	6/13/2008	95.05	3721.04	--	--	--
MW-B	3816.09	9/15/2008	98.39	3717.70	--	--	--
MW-B	3816.09	1/26/2009	91.36	3724.73	--	--	--
MW-B	3816.09	7/9/2009	99.76	3716.33	--	--	--
MW-B	3816.09	1/25/2010	95.21	3720.88	--	--	107.65
MW-B	3816.09	7/6/2010	101.50	3714.59	--	--	--
MW-B	3816.09	1/27/2011	98.36	3717.73	--	--	--
MW-B	3816.09	7/11/2011	---------- not gauged ----------				
MW-B	3816.09	10/15/2012	---------- not gauged ----------				
MW-B	3816.09	1/21/2013	103.00	3713.09	--	--	--
MW-B	3816.09	7/22/2013	---------- not gauged ----------				

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-B	3816.09	3/4/2014	100.78	3715.31	--	--	--
MW-B	3816.09	10/15/2014	---------- not gauged ----------				
MW-B	3816.09	3/16/2015	100.02	3716.07	--	--	--
MW-B	3816.09	10/12/2015	107.35	3708.74	--	--	--
MW-B	3816.09	3/14/2016	101.95	3714.14	--	--	
MW-B	3816.09	10/3/2016	---------- not gauged ----------				
MW-B	3816.09	3/13/2017	103.20	3712.89	--	--	--
MW-B	3816.09	9/11/2017	114.04	3702.05	--	--	--
MW-B	3816.09	3/12/2018	105.75	3710.34	--	--	--
MW-B	3816.09	9/10/2018	---------- not gauged ----------				
MW-C	3817.04	6/15/2005	87.83	3729.21	--	--	108.05
MW-C	3817.04	7/25/2005	92.53	3724.51	--	--	--
MW-C	3817.04	9/19/2005	91.54	3725.50	--	--	--
MW-C	3817.04	12/5/2005	89.50	3727.54	--	--	--
MW-C	3817.04	5/9/2007	92.56	3724.48	--	--	--
MW-C	3817.04	10/2/2007	93.66	3723.38	--	--	--
MW-C	3817.04	6/13/2008	95.21	3721.83	--	--	--
MW-C	3817.04	9/15/2008	98.75	3718.29	--	--	--
MW-C	3817.04	1/26/2009	92.10	3724.94	--	--	--
MW-C	3817.04	7/9/2009	99.78	3717.26	--	--	--
MW-C	3817.04	1/25/2010	96.09	3720.95	--	--	106.35
MW-C	3817.04	7/6/2010	101.78	3715.26	--	--	--
MW-C	3817.04	1/27/2011	98.92	3718.12	--	--	--
MW-C	3817.04	7/11/2011	---------- not gauged ----------				
MW-C	3817.04	10/15/2012	---------- not gauged ----------				
MW-C	3817.04	1/21/2013	103.93	3713.11	--	--	--
MW-C	3817.04	7/22/2013	---------- not gauged ----------				
MW-C	3817.04	3/4/2014	101.92	3715.12	--	--	--
MW-C	3817.04	10/15/2014	---------- not gauged ----------				
MW-C	3817.04	3/16/2015	100.85	3716.19	--	--	--
MW-C	3817.04	10/12/2015	---------- not gauged ----------				
MW-C	3817.04	3/14/2016	102.46	3714.58	--	--	--
MW-C	3817.04	10/3/2016	---------- not gauged ----------				
MW-C	3817.04	3/13/2017	---------- not gauged ----------				
MW-C	3817.04	9/11/2017	---------- not gauged ----------				
MW-C	3817.04	3/12/2018	---------- not gauged ----------				
MW-C	3817.04	9/10/2018	---------- not gauged ----------				
MW-CR	3817.99	10/3/2016	111.13	3706.86	--	--	--
MW-CR	3817.99	3/13/2017	103.80	3714.19	--	--	--
MW-CR	3817.99	9/11/2017	114.65	3703.34	--	--	--
MW-CR	3817.99	3/12/2018	106.55	3711.44	--	--	--
MW-CR	3817.99	9/10/2018	118.01	3699.98	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-D	3816.08	3/2/2005	82.68	3733.40	--	--	107.92
MW-D	3816.08	9/19/2005	90.48	3725.60	--	--	--
MW-D	3816.08	12/5/2005	88.44	3727.64	--	--	--
MW-D	3816.08	5/9/2007	91.49	3724.59	--	--	--
MW-D	3816.08	9/27/2007	92.62	3723.46	--	--	--
MW-D	3816.08	6/13/2008	94.43	3721.65	--	--	--
MW-D	3816.08	9/15/2008	97.49	3718.59	--	--	--
MW-D	3816.08	1/26/2009	91.08	3725.00	--	--	--
MW-D	3816.08	7/9/2009	98.82	3717.26	--	--	--
MW-D	3816.08	1/25/2010	95.40	3720.68	--	--	106.90
MW-D	3816.08	7/6/2010	100.57	3715.51	--	--	--
MW-D	3816.08	1/25/2011	97.68	3718.40	--	--	--
MW-D	3816.08	7/11/2011	---------- not gauged ----------				
MW-D	3816.08	10/15/2012	---------- not gauged ----------				
MW-D	3816.08	1/21/2013	102.71	3713.37	--	--	--
MW-D	3816.08	7/22/2013	---------- not gauged ----------				
MW-D	3816.08	3/4/2014	101.00	3715.08	--	--	--
MW-D	3816.08	10/15/2014	---------- not gauged ----------				
MW-D	3816.08	3/16/2015	99.80	3716.28	--	--	--
MW-D	3816.08	10/12/2015	105.99	3710.09	--	--	--
MW-D	3816.08	3/14/2016	101.63	3714.45	--	--	--
MW-D	3816.08	10/3/2016	---------- not gauged ----------				
MW-D	3816.08	3/13/2017	103.15	3712.93	--	--	--
MW-D	3816.08	9/11/2017	---------- not gauged ----------				
MW-D	3816.08	3/12/2018	105.96	3710.12	--	--	--
MW-D	3816.08	9/10/2018	---------- not gauged ----------				
MW-D2	3815.93	5/9/2007	91.63	N/A[3]	--	--	204.00
MW-D2	3815.93	9/26/2007	92.79	3723.14	--	--	--
MW-D2	3815.93	6/13/2008	94.93	3721.00	--	--	--
MW-D2	3815.93	9/15/2008	97.77	N/A[3]	--	--	--
MW-D2	3815.93	1/26/2009	91.12	3724.81	--	--	--
MW-D2	3815.93	7/9/2009	99.30	3716.63	--	--	--
MW-D2	3815.93	1/25/2010	95.27	3720.66	--	--	--
MW-D2	3815.93	7/6/2010	100.93	3715.00	--	--	--
MW-D2	3815.93	1/26/2011	97.76	3718.17	--	--	--
MW-D2	3815.93	7/11/2011	109.10	3706.83	--	--	--
MW-D2	3815.93	10/15/2012	110.30	3705.63	--	--	--
MW-D2	3815.93	1/21/2013	102.80	3713.13	--	--	--
MW-D2	3815.93	7/22/2013	110.01	3705.92	--	--	--
MW-D2	3815.93	3/4/2014	101.18	3714.75	--	--	--
MW-D2	3815.93	10/15/2014	108.69	3707.24	--	--	--
MW-D2	3815.93	3/16/2015	99.96	3715.97	--	--	--
MW-D2	3815.93	10/12/2015	106.27	3709.66	--	--	--
MW-D2	3815.93	3/14/2016	102.10	3713.83	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-D2	3815.93	10/3/2016	109.72	3706.21	--	--	--
MW-D2	3815.93	3/13/2017	103.51	3712.42	--	--	--
MW-D2	3815.93	9/11/2017	113.95	3701.98	--	--	--
MW-D2	3815.93	3/12/2018	106.52	3709.41	--	--	--
MW-D2	3815.93	9/18/2018	---------- not gauged ----------				
MW-E	3816.31	9/19/2005	90.39	3725.92	--	--	107.99
MW-E	3816.31	12/5/2005	88.40	3727.91	--	--	--
MW-E	3816.31	5/9/2007	91.47	3724.84	--	--	--
MW-E	3816.31	9/27/2007	92.60	3723.71	--	--	--
MW-E	3816.31	7/1/2008	95.54	3720.77	--	--	--
MW-E	3816.31	9/15/2008	97.21	3719.10	--	--	--
MW-E	3816.31	1/26/2009	91.11	3725.20	--	--	--
MW-E	3816.31	7/9/2009	98.81	3717.50	--	--	--
MW-E	3816.31	1/25/2010	95.20	3721.11	--	--	107.01
MW-E	3816.31	7/6/2010	100.37	3715.94	--	--	--
MW-E	3816.31	1/26/2011	97.50	3718.81	--	--	--
MW-E	3816.31	7/11/2011	---------- not gauged ----------				
MW-E	3816.31	10/15/2012	---------- not gauged ----------				
MW-E	3816.31	1/21/2013	102.52	3713.79	--	--	--
MW-E	3816.31	7/22/2013	---------- not gauged ----------				
MW-E	3816.31	3/4/2014	101.16	3715.15	--	--	--
MW-E	3816.31	10/15/2014	---------- not gauged ----------				
MW-E	3816.31	3/16/2015	99.84	3716.47	--	--	--
MW-E	3816.31	10/12/2015	105.48	3710.83	--	--	--
MW-E	3816.31	3/14/2016	101.89	3714.42	--	--	--
MW-E	3816.31	10/3/2016	---------- not gauged ----------				
MW-E	3816.31	3/13/2017	103.30	3713.01	--	--	--
MW-E	3816.31	9/11/2017	---------- not gauged ----------				
MW-E	3816.31	3/12/2018	106.04	3710.27	--	--	--
MW-E	3816.31	9/10/2018	---------- not gauged ----------				
MW-F	3816.69	9/19/2005	89.86	3726.83	--	--	108.09
MW-F	3816.69	12/5/2005	88.09	3728.60	--	--	--
MW-F	3816.69	5/9/2007	91.21	3725.48	--	--	--
MW-F	3816.69	9/27/2007	92.26	3724.43	--	--	--
MW-F	3816.69	7/1/2008	93.93	3722.76	--	--	--
MW-F	3816.69	9/15/2008	96.49	3720.20	--	--	--
MW-F	3816.69	1/26/2009	91.10	3725.59	--	--	--
MW-F	3816.69	7/9/2009	98.00	3718.69	--	--	--
MW-F	3816.69	1/25/2010	94.89	3721.80	--	--	106.70
MW-F	3816.69	7/6/2010	99.50	3717.19	--	--	--
MW-F	3816.69	1/25/2011	97.20	3719.49	--	--	--
MW-F	3816.69	7/11/2011	106.29	3710.40	--	--	--
MW-F	3816.69	10/15/2012	---------- not gauged ----------				

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-F	3816.69	1/21/2013	102.16	3714.53	--	--	--
MW-F	3816.69	7/22/2013	---------- not gauged ----------				
MW-F	3816.69	3/4/2014	101.02	3715.67	--	--	--
MW-F	3816.69	10/15/2014	---------- not gauged ----------				
MW-F	3816.69	3/16/2015	99.81	3716.88	--	--	--
MW-F	3816.69	10/12/2015	104.79	3711.90	--	--	--
MW-F	3816.69	3/14/2016	101.55	3715.14	--	--	--
MW-F	3816.69	10/3/2016	---------- not gauged ----------				
MW-F	3816.69	3/13/2017	103.00	3713.69	--	--	--
MW-F	3816.69	9/11/2017	---------- not gauged ----------				
MW-F	3816.69	3/12/2018	105.74	3710.95	--	--	--
MW-F	3816.69	9/10/2018	---------- not gauged ----------				
MW-G	3818.23	9/19/2005	89.46	3728.77	--	--	108.05
MW-G	3818.23	12/5/2005	88.18	3730.05	--	--	--
MW-G	3818.23	5/9/2007	91.19	3727.04	--	--	--
MW-G	3818.23	10/1/2007	92.08	3726.15	--	--	--
MW-G	3818.23	7/1/2008	95.54	3722.69	--	--	--
MW-G	3818.23	9/15/2008	95.70	3722.53	--	--	--
MW-G	3818.23	1/26/2009	91.48	3726.75	--	--	--
MW-G	3818.23	7/9/2009	96.72	3721.51	--	--	--
MW-G	3818.23	1/25/2010	95.01	3723.22	--	--	106.55
MW-G	3818.23	7/6/2010	98.50	3719.73	--	--	--
MW-G	3818.23	1/25/2011	97.35	3720.88	--	--	--
MW-G	3818.23	7/11/2011	103.60	3714.63	--	--	--
MW-G	3818.23	10/15/2012	---------- not gauged ----------				
MW-G	3818.23	1/21/2013	102.14	3716.09	--	--	--
MW-G	3818.23	7/22/2013	---------- not gauged ----------				
MW-G	3818.23	3/4/2014	101.10	3717.13	--	--	--
MW-G	3818.23	10/15/2014	---------- not gauged ----------				
MW-G	3818.23	3/16/2015	100.21	3718.02	--	--	--
MW-G	3818.23	10/15/2015	104.32	3713.91	--	--	--
MW-G	3818.23	3/14/2016	101.15	3717.08	--	--	--
MW-G	3818.23	10/3/2016	---------- not gauged ----------				
MW-G	3818.23	3/13/2017	102.70	3715.53	--	--	--
MW-G	3818.23	9/11/2017	---------- not gauged ----------				
MW-G	3818.23	3/12/2018	4/14/1900	3713.12	--	--	--
MW-G	3818.23	9/10/2018	---------- not gauged ----------				
MW-H	3816.74	6/15/2005	86.46	3730.28	--	--	108.10
MW-H	3816.74	7/25/2005	91.05	3725.69	--	--	--
MW-H	3816.74	9/19/2005	90.15	3726.59	--	--	--
MW-H	3816.74	12/5/2005	88.30	3728.44	--	--	--
MW-H	3816.74	5/9/2007	91.30	3725.44	--	--	--
MW-H	3816.74	10/2/2007	92.37	3724.37	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-H	3816.74	6/13/2008	93.94	3722.80	--	--	--
MW-H	3816.74	9/15/2008	97.28	3719.46	--	--	--
MW-H	3816.74	1/26/2009	91.14	3725.60	--	--	--
MW-H	3816.74	7/9/2009	98.30	3718.44	--	--	--
MW-H	3816.74	1/25/2010	94.91	3721.83	--	--	105.53
MW-H	3816.74	7/6/2010	101.28	3715.46	--	--	--
MW-H	3816.74	1/27/2011	97.87	3718.87	--	--	--
MW-H	3816.74	7/11/2011	---------- not gauged ----------				
MW-H	3816.74	10/15/2012	---------- not gauged ----------				
MW-H	3816.74	1/21/2013	102.59	3714.15	--	--	--
MW-H	3816.74	7/22/2013	---------- not gauged ----------				
MW-H	3816.74	3/4/2014	100.53	3716.21	--	--	--
MW-H	3816.74	10/15/2014	---------- not gauged ----------				
MW-H	3816.74	3/16/2015	99.77	3716.97	--	--	--
MW-H	3816.74	10/12/2015	---------- not gauged ----------				
MW-H	3816.74	3/14/2016	101.22	3715.52	--	--	--
MW-H	3816.74	10/3/2016	---------- not gauged ----------				
MW-H	3816.74	3/13/2017	102.65	3714.09	--	--	--
MW-H	3816.74	9/11/2017	---------- not gauged ----------				
MW-H	3816.74	3/12/2018	4/13/1900	3711.77	--	--	--
MW-H	3816.74	9/10/2018	---------- not gauged ----------				
MW-I	3816.94	6/15/2005	85.90	3731.04	--	--	108.07
MW-I	3816.94	7/25/2005	89.94	3727.00	--	--	--
MW-I	3816.94	9/19/2005	89.50	3727.44	--	--	--
MW-I	3816.94	12/5/2005	87.88	3729.06	--	--	--
MW-I	3816.94	5/9/2007	90.83	3726.11	--	--	--
MW-I	3816.94	10/1/2007	91.82	3725.12	--	--	--
MW-I	3816.94	6/13/2008	93.03	3723.91	--	--	--
MW-I	3816.94	9/15/2008	96.38	3720.56	--	--	--
MW-I	3816.94	1/26/2009	90.78	3726.16	--	--	--
MW-I	3816.94	7/9/2009	97.19	3719.75	--	--	--
MW-I	3816.94	1/25/2010	94.52	3722.42	--	--	103.79
MW-I	3816.94	7/6/2010	99.29	3717.65	--	--	--
MW-I	3816.94	1/27/2011	97.39	3719.55	--	--	--
MW-I	3816.94	7/11/2011	106.76	3710.18	--	--	--
MW-I	3816.94	10/15/2012	---------- not gauged ----------				
MW-I	3816.94	1/21/2013	102.14	3714.80	--	--	--
MW-I	3816.94	7/22/2013	---------- not gauged ----------				
MW-I	3816.94	3/4/2014	100.26	3716.68	--	--	--
MW-I	3816.94	10/15/2014	---------- not gauged ----------				
MW-I	3816.94	3/16/2015	99.44	3717.50	--	--	--
MW-I	3816.94	10/12/2015	105.52	3711.42	--	--	--
MW-I	3816.94	3/14/2016	100.71	3716.23	--	--	--
MW-I	3816.94	10/3/2016	---------- not gauged ----------				

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-I	3816.94	3/13/2017	102.30	3714.64	--	--	--
MW-I	3816.94	9/11/2017	---------- not gauged ----------				
MW-I	3816.94	3/12/2018	104.80	3712.14	--	--	--
MW-I	3816.94	9/10/2018	---------- not gauged ----------				
MW-J	3817.66	9/19/2005	87.24	3730.42	--	--	108.05
MW-J	3817.66	12/5/2005	86.23	3731.43	--	--	--
MW-J	3817.66	5/9/2007	89.07	3728.59	--	--	--
MW-J	3817.66	10/1/2007	89.86	3727.80	--	--	--
MW-J	3817.66	6/13/2008	90.51	3727.15	--	--	--
MW-J	3817.66	9/15/2008	93.44	3724.22	--	--	--
MW-J	3817.66	1/26/2009	89.58	3728.08	--	--	--
MW-J	3817.66	7/9/2009	93.95	3723.71	--	--	--
MW-J	3817.66	1/25/2010	93.03	3724.63	--	--	105.97
MW-J	3817.66	7/6/2010	96.05	3721.61	--	--	--
MW-J	3817.66	1/25/2011	95.59	3722.07	--	--	--
MW-J	3817.66	7/11/2011	100.22	3717.44	--	--	--
MW-J	3817.66	10/15/2012	103.82	3713.84	--	--	--
MW-J	3817.66	1/21/2013	100.13	3717.53	--	--	--
MW-J	3817.66	7/22/2013	103.40	3714.26	--	--	--
MW-J	3817.66	3/4/2014	98.82	3718.84	--	--	--
MW-J	3817.66	10/15/2014	104.29	3713.37	--	--	--
MW-J	3817.66	3/16/2015	98.21	3719.45	--	--	--
MW-J	3817.66	10/12/2015	102.61	3715.05	--	--	--
MW-J	3817.66	3/14/2016	98.85	3718.81	--	--	--
MW-J	3817.66	10/3/2016	105.01	3712.65	--	--	--
MW-J	3817.66	3/13/2017	100.45	3717.21	--	--	--
MW-J	3817.66	9/11/2017	---------- not gauged ----------				
MW-J	3817.66	3/12/2018	102.68	3714.98	--	--	--
MW-J	3817.66	9/10/2018	---------- not gauged ----------				
MW-L	3818.35	9/19/2005	86.95	3731.40	--	--	108.07
MW-L	3818.35	12/5/2005	87.80	3730.55	--	--	--
MW-L	3818.35	5/9/2007	90.70	3727.65	--	--	--
MW-L	3818.35	10/1/2007	91.54	3726.81	--	--	--
MW-L	3818.35	6/13/2008	92.29	3726.06	--	--	--
MW-L	3818.35	9/15/2008	95.36	3722.99	--	--	--
MW-L	3818.35	1/26/2009	91.03	3727.32	--	--	--
MW-L	3818.35	7/9/2009	95.76	3722.59	--	--	--
MW-L	3818.35	1/25/2010	94.57	3723.78	--	--	107.20
MW-L	3818.35	7/6/2010	98.03	3720.32	--	--	--
MW-L	3818.35	1/27/2011	97.60	3720.75	--	--	--
MW-L	3818.35	7/11/2011	102.58	3715.77	--	--	--
MW-L	3818.35	10/15/2012	106.09	3712.26	--	--	--
MW-L	3818.35	1/21/2013	101.90	3716.45	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-L	3818.35	7/22/2013	105.75	3712.60	--	--	--
MW-L	3818.35	3/4/2014	100.96	3717.39	--	--	--
MW-L	3818.35	10/15/2014	106.35	3712.00	--	--	--
MW-L	3818.35	3/16/2015	99.73	3718.62	--	--	--
MW-L	3818.35	10/12/2015	104.44	3713.91	--	--	--
MW-L	3818.35	3/14/2016	100.46	3717.89	--	--	--
MW-L	3818.35	10/3/2016	107.00	3711.35	--	--	--
MW-L	3818.35	3/13/2017	102.05	3716.30	--	--	--
MW-L	3818.35	9/11/2017	---------- not gauged ----------				
MW-L	3818.35	3/12/2018	104.41	3713.94	--	--	--
MW-L	3818.35	9/10/2018	---------- not gauged ----------				
					--	--	
MW-M	3817.88	9/19/2005	86.95	3730.93	--	--	108.04
MW-M	3817.88	12/5/2005	86.06	3731.82	--	--	--
MW-M	3817.88	5/9/2007	88.89	3728.99	--	--	--
MW-M	3817.88	10/1/2007	89.63	3728.25	--	--	--
MW-M	3817.88	6/13/2008	90.18	3727.70	--	--	--
MW-M	3817.88	9/15/2008	92.97	3724.91	--	--	--
MW-M	3817.88	1/26/2009	89.49	3728.39	--	--	--
MW-M	3817.88	7/9/2009	93.50	3724.38	--	--	--
MW-M	3817.88	1/25/2010	92.89	3724.99	--	--	--
MW-M	3817.88	7/6/2010	95.53	3722.35	--	--	--
MW-M	3817.88	1/25/2011	95.35	3722.53	--	--	--
MW-M	3817.88	7/11/2011	99.53	3718.35	--	--	--
MW-M	3817.88	10/15/2012	103.15	3714.73	--	--	--
MW-M	3817.88	1/21/2013	99.90	3717.98	--	--	--
MW-M	3817.88	7/22/2013	102.89	3714.99	--	--	--
MW-M	3817.88	3/4/2014	98.75	3719.13	--	--	--
MW-M	3817.88	10/15/2014	103.77	3714.11	--	--	--
MW-M	3817.88	3/16/2015	98.17	3719.71	--	--	--
MW-M	3817.88	10/12/2015	102.10	3715.78	--	--	--
MW-M	3817.88	3/14/2016	98.65	3719.23	--	--	--
MW-M	3817.88	10/3/2016	104.35	3713.53	--	--	--
MW-M	3817.88	3/13/2017	100.30	3717.58	--	--	--
MW-M	3817.88	9/11/2017	106.20	3711.68	--	--	--
MW-M	3817.88	3/12/2018	102.44	3715.44	--	--	--
MW-M	3817.88	9/10/2018	---------- not gauged ----------				
MW-N	3817.7	6/16/2005	86.25	3731.45	--	--	108.08
MW-N	3817.7	7/25/2005	89.85	3727.85	--	--	--
MW-N	3817.7	9/19/2005	89.73	3727.97	--	--	--
MW-N	3817.7	12/5/2005	88.19	3729.51	--	--	--
MW-N	3817.7	5/9/2007	91.17	3726.53	--	--	--
MW-N	3817.7	10/2/2007	92.12	3725.58	--	--	--
MW-N	3817.7	6/13/2008	93.14	3724.56	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-N	3817.7	9/15/2008	96.44	3721.26	--	--	--
MW-N	3817.7	1/26/2009	91.24	3726.46	--	--	--
MW-N	3817.7	7/9/2009	97.16	3720.54	--	--	--
MW-N	3817.7	1/25/2010	94.94	3722.76	--	--	108.67
MW-N	3817.7	7/6/2010	99.07	3718.63	--	--	--
MW-N	3817.7	1/26/2011	97.22	3720.48	--	--	--
MW-N	3817.7	7/11/2011	104.40	3713.30	--	--	--
MW-N	3817.7	10/15/2012	107.82	3709.88	--	--	--
MW-N	3817.7	1/21/2013	102.50	3715.20	--	--	--
MW-N	3817.7	7/22/2013	107.27	3710.43	--	--	--
MW-N	3817.7	3/4/2014	100.80	3716.90	--	--	--
MW-N	3817.7	10/15/2014	107.64	3710.06	--	--	--
MW-N	3817.7	3/16/2015	99.91	3717.79	--	--	--
MW-N	3817.7	10/12/2015	105.57	3712.13	--	--	--
MW-N	3817.7	3/14/2016	101.02	3716.68	--	--	--
MW-N	3817.7	10/3/2016	---------- not gauged ----------				
MW-N	3817.7	3/13/2017	102.60	3715.10	--	--	--
MW-N	3817.70	9/11/2017	---------- not gauged ----------				
MW-N	3817.70	3/12/2018	105.02	3712.68	--	--	--
MW-N	3817.70	3/12/2018	105.02	3712.68	--	--	--
MW-N	3817.70	9/10/2018	---------- not gauged ----------				
MW-O	3814.74	7/25/2005	96.58	3718.16	--	--	113.05
MW-O	3814.74	9/19/2005	93.71	3721.03	--	--	--
MW-O	3814.74	12/5/2005	90.80	3723.94	--	--	--
MW-O	3814.74	5/9/2007	93.97	3720.77	--	--	--
MW-O	3814.74	10/2/2007	95.44	3719.30	--	--	--
MW-O	3814.74	6/13/2008	92.82	3721.92	--	--	--
MW-O	3814.74	9/15/2008	102.30	3712.44	--	--	--
MW-O	3814.74	1/26/2009	92.41	3722.33	--	--	--
MW-O	3814.74	7/9/2009	103.69	3711.05	--	--	--
MW-O	3814.74	1/25/2010	97.04	3717.70	--	--	112.47
MW-O	3814.74	7/6/2010	104.52	3710.22	--	--	--
MW-O	3814.74	1/27/2011	100.46	3714.28	--	--	--
MW-O	3814.74	7/11/2011	---------- not gauged ----------				
MW-O	3814.74	10/15/2012	---------- not gauged ----------				
MW-O	3814.74	1/21/2013	105.35	3709.39	--	--	--
MW-O	3814.74	7/22/2013	---------- not gauged ----------				
MW-O	3814.74	3/4/2014	102.89	3711.85	--	--	--
MW-O	3814.74	10/15/2014	---------- not gauged ----------				
MW-O	3814.74	3/16/2015	101.66	3713.08	--	--	--
MW-O	3814.74	10/12/2015	111.03	3703.71	--	--	--
MW-O	3814.74	3/14/2016	104.10	3710.64	--	--	--
MW-O	3814.74	10/3/2016	---------- not gauged ----------				
MW-O	3814.74	3/13/2017	---------- not gauged ----------				

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-O	3814.74	9/11/2017	---------- not gauged ----------				
MW-O	3814.74	3/12/2018	---------- not gauged ----------				
MW-O	3814.74	9/10/2018	---------- not gauged ----------				
MW-O-R	3815.90	10/3/2016	115.51	3700.39	--	--	--
MW-O-R	3815.90	3/13/2017	105.40	3710.50	--	--	--
MW-O-R	3815.90	9/11/2017	121.25	3694.65	--	--	--
MW-O-R	3815.90	3/12/2018	108.73	3707.17	--	--	--
MW-O-R	3815.90	9/10/2018	124.91	3690.99	--	--	--
MW-P	3814.24	6/15/2005	88.88	3725.36	--	--	113.05
MW-P	3814.24	7/25/2005	96.83	3717.41	--	--	--
MW-P	3814.24	9/19/2005	92.73	3721.51	--	--	--
MW-P	3814.24	12/5/2005	89.84	3724.40	--	--	--
MW-P	3814.24	5/9/2007	93.07	3721.17	--	--	--
MW-P	3814.24	9/27/2007	94.58	3719.66	--	--	--
MW-P	3814.24	6/13/2008	98.30	3715.94	--	--	--
MW-P	3814.24	9/15/2008	101.73	3712.51	--	--	--
MW-P	3814.24	1/26/2009	91.62	3722.62	--	--	--
MW-P	3814.24	7/9/2009	103.99	3710.25	--	--	--
MW-P	3814.24	1/25/2010	96.05	3718.19	--	--	112.90
MW-P	3814.24	7/6/2010	104.93	3709.31	--	--	--
MW-P	3814.24	1/27/2011	99.60	3714.64	--	--	--
MW-P	3814.24	7/11/2011	111.72	3702.52	--	--	--
MW-P	3814.24	10/15/2012	---------- not gauged ----------				
MW-P	3814.24	1/21/2013	103.90	3710.34	--	--	--
MW-P	3814.24	7/22/2013	112.72	3701.52	--	--	--
MW-P	3814.24	3/4/2014	101.45	3712.79	--	--	--
MW-P	3814.24	10/15/2014	112.19	3702.05	--	--	--
MW-P	3814.24	3/16/2015	100.93	3713.31	--	--	--
MW-P	3814.24	10/12/2015	109.91	3704.33	--	--	--
MW-P	3814.24	3/14/2016	103.66	3710.58	--	--	--
MW-P	3814.24	10/3/2016	112.75	3701.49	--	--	--
MW-P	3814.24	3/13/2017	104.91	3709.33	--	--	--
MW-P	3814.24	9/11/2017	---------- not gauged ----------				
MW-P	3814.24	3/12/2018	108.43	3705.81	--	--	--
MW-P	3814.24	9/10/2018	---------- not gauged ----------				
MW-Q	3814.23	7/25/2005	96.81	3717.42	--	--	108.07
MW-Q	3814.23	9/19/2005	90.00	3724.23	--	--	--
MW-Q	3814.23	12/5/2005	87.53	3726.70	--	--	--
MW-Q	3814.23	5/9/2007	90.43	3723.80	--	--	--
MW-Q	3814.23	9/27/2007	92.23	3722.00	--	--	--
MW-Q	3814.23	6/13/2008	98.61	3715.62	--	--	--
MW-Q	3814.23	9/15/2008	98.08	3716.15	--	--	--

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Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-Q	3814.23	1/26/2009	90.52	3723.71	--	--	--
MW-Q	3814.23	7/9/2009	103.51	3710.72	--	--	--
MW-Q	3814.23	1/25/2010	94.13	3720.10	--	--	108.41
MW-Q	3814.23	7/6/2010	101.92	3712.31	--	--	--
MW-Q	3814.23	1/27/2011	97.60	3716.63	--	--	--
MW-Q	3814.23	7/11/2011	---------- not gauged ----------				
MW-Q	3814.23	10/15/2012	---------- not gauged ----------				
MW-Q	3814.23	1/21/2013	100.64	3713.59	--	--	--
MW-Q	3814.23	7/22/2013	107.82	3706.41	--	--	--
MW-Q	3814.23	3/4/2014	99.02	3715.21	--	--	--
MW-Q	3814.23	10/15/2014	107.90	3706.33	--	--	--
MW-Q	3814.23	3/16/2015	99.72	3714.51	--	--	--
MW-Q	3814.23	10/12/2015	105.95	3708.28	--	--	--
MW-Q	3814.23	3/14/2016	104.60	3709.63	--	--	--
MW-Q	3814.23	10/3/2016	---------- not gauged ----------				
MW-Q	3814.23	3/13/2017	105.70	3708.53	--	--	--
MW-Q	3814.23	9/11/2017	107.94	3706.29	--	--	--
MW-Q	3814.23	3/12/2018	107.80	3706.43	--	--	--
MW-Q	3814.23	9/10/2018	---------- not gauged ----------				
MW-R	3810.89	9/19/2005	91.19	3719.70	--	--	152.93
MW-R	3810.89	12/5/2005	87.71	3723.18	--	--	--
MW-R	3810.89	5/9/2007	90.83	3720.06	--	--	--
MW-R	3810.89	9/27/2007	92.83	3718.06	--	--	--
MW-R	3810.89	6/13/2008	98.18	3712.71	--	--	--
MW-R	3810.89	9/15/2008	100.76	3710.13	--	--	--
MW-R	3810.89	1/26/2009	88.57	3722.32	--	--	--
MW-R	3810.89	7/9/2009	105.25	3705.64	--	--	--
MW-R	3810.89	1/25/2010	93.88	3717.01	--	--	152.29
MW-R	3810.89	7/6/2010	103.95	3706.94	--	--	--
MW-R	3810.89	1/26/2011	97.58	3713.31	--	--	--
MW-R	3810.89	7/11/2011	108.64	3702.25	--	--	--
MW-R	3810.89	10/15/2012	114.39	3696.50	--	--	--
MW-R	3810.89	1/21/2013	101.10	3709.79	--	--	--
MW-R	3810.89	7/22/2013	111.79	3699.10	--	--	--
MW-R	3810.89	3/4/2014	99.49	3711.40	--	--	--
MW-R	3810.89	10/15/2014	109.57	3701.32	--	--	--
MW-R	3810.89	3/16/2015	98.83	3712.06	--	--	--
MW-R	3810.89	10/12/2015	107.52	3703.37	--	--	--
MW-R	3810.89	3/14/2016	102.61	3708.28	--	--	--
MW-R	3810.89	10/3/2016	113.15	3697.74	--	--	--
MW-R	3810.89	3/13/2017	103.60	3707.29	--	--	--
MW-R	3810.89	9/11/2017	121.50	3689.39	--	--	--
MW-R	3810.89	3/12/2018	107.80	3703.09	--	--	--
MW-R	3810.89	9/10/2018	125.00	3685.89			

