

**2019 ANNUAL GROUNDWATER
MONITORING REPORT
Hugh Gathering Site
Lea County, New Mexico
UL-K, Section 11, T21S, R37E
Plains SRS #2002-10235
NMOCD No.: AP-0041**

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MARCH 2020



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1.0 INTRODUCTION AND OBJECTIVES

1.1 Objectives and Site Information

In May 2002, a six-inch steel pipeline at the Hugh Gathering site (Site) released approximately 50-barrels (bbls) of crude oil into the subsurface. This pipeline was formerly owned by EOTT Energy, LLC (EOTT) and is currently owned by Plains Pipeline, L.P. (Plains). The Site is located in Unit Letter K, T21S, R37E, Section 11 of Lea County, New Mexico, approximately two (2) miles east of Eunice, New Mexico (**Figure 1**) or more specifically at latitude 32° 29' 11.007" N and longitude 103° 07' 33.864" W.

The leak that occurred at the Site in May 2002 was apparently caused by internal or external corrosion and was repaired. The release was reported by Mr. Pat McCasland of Environmental Plus, Inc. (EPI) on behalf of Mr. Frank Hernandez of EOTT to the New Mexico Oil Conservation Division (NMOCD).

This report presents the data collected at the Site during weekly groundwater gauging and phase separated hydrocarbon (PSH) recovery, and four (4) quarterly sampling events conducted during 2019. The objective of the on-going quarterly groundwater sampling activities at the Site is to monitor the concentration of chemicals of concern (COCs) in the affected groundwater and to remove residual crude oil from groundwater.

1.2 Previous Remedial Responses and Environmental Investigations

The previous environmental consultants for the Site were EPI and EarthCon Consultants, Inc. (EarthCon). On July 1, 2012, EnTech Consulting Corporation (EnTech) was retained by Plains for consulting services for the Site. Even though the environmental consultant for the Site has changed, the same personnel were hired by EnTech for historical knowledge, consistency, and to continue working at the Site.

The leak was repaired and affected soil was excavated and temporarily placed on a plastic liner. The initial response notification form (Form No. C-141), prepared by EPI for Plains, provides documentation of reporting the release to the NMOCD. Initial soil remediation activities were completed by EPI. The total spill-impacted area was approximately 1,176 square feet. According to documents available from EPI, the May 2002 release resulted in crude oil impacting two areas, one on either side of the New Mexico State Road (NMSR) 18 (**Figure 2**). The crude oil was initially contained in the chase before flowing from vent pipes on the east and west sides of NMSR 18 and affecting the surface and subsurface soil in two (2) separate areas. For the ease of the discussion, the two (2) impacted areas are hereafter referred to as the east and west

side release areas. As part of the initial remediation activities, impacted soils to a depth of approximately four (4) feet below ground surface (bgs) were excavated and disposed of in an NMOCD-approved landfarm.

1.2.1 West Side Investigations and Remediation

Soil and groundwater delineation activities were initiated in September 2002 with the installation of soil borings BH9 to BH16 on the west side of NMSR 18. Soil boring BH10 was drilled to a total depth of 60-feet bgs and subsequently converted to a monitor well (MW-1). PSH was detected on the surface of the groundwater collected from MW-1.

Monitor wells MW-2 through MW-5 were installed with NMOCD approval on the west side of NMSR 18 during June and July 2003 (**Figure 2**). PSH was discovered in monitor wells MW-1, MW-2, and MW-4. Recovery of PSH from these monitor wells was initiated on a weekly basis and in August 2003, daily recovery began using a gasoline powered eductor type PSH recovery system installed by EPI.

In 2004, with NMOCD approval, monitor wells MW-6 through MW-12, were installed by EPI to further delineate the horizontal extent of PSH and dissolved phase hydrocarbons (**Figure 2**). PSH was observed in monitor wells MW-8, MW-9, and MW-10. Dissolved-phase hydrocarbons (DPH) consisting of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and polynuclear aromatic hydrocarbons (PAH) constituents were detected in the 2004 analytical results from the groundwater sample collected from monitor well MW-5. BTEX and PAH constituents were not detected at or above the respective laboratory method detection limits (MDLs) in 2004 samples from groundwater collected from monitor wells MW-6, MW-7, MW-11, and MW-12 located on the Site periphery. PSH was present in monitor wells MW-1, MW-2, MW-3, MW-4, MW-8, MW-9 and MW-10 with thicknesses ranging from 0.25-foot to 11.13-feet.

In May 2005, Plains submitted an Abatement Plan to the NMOCD for approval (prepared by EPI). After a public comment period, the NMOCD subsequently approved implementation of the Abatement Plan with a November 5, 2005 letter to Plains.

Site surveillance continued in 2005 with daily PSH removal and inspection, monthly monitoring of groundwater and PSH levels, and quarterly sampling of PSH-free monitor wells. In August 2005, because of declining PSH thickness and recovery volumes, PSH recovery was changed from daily deployment of the PSH recovery system to weekly hand bailing of PSH impacted wells and installation of absorbent socks. During 2005, approximately 550-gallons of crude oil were recovered and reintroduced to the Plains

pipeline system. The total recovered volume of oil as of December 31, 2005, including the 600-gallons recovered from 2002 through 2004, was approximately 1,150- gallons.

NMOCD approved Plains Stage 1 and State 2 Abatement Plan (Abatement Plan) for the Site. During December 2006, EPI conducted excavation, confirmation soil sampling, treatment of residual soils using MicroBlaze Spill Control (MicroBlaze), installation of a passive vapor recovery system, clay liner placement, and backfilling of the Site on the west side of NMSR 18. Details of these field activities were presented in the 2006 Annual Report and Soil Closure Report West Side NMSR 18.

1.2.2 East Side Investigations and Remediation

The release on the east side of NMSR 18 was initially delineated with the installation of soil borings BH1 to BH8 in September 2002. The horizontal extent of soil impact on the east side appears to have covered approximately 55-feet x 10-feet of surface area from the point of release. The vertical extent of soil impact was delineated to approximately 25-feet bgs. The groundwater encountered did not appear to be impacted. In July 2006, additional delineation was completed on the east side, with the installation of soil borings BH9 through BH14. In soil boring BH13, delineation was achieved at a depth of 46-feet bgs. Delineation could not be completed in soil boring BH11 as refusal was met at 22- feet bgs and hydrocarbons exceeding regulatory guidelines were present at 20-feet bgs.

To address the hydrocarbon impact on the east side of NMSR 18, a work plan was prepared and submitted on May 2, 2008 to the NMOCD and approved. The work plan was implemented during July through October 2008. During the implementation of this work, EarthCon supervised the soil remediation activities including excavation of the top 19 feet of hydrocarbon impacted soil, installation of a clay barrier installation, and backfilling of the excavated soils. A Soil Closure Report East Side NMSR 18 was submitted to the NMOCD in October 2008 indicating the completion of the soil remediation activities and the achievement of the target clean up goals for soils at the Site. One (1) monitor well (MW-13) was installed to determine if the groundwater was affected on the east side of NMSR 18. Details of these field activities were presented in the Soil Closure Report East Side NMSR 18 dated December 2008 and also the 2008 Annual Report.

To address the COCs in groundwater on the east side of NMSR 18, a Groundwater Investigation and Delineation Work Plan letter dated February 23, 2010 was submitted to the NMOCD. This work plan proposed the installation of two (2) additional monitor wells to delineate the groundwater impact, however landowner approval was not

secured prior to mobilization and only MW-13 was installed. Monitor well MW-13 was the only well at that time to show impact to groundwater from the release associated with the east side of the NMSR 18. Additionally, quarterly groundwater samples were collected from MW-12 and in May 2010 was identified as having groundwater impacted above NMOCD standards for benzene.

1.3 Regulatory Framework

Based on standards outlined in New Mexico Administrative Code (NMAC), Title 20, Chapter 6, Part 2, the remediation criteria for groundwater at the Site are as follows:

Chemical of Concern	Limit (mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total Xylenes	0.62
Polynuclear Aromatic Hydrocarbons (PAH) ^(1,2)	0.03
Benzo-a-pyrene ⁽²⁾	0.0007

1 – PAHs: Total naphthalenes plus monomethylnaphthalenes

2 – PAH remediation standards will be used as target concentrations only upon PSH removal.

In addition to using the above values as the target cleanup goals for COC concentrations in groundwater at the Site, PSH removal is an integral part of ongoing remediation activities.

1.4 Limitations

EnTech has examined and relied upon the file information provided by Plains and their contractors, and conversations with Plains personnel and their contractors familiar with the Site in question. EnTech has not conducted an independent examination of the information contained in external project files or that provided by Plains or their contract personnel. Furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents and during the interviews of Plains and contract personnel are true and accurate. EnTech has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. EnTech will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. EnTech believes the conclusions stated herein are factual, but no guarantee is made or implied.

2.0 GROUNDWATER ASSESSMENT AND RESULTS

2.1 Groundwater Sampling Methodology

Activities conducted at the Site in 2019 primarily consisted of gauging wells for groundwater levels, determining the presence or absence of PSH, and recovering PSH using absorbent socks, hand bailing, and submersible pumps in monitor wells. Sampling of PSH-free monitor wells was also completed to evaluate the extent of the dissolved-phase hydrocarbon plume.

Measurements of the depth to groundwater and product thickness in wells with hydrocarbon sheen or PSH were completed during the weekly PSH recovery and groundwater sampling events. Thirteen (13) monitor wells (MW-1R through MW-13) were gauged using an oil/water interface probe. The well locations are shown on **Figure 2**.

Groundwater level elevations and the presence of PSH, if any, were noted for each well. In cases where no measurable PSH was detected by the interface probe, the downhole sensor of the probe was examined for the presence of PSH upon removal from the well. Monitor wells MW-1R (MW-1R replaced MW-1 in November 2013), MW-2, MW-4, and MW-8 through MW-10 contained a measurable PSH thickness or hydrocarbon sheen during 2019 and were sampled annually at a minimum. Starting in the second quarter of 2008, all recovery and monitor wells with PSH or sheen were required to be sampled annually and analyzed for BTEX and PAH. For consistency, groundwater samples were collected for the required analysis during the second quarter of each subsequent year. The NMOCD also requested that any monitor wells which had a COC which exceeded NMOCD standards be sampled for PAHs. To meet these requests, groundwater samples were collected during the second quarter of 2019 from MW-1R, MW-2, MW-3, MW-8 through MW-10 and analyzed for PAH and BTEX.