Summary of Historical Groundwater Gauging Data
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-S	3816.52	5/9/2007	87.07	3729.45	--	--	122.73
MW-S	3816.52	10/1/2007	87.85	3728.67	--	--	--
MW-S	3816.52	6/13/2008	88.58	3727.94	--	--	--
MW-S	3816.52	9/15/2008	91.27	3725.25	--	--	--
MW-S	3816.52	1/26/2009	87.74	3728.78	--	--	--
MW-S	3816.52	7/9/2009	91.86	3724.66	--	--	--
MW-S	3816.52	1/25/2010	91.11	3725.41	--	--	122.77
MW-S	3816.52	7/6/2010	93.92	3722.60	--	--	--
MW-S	3816.52	1/25/2011	93.60	3722.92	--	--	--
MW-S	3816.52	7/11/2011	98.00	3718.52	--	--	--
MW-S	3816.52	10/15/2012	101.41	3715.11	--	--	--
MW-S	3816.52	1/21/2013	97.91	3718.61	--	--	--
MW-S	3816.52	7/22/2013	100.96	3715.56	--	--	--
MW-S	3816.52	3/4/2014	96.75	3719.77	--	--	--
MW-S	3816.52	10/15/2014	102.00	3714.52	--	--	--
MW-S	3816.52	3/16/2015	96.29	3720.23	--	--	--
MW-S	3816.52	10/12/2015	100.54	3715.98	--	--	--
MW-S	3816.52	3/14/2016	97.03	3719.49	--	--	--
MW-S	3816.52	10/3/2016	102.92	3713.60	--	--	--
MW-S	3816.52	3/13/2017	98.60	3717.92	--	--	--
MW-S	3816.52	9/11/2017	104.90	3711.62	--	--	--
MW-S	3816.52	3/12/2018	100.72	3715.80	--	--	--
MW-S	3816.52	9/10/2018	107.40	3709.12	--	--	--
MW-T	3816.71	5/9/2007	N/A[2]	N/A[2]	--	--	--
MW-T	3816.71	7/7/2008	94.43	3722.28	--	--	--
MW-T	3816.71	9/15/2008	96.81	3719.90	--	--	--
MW-T	3816.71	1/26/2009	92.39	3724.32	--	--	122.17
MW-T	3816.71	7/9/2009	97.92	3718.79	--	--	--
MW-T	3816.71	7/6/2010	99.58	3717.13	--	--	--
MW-T	3816.71	1/27/2011	97.69	3719.02	--	--	--
MW-T	3816.71	7/11/2011	105.15	3711.56	--	--	--
MW-T	3816.71	10/15/2012	105.43	3711.28	--	--	--
MW-T	3816.71	1/21/2013	102.20	3714.51	--	--	--
MW-T	3816.71	7/22/2013	107.70	3709.01	--	--	--
MW-T	3816.71	3/4/2014	100.24	3716.47	--	--	--
MW-T	3816.71	10/15/2014	107.84	3708.87	--	--	--
MW-T	3816.71	3/16/2015	99.45	3717.26	--	--	--
MW-T	3816.71	10/12/2015	105.79	3710.92	--	--	--
MW-T	3816.71	3/14/2016	100.86	3715.85	--	--	--
MW-T	3816.71	10/3/2016	109.18	3707.53	--	--	--
MW-T	3816.71	3/13/2017	102.40	3714.31	--	--	--
MW-T	3816.71	9/11/2017	112.12	3704.59	--	--	--
MW-T	3816.71	3/12/2018	104.98	3711.73	--	--	--

Summary of Historical Groundwater Gauging Data
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-T	3816.71	9/10/2018	115.31	3701.40	--	--	--
MW-U	3814.94	5/9/2007	91.76	3723.18	--	--	123.10
MW-U	3814.94	9/27/2007	93.09	3721.85	--	--	--
MW-U	3814.94	6/13/2008	96.34	3718.60	--	--	--
MW-U	3814.94	9/15/2008	99.07	3715.87	--	--	--
MW-U	3814.94	1/26/2009	91.19	3723.75	--	--	--
MW-U	3814.94	7/9/2009	101.27	3713.67	--	--	--
MW-U	3814.94	1/25/2010	95.12	3719.82	--	--	123.09
MW-U	3814.94	7/6/2010	102.33	3712.61	--	--	--
MW-U	3814.94	1/25/2011	98.38	3716.56	--	--	--
MW-U	3814.94	7/11/2011	109.63	3705.31	--	--	--
MW-U	3814.94	10/15/2012	112.01	3702.93	--	--	--
MW-U	3814.94	1/21/2013	102.60	3712.34	--	--	--
MW-U	3814.94	7/22/2013	110.61	3704.33	--	--	--
MW-U	3814.94	3/4/2014	100.45	3714.49	--	--	--
MW-U	3814.94	10/15/2014	109.89	3705.05	--	--	--
MW-U	3814.94	3/16/2015	100.04	3714.90	--	--	--
MW-U	3814.94	10/12/2015	107.66	3707.28	--	--	--
MW-U	3814.94	3/14/2016	102.65	3712.29	--	--	--
MW-U	3814.94	10/3/2016	112.40	3702.54	--	--	--
MW-U	3814.94	3/13/2017	103.81	3711.13	--	--	--
MW-U	3814.94	9/11/2017	---------- not gauged ----------				
MW-U	3814.94	3/12/2018	106.88	3708.06	--	--	--
MW-U	3814.94	9/10/2018	---------- not gauged ----------				
MW-V	3815.04	5/9/2007	92.17	3722.87	--	--	122.79
MW-V	3815.04	9/27/2007	93.48	3721.56	--	--	--
MW-V	3815.04	6/13/2008	96.14	3718.90	--	--	--
MW-V	3815.04	9/15/2008	99.61	3715.43	--	--	--
MW-V	3815.04	1/26/2009	91.31	3723.73	--	--	--
MW-V	3815.04	7/9/2009	101.25	3713.79	--	--	--
MW-V	3815.04	1/25/2010	95.45	3719.59	--	--	122.84
MW-V	3815.04	7/6/2010	102.80	3712.24	--	--	--
MW-V	3815.04	1/25/2011	98.75	3716.29	--	--	--
MW-V	3815.04	7/11/2011	109.80	3705.24	--	--	--
MW-V	3815.04	10/15/2012	113.00	3702.04	--	--	--
MW-V	3815.04	1/21/2013	103.40	3711.64	--	--	--
MW-V	3815.04	7/22/2013	111.58	3703.46	--	--	--
MW-V	3815.04	3/4/2014	100.92	3714.12	--	--	--
MW-V	3815.04	10/15/2014	110.80	3704.24	--	--	--
MW-V	3815.04	3/16/2015	100.20	3714.84	--	--	--
MW-V	3815.04	10/12/2015	108.37	3706.67	--	--	--
MW-V	3815.04	3/14/2016	102.49	3712.55	--	--	--
MW-V	3815.04	10/3/2016	113.02	3702.02	--	--	--

Summary of Historical Groundwater Gauging Data
Lovington Paddock Groundwater Remediation Site
Lea County, New Mexico

Well ID	TOC Elevation ft msl	Date	Depth to Groundwater ft toc	Groundwater Elevation ft msl	Depth to LNAPL ft toc	Thickness of LNAPL ft	Total Depth ft toc
MW-V	3815.04	3/13/2017	103.80	3711.24	--	--	--
MW-V	3815.04	9/11/2017	117.97	3697.07	--	--	--
MW-V	3815.04	3/12/2018	106.87	3708.17	--	--	--
MW-V	3815.04	9/10/2018	121.30	3693.74	--	--	--
MW-W	3815.09	5/9/2007	92.76	3722.33	--	--	122.05
MW-W	3815.09	9/27/2007	94.06	3721.03	--	--	--
MW-W	3815.09	6/13/2008	96.37	3718.72	--	--	--
MW-W	3815.09	9/15/2008	100.23	3714.86	--	--	--
MW-W	3815.09	1/26/2009	91.72	3723.37	--	--	--
MW-W	3815.09	7/9/2009	101.58	3713.51	--	--	--
MW-W	3815.09	1/25/2010	95.98	3719.11	--	--	133.15
MW-W	3815.09	7/6/2010	103.41	3711.68	--	--	--
MW-W	3815.09	1/26/2011	99.24	3715.85	--	--	--
MW-W	3815.09	7/11/2011	110.25	3704.84	--	--	--
MW-W	3815.09	10/15/2012	114.13	3700.96	--	--	--
MW-W	3815.09	1/21/2013	104.11	3710.98	--	--	--
MW-W	3815.09	7/22/2013	112.89	3702.20	--	--	--
MW-W	3815.09	3/4/2014	101.65	3713.44	--	--	--
MW-W	3815.09	10/15/2014	111.77	3703.32	--	--	--
MW-W	3815.09	3/16/2015	100.59	3714.50	--	--	--
MW-W	3815.09	10/12/2015	109.08	3706.01	--	--	--
MW-W	3815.09	3/14/2016	102.75	3712.34	--	--	--
MW-W	3815.09	10/3/2016	113.76	3701.33	--	--	--
MW-W	3815.09	3/13/2017	104.40	3710.69	--	--	--
MW-W	3815.09	9/11/2017	118.61	3696.48	--	--	--
MW-W	3815.09	3/12/2018	107.33	3707.76	--	--	--
MW-W	3815.09	9/10/2018	---------- not gauged ----------				

Notes:
msl = mean sea level.
toc = top of casing
Total depths of wells reported through 07/08/09 were calculated rather than measured.

Appendix B
Summary of Historical Groundwater Analytical Results

Summary of Historical groundwater Analytical Results
Lovington Paddock Groundwater Remediation Site
Section 1-T17S-R36E. Lea County, New Mexico

Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-1	11/5/1998	<0.001	<0.001	<0.001	<0.001					
MW-1	1/28/1999	<0.001	<0.001	<0.001	<0.001	<0.100	<5			
MW-1	1/6/2000	<0.005	<0.005	<0.005	<0.005					
MW-1	2/12/2002	<0.001	<0.001	<0.001	<0.001					
MW-2	11/5/1998	<0.001	<0.001	<0.001	<0.001					
MW-2	1/28/1999	<0.001	<0.001	<0.001	<0.001	<0.100	<5			
MW-2	1/6/2000	<0.005	<0.005	<0.005	<0.005					
MW-2	2/12/2002	0.032	<0.001	<0.001	<0.001					
MW-3	11/5/1998	0.147	<0.001	<0.001	<0.001					
MW-3	1/28/1999	0.102	<0.001	<0.001	<0.001	<0.100	<5			
MW-3	1/6/2000	0.593	<0.005	<0.005	<0.005					
MW-3	2/12/2002	0.557	<0.010	<0.010	<0.010					
MW-4	11/5/1998	0.882	0.808	0.085	0.214					
MW-4	1/28/1999	1.85	1.89	0.123	0.682	8.07	<5			
MW-4	1/6/2000	0.569	0.331	0.055	0.109					
MW-4	2/12/2002	0.422	0.379	0.044	0.126					
MW-5	1/28/1999	2.73	0.001	0.002	0.12	5.18	<5			
MW-5	1/6/2000	3.1	<0.005	<0.005	0.057					
MW-5	2/12/2002	3.06	<0.020	<0.020	<0.020					
MW-6	1/28/1999	2.58	0.003	0.39	0.108	5.38	<5			
MW-6	1/6/2000	2.07	<0.005	0.439	0.087					
MW-6	2/12/2002	7.03	<0.100	0.7	0.152					
MW-7	3/25/1999	<0.001	<0.001	<0.001	<0.001	<0.100	<5			
MW-7	1/6/2000	<0.005	<0.005	<0.005	<0.005					
MW-7	2/12/2002	<0.005	<0.005	<0.005	<0.005					
MW-8	3/25/1999	<0.001	<0.001	<0.001	<0.001	<0.100	<5			
MW-8	1/6/2000	<0.005	<0.005	<0.005	<0.005					
MW-8	2/12/2002	<0.001	<0.001	<0.001	<0.001					
MW-9	3/25/1999	0.104	<0.001	<0.001	0.002	0.155	<5			
MW-9	4/14/1999	<0.001	<0.001	<0.001	<0.001	<0.100	<5			
MW-9	1/6/2000	<0.005	<0.005	<0.005	<0.005					
MW-9	2/12/2002	0.0474	<0.001	<0.001	<0.001					
WW-1	10/17/2001	<0.001	<0.001	<0.001	<0.001				655	1,790
WW-1	2/12/2002	<0.001	<0.001	<0.001	<0.001				77.5	
WW-2	10/17/2001	<0.001	<0.001	<0.001	<0.001				45.5	389
WW-2	2/12/2002	<0.000	<0.000	<0.000	<0.000					
WW-3	10/17/2001	<0.001	<0.001	<0.001	<0.001				102	478
WW-3	2/12/2002	<0.001	<0.001	<0.001	<0.001				125	

Summary of Historical groundwater Analytical Results
Lovington Paddock Groundwater Remediation Site
Section 1-T17S-R36E. Lea County, New Mexico

Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
WW-4	10/17/2001	<0.001	<0.001	<0.001	<0.001				58	446
WW-4	2/12/2002	<0.001	<0.001	<0.001	<0.001				56.5	
AST WW	10/17/2001	<0.001	<0.001	<0.001	<0.001				43.6	396
AST WW	2/12/2002	<0.001	<0.001	<0.001	<0.001				39.4	
BW-1	6/16/2005	<0.005	<0.005	<0.005	<0.005					
BW-1	7/27/2005	<0.001	<0.001	<0.001	<0.001					
BW-1	9/21/2005	<0.001	<0.001	<0.001	<0.001					
BW-1	12/9/2005	0.184	0.24	0.0458	0.172					
BW-1	7/2/2008	0.0052	0.0018	0.0007	0.0018	0.027	0.077			
BW-1	9/18/2008	0.0022	0.0014	0.0007 J	0.0015 J	<0.02	0.076 J			
BW-1	2/11/2009	0.0004	0.0002 J	0.0002 J	<0.0006	<0.02	0.031			
BW-1	7/14/2009	<0.0002	<0.0002	0.0003 J	<0.0006	0.035 J	0.13			
BW-1	1/26/2010	<0.0002	0.0002 J	<0.0002	<0.0006	<0.02	0.073 J			
BW-1	7/7/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.070 J			
BW-1	1/25/2011	<0.001	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
BW-1	7/13/2011	<0.001	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
BW-1	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50			
BW-1	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50			
BW-1	7/23/2013	<0.00182	<0.00200	<0.00123	<0.00100	<1.44	<1.44			
BW-1	3/4/2014	0.239	<0.00200	<0.00100	0.00644	<1.34	<1.34			
BW-1	10/16/2014	0.00113	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
BW-1	3/20/2015	0.381	0.00251	<0.00100	0.00805	<1.50	<1.50	<1.50		
BW-1	10/15/2015	0.0625	<0.00200	<0.00100	0.00581	<1.41	<1.41	<1.41		
BW-1	3/17/2016	0.35	0.00253	0.00315	0.0123	<2.34	<2.34	<2.34		
BW-1	10/5/2016	0.13	0.00347	<0.00200	0.0138	<1.50	<1.50	<1.50		
BW-1	3/14/2017	1.25	<0.0500	<0.0500	<0.0500	<1.50	<1.50	<1.50		
BW-1	9/13/2017	0.0364	<0.00200	<0.00200	<0.00400	<1.50	<1.50	<1.50		
BW-1	3/16/2018	0.2060	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
BW-1	9/11/2018	<0.0437		<0.0020	<0.0020	<1.50	<1.50	<1.50		
BW-2	6/16/2005	0.0039	0.0026	<0.001	0.001					
BW-2	7/27/2005	<0.001	<0.001	<0.001	<0.001					
BW-2	9/21/2005	<0.001	<0.001	<0.001	<0.001					
BW-2	12/9/2005	0.076	0.117	0.0272	0.0981					
BW-2	7/2/2008	0.0099	0.0025	0.0009	0.0022	0.043	0.11			
BW-2	9/18/2008	0.0016	0.0011	0.0003 J	0.0009 J	<0.02	<0.033			
BW-2	2/11/2009	0.0002 J	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
BW-2	7/16/2009	0.018	0.0002 J	0.0019	0.0009 J	0.087	0.64			
BW-2	7/13/2010	0.13	0.038	0.0061	0.013	0.37	0.13			
BW-2	1/27/2011	0.005	0.0028	<0.0010	<0.0030	<0.0500	0.025 J			
BW-2	7/14/2011	0.00139	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
BW-2	10/17/2012	0.00695	0.00613	<0.00100	<0.00100	<1.50	<1.50			
BW-2	1/23/2013	0.0503	0.0128	<0.00100	<0.00100	<1.50	<1.50			
BW-2	7/24/2013	0.00289	<0.00200	<0.00100	<0.00100	<1.41	<1.41			
BW-2	3/5/2014	0.03470	0.00420	<0.00100	<0.00100	<1.34	<1.34			

Summary of Historical groundwater Analytical Results
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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
BW-2	10/17/2014	0.00786	0.00451	<0.00100	<0.00100	<1.48	<1.48	<1.48		
BW-2	3/26/2015	0.00276	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
BW-2	10/14/2015	0.0101	0.00510	<0.00100	<0.00100	<1.40	<1.40	<1.40		
BW-2	3/17/2016	0.0860	0.0266	<0.00200	0.00364	<2.35	<2.35	<2.35		
BW-2	10/5/2016	0.0512	0.0188	<0.00200	<0.00200	<1.50	<1.50	<1.50		
BW-2	3/14/2017	0.00938	0.00241	<0.00200	<0.00200	<1.50	<1.50	<1.50		
BW-2	9/12/2017	0.0414	0.00365	<0.00200	0.00200	<1.50	<1.50	<1.50		
BW-2	3/15/2018	0.0022	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
BW-2	9/11/2018	0.0214	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
BW-3	6/16/2005	4.25	0.11	<0.1	<0.1					
BW-3	7/27/2005	<0.001	<0.001	<0.001	<0.001					
BW-3	9/22/2005	<0.001	<0.001	<0.001	<0.001					
BW-3	12/9/2005	0.0508	0.0769	0.0182	0.0724					
BW-3	7/2/2008	0.0073	0.0024	0.001	0.0023	0.035	0.095			
BW-3	9/18/2008	0.0029	0.0017	0.0004 J	0.0012 J	<0.02	<0.033			
BW-3	2/11/2009	0.0003 J	0.0002 J	<0.0002	<0.0006	<0.02	<0.031			
BW-3	7/16/2009	0.012	<0.0002	0.0016	0.0007 J	0.063	0.13			
BW-3	1/27/2011	dry								
BW-3	7/14/2011	0.0151	0.00774	0.00156	<0.0010	<1.5	<1.5			
BW-3	10/17/2012	0.0215	0.00969	<0.00100	<0.00100	<1.50	<1.50			
BW-3	1/23/2013	0.00283	0.00313	<0.00100	<0.00100	<1.50	<1.50			
BW-3	7/24/2013	0.209	0.0797	<0.00640	0.0177	<1.44	<1.44			
BW-3	3/5/2014	1.500	0.4420	0.0489	0.1610	3.710	<1.34			
BW-3	10/17/2014	0.026	0.0094	<0.00100	0.0021	<1.48	<1.48			
BW-3	3/20/2015	0.073	0.0246	<0.00100	0.00597	<1.50	<1.50	<1.50		
BW-3	10/15/2015	0.206	0.0752	0.00381	0.0177	<1.41	<1.41	<1.41		
BW-3	3/17/2016	0.028	0.00591	<0.00200	<0.00200	<2.34	<2.34	<2.34		
BW-3	10/5/2016	0.105	0.0335	<0.00200	0.0122	<1.50	<1.50	<1.50		
BW-3	3/14/2017	0.0282	0.00889	<0.00200	<0.00200	<1.50	<1.50	<1.50		
BW-3	9/13/2017	0.387	0.0113	<0.00200	0.0193	<1.50	<1.50	<1.50		
BW-3	3/13/2018	0.08150	0.00708	<0.0020	<0.0020	<1.50	<1.50	<1.50		
BW-3	9/12/2018	dry								
MW-A	6/16/2005	0.0348	0.0034	<0.001	<0.001					
MW-A	7/26/2005	dry								
MW-A	9/20/2005	dry								
MW-A	12/8/2005	0.0206	0.0887	0.0159	0.0858					
MW-A	7/1/2008	dry								
MW-B	6/16/2005	0.713	0.0266	<0.02	<0.02					
MW-B	7/26/2005	0.546	0.917	0.0902	0.485					

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-B	9/20/2005	0.312	0.454	0.0344	0.236					
MW-B	12/8/2005	0.103	0.172	<0.02	0.115					
MW-B	5/17/2007	0.086	0.0076	0.0005	0.003	0.3	0.088			
MW-B	10/2/2007	0.068	0.003	0.0003	0.0009			1.3		
MW-B	6/30/2008	0.67	0.025	0.0028	0.02	1.7	0.087**			
MW-B	9/17/2008	0.11	0.0041 J	0.0019 J	0.0081 J	0.34	<0.032			
MW-B	2/3/2009	0.041	0.0019	0.0004 J	0.0014 J	0.095	<0.056			
MW-B	7/15/2009	0.034	<0.0002	0.0013	<0.0006	0.14	0.09 J			
MW-B	1/27/2010	0.048	0.0032	<0.0002	0.0016 J	0.28	0.1			
MW-B	7/12/2010	0.077	0.0029	<0.0002	0.0016 J	0.26	0.063 J			
MW-B	1/27/2011	0.36	0.0096	<0.0010	0.0064	0.914	0.073			
MW-B	7/13/2011		---------- dry ----------							
MW-B	10/15/2012		---------- dry ----------							
MW-B	1/23/2013	2.41	<0.0500	<0.0250	<0.0250	4.97	<1.50	4.97		
MW-B	7/23/2013		---------- dry ----------							
MW-B	3/5/2014	0.348	<0.00200	<0.00100	0.00273	4.51	<1.34	4.51		
MW-B	10/16/2014		---------- dry ----------							
MW-B	3/20/2015	4.01	<0.040	<0.0200	0.0568	8.01	<1.50	8.01		
MW-B	10/12/2015		---------- dry ----------							
MW-B	3/16/2016	4.82	<0.00150	<0.00200	<0.00200	5.27	<2.34	5.27		
MW-B	10/5/2016		---------- dry ----------							
MW-B	3/15/2017	0.125	0.00243	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-B	9/12/2017		---------- dry ----------							
MW-B	3/13/2018	2.0500	<0.100	<0.100	<0.100	5.50	3.02	8.52		
MW-B										
MW-C	6/15/2005	<0.005	<0.005	<0.005	<0.005					
MW-C	7/26/2005	0.414	0.543	0.0885	0.266					
MW-C	9/21/2005	0.239	0.317	0.0599	0.17					
MW-C	12/8/2005	0.0472	0.0741	0.0162	0.0592					
MW-C	5/17/2007	0.012	0.0049	0.0006	0.0019	0.062	0.095			
MW-C	10/2/2007	0.029	0.011	0.0011	0.003			<0.095		
MW-C	6/30/2008	0.019	0.0053	0.0011	0.0016	0.075	0.26			
MW-C	9/17/2008	0.0029	0.0014	0.0006 J	0.0015 J	0.025 J	0.068 J			
MW-C	2/5/2009	0.0086	0.0036	0.0007 J	0.0019 J	0.039 J	<0.032			
MW-C	7/14/2009	0.0071	0.0002 J	0.0014	0.0006 J	0.093	0.09 J			
MW-C	1/27/2010	0.0021	0.0003 J	<0.0002	<0.0006	<0.02	0.061 J			
MW-C	7/12/2010	0.0005 J	0.0004 J	<0.0002	<0.0006	0.033 J	0.096 J			
MW-C	1/27/2011	0.0025	0.0011	<0.0010	<0.0030	<0.0500	0.024 J			
MW-C	7/13/2011		---------- dry ----------							
MW-C	10/15/2012		---------- dry ----------							

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-C	1/23/2013	0.00434	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-C	7/23/2013	dry								
MW-C	3/5/2014	0.05820	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-C	10/16/2014	dry								
MW-C	3/20/2015	0.102	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-C	10/12/2015	dry								
MW-C	3/16/2016	0.0711	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-C-R	10/4/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-C-R	3/14/2017	0.0177	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-C-R	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-C-R	3/15/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-C-R	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-D	5/15/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-D	9/27/2007	<0.002	<0.002	<0.002	<0.006			<0.094		
MW-D	6/30/2008	0.039	0.0073	0.0013	0.0013	0.095	0.13			
MW-D	9/16/2008	0.0013	0.001 J	0.0005 J	0.0012 J	<0.02	0.088 J			
MW-D	2/4/2009	0.0081	0.0023	0.0007 J	0.0019 J	0.034 J	<0.031			
MW-D	7/13/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.044 J	0.13			
MW-D	1/27/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.046 J			
MW-D	7/8/2010	<0.0002	0.0004 J	<0.0002	<0.0006	0.028 J	0.16			
MW-D	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-D	7/13/2011	dry								
MW-D	10/15/2012	dry								
MW-D	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-D	7/23/2013	dry								
MW-D	3/5/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-D	10/16/2014	dry								
MW-D	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-D	10/15/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-D	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-D	10/5/2016	dry								
MW-D	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-D	9/12/2017	dry								
MW-D	3/16/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-D	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-D2	5/15/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-D2	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-D2	6/30/2008	0.026	0.0046	0.0009	0.0009	0.061	0.036			
MW-D2	9/17/2008	0.0011	0.0008 J	0.0007 J	0.0015 J	<0.02	0.052 J			
MW-D2	2/4/2009	0.0067	0.0031	0.0006 J	0.0016 J	0.030 J	<0.031			
MW-D2	7/13/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.023 J	0.086 J			
MW-D2	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.049 J			
MW-D2	7/7/2010	<0.0002	0.0002 J	<0.0002	<0.0006	<0.02	0.060 J			
MW-D2	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
MW-D2	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-D2	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-D2	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-D2	7/24/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-D2	3/5/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-D2	10/17/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-D2	3/16/2015	---------- not sampled ----------								
MW-D2	10/14/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-D2	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-D2	10/4/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-D2	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-D2	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-D2	3/15/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-D2	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-E	6/15/2005	<0.005	<0.005	<0.005	<0.005					
MW-E	5/16/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-E	9/27/2007	<0.002	<0.002	<0.002	<0.006			<0.094		
MW-E	7/1/2008	0.017	0.005	0.001	0.0011	0.049	0.041			
MW-E	9/17/2008	0.01	0.0059	0.0006 J	0.0034	0.055	<0.03			
MW-E	2/11/2009	0.0008 J	0.0004 J	0.0003 J	0.0007 J	<0.02	<0.031			
MW-E	7/15/2009	<0.0002	<0.0002	0.0002 J	<0.0006	0.044 J	0.33			
MW-E	1/27/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.062 J			
MW-E	7/8/2010	<0.0002	0.0004 J	<0.0002	<0.0006	<0.02	0.080 J			
MW-E	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-E	7/13/2011	---------- dry ----------								
MW-E	10/15/2012	---------- dry ----------								
MW-E	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-E	7/23/2013	---------- dry ----------								
MW-E	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-E	10/16/2014	---------- dry ----------								
MW-E	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-E	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-E	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-E	10/5/2016	---------- dry ----------								
MW-E	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-E	9/12/2017	---------- dry ----------								
MW-E	3/13/2018	---------- dry ----------								
MW-E	9/12/2018	---------- dry ----------								

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-F	6/15/2005	<0.005	<0.005	<0.005	<0.005					
MW-F	5/16/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-F	9/27/2007	<0.002	<0.002	<0.002	<0.006			<0.096		
MW-F	7/2/2008	0.013	0.0036	0.0007	0.0008	0.039	0.044			
MW-F	9/17/2008	0.0074	0.0042	0.0005 J	0.0025 J	0.039 J	<0.031			
MW-F	2/11/2009	0.0004 J	0.0002 J	<0.0002	<0.0006	<0.02	<0.031			
MW-F	7/14/2009	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.079 J			
MW-F	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.063 J			
MW-F	7/7/2010	0.0002 J	0.0003 J	<0.0002	<0.0006	<0.02	0.11			
MW-F	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-F	7/13/2011	---------- insufficient water ----------								
MW-F	10/15/2012	---------- dry ----------								
MW-F	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-F	7/23/2013	---------- dry ----------								
MW-F	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-F	10/16/2014	---------- dry ----------								
MW-F	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-F	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-F	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-F	10/5/2016	---------- dry ----------								
MW-F	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-F	9/12/2017	---------- dry ----------								
MW-F	3/16/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-F										
MW-G	6/15/2005	<0.005	<0.005	<0.005	<0.005					
MW-G	5/16/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-G	10/1/2007	<0.002	<0.002	<0.002	<0.006			<0.096		
MW-G	7/2/2008	0.0081	0.0025	0.0006	0.0006	0.026	<0.029			
MW-G	9/17/2008	0.024	0.013	0.001	0.0057	0.11	<0.031			
MW-G	2/11/2009	0.0012	0.0005 J	0.0003 J	0.0009 J	<0.02	<0.031			
MW-G	7/15/2009	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.11			
MW-G	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.054 J			
MW-G	7/7/2010	0.0002 J	0.0003 J	<0.0002	<0.0006	<0.02	0.073 J			
MW-G	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-G	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
MW-G	10/15/2012	---------- dry ----------								
MW-G	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-G	7/23/2013	---------- dry ----------								
MW-G	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-G	10/16/2014	---------- dry ----------								
MW-G	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-G	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-G	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
MW-G	10/5/2016	---------- dry ----------								
MW-G	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-G	9/12/2017	---------- dry ----------								
MW-G	3/16/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-G										

Summary of Historical groundwater Analytical Results
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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-H	6/15/2005	0.492	0.0219	<0.02	<0.02					
MW-H	7/26/2005	1.93	2.01	0.144	0.677					
MW-H	9/20/2005	2.35	2.54	0.188	0.932					
MW-H	12/6/2005	3.89	2.72	0.202	0.815					
MW-H	5/17/2007	0.73	0.082	0.0089	0.031	2.4	0.2			
MW-H	10/2/2007	0.2	0.037	0.0027	0.01			<0.094		
MW-H	7/2/2008	0.14	0.022	0.0018	0.006	0.36	0.036			
MW-H	9/17/2008	0.26	0.077	0.0032	0.022	0.86	0.036 J			
MW-H	2/3/2009	0.49	0.056	0.0075	0.022	1.2	0.078 J			
MW-H	7/15/2009	0.25	0.0018	0.027	0.012	0.64	0.068 J			
MW-H	1/27/2010	0.6	0.061	0.0025	0.017	1.7	0.16			
MW-H	7/13/2010	0.71	0.032	0.0016 J	0.0079 J	1.5	0.094 J			
MW-H	1/27/2011	4.6	0.28	0.0066	0.055	8.48	0.15			
MW-H	7/13/2011			dry						
MW-H	10/15/2012			dry						
MW-H	1/23/2013	5.93	0.446	0.0373	0.0528	7.55	<1.50	<1.50		
MW-H	7/23/2013			dry						
MW-H	3/5/2014	5.540	0.784	0.02560	0.08020	7.060	<1.34	<1.34		
MW-H	10/16/2014			dry						
MW-H	3/26/2015	6.57	0.808	<0.0250	<0.0250	10.1	1.59	11.7		
MW-H	10/12/2015			dry						
MW-H	3/17/2016	5.08	0.704	<0.00200	<0.00200	6.88	<2.34	<2.34		
MW-H	10/5/2016			dry						
MW-H	3/14/2017	2.65	0.299	<0.100	<0.100	2.09	1.99	4.08		
MW-H	9/12/2017			dry						
MW-H	3/13/2018			dry						
MW-H										
MW-I	6/15/2005	0.378	0.0124	<0.01	<0.01					
MW-I	7/26/2005	1.1	1.4	0.067	0.491					
MW-I	9/20/2005	0.555	0.801	0.0253	0.375					
MW-I	12/6/2005	0.496	0.611	0.0287	0.238					
MW-I	5/17/2007	0.067	0.032	0.0009	0.007	0.26	0.053			
MW-I	10/1/2007	0.033	0.01	<0.002	0.002			<0.097		
MW-I	7/1/2008	0.086	0.034	0.0017	0.0059	0.3	0.063			
MW-I	9/17/2008	0.0042	0.0022	0.0007 J	0.0019 J	0.029 J	0.091 J			
MW-I	2/5/2009	0.012	0.0056	0.0005 J	0.0021 J	0.058	<0.031			
MW-I	7/14/2009	0.011	0.0002 J	0.004	0.001 J	0.091	0.1			
MW-I	1/27/2010	0.03	0.012	0.0004 J	0.0025 J	0.13	0.065 J			
MW-I	7/12/2010	0.041	0.0028	0.0003 J	0.0014 J	0.14	0.047 J			
MW-I	1/27/2011	0.0025	0.0018	<0.0010	<0.0030	0.0448 J	<0.050			
MW-I	7/14/2011	4.19	0.994	0.049	0.356	6.12	<1.50	<1.50		
MW-I	10/15/2012			dry						
MW-I	1/23/2013	0.338	0.00613	<0.00100	0.00232	<1.50	<1.50	<1.50		
MW-I	7/23/2013			dry						
MW-I	3/5/2014	1.110	0.0601	<0.00500	0.00667	1.910	<1.34	<1.34		
MW-I	10/16/2014			dry						
MW-I	3/26/2015	1.64	0.0934	<0.0200	<0.0200	3.55	<1.50	3.55		
MW-I	10/15/2015	0.642	0.045	<0.0200	<0.400	2.19	<1.41	2.190		
MW-I	3/17/2016	1.27	0.0585	<0.00200	<0.00200	<2.34	3.76	3.76		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-I	10/5/2016		---------- dry ----------							
MW-I	3/15/2017		---------- insufficient water ----------							
MW-I	9/12/2017		---------- dry ----------							
MW-I	3/14/2018	0.2960	0.00472	<0.0020	<0.0020	1.75	<1.50	1.75		
MW-I										
MW-J	12/6/2005	<0.005	<0.005	<0.005	<0.005					
MW-J	5/15/2007	0.0015	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-J	10/1/2007	0.0005	<0.002	<0.002	<0.006			<0.096		
MW-J	6/30/2008	0.038	0.0073	0.0014	0.0014	0.093	0.28			
MW-J	9/16/2008	0.0012	0.0008 J	0.0005 J	0.0011 J	<0.02	0.093 J			
MW-J	2/4/2009	0.0078	0.0022	0.0007 J	0.0019 J	0.032 J	<0.031			
MW-J	7/13/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.035 J	0.11			
MW-J	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.056 J			
MW-J	7/7/2010	<0.0002	0.0002 J	<0.0002	<0.0006	<0.02	0.062 J			
MW-J	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-J	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
MW-J	10/15/2012		---------- insufficient water ----------							
MW-J	1/22/2013		---------- insufficient water ----------							
MW-J	7/23/2013	<0.0010	<0.0020	<0.0010	<0.0010	1.44	1.44	1.44		
MW-J	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-J	10/16/2014		---------- insufficient water ----------							
MW-J	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-J	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-J	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
MW-J	10/5/2016		---------- insufficient water ----------							
MW-J	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-J	9/12/2017		---------- dry ----------							
MW-J	3/14/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-J										
MW-L	6/15/2005	<0.005	<0.005	<0.005	<0.005					
MW-L	5/15/2007	<0.002	<0.002	<0.002	<0.006	<0.02	0.038	<0.093		
MW-L	10/1/2007	<0.002	<0.002	<0.002	<0.006					
MW-L	7/1/2008	0.018	0.0031	0.001	0.0025	0.063	0.089			
MW-L	9/16/2008	0.0019	0.0012	<0.0006	<0.0015	<0.02	0.13			

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-L	2/4/2009	0.011	0.003	0.0009 J	0.0024 J	0.041 J	0.042 J			
MW-L	7/14/2009	0.0003 J	<0.0002	0.0002 J	<0.0006	0.033 J	0.079 J			
MW-L	1/27/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.037 J			
MW-L	7/12/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.051 J			
MW-L	1/27/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-L	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
MW-L	10/15/2012	---------- insufficient water ----------								
MW-L	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-L	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-L	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-L	10/16/2014	---------- dry ----------								
MW-L	3/17/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-L	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-L	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
MW-L	10/5/2016	---------- insufficient water ----------								
MW-L	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-L	9/12/2017	---------- dry ----------								
MW-L	3/14/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-L										
MW-M	6/15/2005	<0.005	<0.005	<0.005	<0.005			<0.096		
MW-M	5/15/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-M	10/1/2007	<0.002	<0.002	<0.002	<0.006					
MW-M	6/30/2008	0.042	0.004	0.0011	0.0032	0.11	0.034**			
MW-M	9/16/2008	0.0023	0.0013	0.0006 J	0.0014 J	0.022	0.13			
MW-M	2/4/2009	0.013	0.0031 J	0.001 J	0.0025 J	0.053	0.036 J			
MW-M	7/15/2009	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.071 J			
MW-M	1/25/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.25			
MW-M	7/6/2010	0.0003 J	0.0003 J	<0.0002	<0.0006	<0.02	0.1			
MW-M	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.050	<0.050			
MW-M	7/13/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-M	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<!.50		
MW-M	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-M	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.44	<1.44	<1.44		
MW-M	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-M	10/16/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-M	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-M	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-M	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
MW-M	10/5/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-M	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-M	9/12/2017	---------- insufficient water ----------								
MW-M	3/14/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-M										
MW-N	6/15/2005	<0.001	<0.001	<0.001	<0.001					
MW-N	7/26/2005	0.0059	<0.005	<0.005	<0.005					
MW-N	9/21/2005	0.0076	<0.001	<0.001	<0.001					
MW-N	12/6/2005	<0.001	<0.001	<0.001	<0.001			<0.095		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-N	5/17/2007	0.0013	0.0007	0.0002	<0.006	0.032	0.067			
MW-N	10/2/2007	<0.002	<0.002	<0.002	<0.006					
MW-N	6/30/2008	0.011	0.0031	0.0008	0.0009	0.056	0.05			
MW-N	9/17/2008	0.0014	0.0011	0.0007 J	0.0016 J	<0.02	0.073			
MW-N	2/5/2009	0.0051	0.0025	0.0006 J	0.0014 J	0.031 J	0.034 J			
MW-N	7/13/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.079	0.32			
MW-N	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.041 J			
MW-N	7/8/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.062 J			
MW-N	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
MW-N	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-N	10/15/2012			---------- dry ----------						
MW-N	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00351	<1.50	<1.50	<1.50		
MW-N	7/23/2013			---------- dry ----------						
MW-N	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-N	10/16/2014			---------- dry ----------						
MW-N	3/19/2015	0.00295	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-N	10/13/2015	<0.0010	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-N	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-N	10/5/2016			---------- dry ----------						
MW-N	3/14/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-N	9/12/2017			---------- dry ----------						
MW-N	3/14/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-N										
MW-O	7/25/2005	0.0035	<0.001	<0.001	<0.001					
MW-O	9/21/2005	0.0102	<0.001	<0.001	<0.001			<0.093		
MW-O	12/8/2005	0.0045	<0.001	<0.001	<0.001					
MW-O	5/14/2007	0.0072	<0.002	<0.002	<0.006	0.043	0.13			
MW-O	10/2/2007	0.0012	0.001	<0.002	<0.006					
MW-O	6/30/2008	0.04	0.01	0.0065	0.011	0.15	0.280**			
MW-O	9/16/2008	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
MW-O	2/2/2009	<0.0002	0.0012	0.0005 J	0.0011 J	<0.02	0.063 J			
MW-O	7/13/2009	<0.0002	<0.0002	0.0003 J	<0.0006	0.1	0.36			
MW-O	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
MW-O	7/8/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.053 J			
MW-O	1/27/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.0500		
MW-O	7/13/2011			---------- dry ----------						
MW-O	10/15/2012			---------- dry ----------						
MW-O	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-O	7/23/2013			---------- dry ----------						
MW-O	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-O	10/16/2014			---------- dry ----------						
MW-O	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-O	10/12/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-O	3/17/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-O-R	10/4/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-O-R	3/14/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-O-R	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-O-R	3/13/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-O-R										

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-P	6/15/2005	1.92	<0.05	<0.05	<0.05					
MW-P	7/25/2005	0.179	<0.001	<0.001	<0.001			<0.094		
MW-P	9/19/2005	<0.001	<0.001	<0.001	<0.001					
MW-P	12/8/2005	<0.001	<0.001	<0.001	<0.001					
MW-P	5/14/2007	<0.002	<0.002	<0.002	<0.006	<0.02	0.028			
MW-P	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-P	6/17/2008	<0.002	0.003	<0.002	<0.006	<0.037	<0.062			
MW-P	9/16/2008	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
MW-P	2/2/2009	<0.0002	0.0033	0.0005 J	0.0011 J	<0.02	0.049 J			
MW-P	7/13/2009	0.0011	<0.0002	0.0003 J	<0.0006	0.31	4.7			
MW-P	1/27/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
MW-P	7/12/2010	<0.0002	0.0004 J	<0.0002	<0.0006	0.024 J	0.074 J			
MW-P	1/27/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
MW-P	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-P	10/15/2012	---------- dry ----------								
MW-P	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-P	7/23/2013	---------- dry ----------								
MW-P	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-P	10/16/2014	---------- dry ----------								
MW-P	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-P	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-P	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-P	10/5/2016	---------- dry ----------								
MW-P	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-P	9/12/2017	---------- dry ----------								
MW-P	3/13/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-P										
MW-Q	7/25/2005	<0.001	<0.001	<0.001	<0.001			<0.094		
MW-Q	9/21/2005	<0.001	<0.001	<0.001	<0.001					
MW-Q	12/6/2005	<0.001	<0.001	<0.001	<0.001					
MW-Q	5/14/2007	<0.002	<0.002	<0.002	<0.006	<0.02	<0.028			
MW-Q	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-Q	6/17/2008	0.005	0.006	0.003	0.006	<0.043	<0.062			
MW-Q	9/16/2008	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.031			
MW-Q	2/2/2009	<0.0002	0.0021	0.0003 J	0.0007 J	<0.02	0.048 J			
MW-Q	7/14/2009	<0.0002	<0.0002	0.0003 J	<0.0006	0.16	0.68			
MW-Q	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.031 J			
MW-Q	7/12/2010	<0.0002	0.0004 J	<0.0002	<0.0006	0.046 J	0.420 J			
MW-Q	1/27/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
MW-Q	7/13/2011	---------- dry ----------								
MW-Q	10/15/2012	---------- dry ----------								
MW-Q	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-Q	7/23/2013	---------- dry ----------								
MW-Q	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-Q	10/16/2014	---------- dry ----------								
MW-Q	3/19/2015	<0.0010	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-Q	10/15/2015	<0.0010	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-Q	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-Q	10/5/2016		---------- no access ----------							
MW-Q	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-Q	9/12/2017		---------- insufficient water ----------							
MW-Q	3/13/2018		---------- dry ----------							
MW-Q										
MW-R	8/12/2005	<0.001	<0.001	<0.001	<0.001					
MW-R	9/19/2005	<0.001	<0.001	<0.001	<0.001					
MW-R	12/8/2005	<0.001	<0.001	<0.001	<0.001					
MW-R	5/14/2007	<0.002	<0.002	<0.002	<0.006	<0.02	0.028			
MW-R	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-R	6/17/2008	<0.002	<0.002	<0.002	<0.006	<0.061	<0.110			
MW-R	9/15/2008	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	<0.039			
MW-R	2/2/2009	0.0002 J	0.0005 J	0.0008 J	0.0016 J	0.028 J	0.074 J			
MW-R	7/14/2009	<0.0002	<0.0002	0.0002 J	<0.0006	0.049 J	0.13			
MW-R	1/27/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.041 J			
MW-R	7/8/2010	<0.0002	0.0004 J	<0.0002	<0.0006	<0.02	0.076 J			
MW-R	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.050	<0.050	<0.050		
MW-R	7/13/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-R	10/17/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-R	1/23/2013	<0.00100	<0.00200	<0.00100	0.00267	<1.50	<1.50	<1.50		
MW-R	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-R	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-R	10/16/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-R	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-R	10/14/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-R	3/17/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-R	10/4/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-R	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-R	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-R	3/13/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-R	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-S	7/27/2006	<0.0005	<0.0007	<0.0008	<0.0008	0.028	0.053			
MW-S	5/14/2007	<0.002	<0.002	<0.002	<0.006	<0.02	0.39			
MW-S	10/1/2007	<0.002	<0.002	<0.002	<0.006					
MW-S	6/30/2008	0.039	0.0032	0.0005	0.0021	0.11	<0.043			
MW-S	9/16/2008	0.004	0.0018	0.0008 J	0.0019 J	0.029 J	0.35			
MW-S	2/4/2009	0.022	0.0048	0.0011	0.0031	0.072	0.044 J			
MW-S	7/15/2009	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.050 J			
MW-S	1/25/2010	<0.0002	<0.0002	<0.0002	<0.0006	0.023 J	0.18 J			
MW-S	7/6/2010	0.0003 J	0.0002 J	<0.0002	<0.0006	<0.02	0.074 J			
MW-S	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050			
MW-S	7/13/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.5	<1.5			
MW-S	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50			

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-S	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50			
MW-S	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.42	<1.42			
MW-S	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34			
MW-S	10/16/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-S	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-S	10/15/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-S	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-S	10/5/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-S	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-S	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-S	3/14/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-S	9/11/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-T	7/27/2006	0.36	0.12	0.037	0.15	1.3	0.86			
MW-T	9/18/2008	0.0049	0.0028	0.0008 J	0.002 J	0.027 J	0.11			
MW-T	2/11/2009	0.0004 J	0.0003 J	<0.0002	<0.0006	<0.02	0.033 J			
MW-T	7/16/2009	0.0071	<0.0002	0.0013	0.0008 J	0.044 J	0.13			
MW-T	7/13/2010	0.84	0.18	0.026	0.055	2.4	0.070 J			
MW-T	1/27/2011	12	1.5	0.2	0.61	22.6	0.41			
MW-T	7/13/2011	4.49	0.448	0.0208	0.0576	8.17	<1.5	<0.093		
MW-T	10/17/2012	12.8	<0.200	0.260	0.418	15.5	<1.50	15.5		
MW-T	1/23/2013	10.5	<0.100	0.104	0.195	12.2	<1.50	12.2		
MW-T	7/24/2013	13.1	0.168	0.284	0.519	21.3	<1.43	21.3		
MW-T	3/5/2014	3.95	0.0311	0.09950	0.17700	12.3	<1.34	12.3		
MW-T	10/17/2014	12.3	<0.100	0.17000	0.35100	15.3	<1.48	15.3		
MW-T	3/26/2015	13.4	<0.100	0.234	0.480	16.4	<1.50	16.4		
MW-T	10/15/2015	14.9	0.1570	0.34000	0.6590	15.4	<1.41	15.4		
MW-T	3/17/2016	11.5	0.0970	0.189	0.316	15.4	<1.41	15.4		
MW-T	10/5/2016	9.54	0.0170	0.181	0.329	12.1	<1.50	12.1		
MW-T	3/14/2017	11.7	<0.200	0.613	0.670	1.98	<1.50	1.98		
MW-T	9/12/2017	2.23	0.2980	<0.0456	0.735	2.18	<1.50	<1.50		
MW-T	3/15/2018	9.4200	<0.400	<0.400	<0.400	18.80	<1.50	18.80		
MW-T	9/11/2018	12.2 D	0.0670	0.242	0.330	15.30	<1.50	15.30		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-U	4/24/2007	<0.005	0.009	<0.008	<0.008	0.027	0.180*			
MW-U	5/16/2007	<0.0002	<0.0002	<0.0002	<0.0006	0.027	0.18			
MW-U	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-U	6/30/2008	0.004	0.0018	0.0009	0.0019	0.028	0.057**			
MW-U	9/17/2008	<0.0002	0.0003 J	0.0002 J	<0.0006	0.025 J	<0.032			
MW-U	2/3/2009	<0.0002	0.0021	0.0006 J	0.0013 J	<0.02	0.060 J			
MW-U	7/14/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.034 J	0.1			
MW-U	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.049 J			
MW-U	7/7/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.070 J			
MW-U	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.0500		
MW-U	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-U	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-U	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-U	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.42	<1.42	<1.42		
MW-U	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-U	10/16/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-U	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-U	10/14/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.40	<1.40	<1.40		
MW-U	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-U	10/6/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-U	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-U	9/12/2017	---------- dry ----------								
MW-U	3/15/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-U										
MW-V	4/24/2007	<0.005	<0.007	<0.008	<0.008	0.028*	0.310*			
MW-V	5/16/2008	<0.001	<0.0002	<0.0002	<0.0006	0.028	0.31			
MW-V	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-V	6/30/2008	0.011	0.0027	0.0012	0.0025	0.044	0.093**			
MW-V	9/16/2008	0.0045	<0.0002	<0.0002	<0.0006	0.023 J	0.064 J			
MW-V	2/2/2009	<0.0002	0.0078	0.0003 J	0.0007 J	0.023 J	0.066 J			
MW-V	7/13/2009	<0.0002	<0.0002	<0.0002	<0.0006	0.027 J	0.14			
MW-V	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.062 J			
MW-V	7/7/2010	<0.0002	0.0002 J	<0.0002	<0.0006	<0.02	0.070 J			
MW-V	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.094		
MW-V	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-V	10/16/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-V	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-V	7/24/2013	0.0105	<0.00200	<0.00100	<0.00100	<1.45	<1.45	<1.45		
MW-V	3/5/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-V	10/17/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-V	3/16/2015	---------- not sampled ----------								
MW-V	10/14/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-V	3/16/2016	0.314	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-V	10/6/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-V	3/15/2017	0.0339	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-V	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-V	3/15/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-V	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		

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Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-W	4/24/2007	<0.005	<0.007	<0.008	<0.008	0.037*	0.450*			
MW-W	5/16/2007	<0.001	<0.0002	<0.0002	<0.0006	0.037	0.45			
MW-W	9/27/2007	<0.002	<0.002	<0.002	<0.006					
MW-W	6/30/2008	0.031	0.0035	0.0015	0.0032	0.092	0.130**			
MW-W	9/16/2008	0.0025	<0.0002	<0.0002	<0.0002	0.021 J	0.068 J			
MW-W	2/2/2009	<0.0002	0.0029	0.0004 J	0.0009 J	<0.02	0.078 J			
MW-W	7/13/2009	<0.0002	<0.0002	0.0003 J	<0.0006	0.093	0.33			
MW-W	1/26/2010	<0.0002	<0.0002	<0.0002	<0.0006	<0.02	0.039 J			
MW-W	7/7/2010	<0.0002	0.0003 J	<0.0002	<0.0006	<0.02	0.087 J	<0.096		
MW-W	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
MW-W	7/13/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
MW-W	10/17/2012	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-W	1/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-W	7/24/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.46	<1.46	<1.46		
MW-W	3/5/2014	0.00141	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
MW-W	10/17/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.48	<1.48	<1.48		
MW-W	3/20/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
MW-W	10/14/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
MW-W	3/16/2016	0.0648	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
MW-W	10/4/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-W	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-W	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
MW-W	3/13/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
DUP1 (MW-D)	1/25/2011	<0.0010	<0.0010	<0.0010	<0.0030	<0.0500	<0.050	<0.050		
DUP-1 (MW-N)	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
DUP11 (MW-C)	1/25/2011	0.0024	0.00099 J	<0.0010	<0.0030	<0.0500	0.036 J	0.036 J		
DUP-2 (BW-2)	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0010	<1.50	<1.50	<1.50		
DUP	10/16/2012	<0.00100	<0.00203	<0.00100	<0.00100	<1.50	<1.50	<1.50		
Trip Blank	1/26/2011	<0.0010	<0.0010	<0.0010	<0.0030					
DUP1	1/22/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
Dup 1	7/23/2013	<0.00100	<0.00200	<0.00100	<0.00100	<1.42	<1.42	<1.42		
DUP-1 (MW-S)	3/4/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
DUP-2 (MW-V)	3/5/2014	<0.00100	<0.00200	<0.00100	<0.00100	<1.34	<1.34	<1.34		
Trip Blank	3/5/2014	<0.00100	<0.00200	<0.00100	<0.00100					
Dup (BW-2)	10/17/2014	0.00867	0.00391	<0.00100	<0.00100	<1.48	<1.48	<1.48		
Dup-1 (MW-Q)	3/19/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
Dup-2 (BW-3)	3/20/2015	0.0710	0.0239	<0.00100	0.00613	<1.50	<1.50	<1.50		
Dup-3 (BW-2)	3/26/2015	0.00293	<0.00200	<0.00100	<0.00100	<1.50	<1.50	<1.50		
Dup-1 (MW-P)	10/13/2015	<0.00100	<0.00200	<0.00100	<0.00100	<1.41	<1.41	<1.41		
Dup-2 (BW-2)	10/14/2015	0.0136	0.00473	<0.00100	<0.00100	<1.41	<1.41	<1.41		
Dup-3 (BW-1)	10/15/2015	0.05060	<0.00200	<0.00100	0.00425	<1.40	<1.40	<1.40		
Dup-1 (MW-M)	3/15/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
Dup-2 (MW-Q)	3/16/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.35	<2.35	<2.35		
Dup-3 (MW-O)	3/17/2016	<0.00200	<0.00150	<0.00200	<0.00200	<2.34	<2.34	<2.34		
Dup (MW-S)	10/5/2016	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
Dup-1 (MW-U)	3/15/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
Dup-2 (MW-F)	3/16/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		
Dup (MW-S)	9/12/2017	<0.00200	<0.00200	<0.00200	<0.00200	<1.50	<1.50	<1.50		

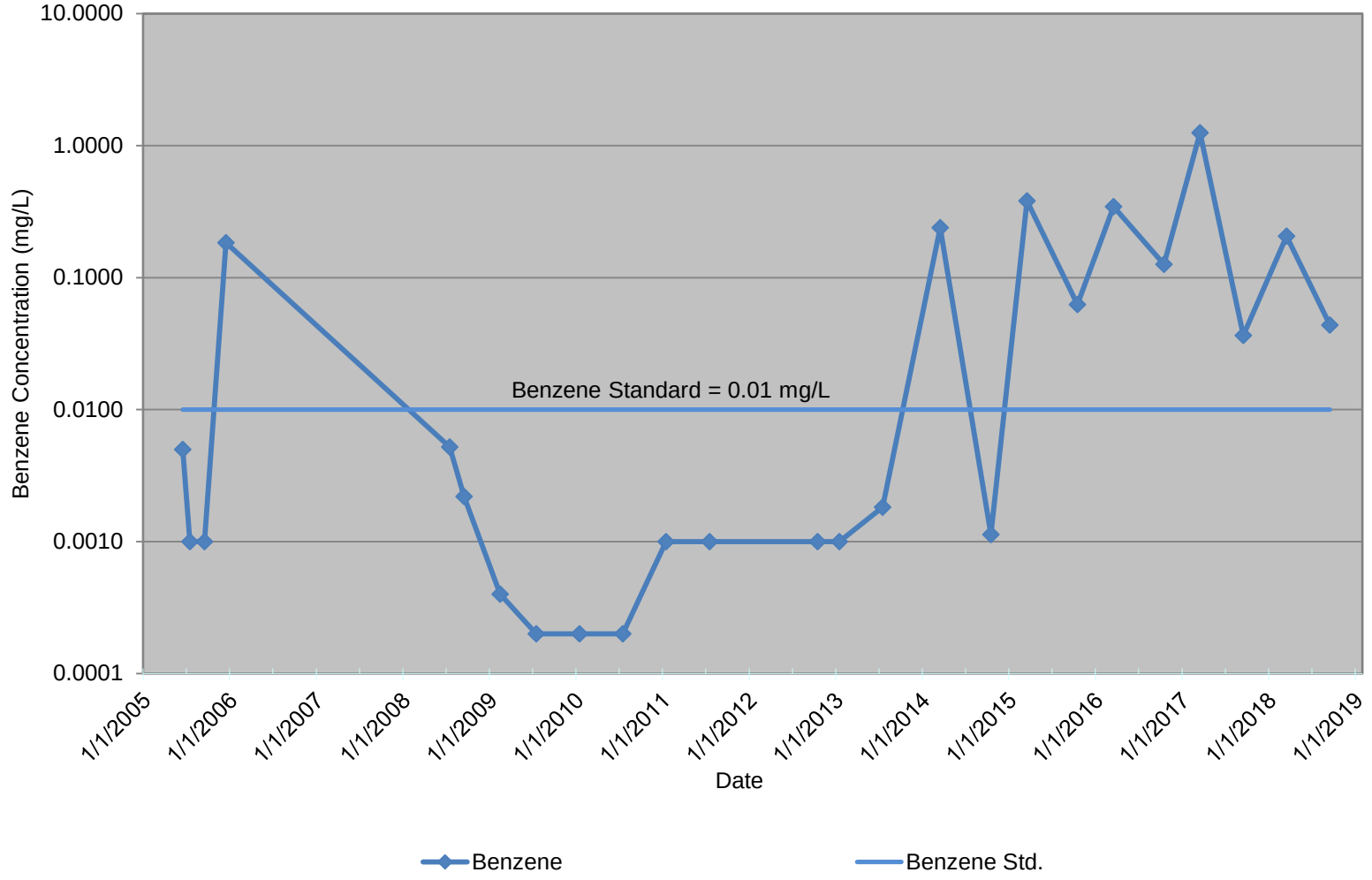
Summary of Historical groundwater Analytical Results
Lovington Paddock Groundwater Remediation Site
Section 1-T17S-R36E. Lea County, New Mexico

Location	Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	TPH-GRO mg/L	TPH-DRO mg/L	Total TPH mg/L	Chlorides mg/L	TDS mg/L
NMWQCC Standards		0.01	0.75	0.75	0.62	--	--	--	250	1000
MW-I (Dup)	3/14/2018	0.2670	0.00399	<0.0020	<0.0020	1.51	<1.50	1.51		
MW-G (Dup)	3/16/2018	<0.00200	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		
MW-R (Dup)	9/12/2018	<0.0020	<0.0020	<0.0020	<0.0020	<1.50	<1.50	<1.50		

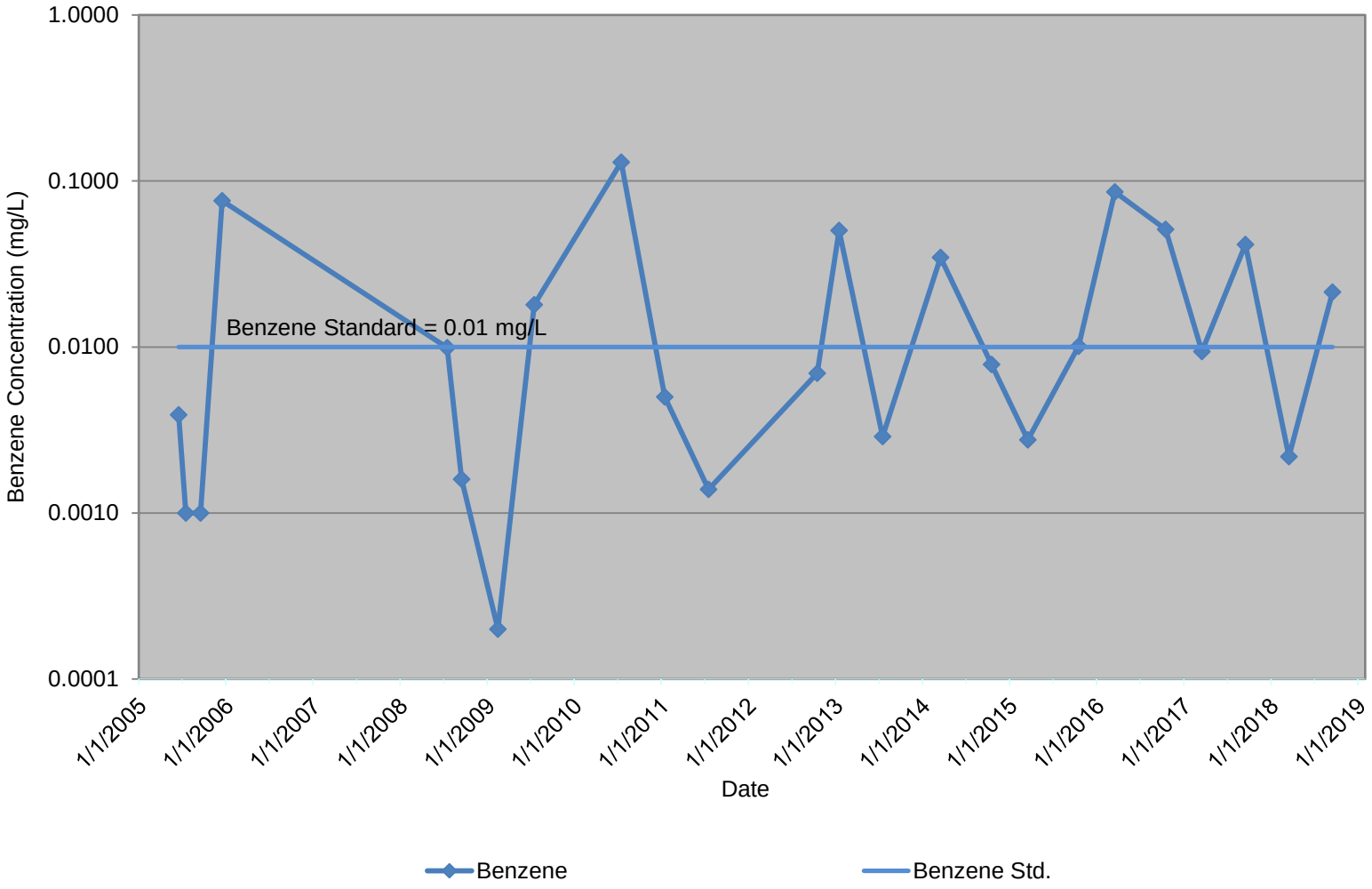
Notes:
mg/L - milligrams per liter
TPH - total petroleum hydrocarbons
TPH GRO - total petroleum hydrocarbons gasoline range organic (C_6-C_{10})
TPH DRO - total petroleum hydrocarbons diesel range organic (>C_{10}-C_{28})
TDS - Total Dissolved Solids
NMWQCC HHSGR - New Mexico Water Quality Control Commission Human Health for groundwater (NMAC 20.6.2.3103A).
Cells shaded yellow exceed NMWQCC standards.
J - estimated value which is less than the quantitation limit.
* - resampled on 05/16/2007
** - resampled on 07/01/2008
NS = not sampled

Appendix C
Charts of Benzene Concentration Trends

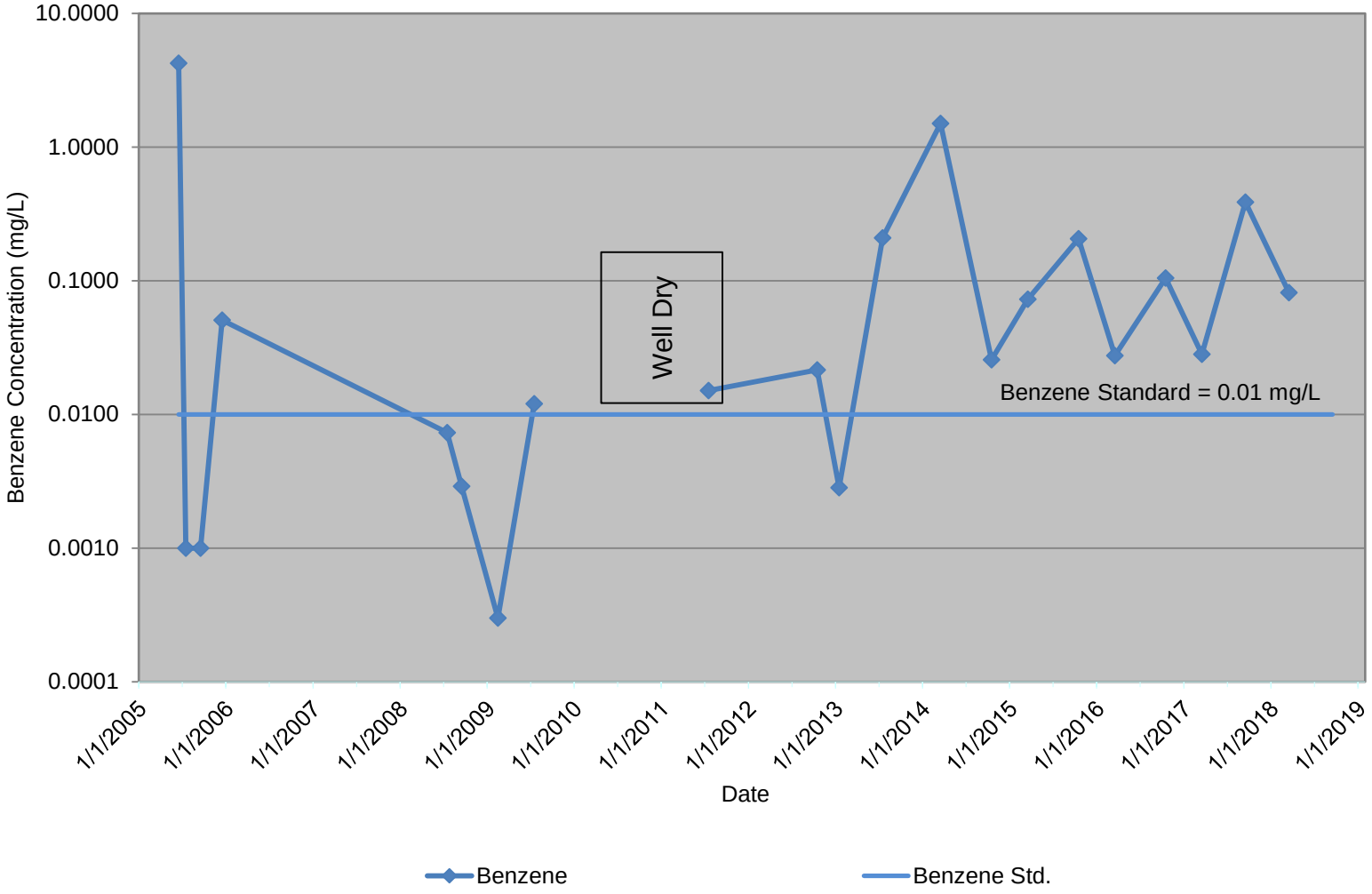
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
BW-1



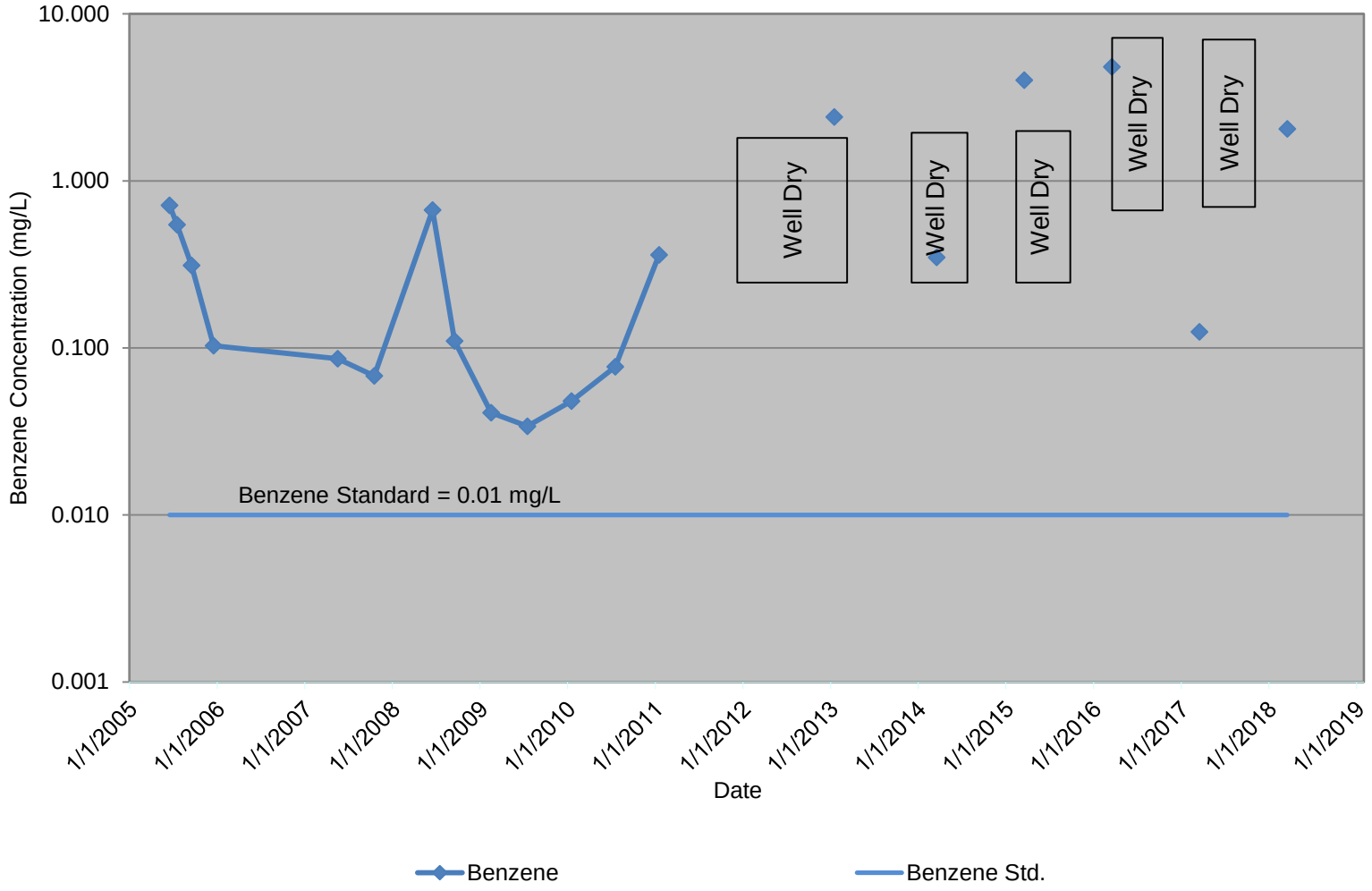
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
BW-2