Monitor wells not exhibiting PSH or hydrocarbon sheen were gauged monthly and sampled quarterly. After collecting and recording the groundwater level, each well was purged with a clean electric submersible pump or hand bailed using a clean disposable bailer, and then groundwater samples were collected using a new dedicated disposable bailer.

Groundwater samples were poured directly from the disposable bailers into the appropriate laboratory-supplied sample containers. The sample containers were then packaged to prevent breakage, placed on ice in a cooler, and shipped to ESC Lab Sciences or Pace Analytical (which purchased ESC in June 2018) of Mt. Juliet,

Tennessee for analysis. The groundwater samples were analyzed for BTEX by EPA Method SW 846-8260B and PAHs by EPA Method SW 8270C.

2.2 Groundwater Gauging

Table 1 summarizes groundwater gauging (elevation and PSH thickness) measurements taken before each quarterly groundwater sampling event in 2019. In addition, weekly groundwater elevation and PSH thickness measurements were recorded prior to and after PSH recovery and monthly measurements were taken from wells without PSH. Groundwater elevations and PSH thickness measurements were taken in six (6) monitor wells (MW-1R, MW-2, MW-4, MW-8 through MW-10) during weekly PSH recovery efforts. Groundwater elevation measurements were recorded quarterly for seven (7) PSH-free monitor wells (MW-3, MW-5, MW-6, MW-7, and MW-11 through MW-13). Complete historical groundwater elevation and PSH thickness measurements since September 21, 2005 are presented in **Table 2**. The groundwater elevation calculations are based on the top of PVC well casing elevations, which were last surveyed on March 15, 2005 by EarthCon, the previous consultant.

2.3 Groundwater Gradient and Flow Direction

Using the groundwater gauging data summarized in **Table 1**, groundwater gradient maps were prepared and are included as **Figures 3A** through **3D**. The calculated groundwater gradient and estimated groundwater flow direction are based on the gauging data obtained on February 14, May 14, August 27, and November 20, 2019. The hydraulic gradient in 2019 ranged from 0.0011 to 0.0014 feet/foot (ft/ft), based on groundwater elevations measured between monitor wells MW-6 and MW-12. The groundwater gradient and flow direction across the Site during 2019 were similar to the gradient and southeast direction observed during the previous five years.

2.4 Groundwater Analytical Results

Groundwater samples were collected on February 14, May 14, August 27, and November 20, 2019 from all wells that did not contain PSH (see **Table 3**). The monitor wells were purged by removing a minimum of three (3) to five (5) well volumes of groundwater, or depending on groundwater conditions, bailed dry three (3) times using a disposable bailer and allowed to recover to at least 80% of the initial volume before collecting samples. Groundwater samples were collected and transferred into laboratory-supplied sample containers. The sample containers were placed on ice in a cooler and shipped to ESC (Pace) for analysis.

From 2008 through 2019, NMOCD required Plains to analyze for BTEX and PAH constituents in the dissolved phase groundwater samples collected from monitor wells

with a hydrocarbon sheen or wells that exceed NMOCD remediation standards. To meet this requirement for 2019, groundwater samples were collected from monitor wells containing PSH (MW-1R, MW-2, MW-3, and MW-8 through MW-10) during the second quarter and analyzed for BTEX (see **Tables 3 and 4** for analytical data) as well as PAHs (see **Table 5**). Groundwater samples were collected from PSH-free monitor wells (MW-3, MW-5 through MW-7, and MW-11 through MW-13) in all four (4) quarters of 2019 and analyzed for BTEX.

Laboratory analysis of groundwater samples collected from monitor wells MW-1R, MW-2, MW-4, and MW-8 through MW-10 indicated benzene concentrations at levels above the NMOCD criteria during the second quarter 2019 quarterly sampling event and are summarized in **Table 2.1** below. Analysis of groundwater samples collected from all other monitor wells (MW-3, MW-5 through MW-7, and MW-11 through MW-13) during all four (4) quarterly sampling events indicated concentrations below method detection limits (MDLs) or concentrations below the NMOCD criteria for all COCs.

	Second Quarter 2019			
	Benzene	Toluene	Ethyl-benzene	Xylenes
NMOCD Standards (mg/L)	0.01	0.75	0.75	0.62
MW-1R	0.243	0.0682	0.625	0.115
MW-2	1.01	0.00271	0.238	0.205
MW-4	0.0101	0.00408	0.0168	0.0170
MW-8	0.324	0.0494	0.274	0.397
MW-9	0.0513	<0.020	0.167	0.265
MW-10	0.0146	0.00177	0.0387	0.0594

Note: Concentrations in bold indicate exceedances of NMOCD Remediation criteria.

The 2019 analytical results are presented in **Table 3**, and historical analytical results are presented in **Table 4**. Laboratory analytical reports are provided in **Appendix A**. The groundwater analytical data for each quarterly sampling event are presented in **Figures 4A through 4D**.

The NMOCD requires annual PAH analysis be conducted on each monitor well until laboratory analysis indicates the PAH concentrations are below the NMOCD remediation criterion for the constituent sampled.

During the second quarter sampling event, fluids (PSH and dissolved phase hydrocarbons) from MW-1R, MW-2, MW-4, MW-8, MW-9, and MW-10 were bailed off prior to purging the well. After three (3) well volumes were removed and the well was allowed to stabilize prior to a groundwater sample being collected. The analytical results indicated the presence of PAHs detected above laboratory detection limits, but below any applicable NMOCD established remediation criteria with the exception of naphthalene. Naphthalene was detected above the NMOCD standards of 0.03 mg/L in monitor wells MW-2, MW-8 and MW-9. The following PAH analytes were detected during the second quarter sampling event naphthalene, acenaphtylene, acenaphthylene, fluorene, phenanthrene, dibenzofuran, 1-methylnaphthalene, and 2-methylnaphthalene. Copies of the laboratory analytical data packages are included in **Appendix A**.

2.5 Groundwater Waste Disposal

Purge water from well sampling is placed in the 1,100-gallon above ground storage tank (AST). These liquids are vacuumed from the tank and transported off-Site for disposal by Key Energy Services of Hobbs, New Mexico and disposed of at a licensed disposal facility.

3.0 PSH RECOVERY

3.1 PSH Recovery Methodology

In addition to collecting groundwater samples, EnTech performed weekly visits to the Site to gauge and recover PSH from six (6) wells with PSH/sheen (wells MW-1R, MW-2, MW-4, and MW-8 through MW-10). Measurements to PSH and water levels were recorded during each Site visit (see **Table 2**). PSH recovery activities were completed on a weekly basis using submersible pumps, hand bailer and/or absorbent socks. Routine PSH recovery activities typically consisted of the removal of 10- to 20-gallons of affected groundwater and PSH.

3.2 PSH Recovery via Pumping and Manual Bailing

During 2019, measurable PSH was observed in monitor wells MW-1R, MW-2, MW-4, MW-8 through MW-10. In general, decreasing trends in the PSH thickness data collected for these wells has been observed. Recovery data for PSH and dissolved phase groundwater are presented in **Table 6** for 2019.

A general decreasing trend in the PSH thickness in monitor well MW-1 was observed starting in early 2007. MW-1R was installed in 2013 to increase product recovery and replace well MW-1. The average product thickness observed in 2019 for MW-1R was 0.41-foot, an increase from 0.15-foot in 2018. A maximum product thickness of 1.82-feet was measured in 2019, an increase over the 0.15-foot in 2018. A total of 11.75-gallons of PSH (an increase over the 5.5-gallons recovered in 2018) and 418.25-gallons of affected groundwater were recovered from MW-1R during 2019, which does not include sheens observed during recovery of PSH.

The maximum thickness in MW-2 during 2019 was observed to be 0.75-foot, which occurred during the first quarter, an increase from 0.24-foot feet observed in 2018. The calculated average PSH thickness for 2019 was 0.09- foot. A total of 2.5-gallons of PSH (a slight increase over the 2.0-gallon recovered in 2018) and 407.50-gallons of affected groundwater were recovered from MW-2 during 2018, which does not include sheens observed during recovery of PSH.

There was no measurable thickness of PSH in MW-3 observed during 2015 through 2019. The last measurable thickness occurred during the first quarterly sampling event of 2015 and was 0.02-foot. While this well has remained on the PSH recovery list, no PSH or affected groundwater were recovered in 2019.

The maximum thickness in MW-4 during 2019 was observed to be 0.23-foot, an increase from 0.09-foot in 2018. PSH thicknesses observed in monitor well MW-4 during 2019 ranged from a sheen to 0.23-foot. The maximum thickness was observed during the third quarter of 2019. A total of 2.50-gallons of PSH (an increase of the 0.25-gallon that was recovered in 2018) and 397.50-gallons of affected water were recovered from MW-4 during 2019.

PSH thicknesses observed in MW-8 during 2019 ranged from nondetectable to 0.18-foot, a decrease from a maximum thickness of 0.62-foot in 2018. The calculated average PSH thickness observed during 2018 was 0.06-foot. A total of 2.75-gallons of PSH (an increase over the 1.75-gallons recovered in 2018) and 357.25-gallons of affected groundwater were recovered from MW-8 during 2019.

The maximum PSH thickness observed in monitor well MW-9 was 0.65-foot, an increase from 0.34-foot in 2018. The calculated average PSH thickness for 2019 was 0.17-foot. A total of 5.50-gallons of PSH (a decrease from the 8.50-gallons recovered in 2018) and 424.50-gallons of affected water were recovered from MW-9 during 2019.