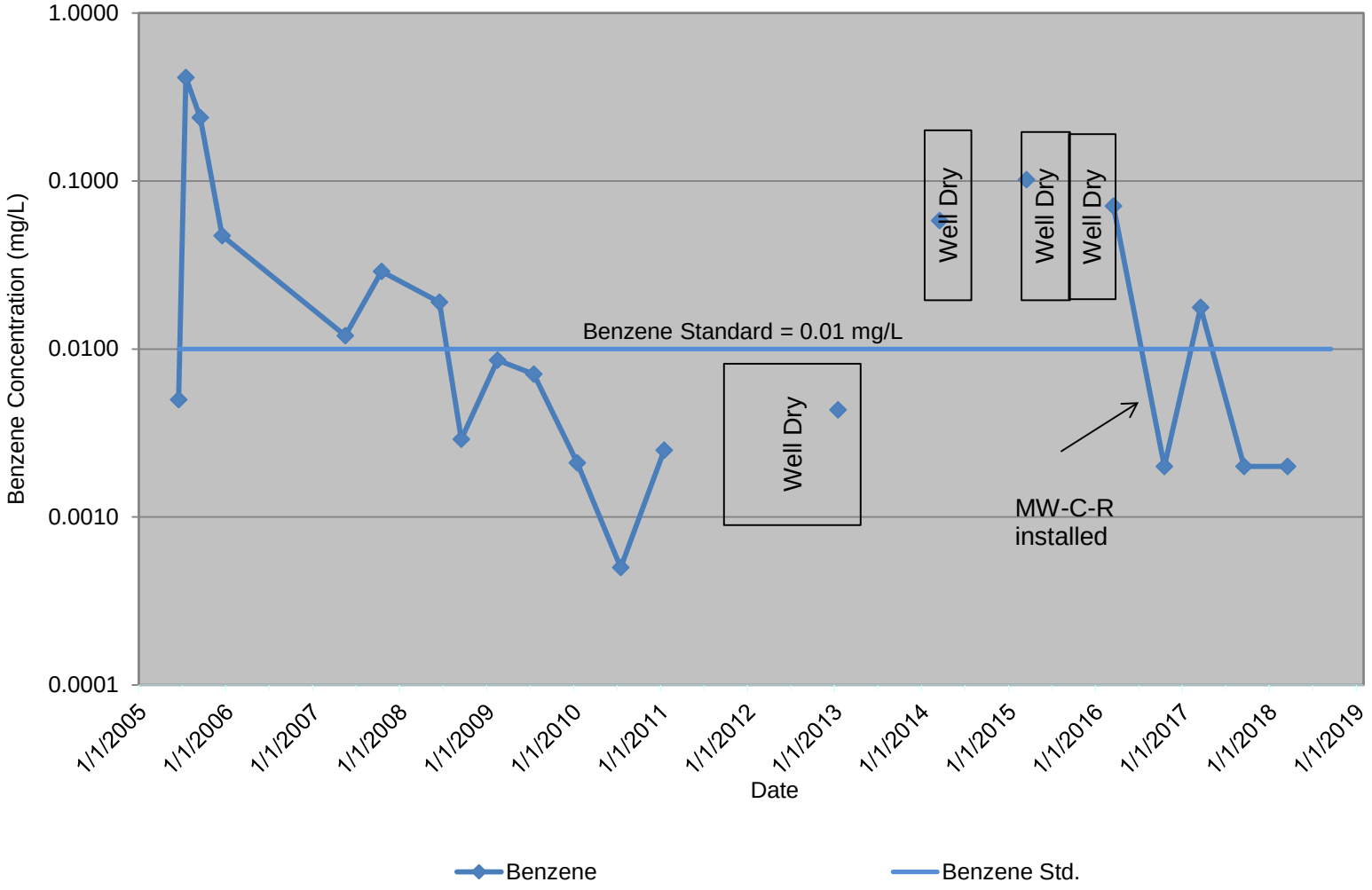
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
BW-3



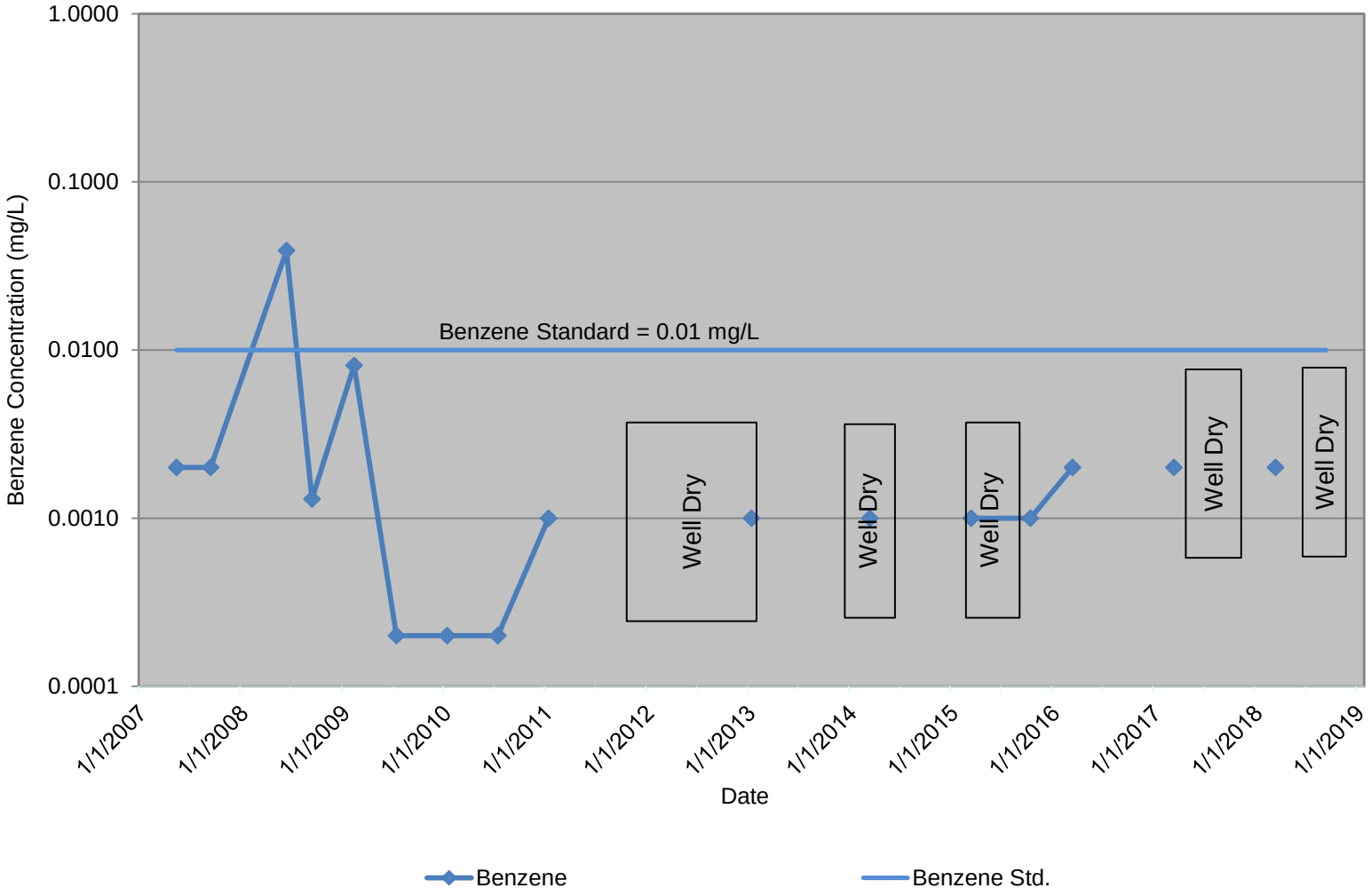
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-B



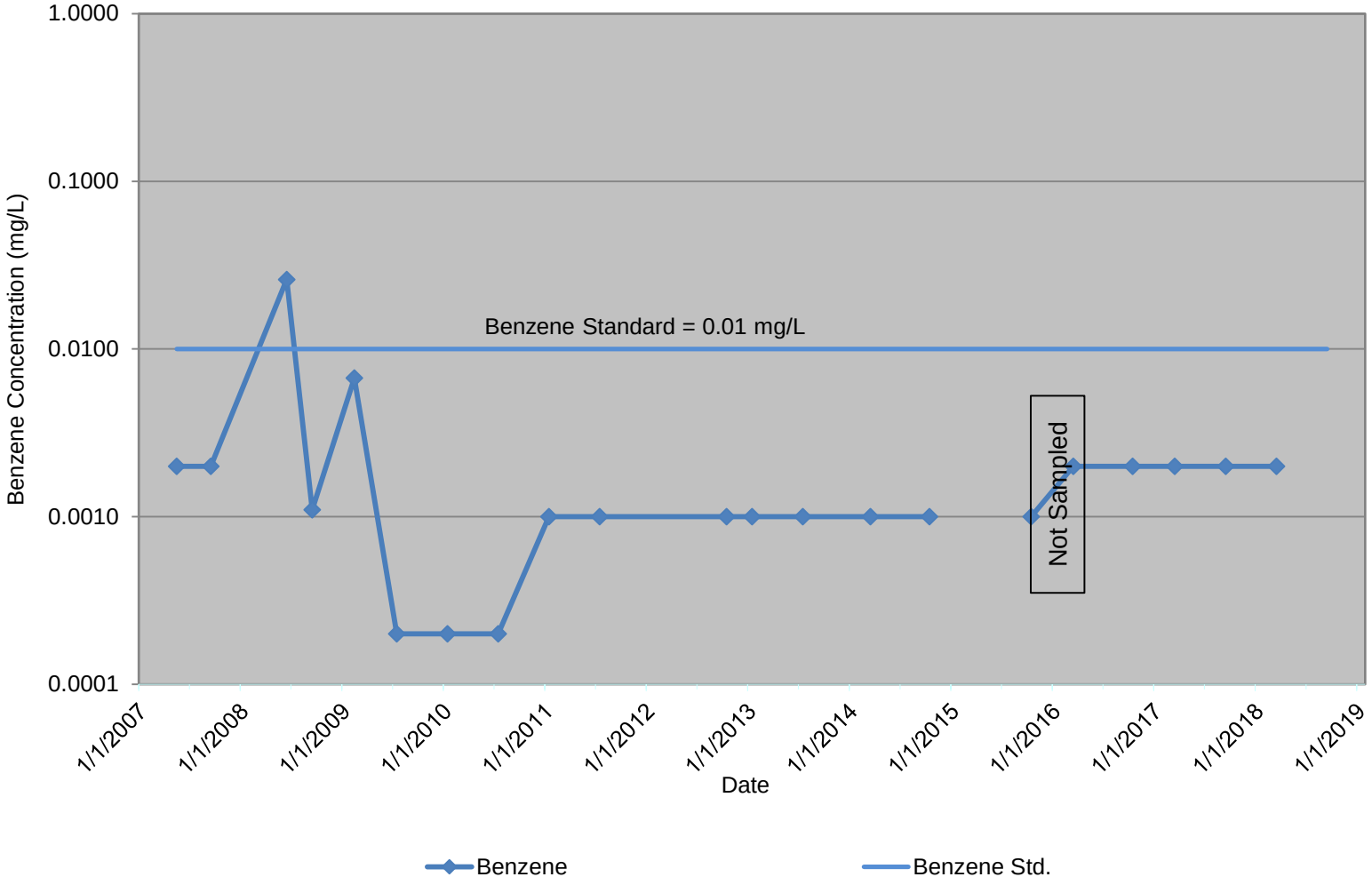
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-C and MW-C-R



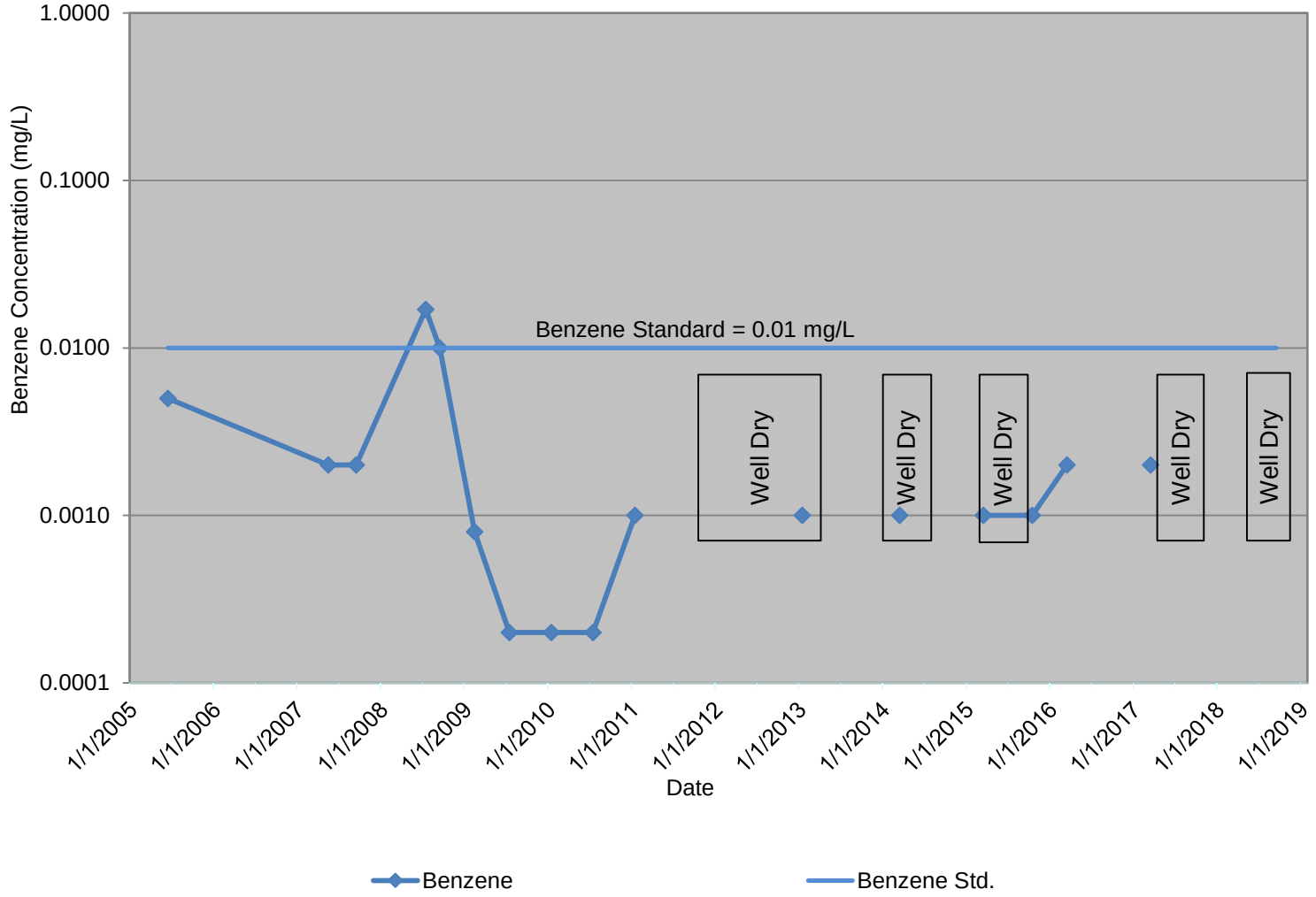
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzen in Groundwater
MW-D



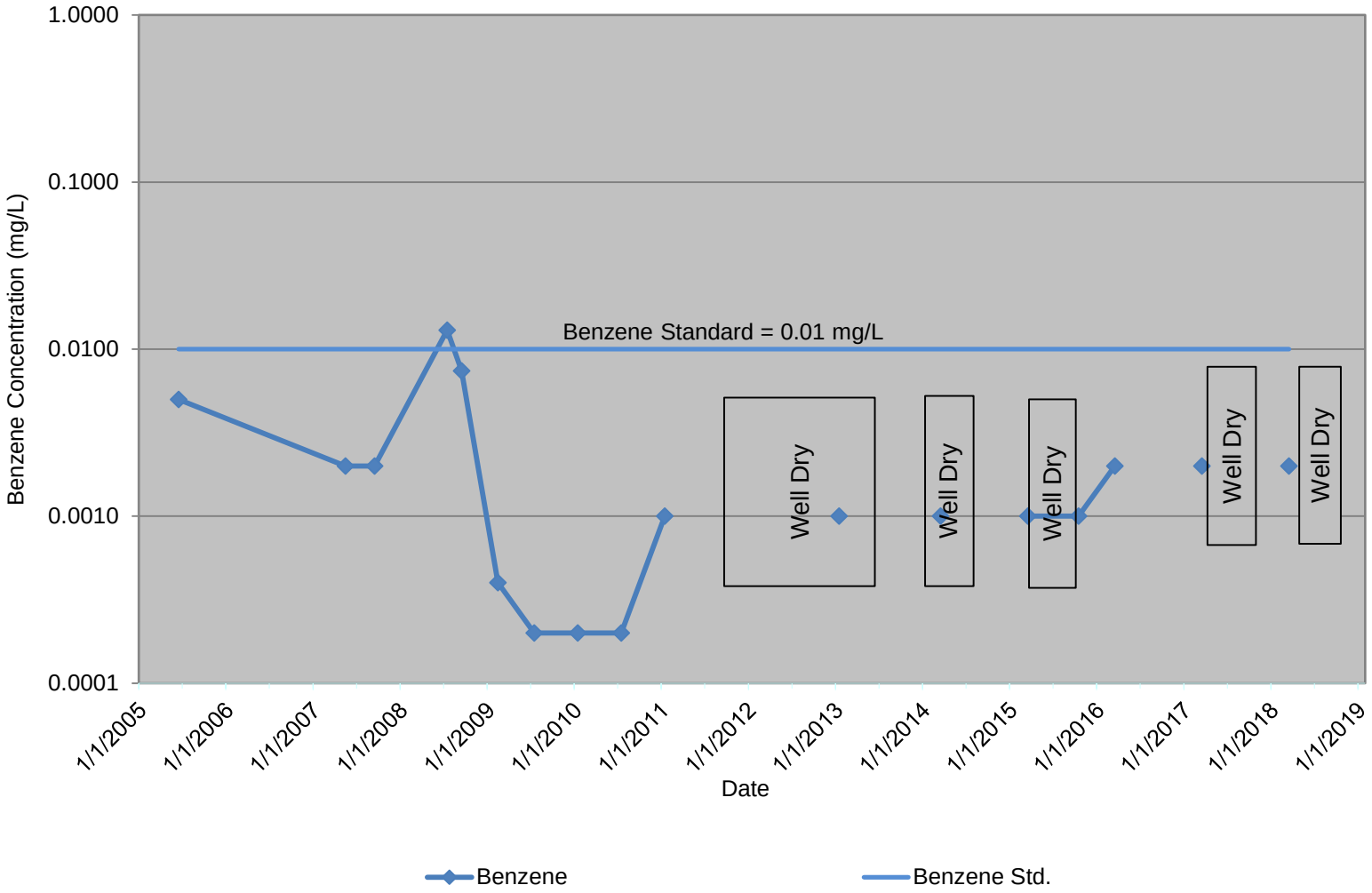
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Benzene in Groundwater
Lea County, NM
MW-D2



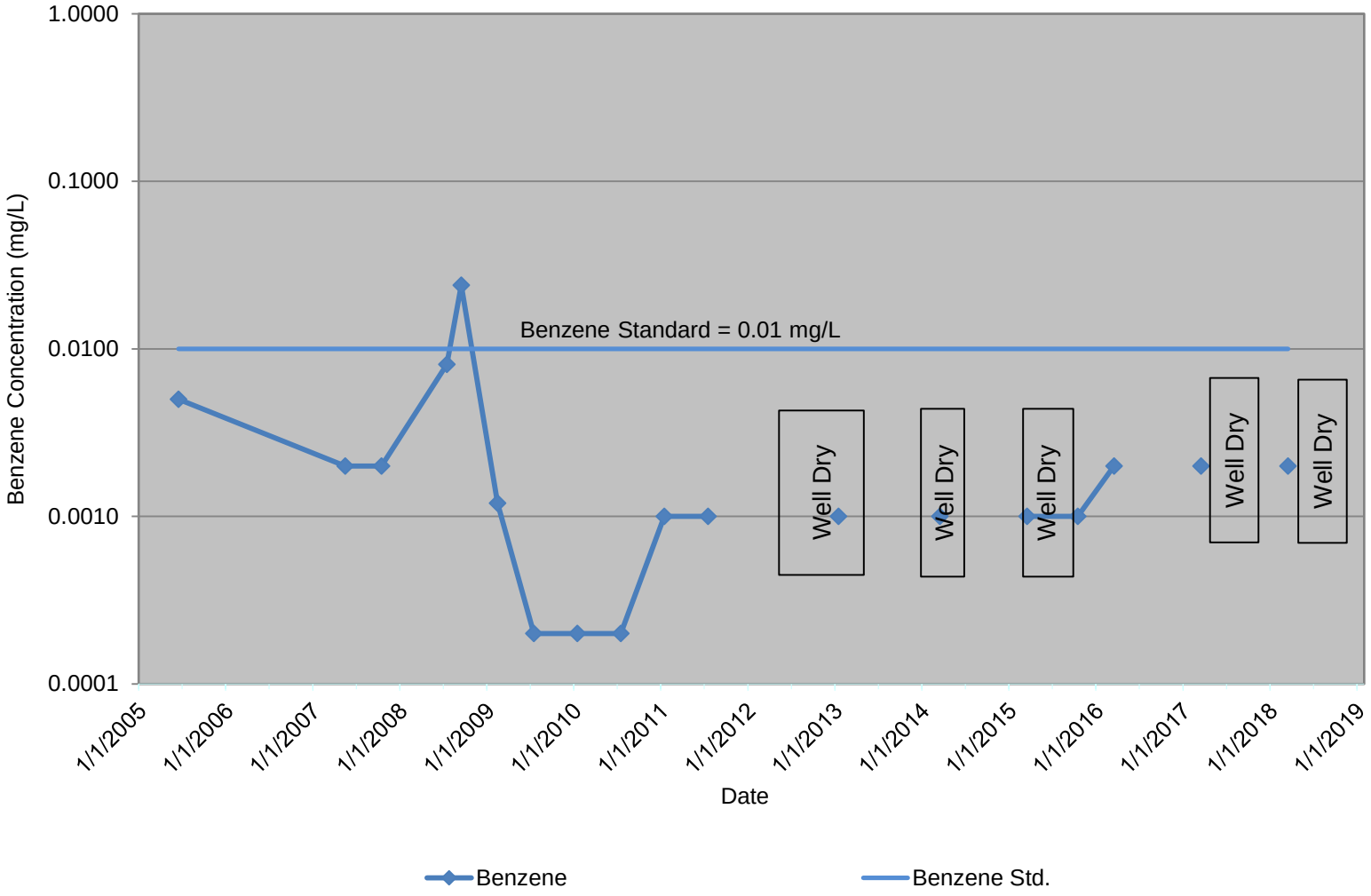
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-E



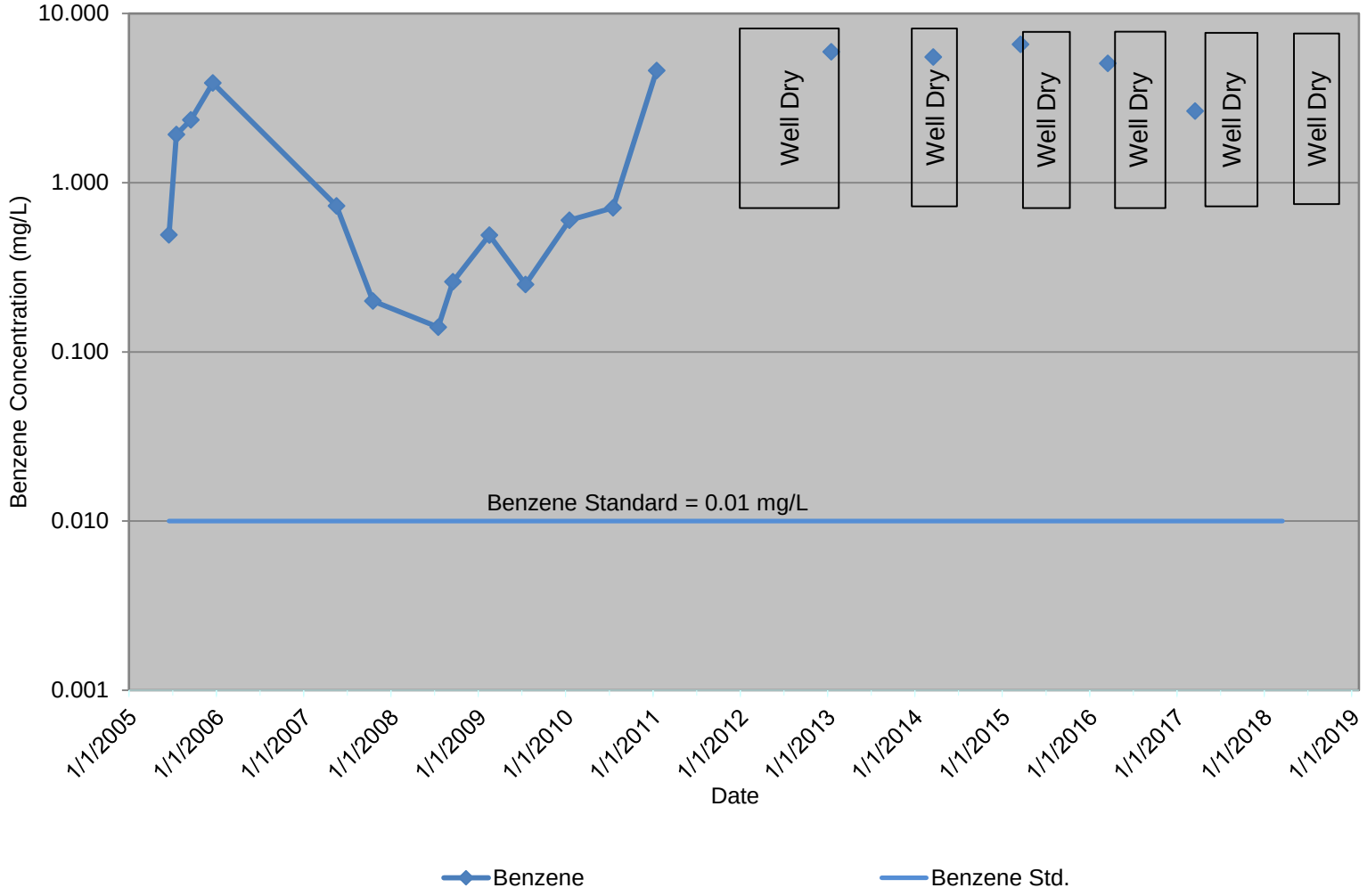
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-F



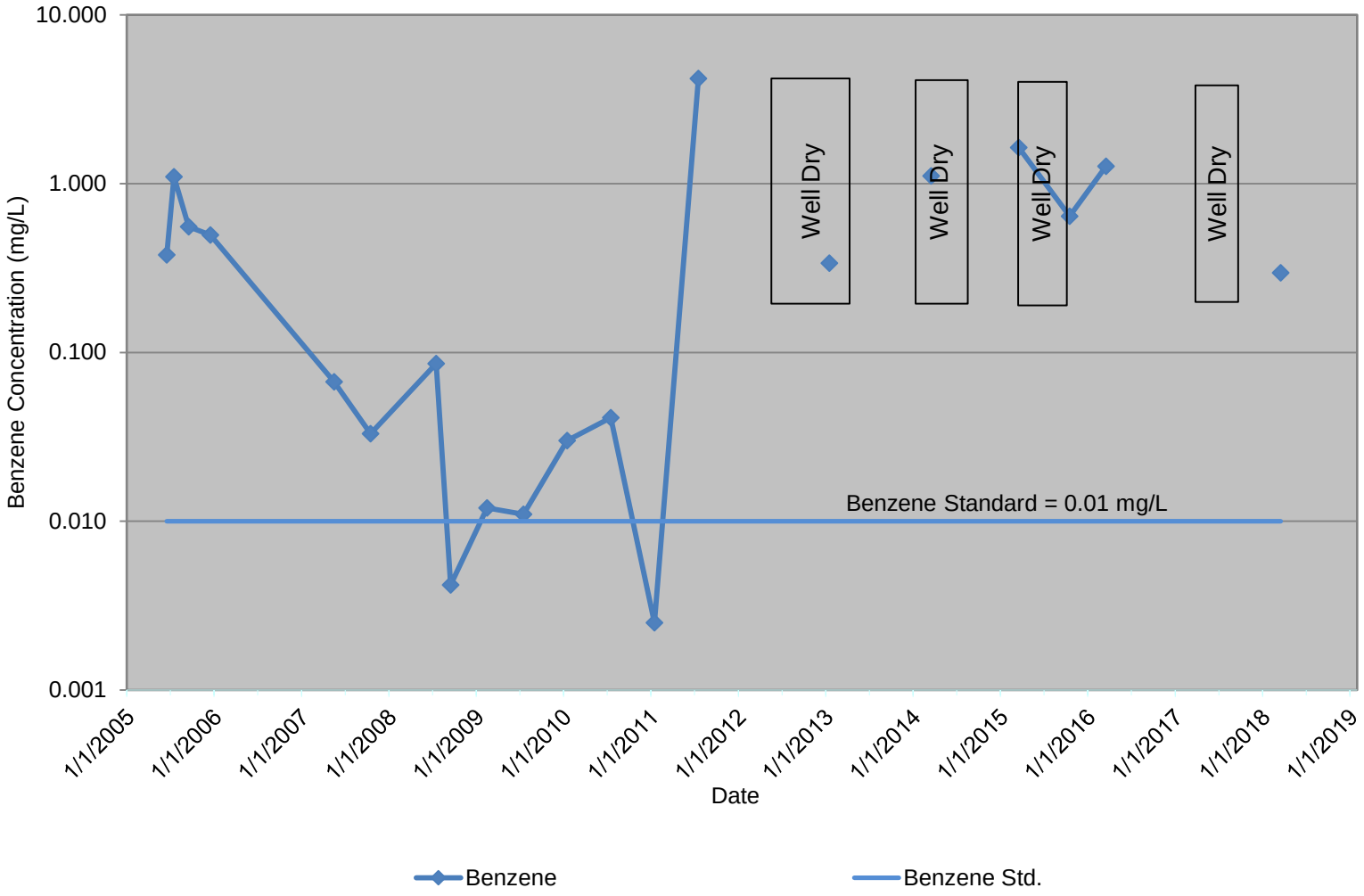
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-G



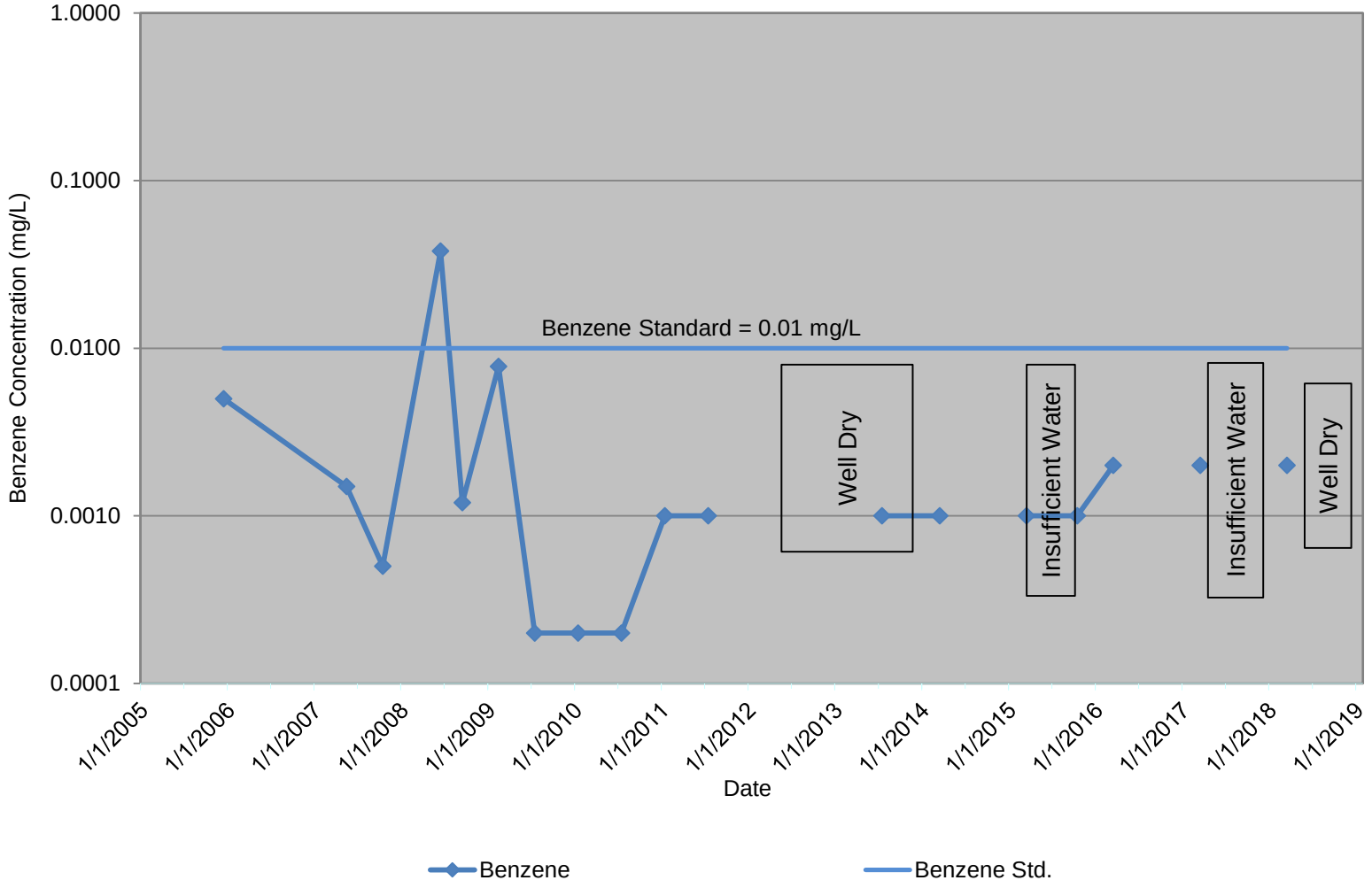
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Benzene in Grouundwater
Lea County, NM
MW-H