The maximum PSH thickness observed in monitor well MW-10 was 0.25-foot, an increase from 0.18-foot in 2018 and 0.09 feet in 2016, but overall decreasing from 0.89-foot in 2014 and 0.39-foot in 2015. The calculated average PSH thickness for 2019 was 0.04-foot. A total of 0.25-gallon of PSH and 279.75-gallons of affected water were recovered from MW-10 during 2019.

3.3 PSH Waste Disposal

Approximately 25.25-gallons of PSH and 2284.75-gallons total of affected groundwater were recovered from the wells containing PSH or sheen during 2019 during manual and pumping recovery events. These liquids are vacuumed from the tank and transported off-Site for disposal by Key Energy Services of Hobbs, New Mexico and disposed of at a licensed disposal facility.

4.0 MONITORED NATURAL ATTENUATION

4.1 Regulatory Framework for Monitored Natural Attenuation

Monitored Natural Attenuation (MNA) is defined by the New Mexico Environmental Department in 20.5.13 NMAC as “a methodology for remediation that relies upon a variety of naturally occurring chemical, physical and biological processes to achieve target concentrations in a manner that is equally as protective of public health, safety and welfare, and the environment as other methods and that is accompanied by a program of monitoring to document the process and results of the above mentioned processes.”

As part of the MNA process several lines of evidence need to be evaluated, the general lines of evidence are listed below:

- **Primary Lines of Evidence (PLOE).** Relies on use of historical groundwater data that demonstrate a clear trend of stable or decreasing chemical of concern (COC) concentrations over time and with distance away from the source at appropriate monitoring or sampling points.
- **Secondary Lines of Evidence (SLOE).** Uses geochemical indicators to document certain geochemical signatures or “footprints” in the groundwater that demonstrated (indirectly) the type of natural attenuation process(es) occurring at the affected property and the destruction of COCs; or uses distance-based/time-based/biodegradation rate calculations to demonstrate attenuation.
- **Other Lines of Evidence (OLOE).** Most often consists of predictive modeling studies and other lab/field studies that demonstrate an understanding of the natural attenuation process(es) occurring at the affected property and their effectiveness in controlling PCLE zone migration and decreasing COC concentrations.

4.2 Groundwater Plume Stability and Monitored Natural Attenuation Information

The Hugh Gathering Site is currently undergoing Plume Stability Analysis. While samples are collected for monitored natural attenuation, insufficient data exists at this time to perform a reliable evaluation.

While plume stability using MNA cannot be evaluated at this time, PLOEs do exist and include:

- The benzene concentrations reported in the groundwater samples collected from the monitor wells down-gradient of the plume (MW-12 and MW-13) from 2013 through 2019 were below laboratory MDLs or at concentrations below the NMOCD criteria;
- Benzene concentrations reported in the groundwater samples collected from cross-gradient monitor wells (MW-7 and MW-11) from 2013 through 2019, were below laboratory MDLs or at concentrations below the NMOCD criteria; and,
- Declining benzene concentrations analyzed in the groundwater samples collected from monitor well MW-1R, MW-2 through MW-4, and MW-8 through MW-13 from 2012 through 2019.

The dissolved phase plume was evaluated by analyzing groundwater samples collected quarterly from monitor wells which did not contain PSH. During the second quarter, monitor wells which historically contained PSH were sampled. Benzene was detected above the MDLs in monitor wells MW-1R, MW-2, MW-4, MW-8, MW-9, and MW-10 and above NMOCD remediation criteria in MW-1R, MW-2, MW-4, and MW-8 through MW-10. Historically monitor wells MW-12 and MW-13 had concentrations above NMOCD limits, however those have reduced over time and are no longer above limits effective 2012-2013.

Understanding plume stability is an important step in the remedial planning process for a Site. For instance, an increasing plume could potentially migrate to human or environmental receptors, whereas a stable or decreasing plume may not pose an imminent threat to human health and the environment. An introduction to plume stability analysis and the basis for the plume evaluation at the Site was presented in the 2009 Annual Report.

This analysis was conducted in order to understand the overall stability of the benzene plume during 2008 through 2019. This study included the development of benzene concentration isopleths maps. An average of the benzene concentrations reported in the four (4) quarterly groundwater sampling events were used for all the PSH-free wells (MW-3, through MW-7, and MW-11 through MW-13). Since the wells with PSH were only sampled during the second quarter sampling events from 2008 through 2019, the benzene concentrations reported in 2019 during this sampling event were included in the annual plume evaluation.

The benzene isopleths maps for 2008 through 2019 are presented in **Figures 5 through 17** respectively. Previous maps prepared by EarthCon are presented in **Figures 5 through 9**.

The Mann Kendall Trend Test (MKTT) is a statistical method used to analyze data collected over time for consistently increasing or decreasing trends. It is a non-parametric test, which means it works for all distributions (i.e. the data doesn't have to meet the assumption of normality), but the data should have no serial correlation.

The test can be used to find trends for as few as four (4) samples. However, with only a few data points, the test has a high probability of not finding a trend when one would be present if more points were provided. The more data points available, the more likely the test is going to find a true trend. The minimum number of recommended measurements is therefore at least eight (8) to ten (10) (Reference: Prashanth Khambhammettu: "Mann-Kendall Analysis for the Fort Ord Site", HydroGeoLogic, Inc.-OU-1 2004 Annual Groundwater Monitoring Report-Former Fort Ord, California, 2005).

Concentrations of benzene analyzed in groundwater samples collected from the Site between June 3, 2011 and May 14, 2019 were evaluated using the MKTT. Only monitor wells with detectable concentrations of benzene were evaluated.

Monitor wells evaluated by MKTT for benzene included monitor well MW-1/MW-1R, MW-2, MW-4, MW-8, MW-9, and MW-10. The confidence factor [CF] of each analyte and monitor well is listed in brackets following the well. Monitor wells MW-1/MW-1R [99.3%], MW-2 [98.3%], MW-4 [99.9%], MW-8 [99.9%], MW-10 [99.7%] all indicated a "decreasing" trend, whereas monitor well MW-9 [91.0%] indicated a "probably decreasing" trend. A copy of the MKTT analysis is included in Appendix B.

The analytical data collected for the Site used for the plume stability analysis indicated that the benzene plume emanating from the Site has a decreasing trend in size and mass and the average concentration of benzene appears to be decreasing as well.

5.0 CONCLUSIONS

5.1 Findings

Findings and recommendations resulting from 2019 groundwater monitoring at the Hugh Gathering Site are summarized below.

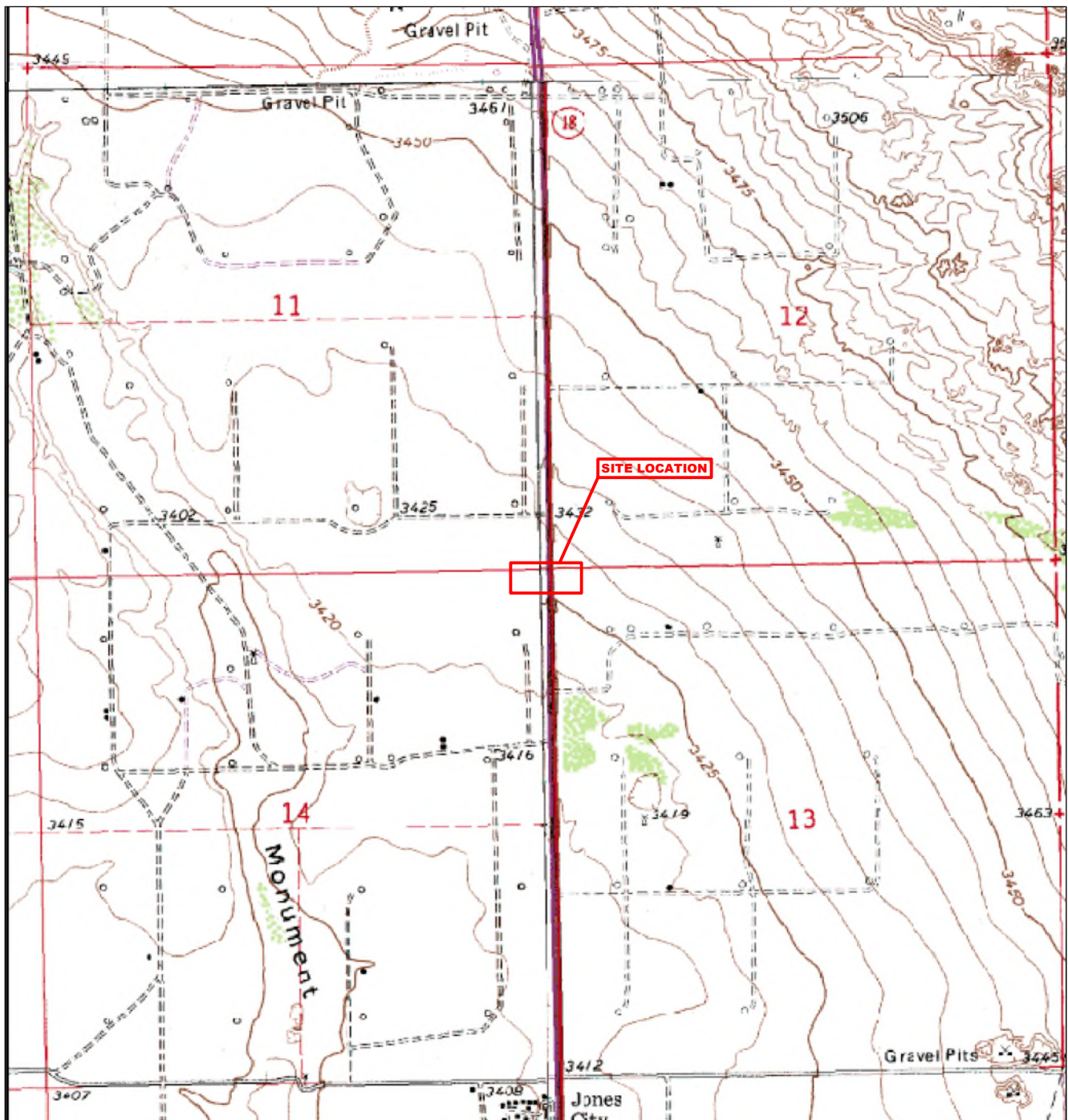
- Groundwater flow in the uppermost groundwater-bearing unit is to the southeast ranging from 0.0011 to 0.0014 ft/ft as measured between wells MW-6 and MW-12.
- Analytical results reported for the groundwater samples collected from seven (7) wells that were PSH-free (MW-3, MW-5, MW-6, MW-7, MW-11, MW-12, and MW-13) indicated BTEX constituent concentrations below laboratory MDLs or below NMOCD remediation criteria for all four (4) quarters. Laboratory analysis of groundwater samples collected from monitor wells with PSH or sheen (MW-1R, MW-2, MW-4, MW-8, MW-9, and MW-10), exceeded the NMOCD remediation criteria for benzene during the quarters they were sampled.
- The PSH plume has remained in the historical source area and does not appear to be migrating downgradient.

Based on PSH recovery data and groundwater sampling completed during 2019 (and previously) at the Site, EnTech recommends the following:

- PSH recovery from wells MW-1R, MW-2, MW-4, MW-8, MW-9, and MW-10 on a weekly basis.
- Groundwater monitoring and sampling continues on a quarterly basis for BTEX in wells with no measurable PSH.
- Groundwater monitoring continues on an annual basis for PAHs in wells with PSH or concentrations exceeding NMOCD standards.

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Eunice NE Quadrangle
32°29'11"N Latitude & 103°07'31"W Longitude

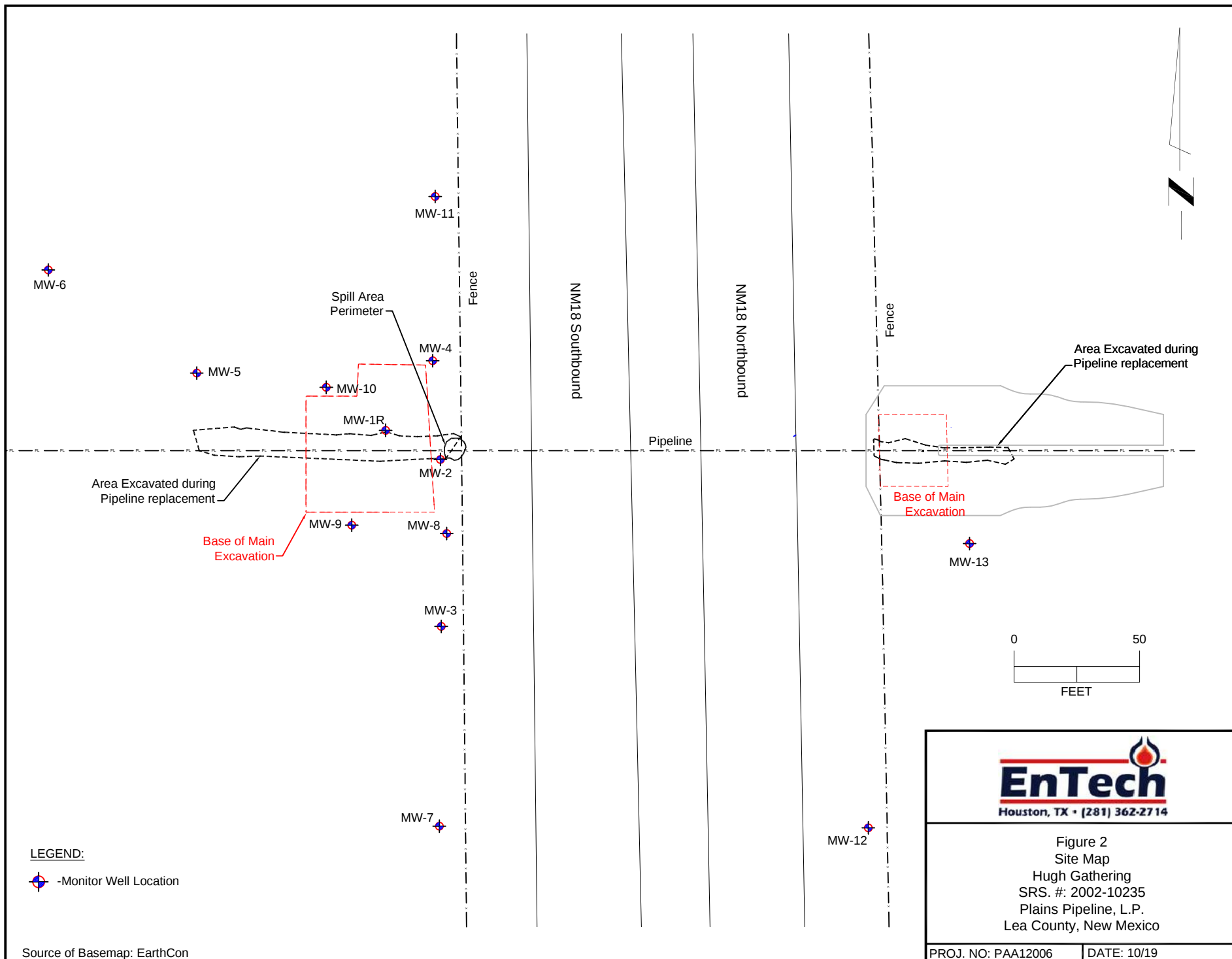
0 1/2 mile 1 mile
 Distance in Miles

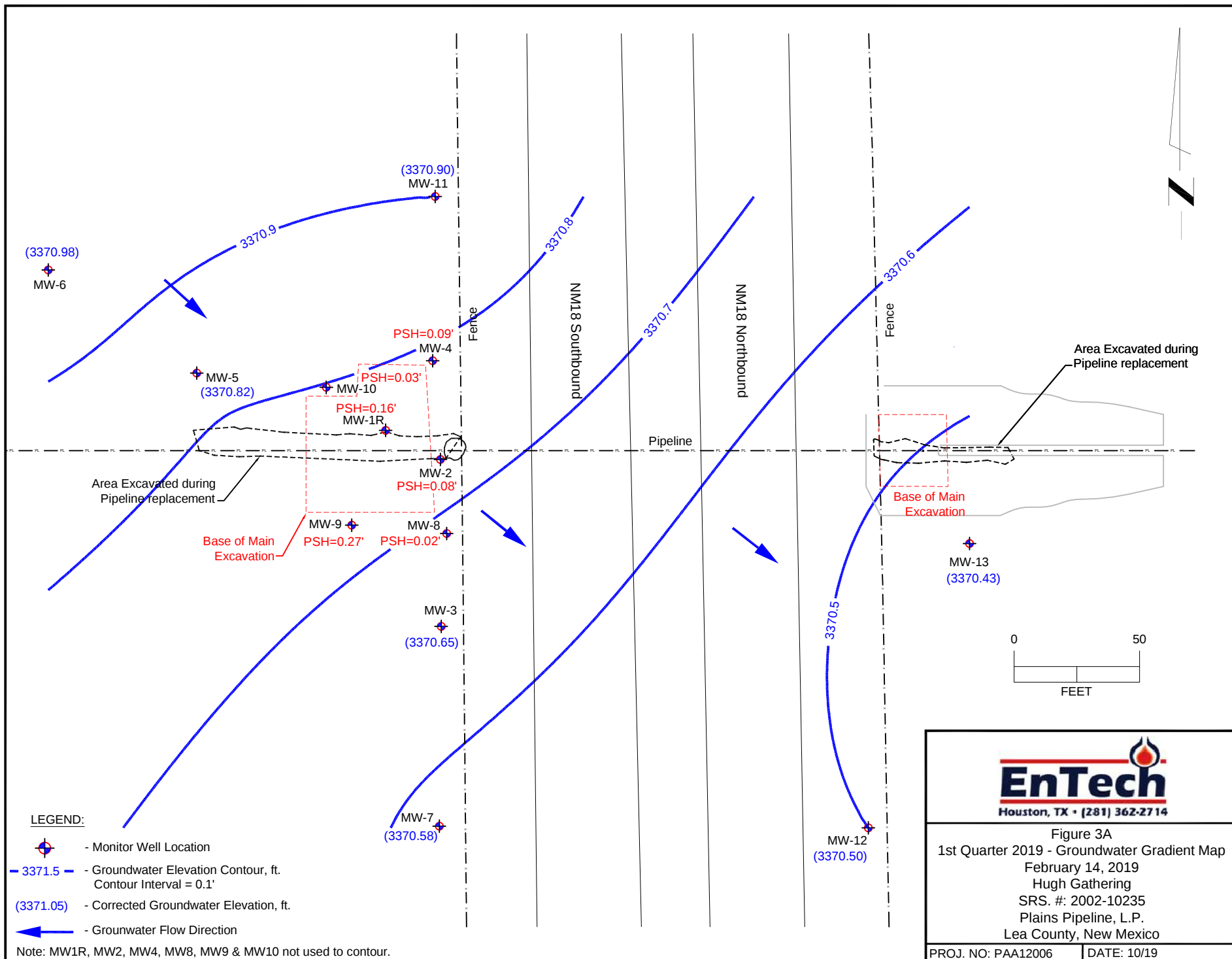
EnTech
 Houston, TX • (281) 362-2714

Figure 1
 Site Location Map
 Hugh Gathering
 SRS. #: 2002-10235
 Plains Pipeline, L.P.
 Lea County, New Mexico