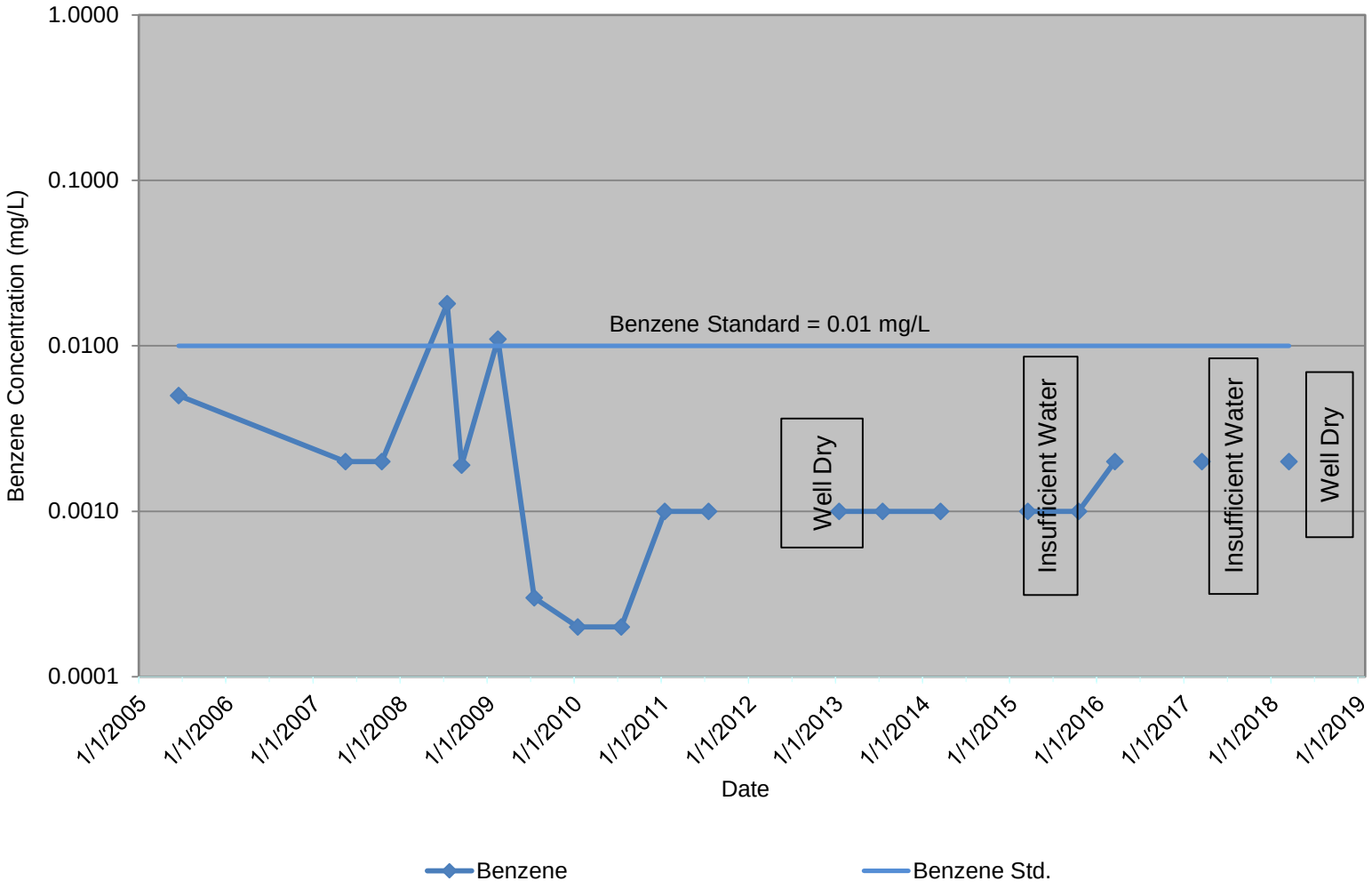
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzen in Groundwater
MW-I



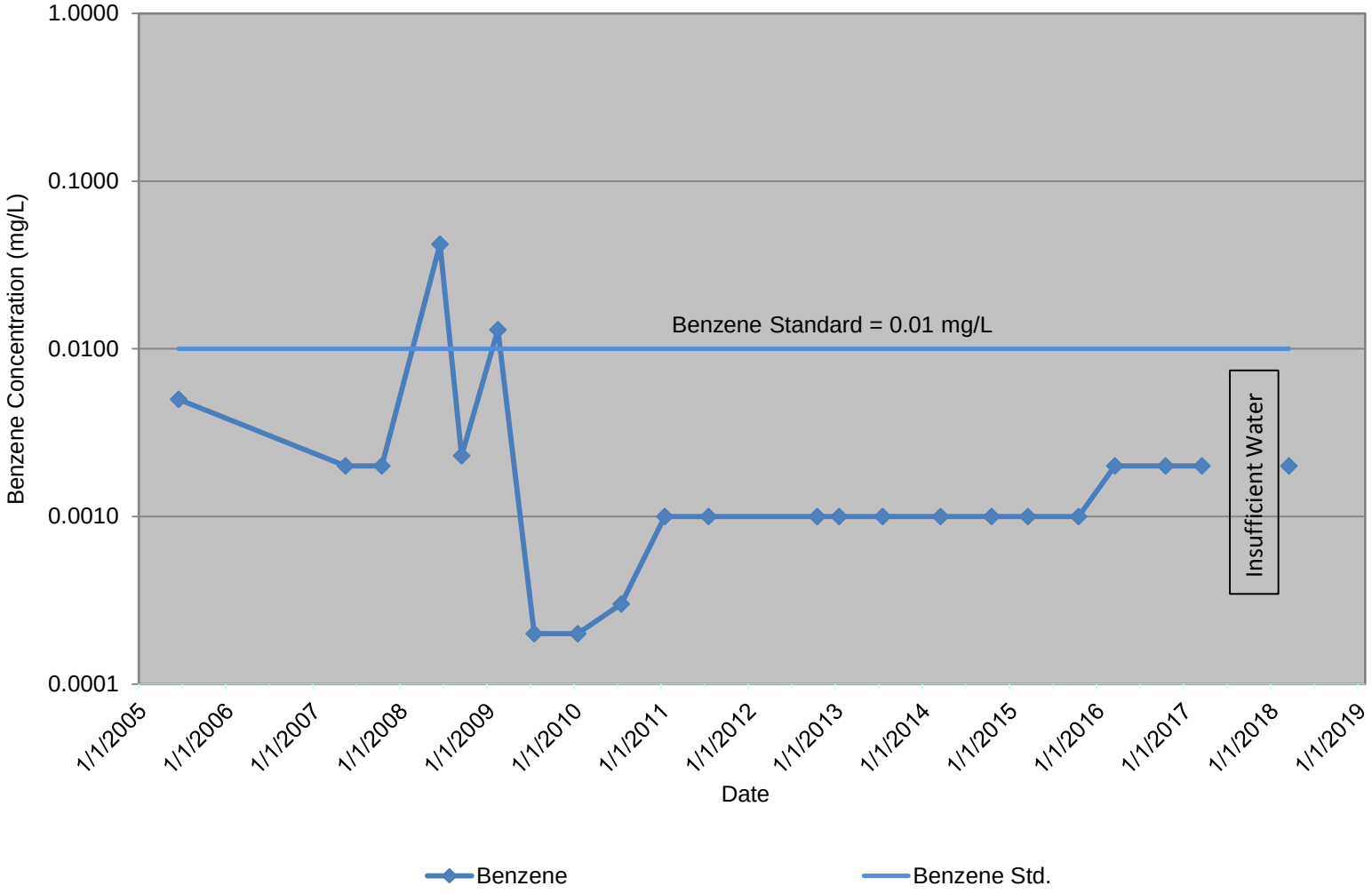
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-J



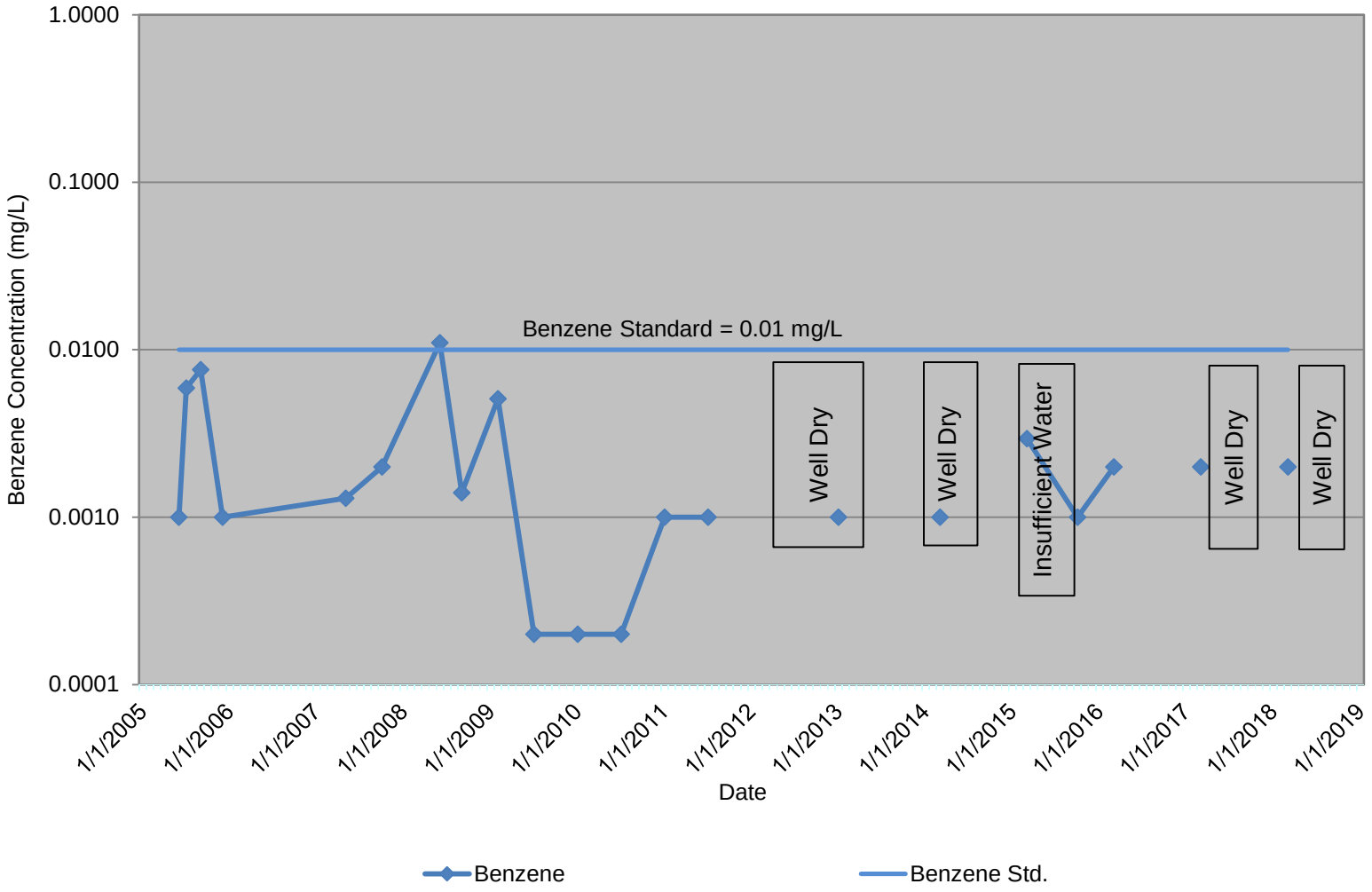
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-L



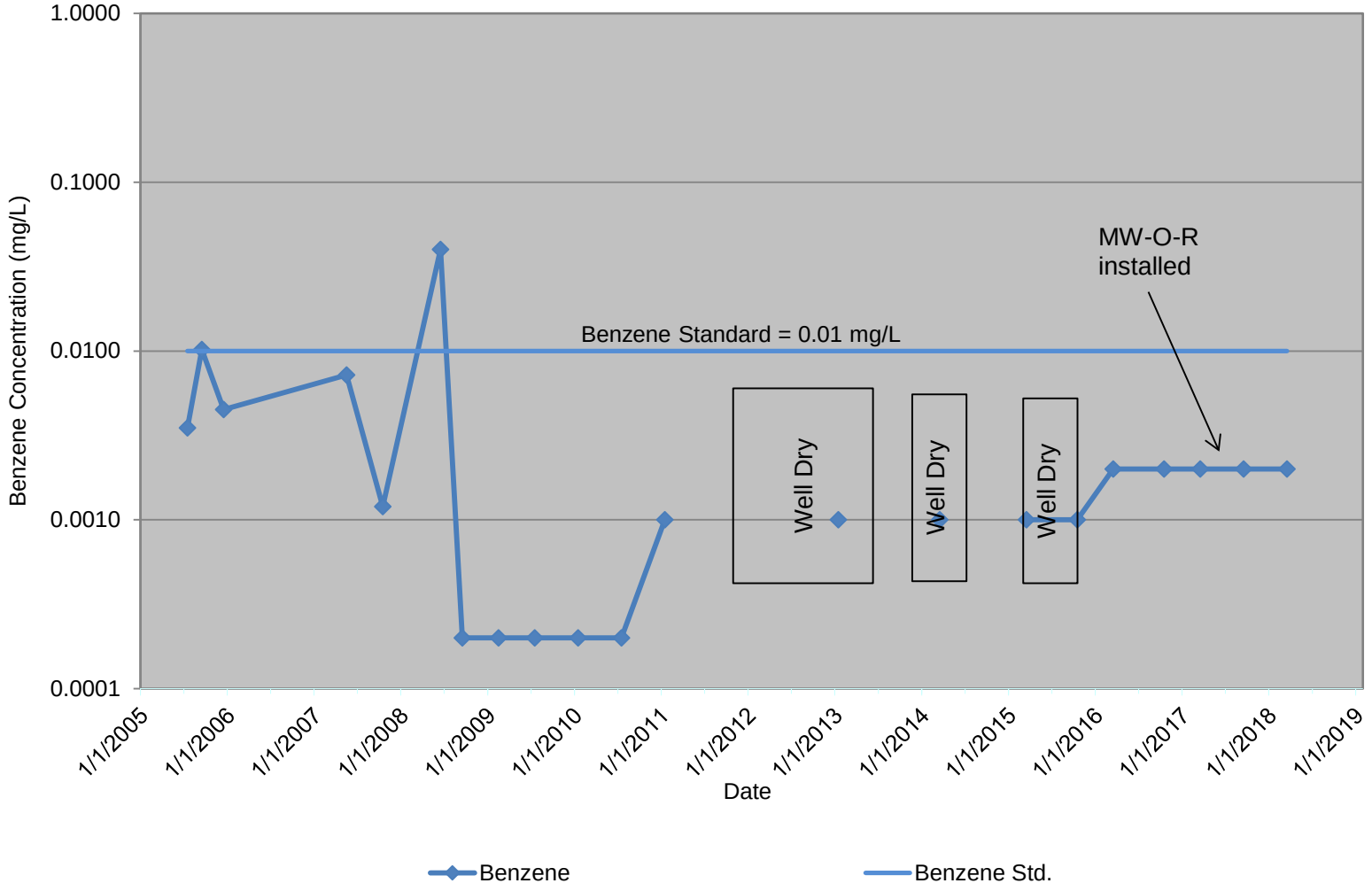
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-M



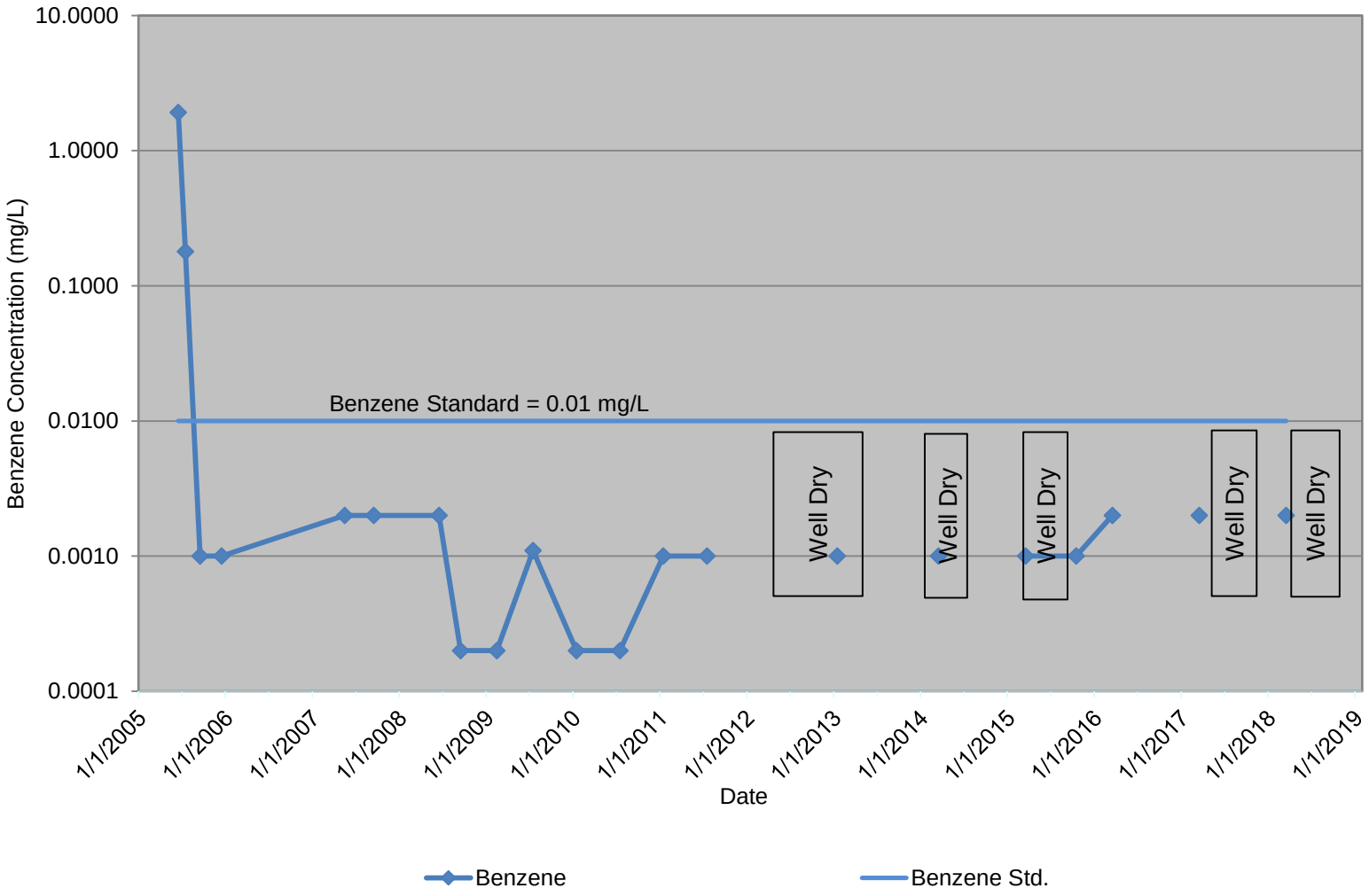
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-N



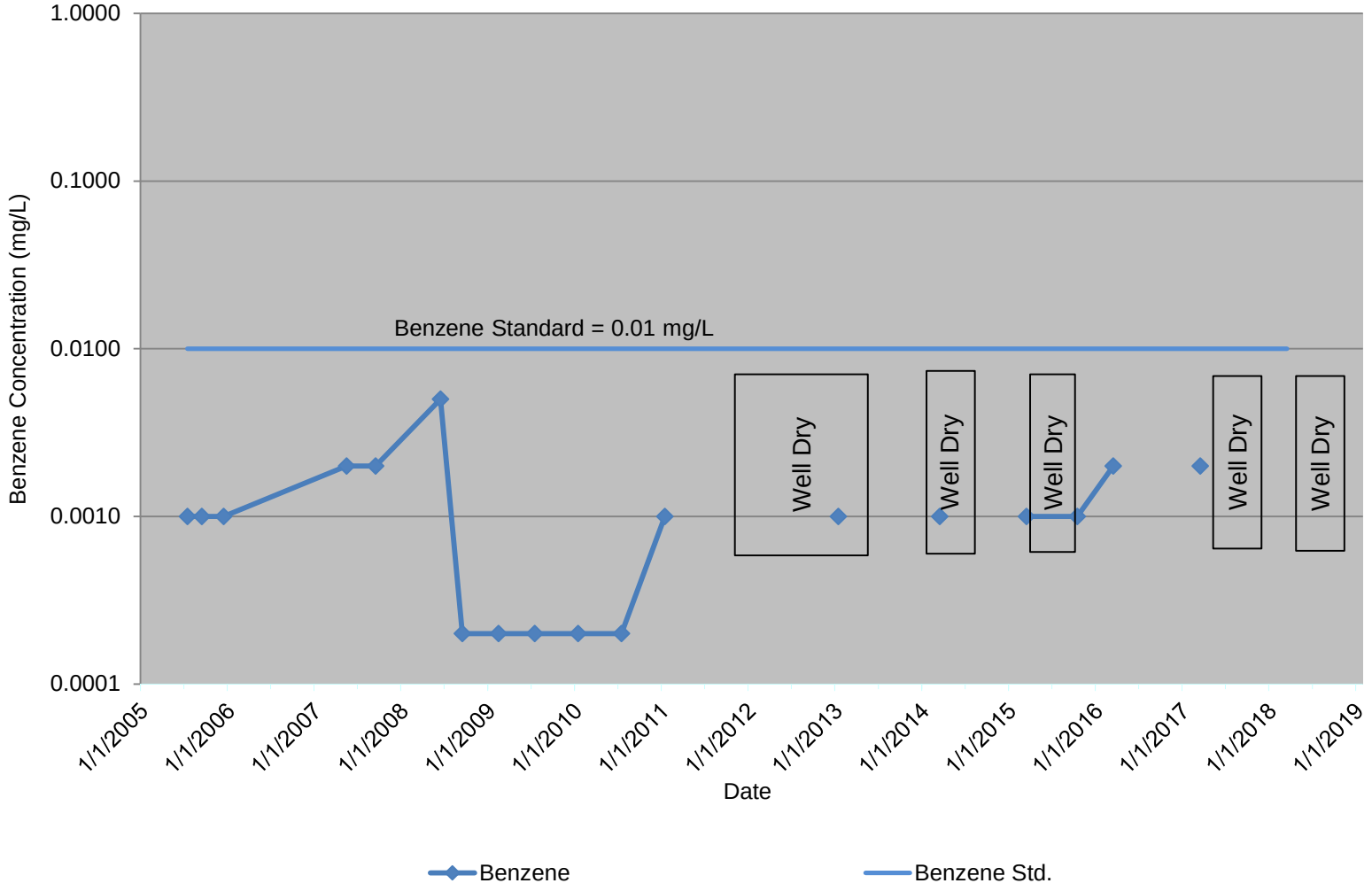
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-O and MW-O-R



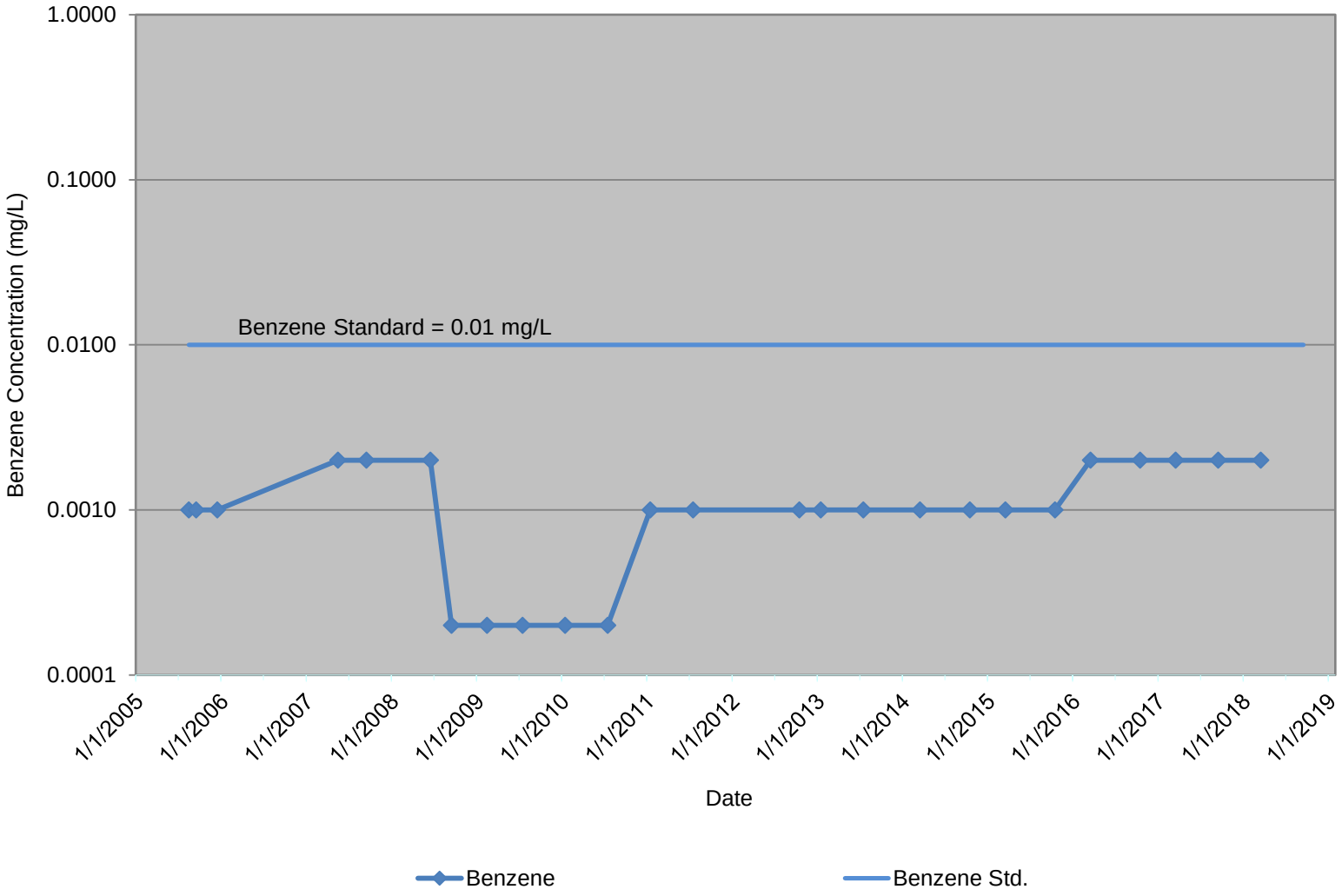
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-P



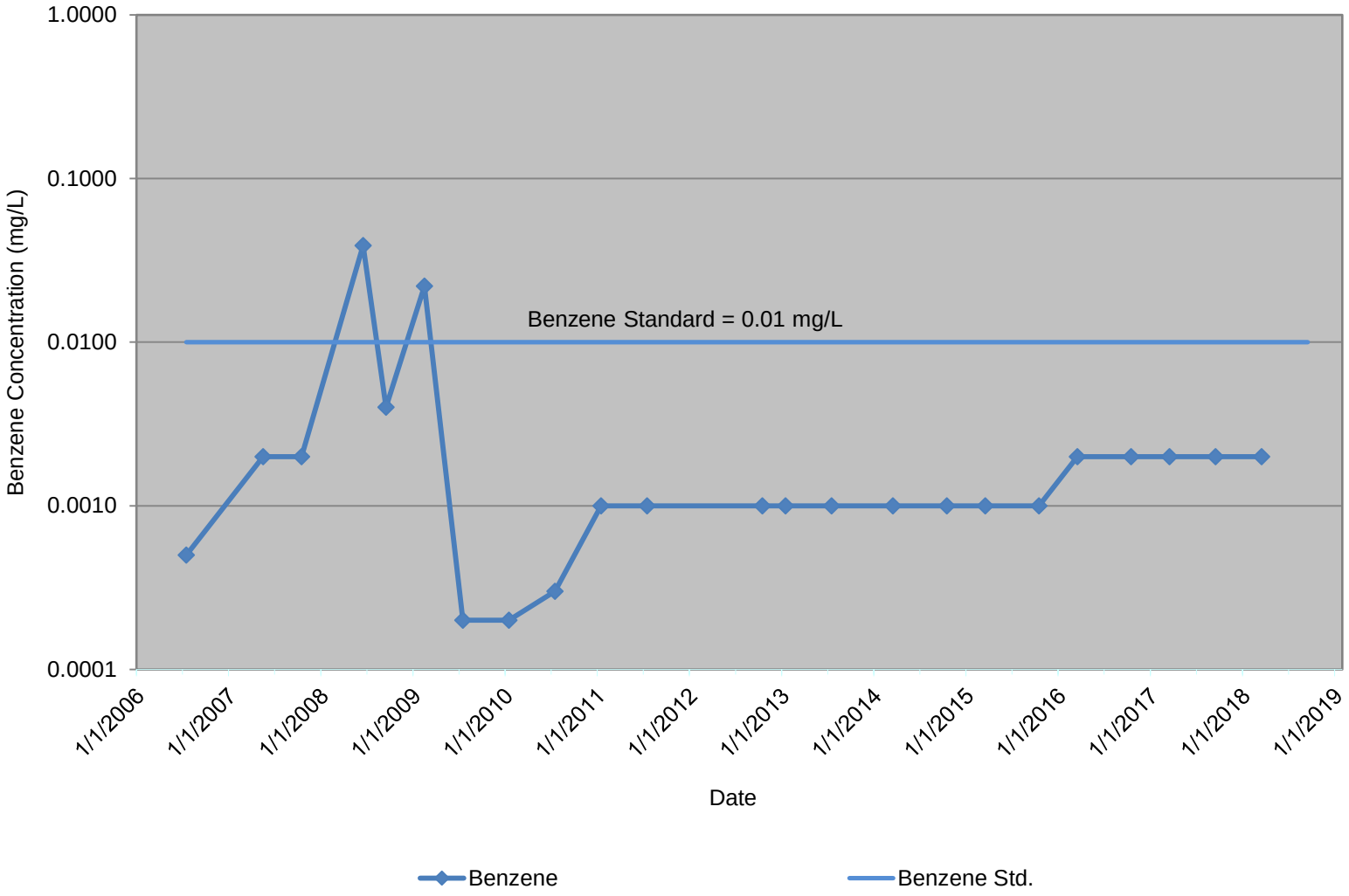
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-Q



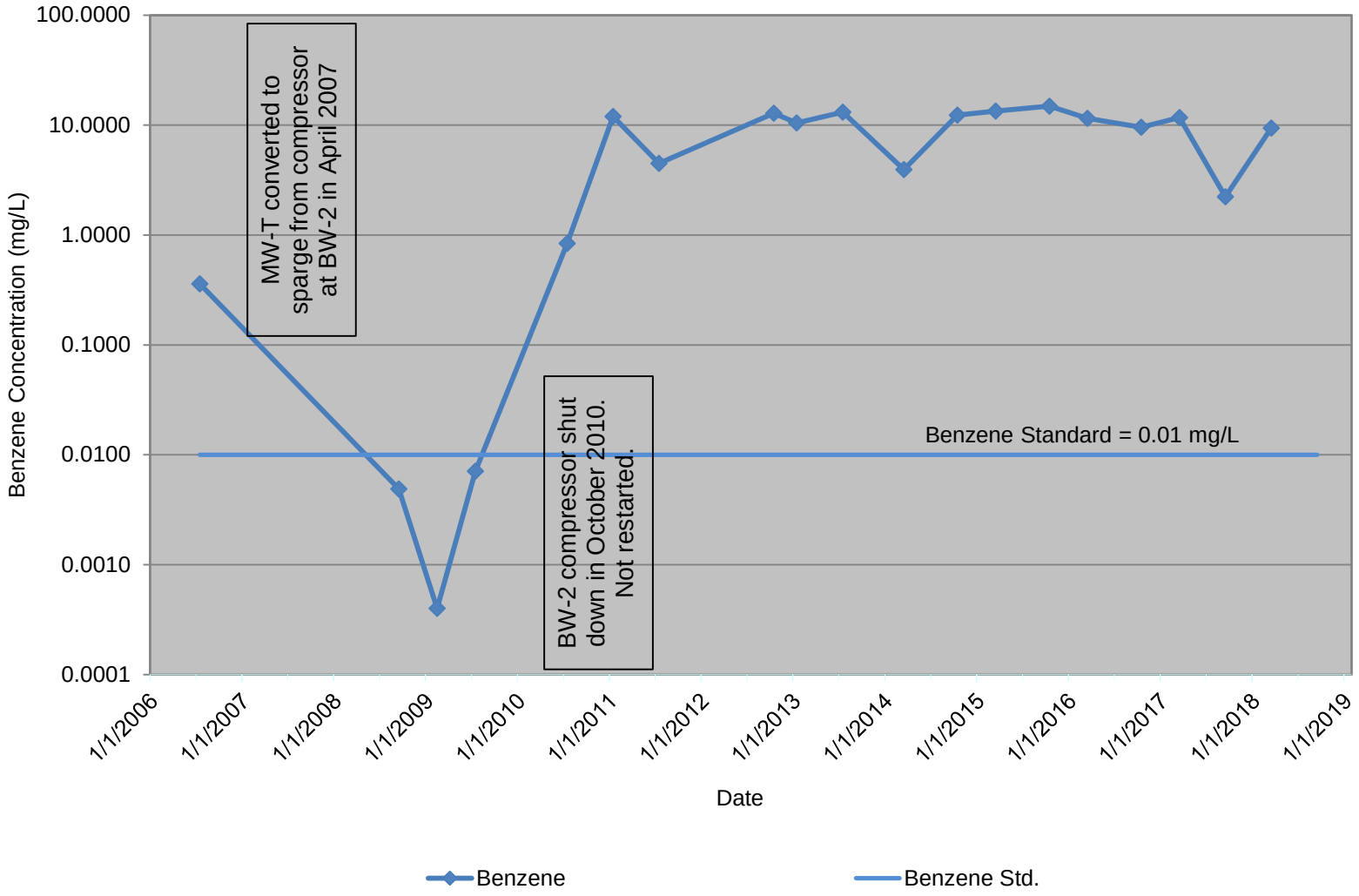
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
MW-R



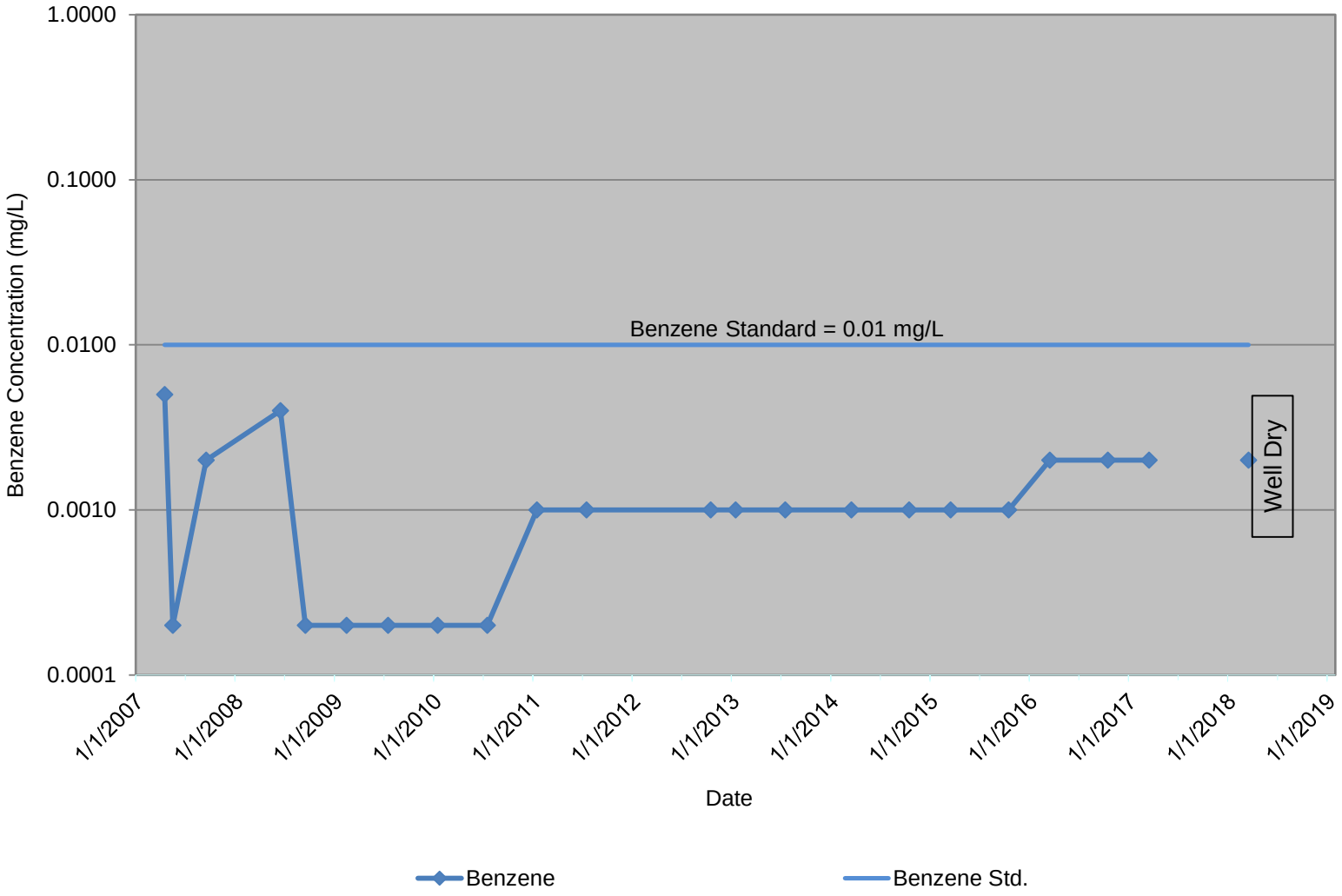
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
MW-S