PROJ. NO: PAA12006

DATE: 10/19





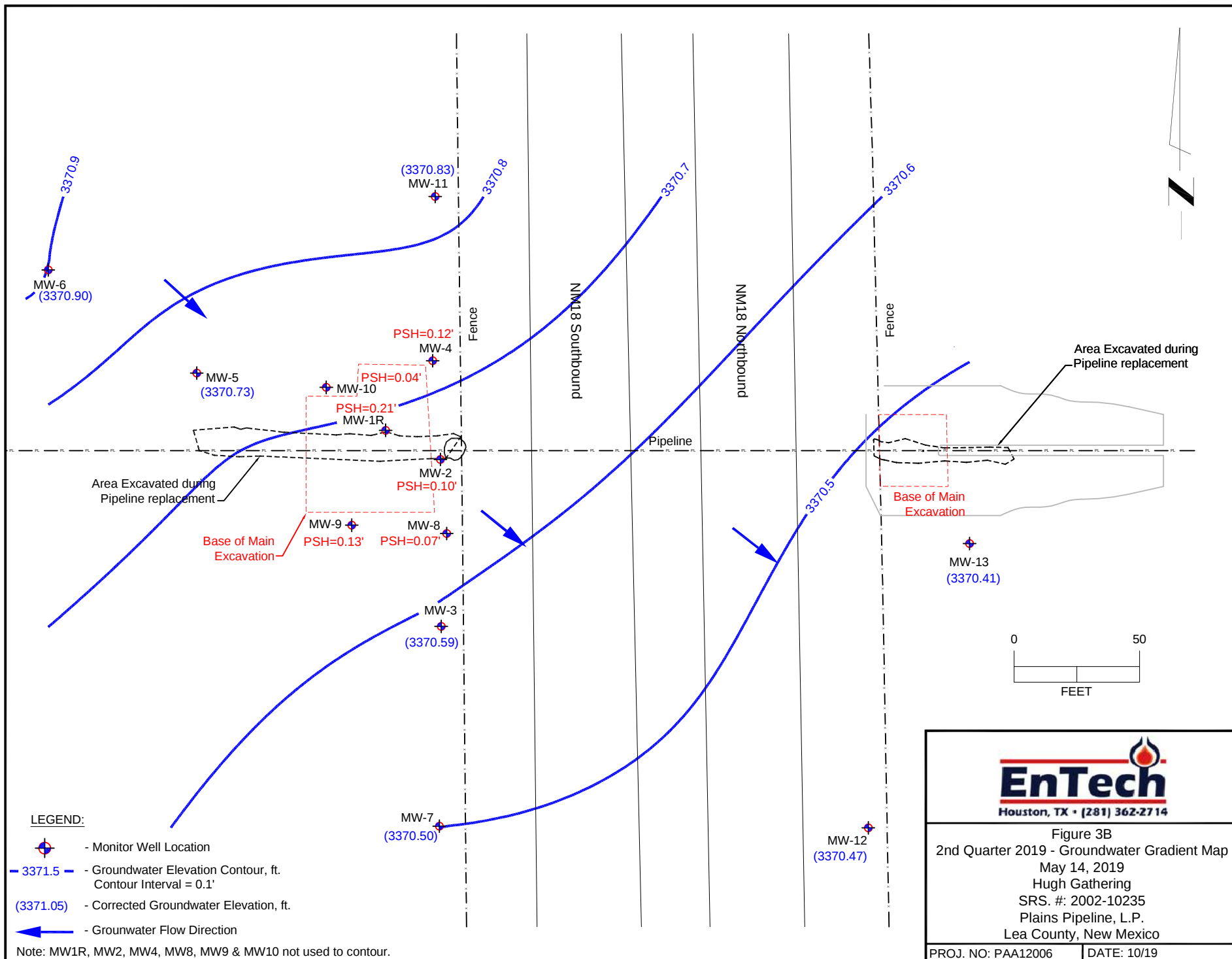
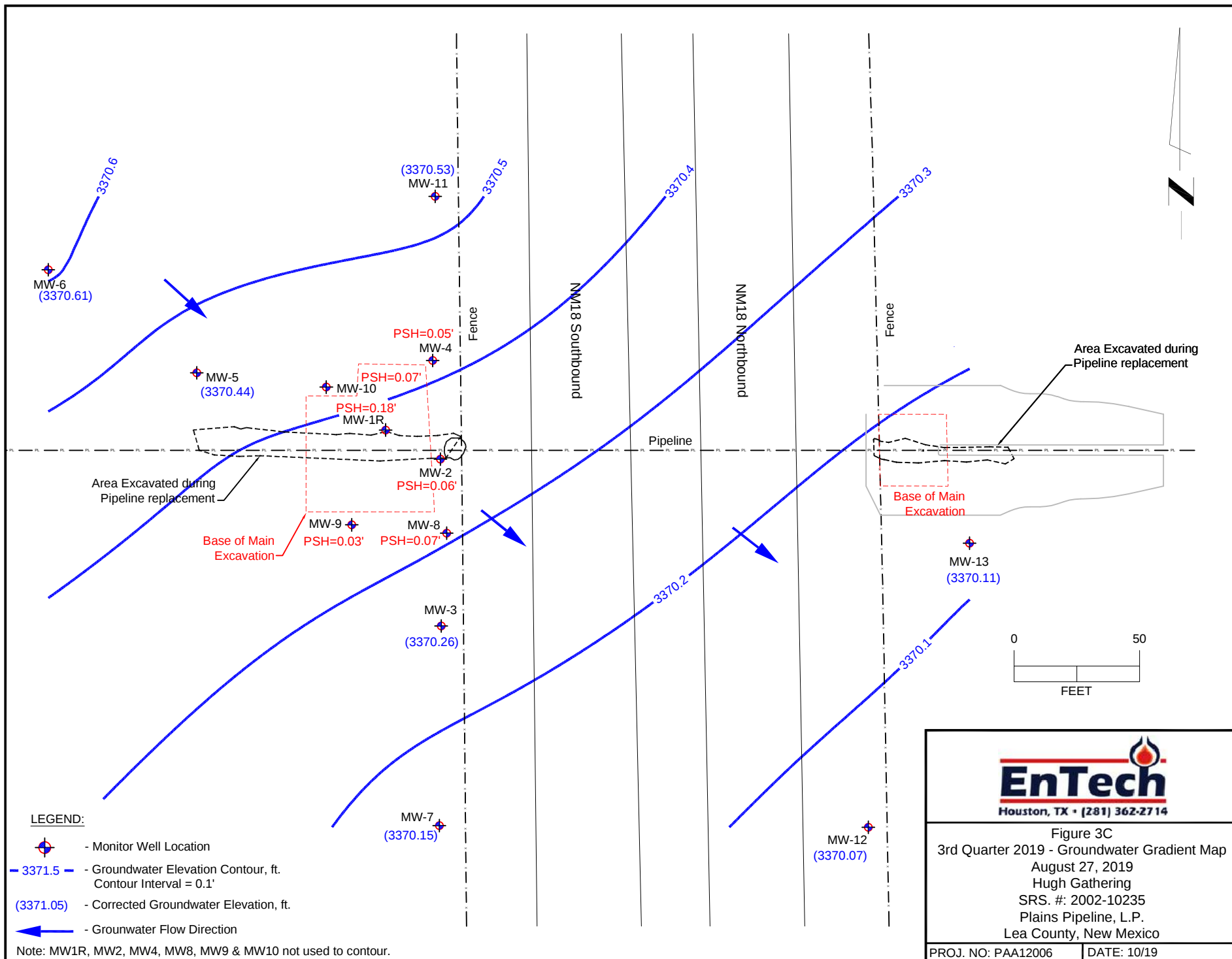
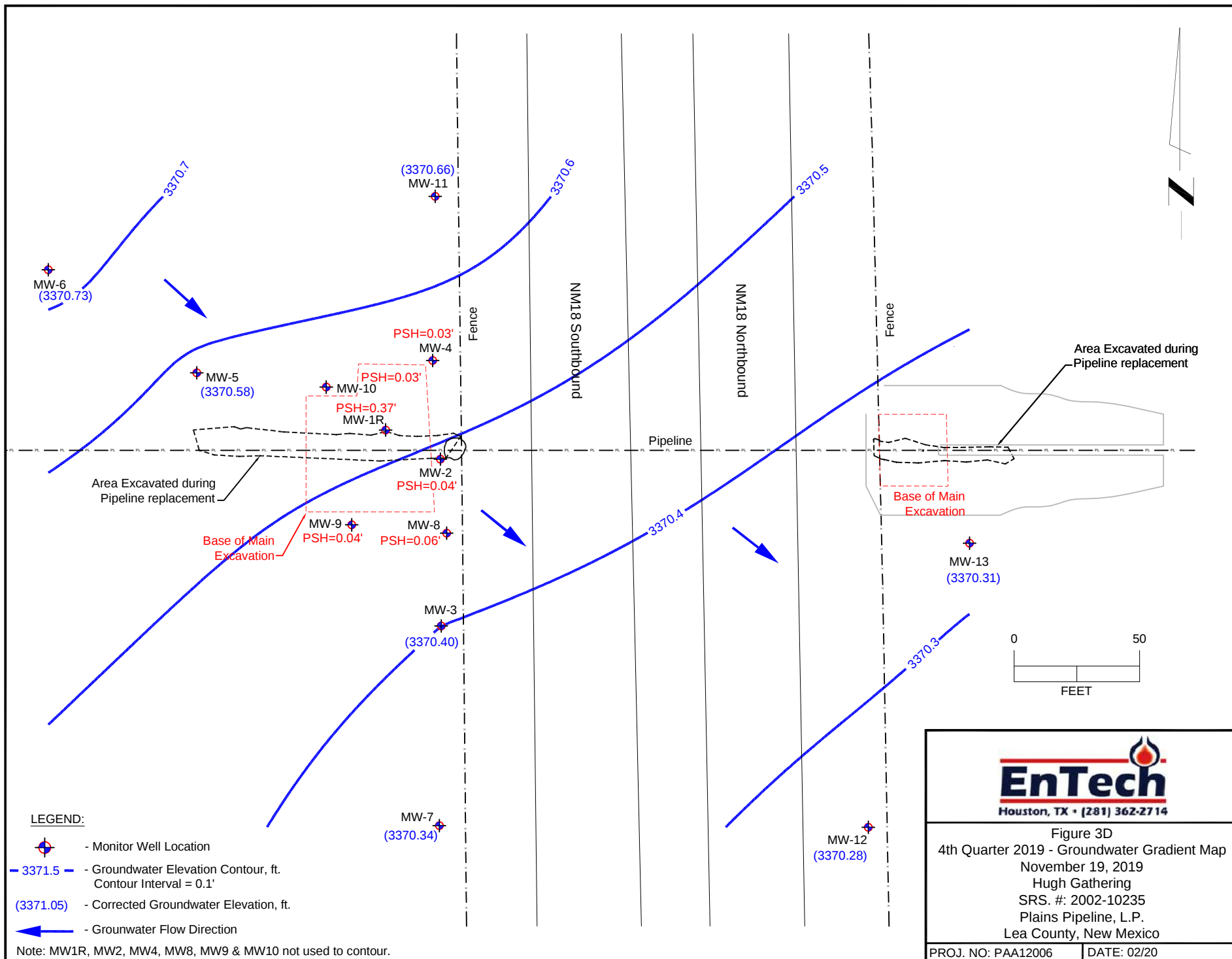


Figure 3B
 2nd Quarter 2019 - Groundwater Gradient Map
 May 14, 2019
 Hugh Gathering
 SRS. #: 2002-10235
 Plains Pipeline, L.P.
 Lea County, New Mexico

PROJ. NO: PAA12006

DATE: 10/19







Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-11	02/14/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	02/14/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	02/14/19	<0.001	<0.001	0.0791	0.00391

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	02/14/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-7	02/14/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-13	02/14/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-12	02/14/19	<0.001	<0.001	<0.001	<0.003

LEGEND:

 -Monitor Well Location

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMOCD Remediation Criteria			
0.01	0.75	0.75	0.62

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

Area Excavated during Pipeline replacement

Area Excavated during Pipeline replacement

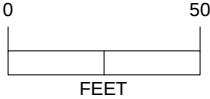
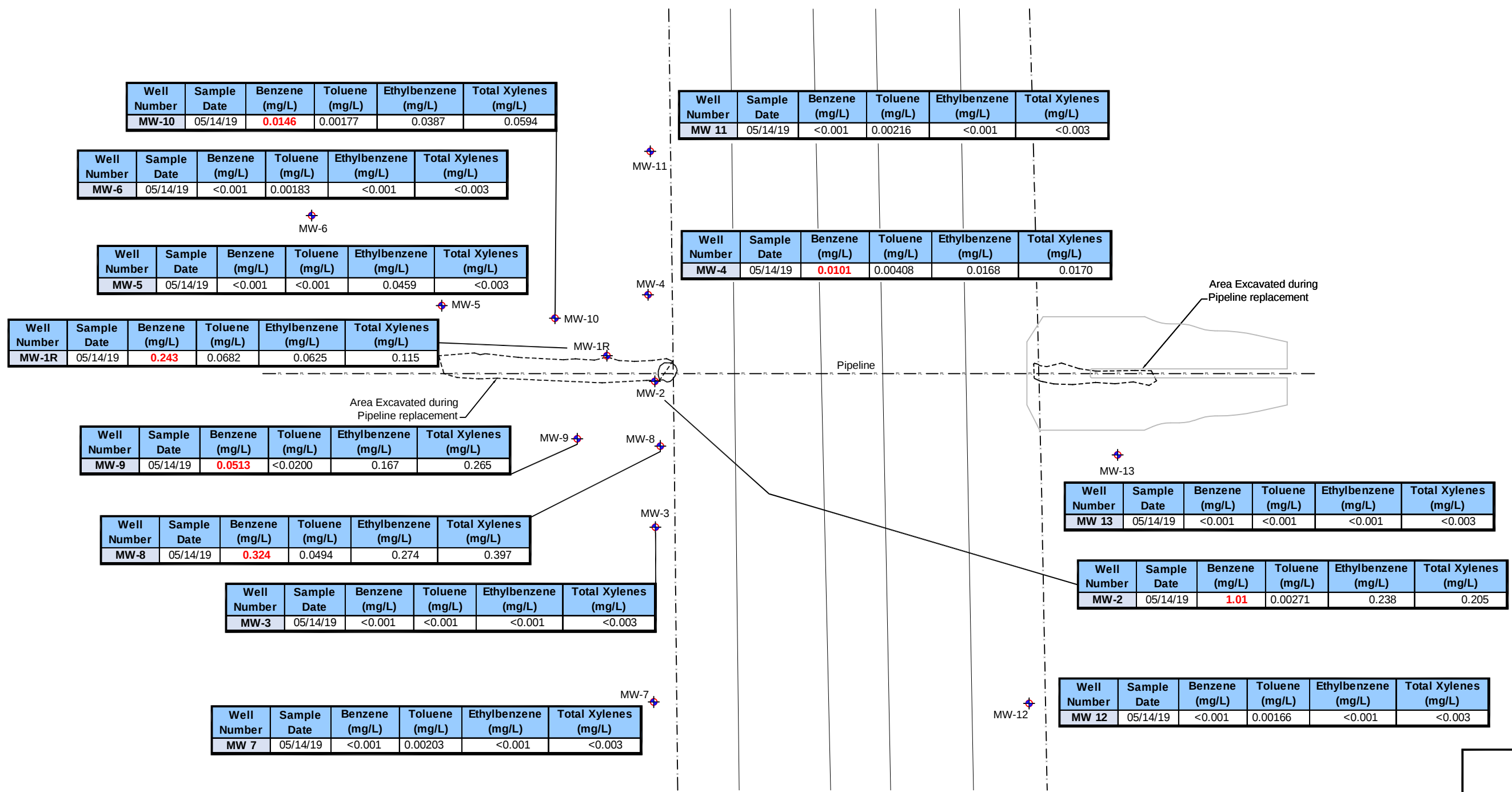


Figure 4A
1st Quarter 2019 - Groundwater Analytical Map
February 14, 2019
Hugh Gathering
SRS. #: 2002-10235
Plains Pipeline, L.P.
Lea County, New Mexico

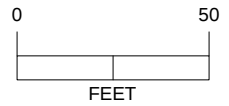


LEGEND:

Monitor Well Location

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMOCD Remediation Criteria			
0.01	0.75	0.75	0.62

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.



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Figure 4B
2nd Quarter 2019 - Groundwater Analytical Map
May 14, 2019
Hugh Gathering
SRS. #: 2002-10235
Plains Pipeline, L.P.
Lea County, New Mexico

PROJ. NO: PAA12006

DATE: 10/19



Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 11	08/28/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	08/28/19	<0.001	<0.001	0.00305	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	08/28/19	0.00177	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	08/28/19	0.00464	0.00507	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 7	08/28/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 13	08/28/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 12	08/28/19	<0.001	<0.001	<0.001	<0.003

LEGEND:

 -Monitor Well Location

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMOCD Remediation Criteria			
0.01	0.75	0.75	0.62

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

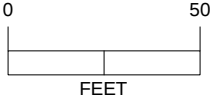
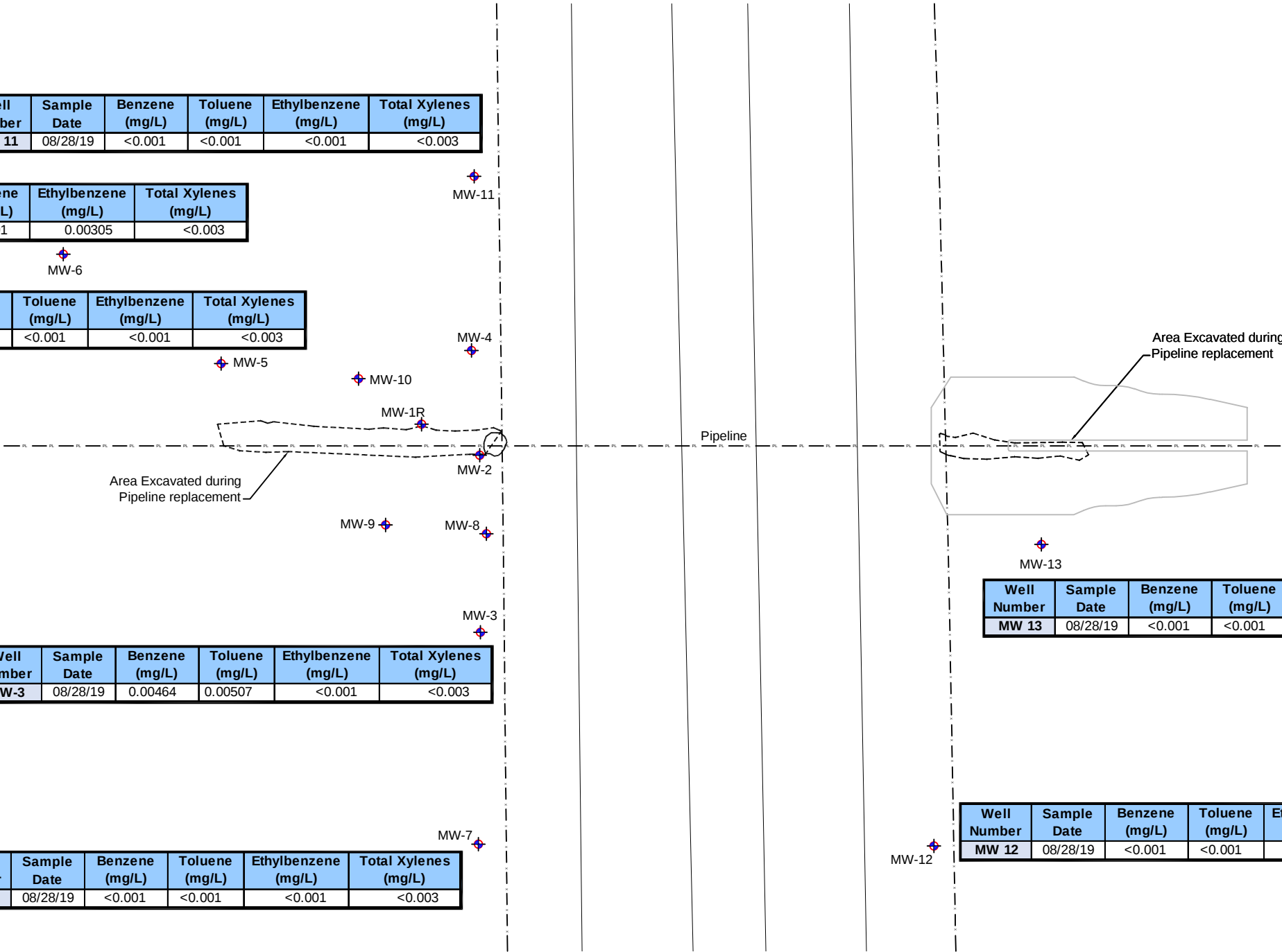