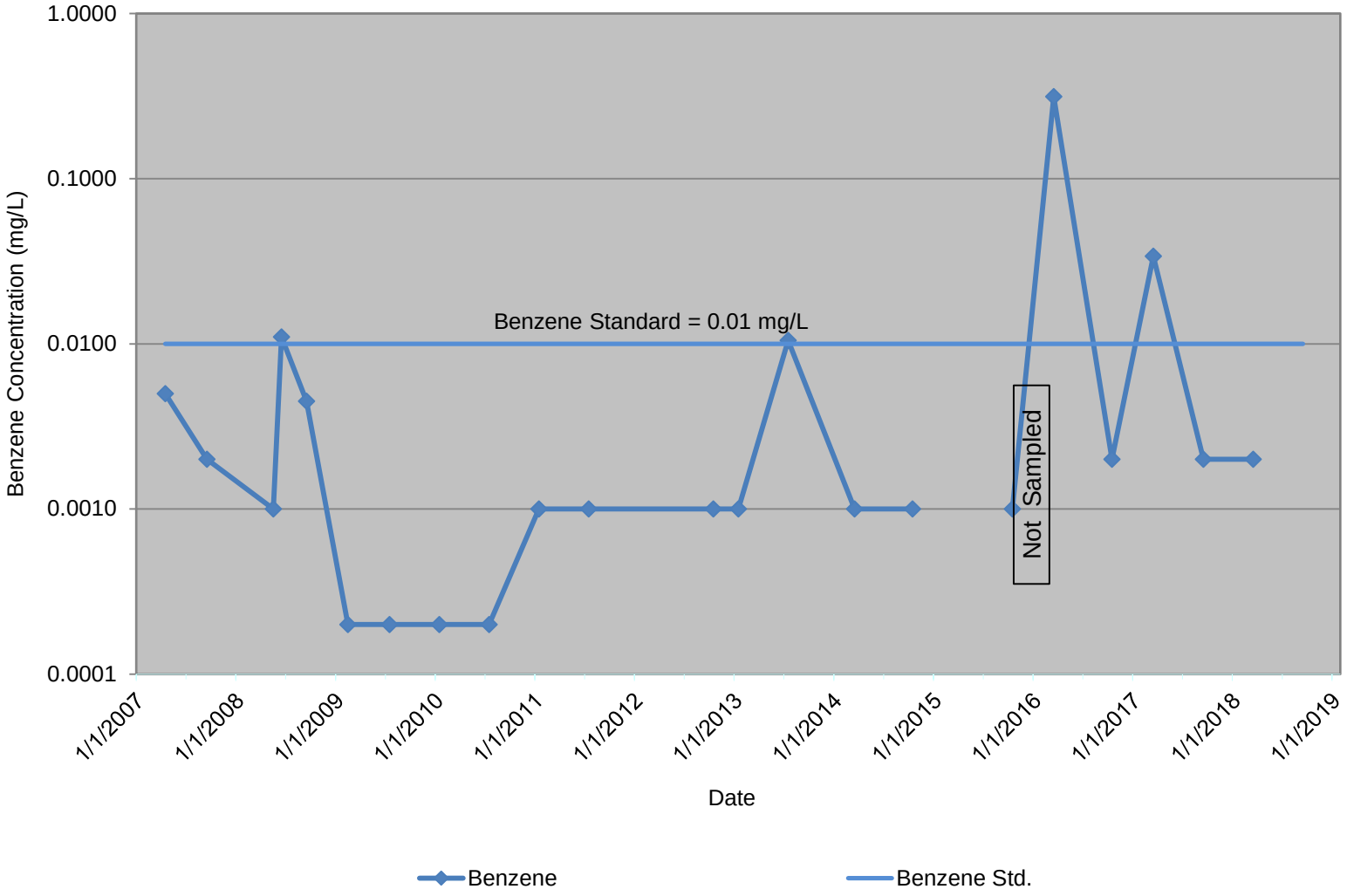
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
MW-T



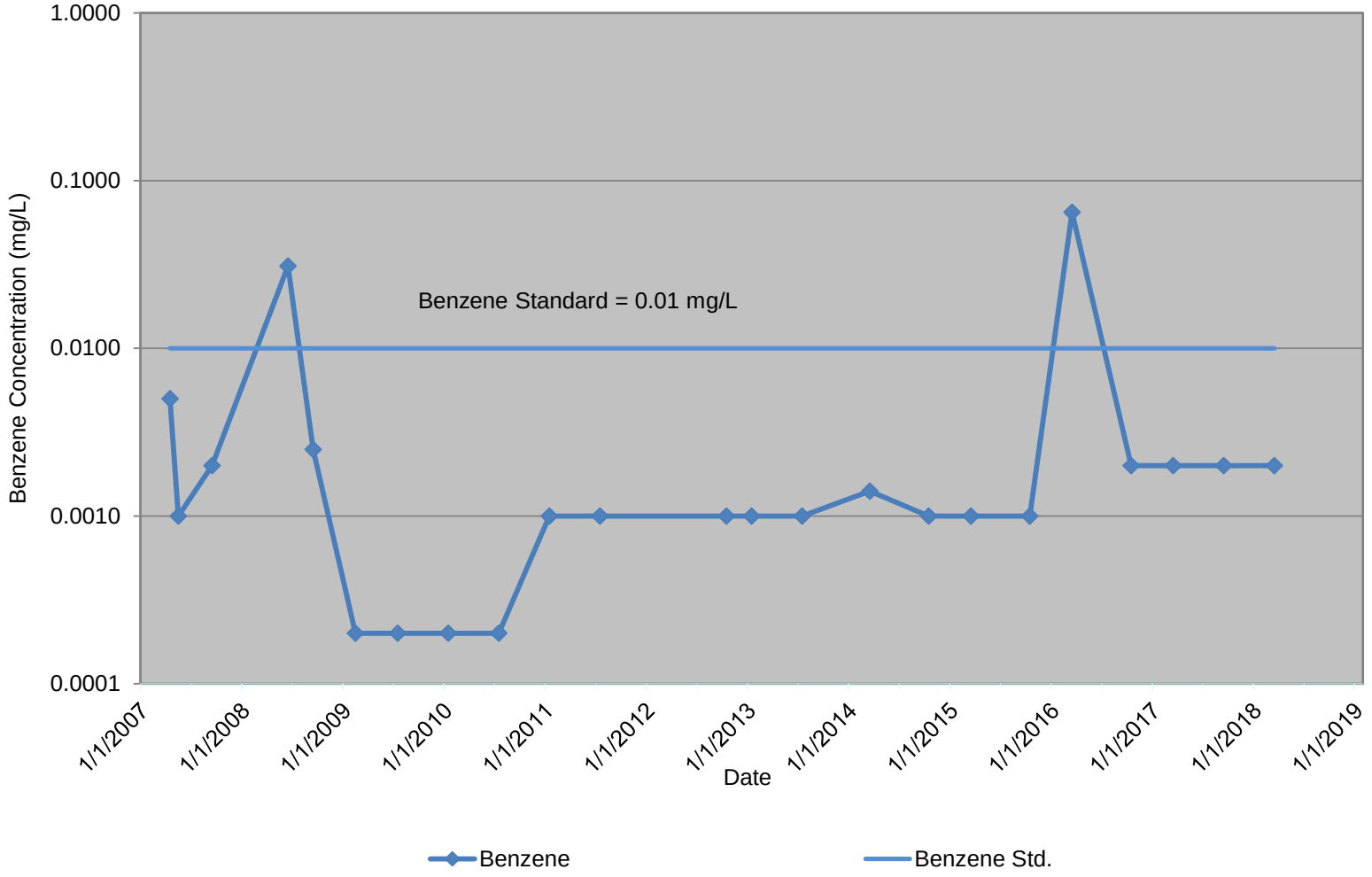
Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
MW-U



Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
MW-V



Chevron Environmental Management Company
Lovington Paddock Groundwater Remediation Site
Lea County, NM
Benzene in Groundwater
MW-W



Appendix D
Certified Laboratory Reports

Analytical Report 579552

for

GHD Services, INC- Midland

Project Manager: Scott Foord

Lovington Paddock

073020

26-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

26-MAR-18

Project Manager: **Scott Foord**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **579552**
Lovington Paddock
Project Address: NM

Scott Foord:

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) 579552. 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. 579552 will be filed for 45 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 579552

GHD Services, INC- Midland, Midland, TX

Lovington Paddock

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-R-W-180313	W	03-13-18 09:10		579552-001
MW-P-W-180313	W	03-13-18 10:20		579552-002
MW-OR-W-180313	W	03-13-18 11:35		579552-003
MW-W-W-180313	W	03-13-18 13:00		579552-004
BW-3-W-180313	W	03-13-18 14:00		579552-005
MW-B-W-180313	W	03-13-18 15:30		579552-006
MW-M-W-180314	W	03-14-18 09:25		579552-007
MW-L-W-180314	W	03-14-18 10:15		579552-008
MW-J-W-180314	W	03-14-18 11:00		579552-009
MW-S-W-180314	W	03-14-18 12:40		579552-010
MW-N-W-180314	W	03-14-18 14:05		579552-011
MW-I-W-180314	W	03-14-18 15:15		579552-012
MW-I-WD-180314	W	03-14-18 00:00		579552-013
MW-T-W-180315	W	03-15-18 09:15		579552-014
BW-2-W-180315	W	03-15-18 10:25		579552-015
MW-U-W-180315	W	03-15-18 11:25		579552-016
MW-V-W-180315	W	03-15-18 12:35		579552-017
MW-C-R-W-180315	W	03-15-18 15:10		579552-018
MW-D2-W-180315	W	03-15-18 13:40		579552-019
BW-1-W-180316	W	03-16-18 09:25		579552-020
MW-G-W-180316	W	03-16-18 10:00		579552-021
MW-G-WD-180316	W	03-16-18 00:00		579552-022
MW-F-W-180316	W	03-16-18 10:45		579552-023
MW-D-W-180316	W	03-16-18 11:30		579552-024

CASE NARRATIVE

Client Name: GHD Services, INC- Midland

Project Name: Lovington Paddock

Project ID:	*073020*	Report Date:	*26-MAR-18*
Work Order Number(s):	*579552*	Date Received:	*03/16/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3044584 BTEX by EPA 8021B

Dilutions due to poor resolution of internal on samples analyzed at a 1x caused by matrix interference.

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-001		579552-002		579552-003		579552-004		579552-005		579552-006	
	Field Id:	MW-R-W-180313		MW-P-W-180313		MW-OR-W-180313		MW-W-W-180313		BW-3-W-180313		MW-B-W-180313	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-13-18 09:10		Mar-13-18 10:20		Mar-13-18 11:35		Mar-13-18 13:00		Mar-13-18 14:00		Mar-13-18 15:30	
Alkalinity by SM2320B SUB: TX104704215-18-24	***Extracted:***	Mar-20-18 16:00				Mar-20-18 16:00				Mar-20-18 16:00			
	Analyzed:	Mar-20-18 17:38				Mar-20-18 17:51				Mar-20-18 17:57			
	Units/RL:	mg/L	RL			mg/L	RL			mg/L	RL		
Alkalinity, Total (CaCO3)		214	4.00			289	4.00			202	4.00		
BTEX by EPA 8021B	***Extracted:***	Mar-21-18 17:15		Mar-23-18 10:00		Mar-21-18 17:15		Mar-21-18 17:15		Mar-21-18 17:15		Mar-22-18 17:00	
	Analyzed:	Mar-21-18 21:46		Mar-23-18 17:09		Mar-21-18 22:23		Mar-21-18 22:41		Mar-21-18 23:00		Mar-23-18 14:15	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.0185	0.00200	2.05	0.100
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.00708	0.00200	ND	0.100
Ethylbenzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.100
m,p-Xylenes		ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.200
o-Xylene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.100
Total Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.100
Total BTEX		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.0256	0.00200	2.05	0.100
Headspace Analysis by RSKSOP175 SUB: TX104704295-17-16	***Extracted:***												
	Analyzed:	Mar-20-18 09:30				Mar-20-18 09:30				Mar-20-18 09:30			
	Units/RL:	ug/L	RL			ug/L	RL			ug/L	RL		
Methane		ND	1.10			ND	1.10			ND	1.10		
Inorganic Anions by EPA 300 SUB: TX104704215-18-24	***Extracted:***	Mar-17-18 10:00				Mar-17-18 10:00				Mar-17-18 10:00			
	Analyzed:	Mar-17-18 12:13				Mar-17-18 12:24				Mar-17-18 12:55			
	Units/RL:	mg/L	RL			mg/L	RL			mg/L	RL		
Sulfate		46.9	0.500			39.3	0.500			61.2	0.500		

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-001		579552-002		579552-003		579552-004		579552-005		579552-006	
	Field Id:	MW-R-W-180313		MW-P-W-180313		MW-OR-W-180313		MW-W-W-180313		BW-3-W-180313		MW-B-W-180313	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-13-18 09:10		Mar-13-18 10:20		Mar-13-18 11:35		Mar-13-18 13:00		Mar-13-18 14:00		Mar-13-18 15:30	
TPH by SW8015 Mod	***Extracted:***	Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00	
	Analyzed:	Mar-21-18 19:08		Mar-21-18 19:33		Mar-21-18 19:58		Mar-21-18 20:23		Mar-21-18 20:48		Mar-21-18 21:13	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Gasoline Range Hydrocarbons (GRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	5.50	1.50
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	3.02	1.50
Oil Range Hydrocarbons (ORO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Total TPH		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	8.52	1.50

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-007		579552-008		579552-009		579552-010		579552-011		579552-012	
	Field Id:	MW-M-W-180314		MW-L-W-180314		MW-J-W-180314		MW-S-W-180314		MW-N-W-180314		MW-I-W-180314	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-14-18 09:25		Mar-14-18 10:15		Mar-14-18 11:00		Mar-14-18 12:40		Mar-14-18 14:05		Mar-14-18 15:15	
Alkalinity by SM2320B	***Extracted:***							Mar-20-18 16:00					
	Analyzed:							Mar-20-18 18:03					
	Units/RL:							mg/L	RL				
Alkalinity, Total (CaCO3)								171	4.00				
BTEX by EPA 8021B	***Extracted:***	Mar-21-18 17:15		Mar-22-18 17:00		Mar-21-18 17:15		Mar-21-18 17:15		Mar-21-18 17:15		Mar-22-18 17:00	
	Analyzed:	Mar-21-18 23:19		Mar-23-18 09:28		Mar-22-18 01:12		Mar-22-18 01:30		Mar-22-18 01:49		Mar-23-18 10:25	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.296	0.00200
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.00472	0.00200
Ethylbenzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
m,p-Xylenes		ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400
o-Xylene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total BTEX		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.301	0.00200
Headspace Analysis by RSKSOP175	***Extracted:***												
	Analyzed:							Mar-20-18 09:30					
	Units/RL:							ug/L	RL				
Methane								ND	1.10				
Inorganic Anions by EPA 300	***Extracted:***							Mar-17-18 10:00					
	Analyzed:							Mar-17-18 13:06					
	Units/RL:							mg/L	RL				
Sulfate								78.5	0.500				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-007		579552-008		579552-009		579552-010		579552-011		579552-012	
	Field Id:	MW-M-W-180314		MW-L-W-180314		MW-J-W-180314		MW-S-W-180314		MW-N-W-180314		MW-I-W-180314	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-14-18 09:25		Mar-14-18 10:15		Mar-14-18 11:00		Mar-14-18 12:40		Mar-14-18 14:05		Mar-14-18 15:15	
TPH by SW8015 Mod	***Extracted:***	Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00	
	Analyzed:	Mar-21-18 21:38		Mar-21-18 22:06		Mar-21-18 23:22		Mar-21-18 23:47		Mar-22-18 00:15		Mar-22-18 00:39	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Gasoline Range Hydrocarbons (GRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	1.75	1.50
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Oil Range Hydrocarbons (ORO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Total TPH		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	1.75	1.50

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-013		579552-014		579552-015		579552-016		579552-017		579552-018	
	Field Id:	MW-I-WD-180314		MW-T-W-180315		BW-2-W-180315		MW-U-W-180315		MW-V-W-180315		MW-C-R-W-180315	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-14-18 00:00		Mar-15-18 09:15		Mar-15-18 10:25		Mar-15-18 11:25		Mar-15-18 12:35		Mar-15-18 15:10	
Alkalinity by SM2320B	***Extracted:***			Mar-20-18 16:00						Mar-20-18 16:00		Mar-20-18 16:00	
	Analyzed:			Mar-20-18 18:10						Mar-20-18 18:17		Mar-20-18 18:37	
	Units/RL:			mg/L	RL					mg/L	RL	mg/L	RL
Alkalinity, Total (CaCO3)				365	4.00					366	4.00	319	4.00
BTEX by EPA 8021B	***Extracted:***	Mar-22-18 17:00		Mar-22-18 17:00		Mar-21-18 17:15		Mar-21-18 17:15		Mar-21-18 17:15		Mar-21-18 17:15	
	Analyzed:	Mar-23-18 10:43		Mar-23-18 13:50		Mar-22-18 02:08		Mar-22-18 02:26		Mar-22-18 02:45		Mar-22-18 03:04	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.267	0.00200	9.42	0.400	0.00219	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Toluene		0.00399	0.00200	ND	0.400	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00200	ND	0.400	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
m,p-Xylenes		ND	0.00400	ND	0.800	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400
o-Xylene		ND	0.00200	ND	0.400	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total Xylenes		ND	0.00200	ND	0.400	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total BTEX		0.271	0.00200	9.42	0.400	0.00219	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Headspace Analysis by RSKSOP175	***Extracted:***												
	Analyzed:			Mar-20-18 09:30						Mar-20-18 09:30		Mar-20-18 09:30	
	Units/RL:			ug/L	RL					ug/L	RL	ug/L	RL
Methane				234	1.10					ND	1.10	ND	1.10
Inorganic Anions by EPA 300	***Extracted:***			Mar-17-18 10:00						Mar-17-18 10:00		Mar-17-18 10:00	
	Analyzed:			Mar-17-18 11:31						Mar-17-18 11:42		Mar-17-18 11:52	
	Units/RL:			mg/L	RL					mg/L	RL	mg/L	RL
Sulfate				0.578	0.500					17.2	0.500	49.9	0.500

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-013		579552-014		579552-015		579552-016		579552-017		579552-018	
	Field Id:	MW-I-WD-180314		MW-T-W-180315		BW-2-W-180315		MW-U-W-180315		MW-V-W-180315		MW-C-R-W-180315	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-14-18 00:00		Mar-15-18 09:15		Mar-15-18 10:25		Mar-15-18 11:25		Mar-15-18 12:35		Mar-15-18 15:10	
TPH by SW8015 Mod	***Extracted:***	Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00		Mar-21-18 14:00	
	Analyzed:	Mar-22-18 01:03		Mar-22-18 01:29		Mar-22-18 01:54		Mar-22-18 02:22		Mar-22-18 02:46		Mar-22-18 03:12	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Gasoline Range Hydrocarbons (GRO)		1.51	1.50	18.8	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Oil Range Hydrocarbons (ORO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Total TPH		1.51	1.50	18.8	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50

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

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested	*Lab Id:*	579552-019		579552-020		579552-021		579552-022		579552-023		579552-024	
	Field Id:	MW-D2-W-180315		BW-1-W-180316		MW-G-W-180316		MW-G-WD-180316		MW-F-W-180316		MW-D-W-180316	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-15-18 13:40		Mar-16-18 09:25		Mar-16-18 10:00		Mar-16-18 00:00		Mar-16-18 10:45		Mar-16-18 11:30	
Alkalinity by SM2320B SUB: TX104704215-18-24	*Extracted:*	Mar-20-18 16:00		Mar-20-18 16:00									
	Analyzed:	Mar-20-18 18:44		Mar-20-18 18:50									
	Units/RL:	mg/L	RL	mg/L	RL								
Alkalinity, Total (CaCO3)		288	4.00	295	4.00								
BTEX by EPA 8021B	*Extracted:*	Mar-23-18 10:00		Mar-22-18 17:00		Mar-22-18 17:00		Mar-22-18 17:00		Mar-22-18 17:00		Mar-22-18 17:00	
	Analyzed:	Mar-23-18 16:51		Mar-23-18 11:02		Mar-23-18 11:21		Mar-23-18 11:40		Mar-23-18 11:58		Mar-23-18 12:17	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00200	0.206	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
m,p-Xylenes		ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400
o-Xylene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total BTEX		ND	0.00200	0.206	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Headspace Analysis by RSKSOP175 SUB: TX104704295-17-16	*Extracted:*												
	Analyzed:	Mar-20-18 09:30		Mar-22-18 10:00									
	Units/RL:	ug/L	RL	ug/L	RL								
Methane		ND	1.10	24.8	1.10								
Inorganic Anions by EPA 300 SUB: TX104704215-18-24	*Extracted:*	Mar-17-18 10:00		Mar-17-18 10:00									
	Analyzed:	Mar-17-18 12:03		Mar-17-18 13:16									
	Units/RL:	mg/L	RL	mg/L	RL								
Sulfate		50.7	0.500	36.2	10.0								

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 579552

GHD Services, INC- Midland, Midland, TX

Project Name: Lovington Paddock

Project Id: 073020
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Fri Mar-16-18 03:36 pm
Report Date: 26-MAR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	579552-019		579552-020		579552-021		579552-022		579552-023		579552-024	
	Field Id:	MW-D2-W-180315		BW-1-W-180316		MW-G-W-180316		MW-G-WD-180316		MW-F-W-180316		MW-D-W-180316	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Mar-15-18 13:40		Mar-16-18 09:25		Mar-16-18 10:00		Mar-16-18 00:00		Mar-16-18 10:45		Mar-16-18 11:30	
TPH by SW8015 Mod	***Extracted:***	Mar-22-18 14:00		Mar-22-18 14:00		Mar-22-18 14:00		Mar-22-18 14:00		Mar-22-18 14:00		Mar-22-18 14:00	
	Analyzed:	Mar-22-18 19:11		Mar-22-18 20:30		Mar-22-18 20:55		Mar-22-18 21:20		Mar-22-18 21:43		Mar-22-18 22:06	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Gasoline Range Hydrocarbons (GRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Oil Range Hydrocarbons (ORO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Total TPH		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50

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

Kelsey Brooks
Project Manager

Final 1.000

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044457 **Sample:** 579552-001 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 19:08

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.64	9.99	96	70-135	
o-Terphenyl	4.85	4.99	97	70-135	

Lab Batch #: 3044457 **Sample:** 579552-002 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 19:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.2	9.99	102	70-135	
o-Terphenyl	5.14	5.00	103	70-135	

Lab Batch #: 3044457 **Sample:** 579552-003 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 19:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.4	9.99	114	70-135	
o-Terphenyl	5.81	5.00	116	70-135	

Lab Batch #: 3044457 **Sample:** 579552-004 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 20:23

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	9.98	101	70-135	
o-Terphenyl	5.07	4.99	102	70-135	

Lab Batch #: 3044457 **Sample:** 579552-005 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 20:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.6	9.99	116	70-135	
o-Terphenyl	5.82	4.99	117	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044457 **Sample:** 579552-006 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 21:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.1	9.98	121	70-135	
o-Terphenyl	5.85	4.99	117	70-135	

Lab Batch #: 3044457 **Sample:** 579552-007 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 21:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.9	9.98	119	70-135	
o-Terphenyl	5.99	4.99	120	70-135	

Lab Batch #: 3044571 **Sample:** 579552-001 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 21:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3044457 **Sample:** 579552-008 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 22:06

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	9.98	101	70-135	
o-Terphenyl	5.07	4.99	102	70-135	

Lab Batch #: 3044571 **Sample:** 579552-003 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 22:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0223	0.0300	74	70-130	
4-Bromofluorobenzene	0.0315	0.0300	105	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044571 **Sample:** 579552-004 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 22:41

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

Lab Batch #: 3044571 **Sample:** 579552-005 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 23:00

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0210	0.0300	70	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3044571 **Sample:** 579552-007 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 23:19

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3044457 **Sample:** 579552-009 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 23:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.8	9.98	108	70-135	
o-Terphenyl	5.50	4.99	110	70-135	

Lab Batch #: 3044457 **Sample:** 579552-010 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/21/18 23:47

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.89	9.99	99	70-135	
o-Terphenyl	4.96	5.00	99	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044457 **Sample:** 579552-011 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 00:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	9.99	101	70-135	
o-Terphenyl	5.09	4.99	102	70-135	

Lab Batch #: 3044457 **Sample:** 579552-012 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 00:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.4	9.98	104	70-135	
o-Terphenyl	5.18	4.99	104	70-135	

Lab Batch #: 3044457 **Sample:** 579552-013 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.2	9.98	102	70-135	
o-Terphenyl	5.12	4.99	103	70-135	

Lab Batch #: 3044571 **Sample:** 579552-009 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3044457 **Sample:** 579552-014 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.9	9.99	109	70-135	
o-Terphenyl	5.44	5.00	109	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044571 **Sample:** 579552-010 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

Lab Batch #: 3044571 **Sample:** 579552-011 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	70-130	
4-Bromofluorobenzene	0.0324	0.0300	108	70-130	

Lab Batch #: 3044457 **Sample:** 579552-015 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 01:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.3	9.99	103	70-135	
o-Terphenyl	5.18	5.00	104	70-135	

Lab Batch #: 3044571 **Sample:** 579552-015 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 02:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3044457 **Sample:** 579552-016 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 02:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	9.98	101	70-135	
o-Terphenyl	5.06	4.99	101	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044571 **Sample:** 579552-016 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 02:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	70-130	
4-Bromofluorobenzene	0.0350	0.0300	117	70-130	

Lab Batch #: 3044571 **Sample:** 579552-017 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 02:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

Lab Batch #: 3044457 **Sample:** 579552-017 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 02:46

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.2	9.99	102	70-135	
o-Terphenyl	5.13	5.00	103	70-135	

Lab Batch #: 3044571 **Sample:** 579552-018 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 03:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

Lab Batch #: 3044457 **Sample:** 579552-018 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 03:12

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.6	9.98	116	70-135	
o-Terphenyl	5.87	4.99	118	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 579552-019 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 19:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.31	9.98	93	70-135	
o-Terphenyl	4.75	4.99	95	70-135	

Lab Batch #: 3044592 **Sample:** 579552-020 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 20:30

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.0	9.98	110	70-135	
o-Terphenyl	5.61	4.99	112	70-135	

Lab Batch #: 3044592 **Sample:** 579552-021 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 20:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.12	9.99	91	70-135	
o-Terphenyl	4.61	5.00	92	70-135	

Lab Batch #: 3044592 **Sample:** 579552-022 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 21:20

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.27	9.99	93	70-135	
o-Terphenyl	4.67	5.00	93	70-135	

Lab Batch #: 3044592 **Sample:** 579552-023 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 21:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.28	9.99	93	70-135	
o-Terphenyl	4.64	5.00	93	70-135	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 579552-024 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 22:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.88	9.98	99	70-135	
o-Terphenyl	5.08	4.99	102	70-135	

Lab Batch #: 3044584 **Sample:** 579552-008 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 09:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	70-130	
4-Bromofluorobenzene	0.0335	0.0300	112	70-130	

Lab Batch #: 3044584 **Sample:** 579552-012 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 10:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

Lab Batch #: 3044584 **Sample:** 579552-013 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 10:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

Lab Batch #: 3044584 **Sample:** 579552-020 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 11:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	70-130	
4-Bromofluorobenzene	0.0252	0.0300	84	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044584 **Sample:** 579552-021 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 11:21

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	70-130	
4-Bromofluorobenzene	0.0336	0.0300	112	70-130	

Lab Batch #: 3044584 **Sample:** 579552-022 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 11:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3044584 **Sample:** 579552-023 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 11:58

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3044584 **Sample:** 579552-024 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 12:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3044584 **Sample:** 579552-014 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 13:50

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044584 **Sample:** 579552-006 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 14:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0222	0.0300	74	70-130	
4-Bromofluorobenzene	0.0377	0.0300	126	70-130	

Lab Batch #: 3044717 **Sample:** 579552-019 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 16:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	70-130	
4-Bromofluorobenzene	0.0336	0.0300	112	70-130	

Lab Batch #: 3044717 **Sample:** 579552-002 / SMP **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 17:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3044457 **Sample:** 7641239-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 16:01

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	10.0	101	70-135	
o-Terphenyl	5.13	5.00	103	70-135	

Lab Batch #: 3044571 **Sample:** 7641353-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 21:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 7641315-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 17:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.58	10.0	96	70-135	
o-Terphenyl	4.95	5.00	99	70-135	

Lab Batch #: 3044584 **Sample:** 7641366-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3044717 **Sample:** 7641384-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/23/18 16:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3044457 **Sample:** 7641239-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 16:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.2	10.0	112	70-135	
o-Terphenyl	5.44	5.00	109	70-135	

Lab Batch #: 3044571 **Sample:** 7641353-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 19:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	70-130	
4-Bromofluorobenzene	0.0377	0.0300	126	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 7641315-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 18:21

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.73	10.0	97	70-135	
o-Terphenyl	4.79	5.00	96	70-135	

Lab Batch #: 3044584 **Sample:** 7641366-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 21:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0219	0.0300	73	70-130	
4-Bromofluorobenzene	0.0363	0.0300	121	70-130	

Lab Batch #: 3044717 **Sample:** 7641384-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/23/18 14:54

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3044457 **Sample:** 7641239-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 16:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.7	10.0	117	70-135	
o-Terphenyl	5.74	5.00	115	70-135	

Lab Batch #: 3044571 **Sample:** 7641353-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 19:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 7641315-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 18:46

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.79	10.0	98	70-135	
o-Terphenyl	4.86	5.00	97	70-135	

Lab Batch #: 3044584 **Sample:** 7641366-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 21:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	70-130	
4-Bromofluorobenzene	0.0348	0.0300	116	70-130	

Lab Batch #: 3044717 **Sample:** 7641384-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/23/18 15:15

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3044457 **Sample:** 579531-007 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 17:51

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.3	9.98	113	70-135	
o-Terphenyl	5.82	4.99	117	70-135	

Lab Batch #: 3044571 **Sample:** 579531-007 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 20:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0226	0.0300	75	70-130	
4-Bromofluorobenzene	0.0355	0.0300	118	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 579552-019 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 19:37

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8.10	9.98	81	70-135	
o-Terphenyl	4.34	4.99	87	70-135	

Lab Batch #: 3044584 **Sample:** 579457-012 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 22:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0220	0.0300	73	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

Lab Batch #: 3044717 **Sample:** 579552-019 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 15:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0321	0.0300	107	70-130	

Lab Batch #: 3044457 **Sample:** 579531-007 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 18:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.6	9.99	106	70-135	
o-Terphenyl	5.48	4.99	110	70-135	

Lab Batch #: 3044571 **Sample:** 579531-007 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/21/18 20:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Paddock

Work Orders : 579552, **Project ID:** 073020

Lab Batch #: 3044592 **Sample:** 579552-019 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/22/18 20:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	7.48	9.99	75	70-135	
o-Terphenyl	3.92	4.99	79	70-135	

Lab Batch #: 3044584 **Sample:** 579457-012 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03/22/18 22:50

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3044717 **Sample:** 579552-019 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03/23/18 15:54

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0216	0.0300	72	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

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

BS / BSD Recoveries

Project Name: Lovington Paddock

Work Order #: 579552 **Project ID:** 073020

Analyst: DHE **Date Prepared:** 03/20/2018 **Date Analyzed:** 03/20/2018

Lab Batch ID: 3044291 **Sample:** 7641140-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Alkalinity by SM2320B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Alkalinity, Total (CaCO3)	<4.00	250	236	94	250	238	95	1	80-120	20	

Analyst: ALJ **Date Prepared:** 03/21/2018 **Date Analyzed:** 03/21/2018

Lab Batch ID: 3044571 **Sample:** 7641353-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.106	106	0.100	0.0900	90	16	70-130	25	
Toluene	<0.00200	0.100	0.102	102	0.100	0.0915	92	11	70-130	25	
Ethylbenzene	<0.00200	0.100	0.108	108	0.100	0.0964	96	11	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.200	0.187	94	11	70-130	25	
o-Xylene	<0.00200	0.100	0.106	106	0.100	0.0945	95	11	70-130	25	

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

BS / BSD Recoveries

Project Name: Lovington Paddock

Work Order #: 579552 **Project ID:** 073020

Analyst: ALJ **Date Prepared:** 03/22/2018 **Date Analyzed:** 03/22/2018

Lab Batch ID: 3044584 **Sample:** 7641366-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0866	87	0.100	0.0848	85	2	70-130	25	
Toluene	<0.00200	0.100	0.0888	89	0.100	0.0893	89	1	70-130	25	
Ethylbenzene	<0.00200	0.100	0.0935	94	0.100	0.0941	94	1	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.200	0.182	91	1	70-130	25	
o-Xylene	<0.00200	0.100	0.0924	92	0.100	0.0926	93	0	70-130	25	

Analyst: ALJ **Date Prepared:** 03/23/2018 **Date Analyzed:** 03/23/2018

Lab Batch ID: 3044717 **Sample:** 7641384-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0759	76	0.100	0.0791	79	4	70-130	25	
Toluene	<0.00200	0.100	0.0784	78	0.100	0.0820	82	4	70-130	25	
Ethylbenzene	<0.00200	0.100	0.0833	83	0.100	0.0878	88	5	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.162	81	0.200	0.171	86	5	70-130	25	
o-Xylene	<0.00200	0.100	0.0831	83	0.100	0.0876	88	5	70-130	25	