Figure 4C
3rd Quarter 2019 - Groundwater Analytical Map
August 28, 2019
Hugh Gathering
SRS. #: 2002-10235
Plains Pipeline, L.P.
Lea County, New Mexico



Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 11	11/20/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	11/20/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	11/20/19	<0.001	<0.001	0.00857	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	11/20/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 7	11/20/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 13	11/20/19	<0.001	<0.001	<0.001	<0.003

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW 12	11/20/19	<0.001	<0.001	<0.001	<0.003

LEGEND:

 -Monitor Well Location

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMOCD Remediation Criteria			
0.01	0.75	0.75	0.62

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

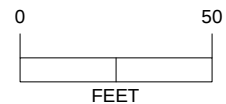
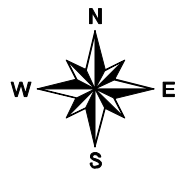


Figure 4D
4th Quarter 2019 - Groundwater Analytical Map
November 20, 2019
Hugh Gathering
SRS. #: 2002-10235
Plains Pipeline, L.P.
Lea County, New Mexico

PROJ. NO: PAA12006 DATE: 2/20



MW-6
[<1]

MW-11
[<1]

MW-5
[105]

MW-10
[400]

MW-4
[NS (947)]

MW-1
[NS (10900)]

MW-2
[NS (2180)]

MW-9
[3,480]

MW-8
[6,120]

MW-3
[NS (5480)]

MW-7
[<1]

MW-12
[<1]

Area Excavated during
Pipeline replacement

Base of Main Excavation

Spill Area
Perimeter

Fence

NM18 Southbound

NM18 Northbound

Pipeline

Insufficient Data to
Complete Contours

Fence

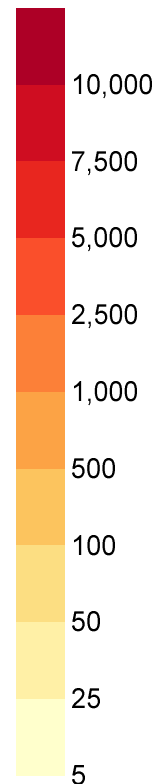
Edge of Excavation

Spill Area
Perimeter

Edge of Excavation

MW-13
[NS (1510)]

Concentration (ug/l)



LEGEND:

MW + - MW - Monitor Wells

+ - Plume Center of Mass

[2] - Benzene Concentration in ug/L

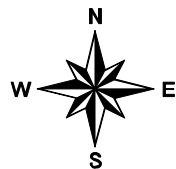
NS (880) - Well Not Sampled, Assumed
Concentration (ug/l)

0 FT 60 FT 120 FT



Figure 5
2007 Benzene Isopleth Map
Plains Pipeline, L.P.
Hugh Gathering
SRS. No.: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00 | ELW | DATE: 01/12



MW-6
[<1]

MW-5
[24]

MW-10
[400]

MW-11
[<1]

MW-4
[947]

MW-1
[10,900]

MW-2
[2,180]

MW-9
[3,480]

MW-8
[6,120]

MW-3
[5,480]

MW-7
[<1]

MW-12
[<1]

MW-13
[1,510]

Area Excavated during
Pipeline replacement

Base of Main Excavation

Spill Area
Perimeter

Fence

NM18 Southbound

NM18 Northbound

Pipeline

Fence

Edge of Excavation

Spill Area
Perimeter

Edge of Excavation

Insufficient Data to
Complete Contours

Concentration (ug/l)

10,000

7,500

5,000

2,500

1,000

500

100

50

25

5

LEGEND:

MW + - MW - Monitor Wells

+ - Plume Center of Mass

[2] - Benzene Concentration in ug/L

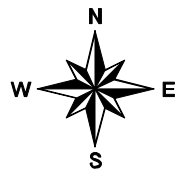
NS (880) - Well Not Sampled, Assumed
Concentration (ug/l)

0 FT 60 FT 120 FT



Figure 6
2008 Benzene Isopleth Map
Plains Pipeline, L.P.
Hugh Gathering
SRS. No.: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00 | ELW | DATE: 01/12



MW-6
[<1]

MW-11
[<1]

MW-5
[13]

MW-10
[361]

MW-4
[551]

MW-1
[5,340]

MW-2
[1,530]

MW-9
[479]

MW-8
[4,270]

MW-3
[428]

MW-7
[2]

MW-12
[27]

Area Excavated during
Pipeline replacement

Base of Main Excavation

Spill Area
Perimeter

Fence

NM18 Southbound

NM18 Northbound

Pipeline

Insufficient Data to
Complete Contours

Fence

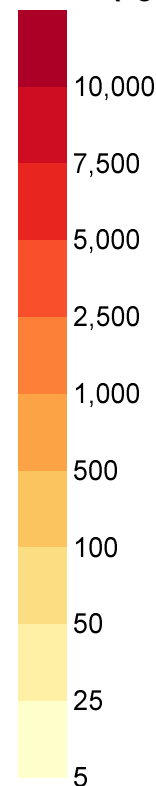
Edge of Excavation

Spill Area
Perimeter

Edge of Excavation

MW-13
[1,933]

Concentration (ug/l)



LEGEND:

MW + - MW - Monitor Wells

+ - Plume Center of Mass

[2] - Benzene Concentration in ug/L

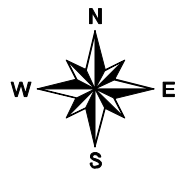
NS (880) - Well Not Sampled, Assumed
Concentration (ug/l)

0 FT 60 FT 120 FT



Figure 7
2009 Benzene Isopleth Map
Plains Pipeline, L.P.
Hugh Gathering
SRS. No.: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00 | ELW | DATE: 01/12



MW-6
[<1]

MW-5
[7]

MW-10
[470]

MW-11
[0.3]

MW-4
[640]

MW-1
[6900]

MW-2
[1700]

MW-9
[910]

MW-8
[5100]

MW-3
[150]

MW-7
[3]

Insufficient Data to
Complete Contours

NM18 Southbound

NM18 Northbound

Pipeline

Fence

Edge of Excavation

Spill Area
Perimeter

MW-13
[1665]

MW-12
[220]

Concentration (ug/l)

10,000
7,500
5,000
2,500
1,000
500
100
50
25
5

LEGEND:

MW + - MW - Monitor Wells

+ - Plume Center of Mass

[2] - Benzene Concentration in ug/L

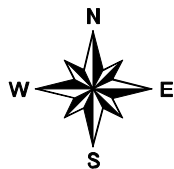
NS (880) - Well Not Sampled, Assumed
Concentration (ug/l)

0 FT 60 FT 120 FT



Figure 8
2010 Benzene Isopleth Map
Plains Pipeline, L.P.
Hugh Gathering
SRS. No.: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00 | ELW | DATE: 01/12



MW-6
[<1]

MW-5
[2]

MW-11
[<1]

MW-10
[540]

MW-4
[590]

MW-1
[NS (6900)]

MW-2
[1,800]

MW-9
[1,200]

MW-8
[3,900]

MW-3
[NS (150)]

MW-7
[6]

Insufficient Data to
Complete Contours

NM18 Southbound

NM18 Northbound

Pipeline

Fence

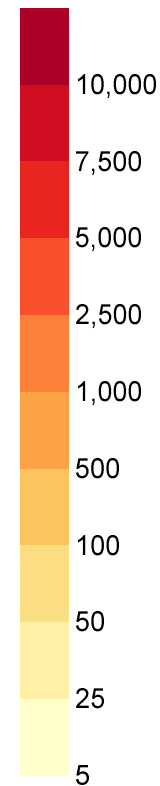
Edge of Excavation

Spill Area
Perimeter

MW-13
[350]

MW-12
[423]

Concentration (ug/l)



LEGEND:

MW + - MW - Monitor Wells

+ - Plume Center of Mass

[2] - Benzene Concentration in ug/L

NS (880) - Well Not Sampled, Assumed
Concentration (ug/l)