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

BS / BSD Recoveries

Project Name: Lovington Paddock

Work Order #: 579552 **Project ID:** 073020

Analyst: MNL **Date Prepared:** 03/20/2018 **Date Analyzed:** 03/20/2018

Lab Batch ID: 3044223 **Sample:** 3044223-1-BKS **Batch #:** 1 **Matrix:** Water

Units: ug/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Headspace Analysis by RSKSOP175 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Methane	<1.10	177	108	61	177	121	68	11	50-115	30	

Analyst: MNL **Date Prepared:** 03/22/2018 **Date Analyzed:** 03/22/2018

Lab Batch ID: 3044456 **Sample:** 3044456-1-BKS **Batch #:** 1 **Matrix:** Water

Units: ug/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Headspace Analysis by RSKSOP175 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Methane	<1.10	177	111	63	177	117	66	5	50-115	30	

Analyst: MAB **Date Prepared:** 03/17/2018 **Date Analyzed:** 03/17/2018

Lab Batch ID: 3044040 **Sample:** 7640970-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfate	<0.500	10.0	9.82	98	10.0	9.91	99	1	90-110	20	

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

BS / BSD Recoveries

Project Name: Lovington Paddock

Work Order #: 579552 **Project ID:** 073020

Analyst: ARM **Date Prepared:** 03/21/2018 **Date Analyzed:** 03/21/2018

Lab Batch ID: 3044457 **Sample:** 7641239-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<1.50	100	105	105	100	110	110	5	70-135	35	
Diesel Range Organics (DRO)	<1.50	100	111	111	100	111	111	0	70-135	35	

Analyst: ARM **Date Prepared:** 03/22/2018 **Date Analyzed:** 03/22/2018

Lab Batch ID: 3044592 **Sample:** 7641315-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<1.50	100	101	101	100	101	101	0	70-135	35	
Diesel Range Organics (DRO)	<1.50	100	91.6	92	100	93.4	93	2	70-135	35	

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

Form 3 - MS Recoveries

Project Name: Lovington Paddock

Work Order #: 579552

Lab Batch #: 3044456 **Project ID:** 073020

Date Analyzed: 03/22/2018 **Date Prepared:** 03/22/2018 **Analyst:** MNL

QC- Sample ID: 579833-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: ug/L

Headspace Analysis by RSKSOP175	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Methane	5.45	177	158	86	50-115	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Lovington Paddock

Work Order # : 579552 **Project ID:** 073020

Lab Batch ID: 3044571 **QC- Sample ID:** 579531-007 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/21/2018 **Date Prepared:** 03/21/2018 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0931	93	0.100	0.0893	89	4	70-130	25	
Toluene	<0.00200	0.100	0.0923	92	0.100	0.0867	87	6	70-130	25	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.100	0.0918	92	6	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.200	0.179	90	6	70-130	25	
o-Xylene	<0.00200	0.100	0.0961	96	0.100	0.0910	91	5	70-130	25	

Lab Batch ID: 3044584 **QC- Sample ID:** 579457-012 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/22/2018 **Date Prepared:** 03/22/2018 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0851	85	0.100	0.0876	88	3	70-130	25	
Toluene	<0.00200	0.100	0.0882	88	0.100	0.0862	86	2	70-130	25	
Ethylbenzene	<0.00200	0.100	0.0927	93	0.100	0.0911	91	2	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.200	0.177	89	2	70-130	25	
o-Xylene	<0.00200	0.100	0.0917	92	0.100	0.0916	92	0	70-130	25	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Lovington Paddock

Work Order # : 579552 **Project ID:** 073020

Lab Batch ID: 3044717 **QC- Sample ID:** 579552-019 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/23/2018 **Date Prepared:** 03/23/2018 **Analyst:** ALJ

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0795	80	0.100	0.0801	80	1	70-130	25	
Toluene	<0.00200	0.100	0.0805	81	0.100	0.0797	80	1	70-130	25	
Ethylbenzene	<0.00200	0.100	0.0861	86	0.100	0.0844	84	2	70-130	25	
m,p-Xylenes	<0.00400	0.200	0.167	84	0.200	0.163	82	2	70-130	25	
o-Xylene	<0.00200	0.100	0.0850	85	0.100	0.0832	83	2	70-130	25	

Lab Batch ID: 3044040 **QC- Sample ID:** 579552-020 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/17/2018 **Date Prepared:** 03/17/2018 **Analyst:** MAB

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfate	36.2	200	228	96	200	231	97	1	90-110	20	

Lab Batch ID: 3044040 **QC- Sample ID:** 579559-001 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/17/2018 **Date Prepared:** 03/17/2018 **Analyst:** MAB

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfate	109	200	298	95	200	297	94	0	90-110	20	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Lovington Paddock

Work Order # : 579552 **Project ID:** 073020

Lab Batch ID: 3044457 **QC- Sample ID:** 579531-007 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/21/2018 **Date Prepared:** 03/21/2018 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<1.50	99.8	106	106	99.9	99.8	100	6	70-135	35	
Diesel Range Organics (DRO)	<1.50	99.8	111	111	99.9	104	104	7	70-135	35	

Lab Batch ID: 3044592 **QC- Sample ID:** 579552-019 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03/22/2018 **Date Prepared:** 03/22/2018 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<1.50	99.8	88.1	88	99.9	86.5	87	2	70-135	35	
Diesel Range Organics (DRO)	<1.50	99.8	84.8	85	99.9	80.4	80	5	70-135	35	

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

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

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

XENCO LABORATORIES

Sample Duplicate Recovery

Project Name: Lovington Paddock

Work Order #: 579552

Lab Batch #: 3044291 **Project ID:** 073020

Date Analyzed: 03/20/2018 17:45 **Date Prepared:** 03/20/2018 **Analyst:** DHE

QC- Sample ID: 579552-001 D **Batch #:** 1 **Matrix:** Ground Water

Reporting Units: mg/L

Alkalinity by SM2320B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (CaCO3)	214	214	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 3

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
Service Center - San Antonio, Texas (210-509-3334)
Odessa, Texas (432-563-1800)
Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote #

Xenco Job # 579552

Client / Reporting Information

Company Name / Branch: GHD-Midland
Company Address: 2135 S Loop 250 W, Midland, TX 79703
Email: william.foord@ghd.com; christopher.knight@ghd.com
Phone No: 713-734-3090; 512-506-8803
Project Contact: Scott Foord
Samplers's Name: Justin Nixon

Project Information

Project Name/Number: CEMC Lovington Paddock Remediation/073020
Project Location: Lovington, NM
Invoice To:
PO Number:

Analytical Information

Matrix Codes

S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
W = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	TPH-8015	RSK 175-METHANE	SULFATE	ALKALINITY	Field Comments
1	MW-R-W-180313		3/13/18	910	GW	6	X								X	X	X	X	X	
2	MW-P-W-180313			1070		5	X								X	X				
3	MW-OR-W-180313			1135		6	X								X	X	X	X	X	
4	MW-W-W-180313			1300		5	X								X	X				
5	BW-3-W-180313			1400		6	X								X	X	X	X	X	
6	MW-B-W-180313			1530		5	X								X	X				
7	MW-M-W-180314		3/14/18	925		5	X								X	X				
8	MW-L-W-180314			1015		5	X								X	X				
9	MW-J-W-180314			1100		5	X								X	X				
10	MW-S-W-180314			1240		6	X								X	X	X	X	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS:

Temp: .9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: .7

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Rec
1		3/16 3:30		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Rec
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5			

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negiotiated under a fully executed client contract.

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Page 2 Of 3

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Xenco Quote # | Xenco Job # 579552

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Company Name / Branch: GHD-Midland
Company Address: 2135 S Loop 250 W, Midland, TX 79703
Email: william.foord@ghd.com, christopher.knight@ghd.com
Phone No: 713-734-3090, 512-506-8803
Project Contact: Scott Foord
Samplers's Name: Justin Kan

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Project Location: Lovington, NM
Invoice To:
PO Number:

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No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	TPH-8015	RSK 175-METHANE	SULFATE	ALKALINITY	Field Comments
1	MW-N-W-180314		3-14-18	1405	GW	5	X								X	X				
2	MW-I-W-180314		"	1515	GW	5	X								X	X				
3	MW-I-WD-180314		"	—	GW	5	X								X	X				
4	MW-T-W-180315		3-15-18	915	GW	6	X								X	X	X	X	X	
5	BW-2-W-180315		"	1025	"	5	X								X	X				
6	MW-U-W-180315		"	1125	"	5	X								X	X				
7	MW-V-W-180315		"	1235	"	6	X								X	X	X	X	X	
8	MW-C-R-W-180315		"	1510	"	6	X								X	X	X	X	X	
9	MW-D2-W-180315		"	1340	"	6	X								X	X	X	X	X	
10	BW-1-W-180316		3-16-18	925	"		X													

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- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS:

Temp: 9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 7

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Rec
1		3/16 3:30	1	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Rec 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	Thermo. Corr. Factor

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Samplers's Name: Justin Kemp

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1	MW-G-W-180316		3-16-18	1000	GW	5	X								X	X				
2	MW-G-WD-180316			-											X	X				
3	MW-F-W-180316			1045											X	X				
4	MW-D-W-180316			1130											X	X				
5																				
6																				
7																				
8																				
9																				
10																				

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Notes:

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Temp: 9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 7

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	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3-16-18 3:30		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	Cooler Temp. Thermo. Corr. Factor
			5			

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Inter-Office Shipment

IOS Number **1057725**

Date/Time: 03/16/18 17:13
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Katie Lowe
Delivery Priority:
Air Bill No.: 780117820101

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
579552-001	W	MW-R-W-180313	03/13/18 09:10	SM2320B	Alkalinity by SM2320B	03/22/18	03/20/18	KEB	ALK	
579552-001	W	MW-R-W-180313	03/13/18 09:10	E300	Inorganic Anions by EPA 300	03/22/18	**03/15/18**	KEB	NO3N SO4	
579552-003	W	MW-OR-W-180313	03/13/18 11:35	E300	Inorganic Anions by EPA 300	03/22/18	**03/15/18**	KEB	NO3N SO4	
579552-003	W	MW-OR-W-180313	03/13/18 11:35	SM2320B	Alkalinity by SM2320B	03/22/18	03/20/18	KEB	ALK	
579552-005	W	BW-3-W-180313	03/13/18 14:00	E300	Inorganic Anions by EPA 300	03/22/18	**03/15/18**	KEB	NO3N SO4	
579552-005	W	BW-3-W-180313	03/13/18 14:00	SM2320B	Alkalinity by SM2320B	03/22/18	03/20/18	KEB	ALK	
579552-010	W	MW-S-W-180314	03/14/18 12:40	E300	Inorganic Anions by EPA 300	03/22/18	**03/16/18**	KEB	NO3N SO4	
579552-010	W	MW-S-W-180314	03/14/18 12:40	SM2320B	Alkalinity by SM2320B	03/22/18	03/21/18	KEB	ALK	
579552-014	W	MW-T-W-180315	03/15/18 09:15	SM2320B	Alkalinity by SM2320B	03/22/18	03/22/18	KEB	ALK	
579552-014	W	MW-T-W-180315	03/15/18 09:15	E300	Inorganic Anions by EPA 300	03/22/18	**03/17/18**	KEB	NO3N SO4	
579552-017	W	MW-V-W-180315	03/15/18 12:35	SM2320B	Alkalinity by SM2320B	03/22/18	03/22/18	KEB	ALK	
579552-017	W	MW-V-W-180315	03/15/18 12:35	E300	Inorganic Anions by EPA 300	03/22/18	**03/17/18**	KEB	NO3N SO4	
579552-018	W	MW-C-R-W-180315	03/15/18 15:10	E300	Inorganic Anions by EPA 300	03/22/18	**03/17/18**	KEB	NO3N SO4	
579552-018	W	MW-C-R-W-180315	03/15/18 15:10	SM2320B	Alkalinity by SM2320B	03/22/18	03/22/18	KEB	ALK	
579552-019	W	MW-D2-W-180315	03/15/18 13:40	SM2320B	Alkalinity by SM2320B	03/22/18	03/22/18	KEB	ALK	
579552-019	W	MW-D2-W-180315	03/15/18 13:40	E300	Inorganic Anions by EPA 300	03/22/18	**03/17/18**	KEB	NO3N SO4	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe

Date Relinquished: 03/16/2018

Received By: Rene Vandenberghe

Date Received: 03/17/2018 09:05

Cooler Temperature: 1.2

Inter-Office Shipment

IOS Number **1057726**

Date/Time: 03/16/18 17:13
Lab# From: **Midland**
Lab# To: **Dallas**

Created by: Katie Lowe
Delivery Priority:
Air Bill No.: 780122806313

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
579552-001	W	MW-R-W-180313	03/13/18 09:10	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/20/18	KEB	CH4	
579552-003	W	MW-OR-W-180313	03/13/18 11:35	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/20/18	KEB	CH4	
579552-005	W	BW-3-W-180313	03/13/18 14:00	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/20/18	KEB	CH4	
579552-010	W	MW-S-W-180314	03/14/18 12:40	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/21/18	KEB	CH4	
579552-014	W	MW-T-W-180315	03/15/18 09:15	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/22/18	KEB	CH4	
579552-017	W	MW-V-W-180315	03/15/18 12:35	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/22/18	KEB	CH4	
579552-018	W	MW-C-R-W-180315	03/15/18 15:10	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/22/18	KEB	CH4	
579552-019	W	MW-D2-W-180315	03/15/18 13:40	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/22/18	KEB	CH4	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe

Date Relinquished: 03/16/2018

Received By: Angelica Martinez

Date Received: 03/19/2018 12:00

Cooler Temperature: 20.4

Inter-Office Shipment

IOS Number **1057727**

Date/Time: 03/16/18 17:18
Lab# From: **Midland**
Lab# To: **Dallas**

Created by: Katie Lowe
Delivery Priority:
Air Bill No.: 780122806313

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
579552-001	W	MW-R-W-180313	03/13/18 09:10	RSK175	Headspace Analysis by RSKSOP175	03/22/18	**03/20/18**	KEB	CH4	
579552-020	W	BW-1-W-180316	03/16/18 09:25	RSK175	Headspace Analysis by RSKSOP175	03/22/18	03/23/18	KEB	CH4	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe

Date Relinquished: 03/16/2018

Received By: Angelica Martinez

Date Received: 03/19/2018 12:00

Cooler Temperature: 20.4

Inter-Office Shipment

IOS Number **1057728**

Date/Time: 03/16/18 17:20
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Katie Lowe
Delivery Priority:
Air Bill No.: 780117820101

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
579552-020	W	BW-1-W-180316	03/16/18 09:25	E300	Inorganic Anions by EPA 300	03/22/18	**03/18/18**	KEB	NO3N SO4	
579552-020	W	BW-1-W-180316	03/16/18 09:25	SM2320B	Alkalinity by SM2320B	03/22/18	03/23/18	KEB	ALK	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe

Date Relinquished: 03/16/2018

Received By: Rene Vandenberghe

Date Received: 03/17/2018 09:05

Cooler Temperature: 1.2

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 1057725

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Katie Lowe **Date Sent:** 03/16/2018 05:13 PM

Received By: Rene Vandenberghe **Date Received:** 03/17/2018 09:05 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**No**	001, 003, 005, 010 Anions received out of hold

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: R. C. Vandenberghe Date: 03/17/2018

Rene Vandenberghe

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Dallas

IOS #: 1057726

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

Sent By: Katie Lowe **Date Sent:** 03/16/2018 05:13 PM

Received By: Angelica Martinez **Date Received:** 03/19/2018 12:00 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	20.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Angelica Martinez Date: 03/19/2018

Angelica Martinez

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Dallas

IOS #: 1057727

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

Sent By: Katie Lowe **Date Sent:** 03/16/2018 05:18 PM

Received By: Angelica Martinez **Date Received:** 03/19/2018 12:00 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	20.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Angelica Martinez Date: 03/19/2018

Angelica Martinez

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 1057728

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Katie Lowe **Date Sent:** 03/16/2018 05:20 PM

Received By: Rene Vandenberghe **Date Received:** 03/17/2018 09:05 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 03/17/2018

Rene Vandenberghe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 03/16/2018 03:36:00 PM

Work Order #: 579552

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)?	.7	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	Sample 20 " BW-1-W-180316" did not have X's for what test they wanted to run. Spoke to the client, said they wanted all test run- BTex, TPH, RSK, Sulfate and alkalinity
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	needed extra VOA for RSK
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Dallas & Houston
#18 Water VOC samples have zero headspace?	**Yes**	

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

Analyst: KL PH Device/Lot#: 213315

Checklist completed by: Katie Lowe Date: 03/16/2018

Checklist reviewed by: Kelsey Brooks Date: 03/20/2018

Analytical Report 598907

for

GHD Services, INC- Midland

Project Manager: Scott Foord

CEMC Lovington Paddock Remediation

073020-2018-001

25-SEP-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

25-SEP-18

Project Manager: **Scott Foord**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **598907**
CEMC Lovington Paddock Remediation
Project Address: NM

Scott Foord:

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) 598907. 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. 598907 will be filed for 45 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,

Debbie Simmons

Debbie Simmons
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BW-2-W-180911	W	09-11-18 09:15		598907-001
MW-S-W-180911	W	09-11-18 10:40		598907-002
MW-T-W-180911	W	09-11-18 12:15		598907-003
BW-1-W-180911	W	09-11-18 14:00		598907-004
MW-C-R-W-180911	W	09-11-18 15:30		598907-005
MW-D-2-W-180912	W	09-12-18 09:05		598907-006
MW-D-R-W-180912	W	09-12-18 12:00		598907-007
MW-V-W-180912	W	09-12-18 10:30		598907-008
MW-R-W-180912	W	09-12-18 13:30		598907-009
MW-R-WD-180912	W	09-12-18 00:00		598907-010

CASE NARRATIVE

Client Name: GHD Services, INC- Midland

Project Name: CEMC Lovington Paddock Remediation

Project ID:	*073020-2018-001*	Report Date:	*25-SEP-18*
Work Order Number(s):	*598907*	Date Received:	*09/12/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3063500 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 598907-003.

Certificate of Analysis Summary 598907

GHD Services, INC- Midland, Midland, TX

Project Name: CEMC Lovington Paddock Remediation

Project Id: 073020-2018-001
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Wed Sep-12-18 04:50 pm
Report Date: 25-SEP-18
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	598907-001		598907-002		598907-003		598907-004		598907-005		598907-006	
	Field Id:	BW-2-W-180911		MW-S-W-180911		MW-T-W-180911		BW-1-W-180911		MW-C-R-W-180911		MW-D-2-W-180912	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Sep-11-18 09:15		Sep-11-18 10:40		Sep-11-18 12:15		Sep-11-18 14:00		Sep-11-18 15:30		Sep-12-18 09:05	
BTEX by EPA 8021B	***Extracted:***	Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00	
	Analyzed:	Sep-15-18 00:23		Sep-15-18 01:03		Sep-18-18 04:04		Sep-15-18 01:23		Sep-15-18 01:43		Sep-15-18 02:03	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.0214	0.00200	ND	0.00200	12.2 D	0.200	0.0437	0.00200	ND	0.00200	ND	0.00200
Toluene		0.00443	0.00200	ND	0.00200	0.0670	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00200	ND	0.00200	0.242	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
m,p-Xylenes		ND	0.00400	ND	0.00400	0.312	0.00400	ND	0.00400	ND	0.00400	ND	0.00400
o-Xylene		ND	0.00200	ND	0.00200	0.0177	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total Xylenes		ND	0.00200	ND	0.00200	0.330	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Total BTEX		0.0258	0.00200	ND	0.00200	12.8	0.00200	0.0437	0.00200	ND	0.00200	ND	0.00200
Headspace Analysis by RSKSOP175 SUB: TX104704295-18-17	***Extracted:***												
	Analyzed:			Sep-19-18 13:20		Sep-19-18 13:40		Sep-19-18 14:00		Sep-19-18 14:20		Sep-19-18 14:40	
	Units/RL:			ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL
Methane				ND	1.10	720	1.10	ND	1.10	ND	1.10	ND	1.10

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

Debbie Simmons
Project Manager

Certificate of Analysis Summary 598907

GHD Services, INC- Midland, Midland, TX

Project Name: CEMC Lovington Paddock Remediation

Project Id: 073020-2018-001
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Wed Sep-12-18 04:50 pm
Report Date: 25-SEP-18
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	598907-001		598907-002		598907-003		598907-004		598907-005		598907-006	
	Field Id:	BW-2-W-180911		MW-S-W-180911		MW-T-W-180911		BW-1-W-180911		MW-C-R-W-180911		MW-D-2-W-180912	
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
	Sampled:	Sep-11-18 09:15		Sep-11-18 10:40		Sep-11-18 12:15		Sep-11-18 14:00		Sep-11-18 15:30		Sep-12-18 09:05	
Alkalinity by SM2320B SUB: TX104704215-18-27	***Extracted:***			Sep-18-18 10:00		Sep-18-18 10:00		Sep-18-18 10:00		Sep-18-18 10:00		Sep-18-18 10:00	
	Analyzed:			Sep-18-18 16:55		Sep-18-18 17:02		Sep-18-18 17:09		Sep-18-18 17:15		Sep-18-18 17:27	
	Units/RL:			mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Alkalinity, Total (CaCO3)				178	4.00	340	4.00	224	4.00	238	4.00	198	4.00
Inorganic Anions by EPA 300 SUB: TX104704215-18-27	***Extracted:***			Sep-13-18 09:00		Sep-13-18 09:00		Sep-13-18 09:00		Sep-13-18 09:00		Sep-13-18 09:00	
	Analyzed:			Sep-13-18 10:22		Sep-13-18 10:35		Sep-13-18 10:49		Sep-13-18 11:03		Sep-13-18 11:16	
	Units/RL:			mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Nitrate as N				2.20	0.100	0.486	0.100	1.38	0.100	0.461	0.100	1.98	0.100
Sulfate				71.2	0.500	23.9	0.500	49.2	0.500	52.2	0.500	49.3	0.500
TPH by SW8015 Mod	***Extracted:***	Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00	
	Analyzed:	Sep-15-18 02:23		Sep-15-18 03:23		Sep-15-18 03:43		Sep-15-18 04:03		Sep-15-18 04:23		Sep-15-18 04:43	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Gasoline Range Hydrocarbons (GRO)		ND	1.50	ND	1.50	15.3	1.50	ND	1.50	ND	1.50	ND	1.50
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Motor Oil Range Hydrocarbons (MRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50
Total TPH		ND	1.50	ND	1.50	15.3	1.50	ND	1.50	ND	1.50	ND	1.50

Debbie Simmons
Project Manager

Certificate of Analysis Summary 598907

GHD Services, INC- Midland, Midland, TX

Project Name: CEMC Lovington Paddock Remediation

Project Id: 073020-2018-001
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Wed Sep-12-18 04:50 pm
Report Date: 25-SEP-18
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	598907-007		598907-008		598907-009		598907-010					
	Field Id:	MW-D-R-W-180912		MW-V-W-180912		MW-R-W-180912		MW-R-WD-180912					
	Depth:												
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER					
	Sampled:	Sep-12-18 12:00		Sep-12-18 10:30		Sep-12-18 13:30		Sep-12-18 00:00					
Alkalinity by SM2320B SUB: TX104704215-18-27	***Extracted:***	Sep-18-18 10:00		Sep-18-18 10:00		Sep-18-18 10:00		Sep-18-18 10:00					
	Analyzed:	Sep-18-18 17:35		Sep-18-18 17:41		Sep-18-18 17:47		Sep-18-18 18:06					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Alkalinity, Total (CaCO3)		376	4.00	255	4.00	183	4.00	183	4.00				
BTEX by EPA 8021B	***Extracted:***	Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00		Sep-14-18 16:00					
	Analyzed:	Sep-15-18 02:23		Sep-15-18 02:43		Sep-15-18 03:03		Sep-15-18 03:23					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
Ethylbenzene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
m,p-Xylenes		ND	0.00400	ND	0.00400	ND	0.00400	ND	0.00400				
o-Xylene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
Total Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
Total BTEX		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200				
Headspace Analysis by RSKSOP175 SUB: TX104704295-18-17	***Extracted:***												
	Analyzed:	Sep-19-18 15:00		Sep-19-18 15:20		Sep-19-18 15:40		Sep-19-18 16:00					
	Units/RL:	ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL				
Methane		48.1	1.10	1.75	1.10	ND	1.10	ND	1.10				
Inorganic Anions by EPA 300 SUB: TX104704215-18-27	***Extracted:***	Sep-13-18 09:00		Sep-13-18 09:00		Sep-13-18 09:00		Sep-13-18 09:00					
	Analyzed:	Sep-13-18 11:30		Sep-13-18 12:11		Sep-13-18 12:24		Sep-13-18 12:38					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Nitrate as N		0.133	0.100	0.132	0.100	2.44	0.100	2.43	0.100				
Sulfate		31.7	0.500	31.6	0.500	69.5	0.500	69.3	0.500				

Debbie Simmons
Project Manager

Certificate of Analysis Summary 598907

GHD Services, INC- Midland, Midland, TX

Project Name: CEMC Lovington Paddock Remediation

Project Id: 073020-2018-001
Contact: Scott Foord
Project Location: NM

Date Received in Lab: Wed Sep-12-18 04:50 pm
Report Date: 25-SEP-18
Project Manager: Debbie Simmons

Analysis Requested											
	Lab Id:	598907-007		598907-008		598907-009		598907-010			
	Field Id:	MW-D-R-W-180912		MW-V-W-180912		MW-R-W-180912		MW-R-WD-180912			
	Depth:										
	Matrix:	GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER			
	Sampled:	Sep-12-18 12:00		Sep-12-18 10:30		Sep-12-18 13:30		Sep-12-18 00:00			
TPH by SW8015 Mod	***Extracted:***	Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00		Sep-14-18 15:00			
	Analyzed:	Sep-15-18 05:03		Sep-15-18 05:23		Sep-15-18 05:43		Sep-15-18 06:03			
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Gasoline Range Hydrocarbons (GRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50		
Diesel Range Organics (DRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50		
Motor Oil Range Hydrocarbons (MRO)		ND	1.50	ND	1.50	ND	1.50	ND	1.50		
Total TPH		ND	1.50	ND	1.50	ND	1.50	ND	1.50		

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

Debbie Simmons
Project Manager

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **BW-2-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-001 Date Collected: 09.11.18 09.15

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 02.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 02.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 02.23	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 02.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	09.15.18 02.23	
o-Terphenyl	84-15-1	96	%	70-135	09.15.18 02.23	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: ALJ % Moisture:
Analyst: ALJ Date Prep: 09.14.18 16.00
Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0214**	0.00200	mg/L	09.15.18 00.23		1
Toluene	108-88-3	**0.00443**	0.00200	mg/L	09.15.18 00.23		1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 00.23	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 00.23	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 00.23	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 00.23	U	1
Total BTEX		**0.0258**	0.00200	mg/L	09.15.18 00.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.15.18 00.23	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.15.18 00.23	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-S-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-002 Date Collected: 09.11.18 10.40

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**2.20**	0.100	mg/L	09.13.18 10.22		1
Sulfate	14808-79-8	**71.2**	0.500	mg/L	09.13.18 10.22		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**178**	4.00	mg/L	09.18.18 16.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 03.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 03.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 03.23	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 03.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	09.15.18 03.23	
o-Terphenyl	84-15-1	97	%	70-135	09.15.18 03.23	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-S-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-002 Date Collected: 09.11.18 10.40

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 01.03	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 01.03	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 01.03	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 01.03	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 01.03	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 01.03	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 01.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.15.18 01.03	
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.15.18 01.03	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 13.20	U	1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-T-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-003 Date Collected: 09.11.18 12.15

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**0.486**	0.100	mg/L	09.13.18 10.35		1
Sulfate	14808-79-8	**23.9**	0.500	mg/L	09.13.18 10.35		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**340**	4.00	mg/L	09.18.18 17.02		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.3**	1.50	mg/L	09.15.18 03.43		1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 03.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 03.43	U	1
Total TPH	PHC635	**15.3**	1.50	mg/L	09.15.18 03.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.15.18 03.43	
o-Terphenyl	84-15-1	94	%	70-135	09.15.18 03.43	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-T-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-003 Date Collected: 09.11.18 12.15

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063500

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**12.2**	0.200	mg/L	09.18.18 04.04	D	100
Toluene	108-88-3	**0.0670**	0.00200	mg/L	09.18.18 04.04		1
Ethylbenzene	100-41-4	**0.242**	0.00200	mg/L	09.18.18 04.04		1
m,p-Xylenes	179601-23-1	**0.312**	0.00400	mg/L	09.18.18 04.04		1
o-Xylene	95-47-6	**0.0177**	0.00200	mg/L	09.18.18 04.04		1
Total Xylenes	1330-20-7	**0.330**	0.00200	mg/L	09.18.18 04.04		1
Total BTEX		**12.8**	0.00200	mg/L	09.18.18 04.04		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	70-130	09.18.18 04.04	
4-Bromofluorobenzene	460-00-4	163	%	70-130	09.18.18 04.04	**

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	**720**	1.10	ug/L	09.19.18 13.40		1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **BW-1-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-004 Date Collected: 09.11.18 14.00

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**1.38**	0.100	mg/L	09.13.18 10.49		1
Sulfate	14808-79-8	**49.2**	0.500	mg/L	09.13.18 10.49		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**224**	4.00	mg/L	09.18.18 17.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 04.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 04.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 04.03	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 04.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.15.18 04.03	
o-Terphenyl	84-15-1	101	%	70-135	09.15.18 04.03	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **BW-1-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-004 Date Collected: 09.11.18 14.00

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0437**	0.00200	mg/L	09.15.18 01.23		1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 01.23	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 01.23	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 01.23	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 01.23	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 01.23	U	1
Total BTEX		**0.0437**	0.00200	mg/L	09.15.18 01.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.15.18 01.23	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.15.18 01.23	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 14.00	U	1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-C-R-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-005 Date Collected: 09.11.18 15.30

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**0.461**	0.100	mg/L	09.13.18 11.03		1
Sulfate	14808-79-8	**52.2**	0.500	mg/L	09.13.18 11.03		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**238**	4.00	mg/L	09.18.18 17.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 04.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 04.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 04.23	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 04.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.15.18 04.23	
o-Terphenyl	84-15-1	93	%	70-135	09.15.18 04.23	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-C-R-W-180911** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-005 Date Collected: 09.11.18 15.30

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 01.43	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 01.43	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 01.43	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 01.43	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 01.43	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 01.43	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 01.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.15.18 01.43	
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.15.18 01.43	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 14.20	U	1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-D-2-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-006 Date Collected: 09.12.18 09.05

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**1.98**	0.100	mg/L	09.13.18 11.16		1
Sulfate	14808-79-8	**49.3**	0.500	mg/L	09.13.18 11.16		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**198**	4.00	mg/L	09.18.18 17.27		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 04.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 04.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 04.43	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 04.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.15.18 04.43	
o-Terphenyl	84-15-1	97	%	70-135	09.15.18 04.43	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-D-2-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-006 Date Collected: 09.12.18 09.05

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 02.03	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 02.03	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 02.03	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 02.03	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 02.03	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 02.03	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 02.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.15.18 02.03	
4-Bromofluorobenzene	460-00-4	97	%	70-130	09.15.18 02.03	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 14.40	U	1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-D-R-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-007 Date Collected: 09.12.18 12.00

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**0.133**	0.100	mg/L	09.13.18 11.30		1
Sulfate	14808-79-8	**31.7**	0.500	mg/L	09.13.18 11.30		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**376**	4.00	mg/L	09.18.18 17.35		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 05.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 05.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 05.03	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 05.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.15.18 05.03	
o-Terphenyl	84-15-1	93	%	70-135	09.15.18 05.03	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-D-R-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-007 Date Collected: 09.12.18 12.00

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 02.23	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 02.23	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 02.23	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 02.23	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 02.23	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 02.23	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 02.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.15.18 02.23	
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.15.18 02.23	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	**48.1**	1.10	ug/L	09.19.18 15.00		1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-V-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-008 Date Collected: 09.12.18 10.30

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**0.132**	0.100	mg/L	09.13.18 12.11		1
Sulfate	14808-79-8	**31.6**	0.500	mg/L	09.13.18 12.11		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**255**	4.00	mg/L	09.18.18 17.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 05.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 05.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 05.23	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 05.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.15.18 05.23	
o-Terphenyl	84-15-1	101	%	70-135	09.15.18 05.23	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-V-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-008 Date Collected: 09.12.18 10.30

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 02.43	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 02.43	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 02.43	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 02.43	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 02.43	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 02.43	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 02.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.15.18 02.43	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.15.18 02.43	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	**1.75**	1.10	ug/L	09.19.18 15.20		1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-R-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-009 Date Collected: 09.12.18 13.30

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**2.44**	0.100	mg/L	09.13.18 12.24		1
Sulfate	14808-79-8	**69.5**	0.500	mg/L	09.13.18 12.24		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**183**	4.00	mg/L	09.18.18 17.47		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 05.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 05.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 05.43	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 05.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.15.18 05.43	
o-Terphenyl	84-15-1	99	%	70-135	09.15.18 05.43	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-R-W-180912** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-009 Date Collected: 09.12.18 13.30

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 03.03	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 03.03	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 03.03	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 03.03	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 03.03	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 03.03	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 03.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.15.18 03.03	
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.15.18 03.03	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 15.40	U	1

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-R-WD-180912** Matrix: Ground Water Date Received:09.12.18 16.50
Lab Sample Id: 598907-010 Date Collected: 09.12.18 00.00

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.13.18 09.00
Seq Number: 3063125 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Nitrate as N	14797-55-8	**2.43**	0.100	mg/L	09.13.18 12.38		1
Sulfate	14808-79-8	**69.3**	0.500	mg/L	09.13.18 12.38		1

Analytical Method: Alkalinity by SM2320B Prep Method: SM2320P
Tech: YAV % Moisture:
Analyst: YAV Date Prep: 09.18.18 10.00
Seq Number: 3063631 SUB: TX104704215-18-27

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (CaCO3)	1640192	**183**	4.00	mg/L	09.18.18 18.06		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 09.14.18 15.00
Seq Number: 3063336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	ND	1.50	mg/L	09.15.18 06.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	ND	1.50	mg/L	09.15.18 06.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	ND	1.50	mg/L	09.15.18 06.03	U	1
Total TPH	PHC635	ND	1.50	mg/L	09.15.18 06.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	09.15.18 06.03	
o-Terphenyl	84-15-1	97	%	70-135	09.15.18 06.03	

Certificate of Analytical Results 598907

GHD Services, INC- Midland, Midland, TX

CEMC Lovington Paddock Remediation

Sample Id: **MW-R-WD-180912** Matrix: Ground Water Date Received:09.12.18 16.50

Lab Sample Id: 598907-010 Date Collected: 09.12.18 00.00

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

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 09.14.18 16.00

Seq Number: 3063398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00200	mg/L	09.15.18 03.23	U	1
Toluene	108-88-3	ND	0.00200	mg/L	09.15.18 03.23	U	1
Ethylbenzene	100-41-4	ND	0.00200	mg/L	09.15.18 03.23	U	1
m,p-Xylenes	179601-23-1	ND	0.00400	mg/L	09.15.18 03.23	U	1
o-Xylene	95-47-6	ND	0.00200	mg/L	09.15.18 03.23	U	1
Total Xylenes	1330-20-7	ND	0.00200	mg/L	09.15.18 03.23	U	1
Total BTEX		ND	0.00200	mg/L	09.15.18 03.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.15.18 03.23	
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.15.18 03.23	

Analytical Method: Headspace Analysis by RSKSOP175

Tech: MNL % Moisture:

Analyst: MNL

Seq Number: 3063755 SUB: TX104704295-18-17

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methane	74-82-8	ND	1.10	ug/L	09.19.18 16.00	U	1

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

QC Summary 598907

GHD Services, INC- Midland

CEMC Lovington Paddock Remediation

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3063125 — Matrix: Water — Date Prep: 09.13.18
MB Sample Id: 7662238-1-BLK — LCS Sample Id: 7662238-1-BKS — LCSD Sample Id: 7662238-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Nitrate as N	<0.100	10.0	10.0	100	9.96	100	90-110	0	20	mg/L	09.13.18 05:37	
Sulfate	<0.500	10.0	10.0	100	9.95	100	90-110	1	20	mg/L	09.13.18 05:37	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3063125 — Matrix: Surface Water — Date Prep: 09.13.18
Parent Sample Id: 598469-002 — MS Sample Id: 598469-002 S — MSD Sample Id: 598469-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Nitrate as N	0.161	10.0	9.44	93	9.43	93	90-110	0	20	mg/L	09.13.18 09:38	
Sulfate	0.624	10.0	9.99	94	9.98	94	90-110	0	20	mg/L	09.13.18 09:38	

Analytical Method: Alkalinity by SM2320B — Prep Method: SM2320P
Seq Number: 3063631 — Matrix: Water — Date Prep: 09.18.18
MB Sample Id: 7662562-1-BLK — LCS Sample Id: 7662562-1-BKS — LCSD Sample Id: 7662562-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (CaCO3)	<4.00	250	254	102	256	102	80-120	1	20	mg/L	09.18.18 15:40	

Analytical Method: Alkalinity by SM2320B — Prep Method: SM2320P
Seq Number: 3063631 — Matrix: Water — Date Prep: 09.18.18
Parent Sample Id: 598682-001 — MD Sample Id: 598682-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (CaCO3)	167	168	1	20	mg/L	09.18.18 15:58	

Analytical Method: Alkalinity by SM2320B — Prep Method: SM2320P
Seq Number: 3063631 — Matrix: Ground Water — Date Prep: 09.18.18
Parent Sample Id: 598907-005 — MD Sample Id: 598907-005 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (CaCO3)	238	241	1	20	mg/L	09.18.18 17:21	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 598907

GHD Services, INC- Midland

CEMC Lovington Paddock Remediation

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3063336 — Matrix: Water — Date Prep: 09.14.18
MB Sample Id: 7662365-1-BLK — LCS Sample Id: 7662365-1-BKS — LCSD Sample Id: 7662365-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.986	99.8	94.7	95	91.9	92	70-135	3	20	mg/L	09.14.18 22:45	
Diesel Range Organics (DRO)	<0.911	99.8	99.7	100	93.9	94	70-135	6	20	mg/L	09.14.18 22:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		121		122		70-135	%	09.14.18 22:45
o-Terphenyl	101		108		104		70-135	%	09.14.18 22:45

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3063336 — Matrix: Water — Date Prep: 09.14.18
Parent Sample Id: 598697-001 — MS Sample Id: 598697-001 S — MSD Sample Id: 598697-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.986	99.9	90.8	91	86.8	87	70-135	5	20	mg/L	09.14.18 23:45	
Diesel Range Organics (DRO)	<0.911	99.9	92.6	93	86.6	87	70-135	7	20	mg/L	09.14.18 23:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		109		70-135	%	09.14.18 23:45
o-Terphenyl	98		95		70-135	%	09.14.18 23:45

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3063398 — Matrix: Water — Date Prep: 09.14.18
MB Sample Id: 7662406-1-BLK — LCS Sample Id: 7662406-1-BKS — LCSD Sample Id: 7662406-1-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	0.0955	96	0.0982	98	70-130	3	25	mg/L	09.14.18 20:03	
Toluene	<0.00200	0.100	0.0963	96	0.0972	97	70-130	1	25	mg/L	09.14.18 20:03	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0994	99	70-130	1	25	mg/L	09.14.18 20:03	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.195	98	70-130	1	25	mg/L	09.14.18 20:03	
o-Xylene	<0.00200	0.100	0.0946	95	0.0944	94	70-130	0	25	mg/L	09.14.18 20:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		92		94		70-130	%	09.14.18 20:03
4-Bromofluorobenzene	93		107		85		70-130	%	09.14.18 20:03

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 598907

GHD Services, INC- Midland

CEMC Lovington Paddock Remediation

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3063500 — Matrix: Water — Date Prep: 09.17.18
MB Sample Id: 7662459-1-BLK — LCS Sample Id: 7662459-1-BKS — LCSD Sample Id: 7662459-1-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	0.0975	98	0.0913	91	70-130	7	25	mg/L	09.17.18 19:19	
Toluene	<0.00200	0.100	0.0975	98	0.0914	91	70-130	6	25	mg/L	09.17.18 19:19	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0944	94	70-130	7	25	mg/L	09.17.18 19:19	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.184	92	70-130	5	25	mg/L	09.17.18 19:19	
o-Xylene	<0.00200	0.100	0.0943	94	0.0888	89	70-130	6	25	mg/L	09.17.18 19:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		92		94		70-130	%	09.17.18 19:19
4-Bromofluorobenzene	109		123		114		70-130	%	09.17.18 19:19

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3063398 — Matrix: Ground Water — Date Prep: 09.14.18
Parent Sample Id: 598836-001 — MS Sample Id: 598836-001 S — MSD Sample Id: 598836-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0922	92	0.0871	87	70-130	6	25	mg/L	09.14.18 20:43	
Toluene	<0.00200	0.100	0.0931	93	0.0874	87	70-130	6	25	mg/L	09.14.18 20:43	
Ethylbenzene	<0.00200	0.100	0.0963	96	0.0906	91	70-130	6	25	mg/L	09.14.18 20:43	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.178	89	70-130	7	25	mg/L	09.14.18 20:43	
o-Xylene	<0.00200	0.100	0.0930	93	0.0882	88	70-130	5	25	mg/L	09.14.18 20:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		94		70-130	%	09.14.18 20:43
4-Bromofluorobenzene	91		94		70-130	%	09.14.18 20:43

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3063500 — Matrix: Ground Water — Date Prep: 09.17.18
Parent Sample Id: 598982-001 — MS Sample Id: 598982-001 S — MSD Sample Id: 598982-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0952	95	0.0927	93	70-130	3	25	mg/L	09.17.18 19:59	
Toluene	<0.00200	0.100	0.0947	95	0.0934	93	70-130	1	25	mg/L	09.17.18 19:59	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0965	97	70-130	1	25	mg/L	09.17.18 19:59	
m,p-Xylenes	<0.00400	0.200	0.191	96	0.186	93	70-130	3	25	mg/L	09.17.18 19:59	
o-Xylene	<0.00200	0.100	0.0940	94	0.0917	92	70-130	2	25	mg/L	09.17.18 19:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		92		70-130	%	09.17.18 19:59
4-Bromofluorobenzene	113		116		70-130	%	09.17.18 19:59

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 598907

GHD Services, INC- Midland

CEMC Lovington Paddock Remediation

Analytical Method: Headspace Analysis by RSKSOP175

Seq Number: 3063755 Matrix: Water

MB Sample Id: 3063755-1-BLK LCS Sample Id: 3063755-1-BKS LCSD Sample Id: 3063755-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methane	<0.900	177	145	82	139	79	50-115	4	30	ug/L	09.19.18 10:20	

Analytical Method: Headspace Analysis by RSKSOP175

Seq Number: 3063755 Matrix: Ground Water

Parent Sample Id: 598816-002 MS Sample Id: 598816-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methane	3080	177	2300	0	50-115	ug/L	09.19.18 11:40	X

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

Chain of Custody

Work Order No: 598907

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com

Page 1 of 1

Project Manager:	Scott Foord	Bill to: (if different)	
Company Name:	GHD	Company Name:	
Address:	2135 S Loop 250 W	Address:	
City, State ZIP:	Midland, TX. 79703	City, State ZIP:	
Phone:	281-725-7477	Email:	william.foord@ghd.com & christopher.knight@ghd.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	CEMC Lovington Paddock Remediation	Turn Around	
Project Number:	73020	Routine ☐	
P.O. Number:	SSOW: 073020-2018-001	Rush:	
Sampler's Name:	Justin Nixon	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4	Thermometer ID	IR
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	0.0
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	BTEX 8021	TPH 8015	Methane (RSK 175)	Anions: Sulfate & Nitrate	Alkalinity
BW-2-W-180911	GW	9-11-18	915		7	X	X			
MW-5-W-180911			1040		8			X	X	X
MW-7-W-180911			1215		8					
BW-1-W-180911			1400		8					
MW-C-R-W-180911			1530		8					
MW-D-2-W-180912		9-12-18	905		8					
MW-04R-W-180912			1200		8					
MW-V-W-180911			1030		8					
MW-R-W-180912			1330		8					
MW-R-WD-180911			—		8					

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Inter-Office Shipment

IOS Number **113919**

Date/Time: 09/12/18 18:14
Created by: Katie Lowe
Please send report to: Debbie Simmons

Lab# From: **Midland**
Delivery Priority:
Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**
Air Bill No.: 773204462358
E-Mail: debbie.simmons@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
598907-002	W	MW-S-W-180911	09/11/18 10:40	SM2320B	Alkalinity by SM2320B	09/18/18	09/25/18	DES	ALK	
598907-002	W	MW-S-W-180911	09/11/18 10:40	E300	Inorganic Anions by EPA 300	09/18/18	**09/13/18 10:40**	DES	NO3N SO4	
598907-003	W	MW-T-W-180911	09/11/18 12:15	E300	Inorganic Anions by EPA 300	09/18/18	**09/13/18 12:15**	DES	NO3N SO4	
598907-003	W	MW-T-W-180911	09/11/18 12:15	SM2320B	Alkalinity by SM2320B	09/18/18	09/25/18	DES	ALK	
598907-004	W	BW-I-W-180911	09/11/18 14:00	E300	Inorganic Anions by EPA 300	09/18/18	**09/13/18 14:00**	DES	NO3N SO4	
598907-004	W	BW-I-W-180911	09/11/18 14:00	SM2320B	Alkalinity by SM2320B	09/18/18	09/25/18	DES	ALK	
598907-005	W	MW-C-R-W-180911	09/11/18 15:30	E300	Inorganic Anions by EPA 300	09/18/18	**09/13/18 15:30**	DES	NO3N SO4	
598907-005	W	MW-C-R-W-180911	09/11/18 15:30	SM2320B	Alkalinity by SM2320B	09/18/18	09/25/18	DES	ALK	
598907-006	W	MW-D-2-W-180912	09/12/18 09:05	SM2320B	Alkalinity by SM2320B	09/18/18	09/26/18	DES	ALK	
598907-006	W	MW-D-2-W-180912	09/12/18 09:05	E300	Inorganic Anions by EPA 300	09/18/18	**09/14/18 09:05**	DES	NO3N SO4	
598907-007	W	MW-D-R-W-180912	09/12/18 12:00	SM2320B	Alkalinity by SM2320B	09/18/18	09/26/18	DES	ALK	
598907-007	W	MW-D-R-W-180912	09/12/18 12:00	E300	Inorganic Anions by EPA 300	09/18/18	**09/14/18 12:00**	DES	NO3N SO4	
598907-008	W	MW-V-W-180912	09/12/18 10:30	E300	Inorganic Anions by EPA 300	09/18/18	**09/14/18 10:30**	DES	NO3N SO4	
598907-008	W	MW-V-W-180912	09/12/18 10:30	SM2320B	Alkalinity by SM2320B	09/18/18	09/26/18	DES	ALK	
598907-009	W	MW-R-W-180912	09/12/18 13:30	SM2320B	Alkalinity by SM2320B	09/18/18	09/26/18	DES	ALK	
598907-009	W	MW-R-W-180912	09/12/18 13:30	E300	Inorganic Anions by EPA 300	09/18/18	**09/14/18 13:30**	DES	NO3N SO4	
598907-010	W	MW-R-WD-180912	09/12/18 00:00	SM2320B	Alkalinity by SM2320B	09/18/18	09/26/18	DES	ALK	
598907-010	W	MW-R-WD-180912	09/12/18 00:00	E300	Inorganic Anions by EPA 300	09/18/18	**09/14/18 00:00**	DES	NO3N SO4	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe

Date Relinquished: 09/13/2018

Received By: Maria Paula Guerra

Date Received: 09/13/2018 09:30

Cooler Temperature: 4.5

Inter-Office Shipment

IOS Number **113920**

Date/Time: 09/12/18 18:15
Lab# From: **Midland**
Lab# To: **Dallas**

Created by: Katie Lowe
Delivery Priority: Fedex
Air Bill No.: 773204477475

Please send report to: Debbie Simmons
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: debbie.simmons@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
598907-002	W	MW-S-W-180911	09/11/18 10:40	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/25/18	DES	C2H4 C2H6 CH4	
598907-003	W	MW-T-W-180911	09/11/18 12:15	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/25/18	DES	C2H4 C2H6 CH4	
598907-004	W	BW-I-W-180911	09/11/18 14:00	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/25/18	DES	C2H4 C2H6 CH4	
598907-005	W	MW-C-R-W-180911	09/11/18 15:30	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/25/18	DES	C2H4 C2H6 CH4	
598907-006	W	MW-D-2-W-180912	09/12/18 09:05	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/26/18	DES	C2H4 C2H6 CH4	
598907-007	W	MW-D-R-W-180912	09/12/18 12:00	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/26/18	DES	C2H4 C2H6 CH4	
598907-008	W	MW-V-W-180912	09/12/18 10:30	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/26/18	DES	C2H4 C2H6 CH4	
598907-009	W	MW-R-W-180912	09/12/18 13:30	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/26/18	DES	C2H4 C2H6 CH4	
598907-010	W	MW-R-WD-180912	09/12/18 00:00	RSK175	Headspace Analysis by RSKSOP175	09/18/18	09/26/18	DES	C2H4 C2H6 CH4	

Inter Office Shipment or Sample Comments:

Relinquished By: Katie Lowe
Date Relinquished: 09/13/2018

Received By: Angelica Martinez
Date Received: 09/13/2018 12:30
Cooler Temperature: 2.8

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 113919

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR:HOU068

Sent By: Katie Lowe **Date Sent:** 09/12/2018 06:14 PM

Received By: Maria Paula Guerra **Date Received:** 09/13/2018 09:30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: mPaula Guerra Date: 09/13/2018

Maria Paula Guerra

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Dallas

IOS #: 113920

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR2

Sent By: Katie Lowe **Date Sent:** 09/12/2018 06:15 PM

Received By: Angelica Martinez **Date Received:** 09/13/2018 12:30 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Angelica Martinez Date: 09/13/2018

Angelica Martinez

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 09/12/2018 04:50:00 PM

Work Order #: 598907

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)?	.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Methane- Dallas Anions&Alkalinity- Houston
#18 Water VOC samples have zero headspace?	**Yes**	

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

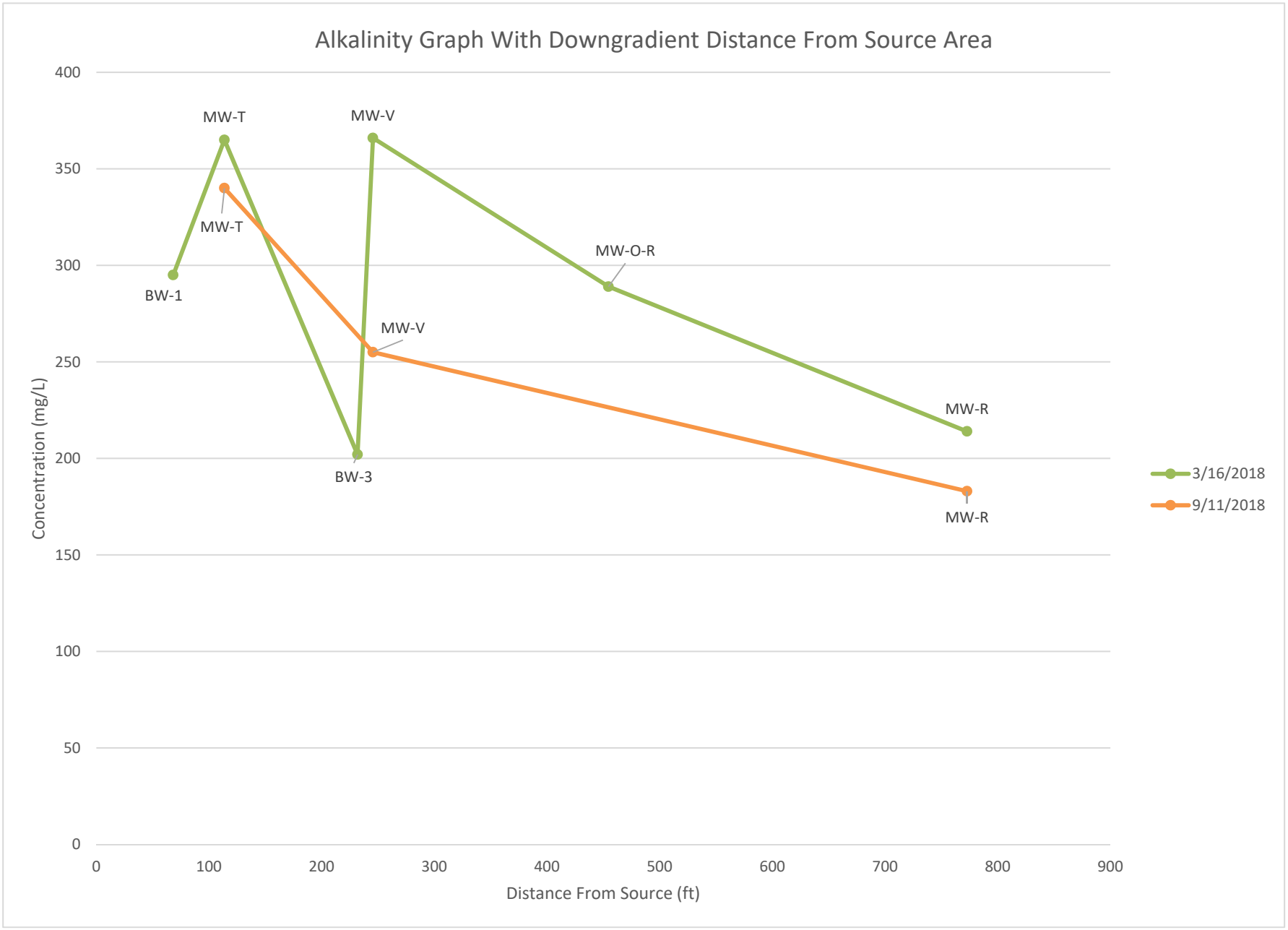
Analyst: BT

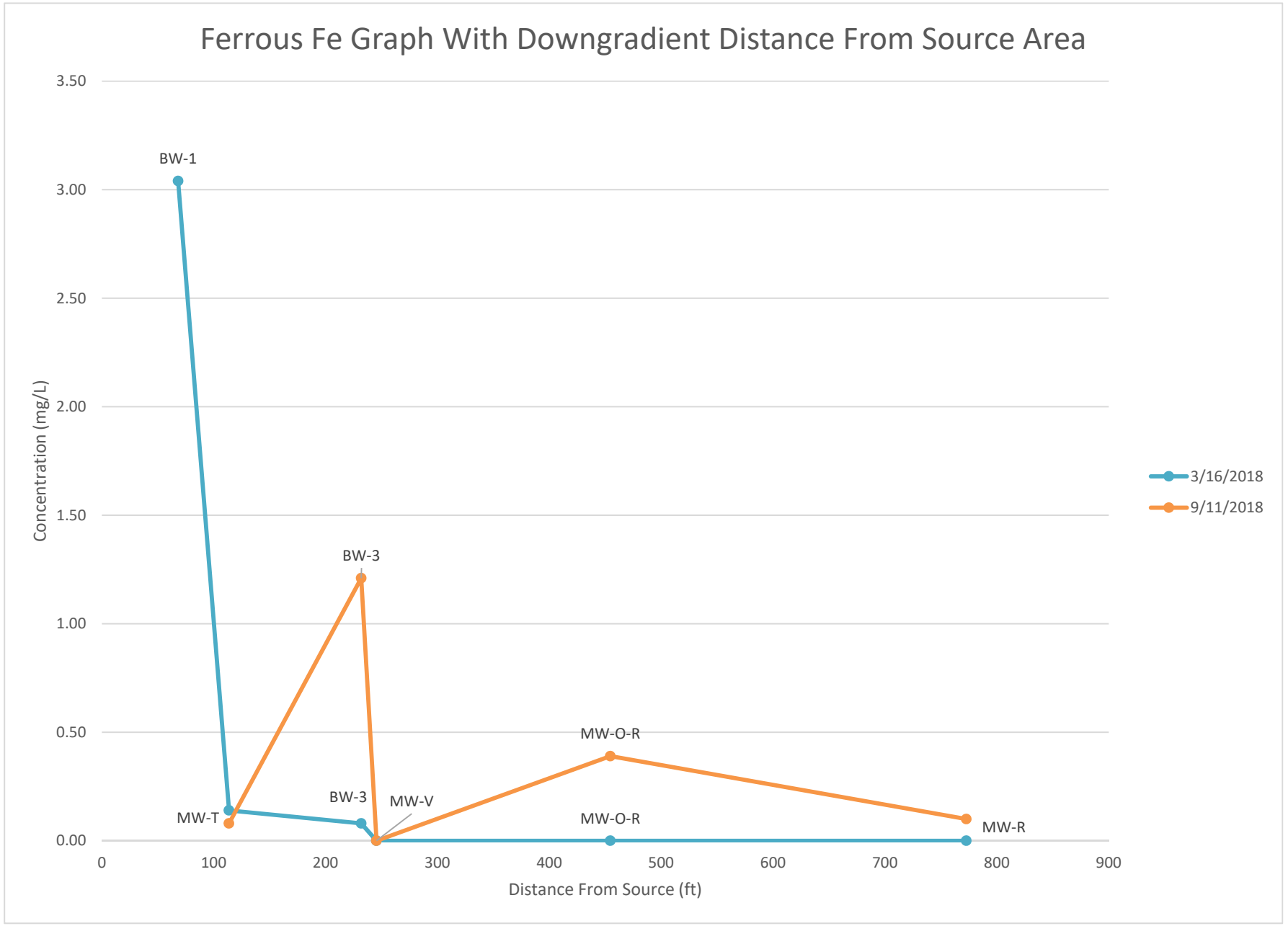
PH Device/Lot#: 213315

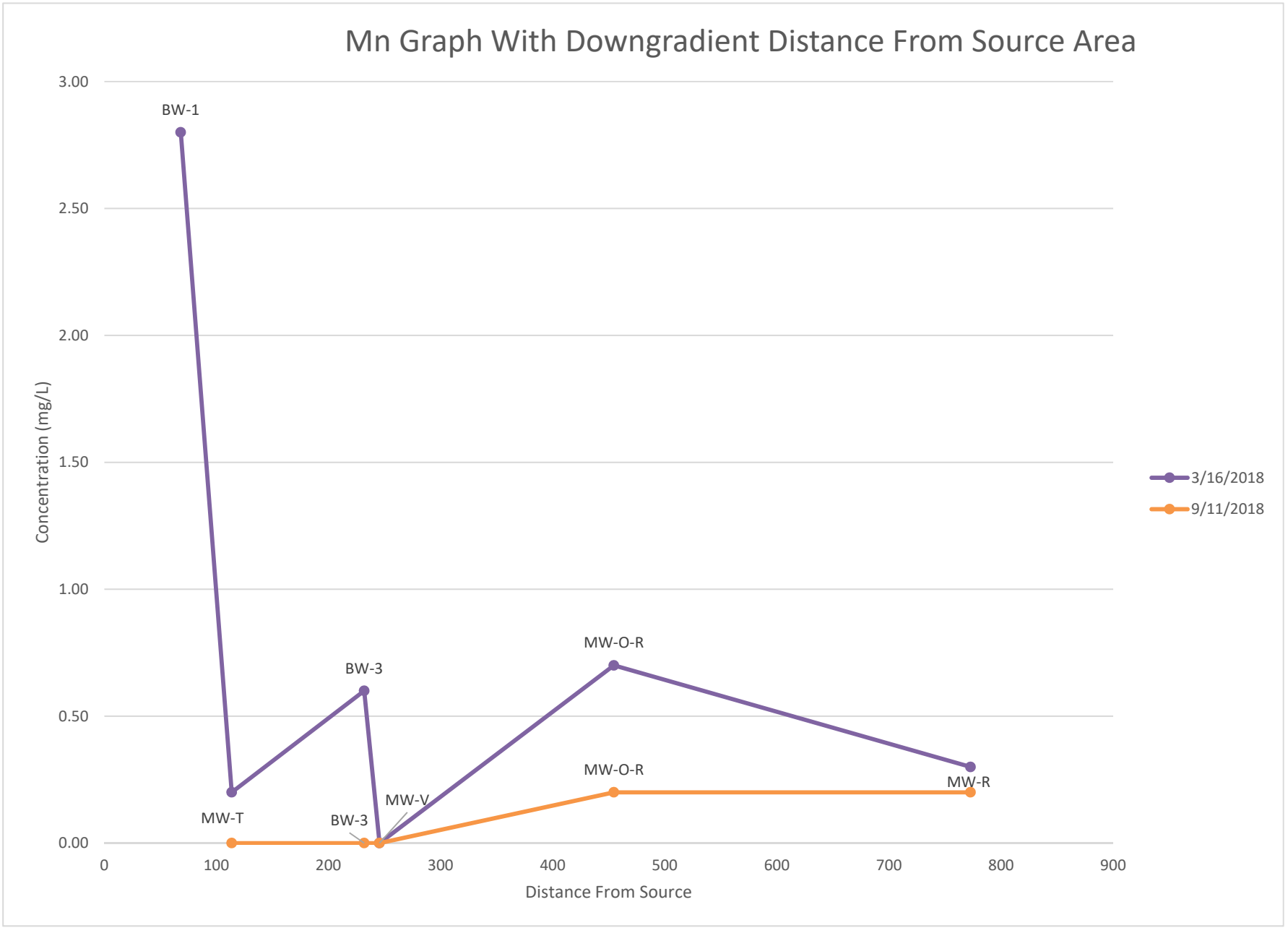
Checklist completed by: Katie Lowe — Date: 09/12/2018

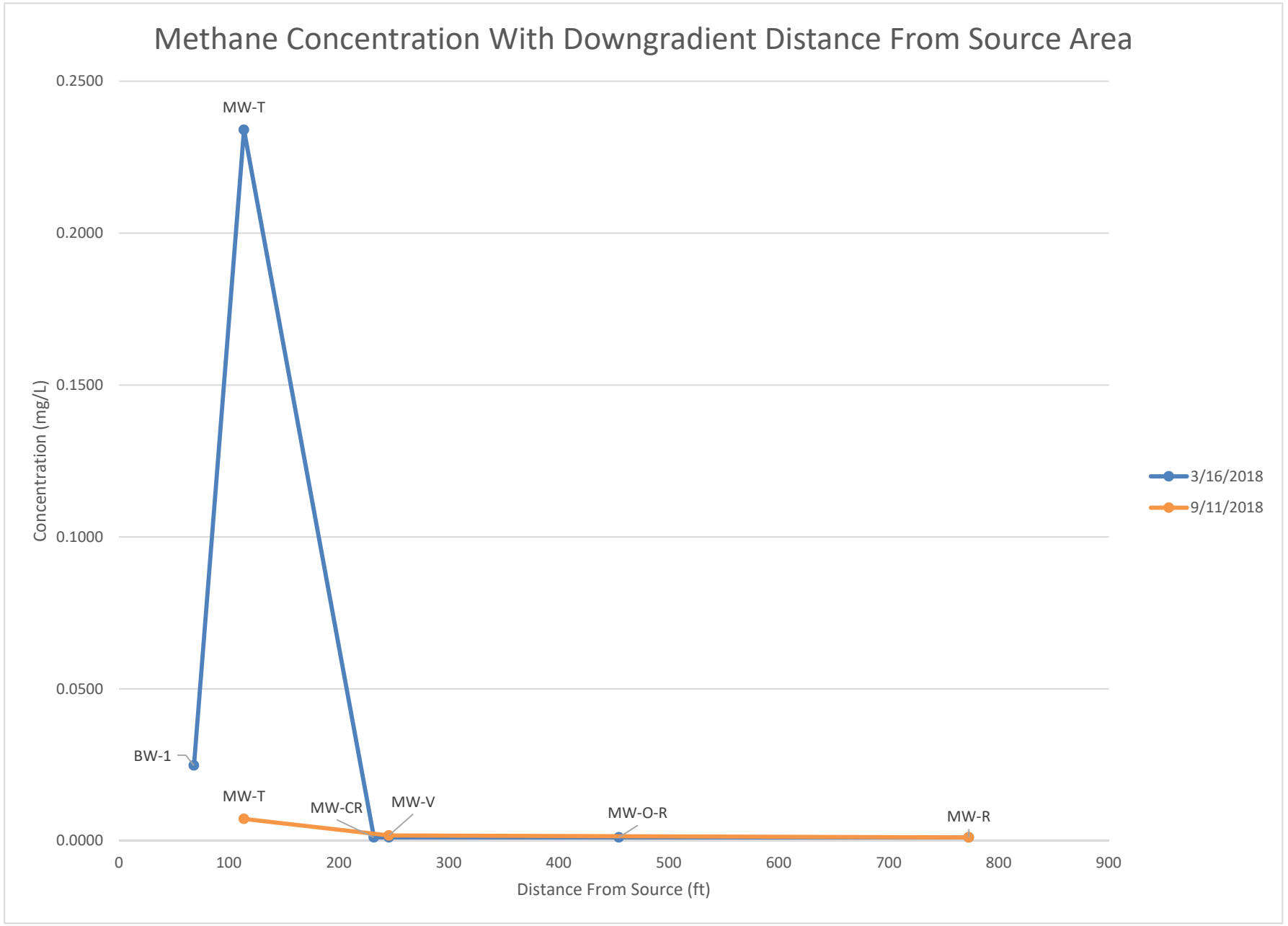
Checklist reviewed by: Debbie Simmons — Date: 09/18/2018

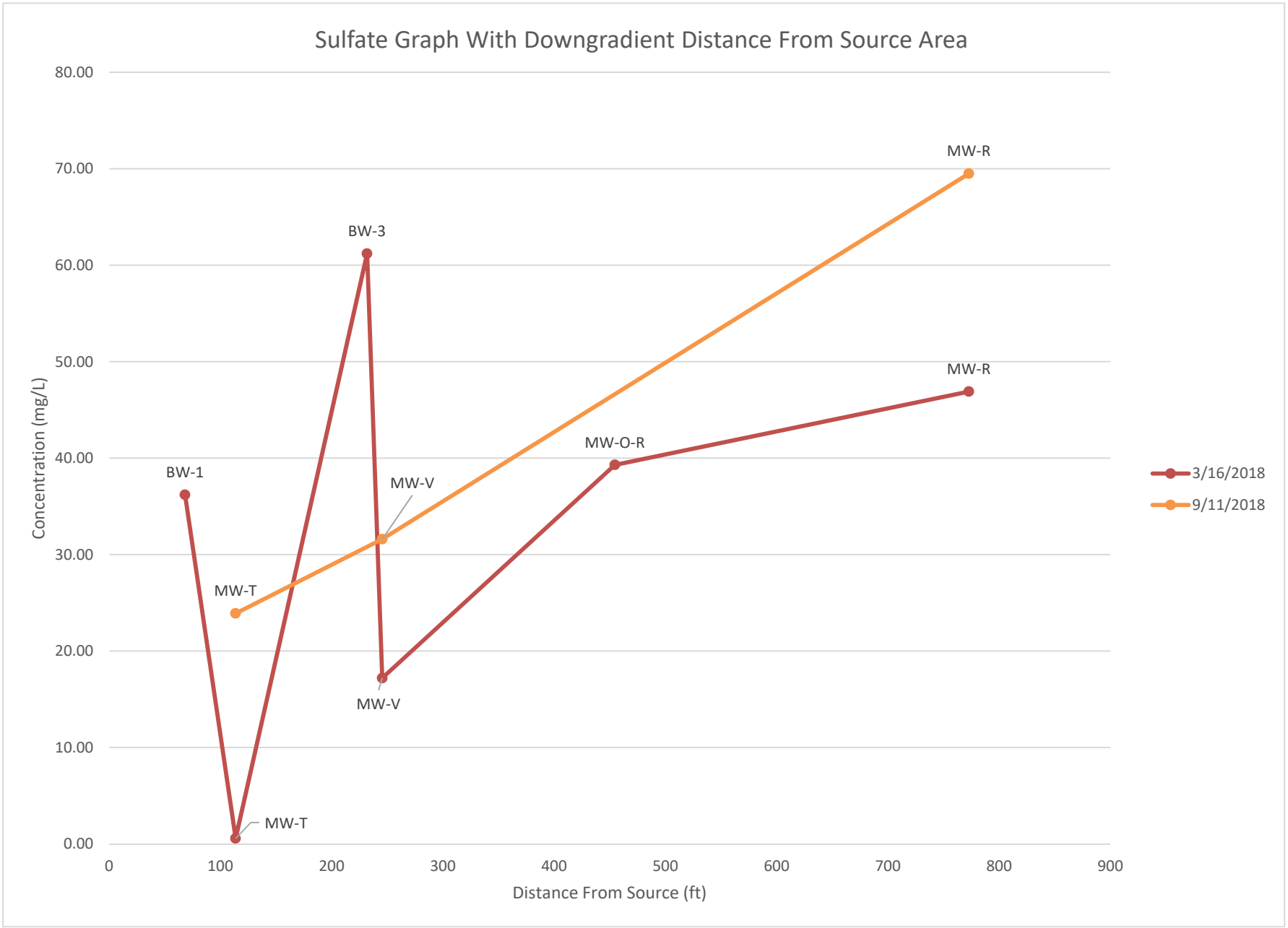
Appendix E
MNA Geochemical Trend Charts











about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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Energy, Minerals and Natural Resources
Oil Conservation Division
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CONDITIONS

Action 2509

CONDITIONS

Operator: Arcadis U.S., Inc 630 Plaza Drive Highlands Ranch, CO 80129	OGRID: 329073
	Action Number: 2509
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Continue monitoring as per schedule. Incorporate any possible remedial solutions in following reports.	6/22/2022