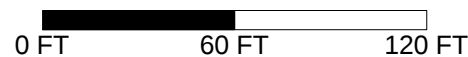
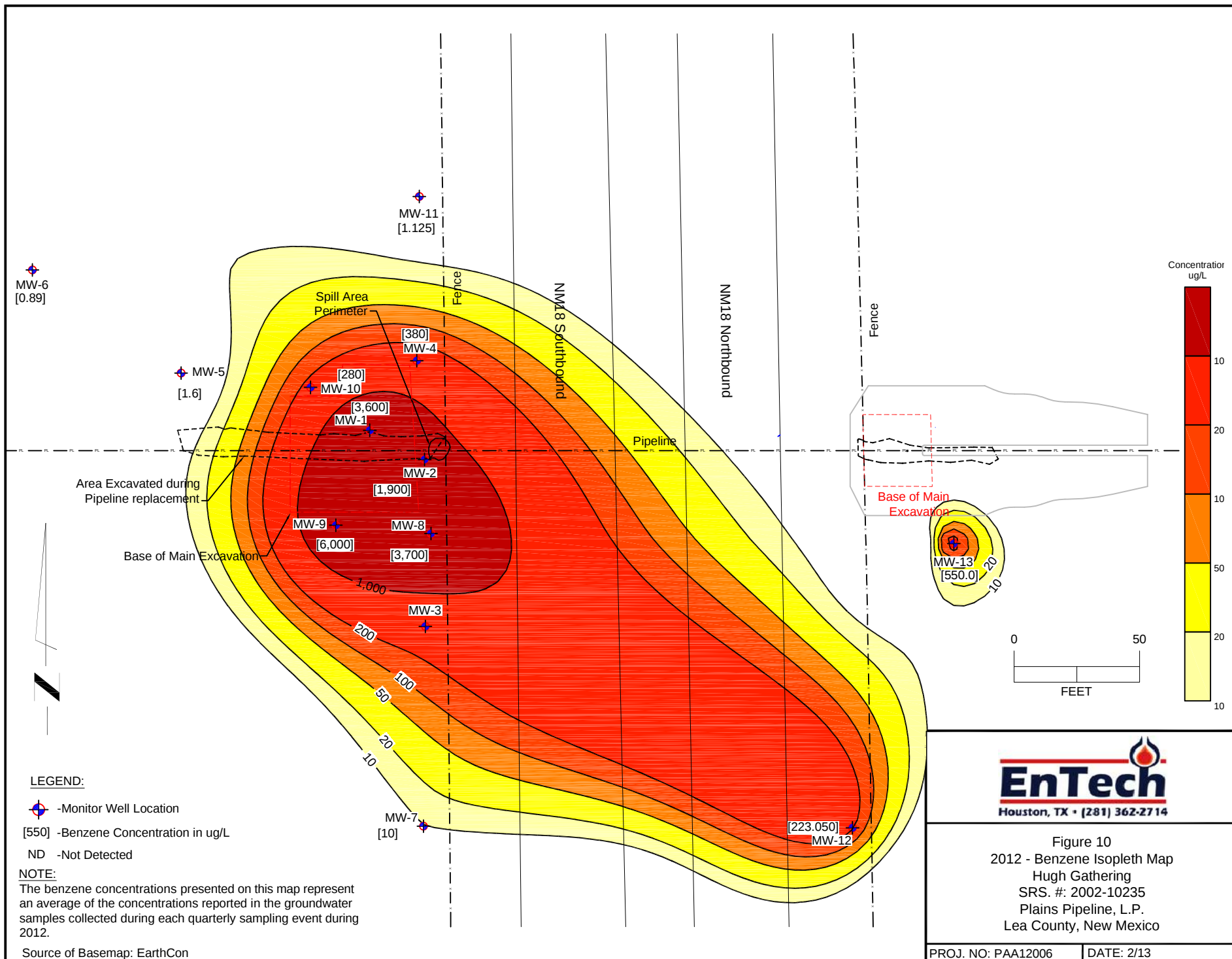
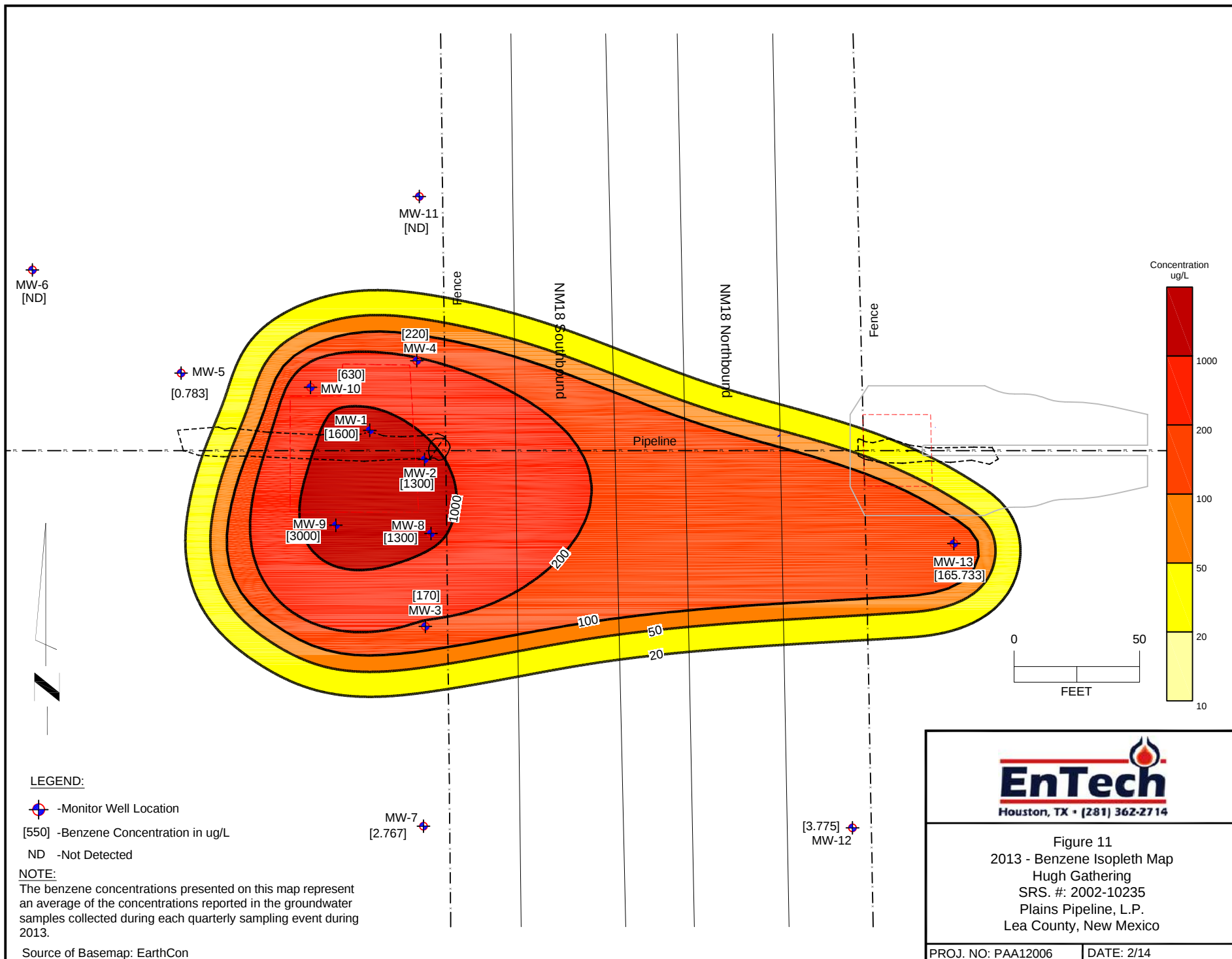
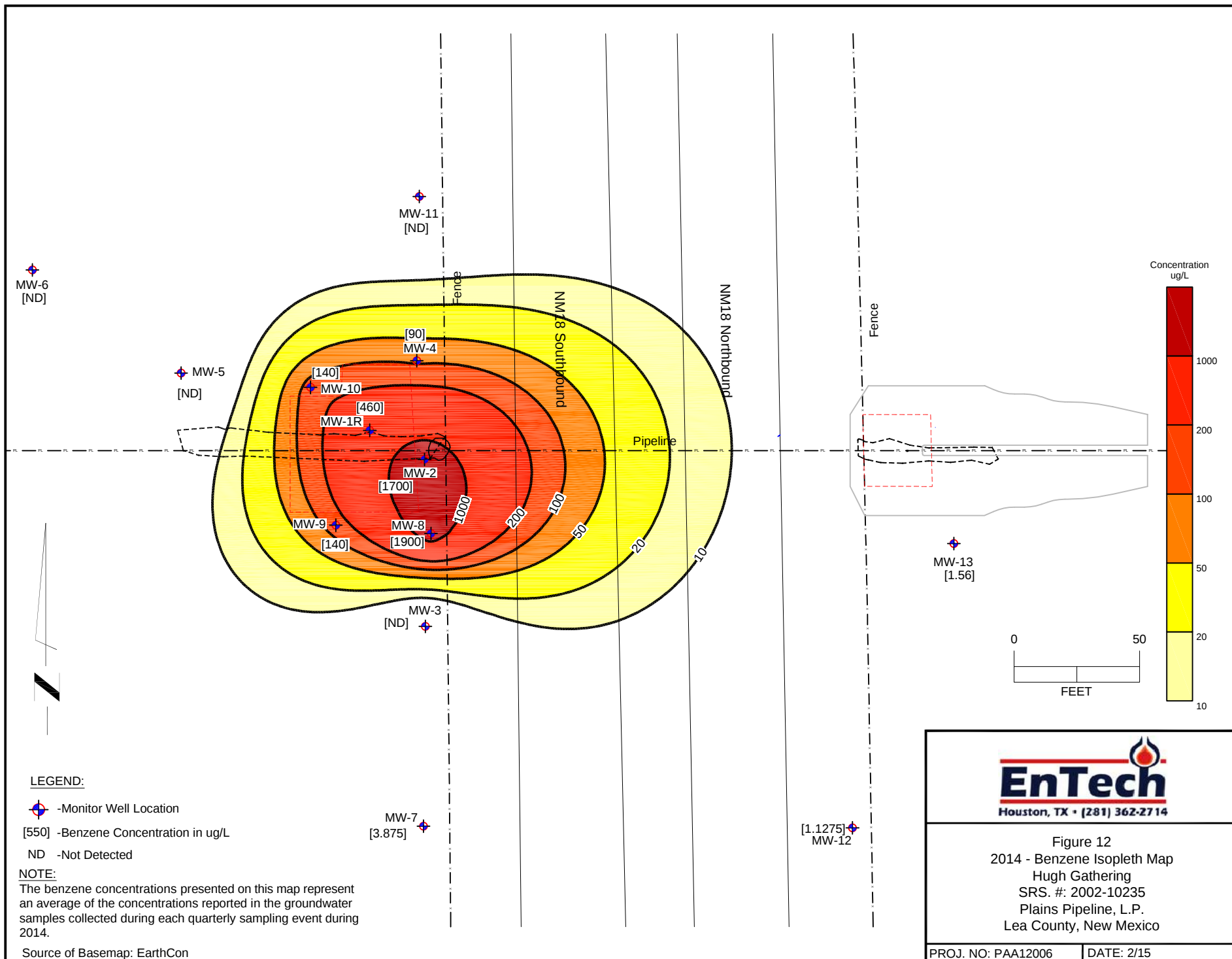


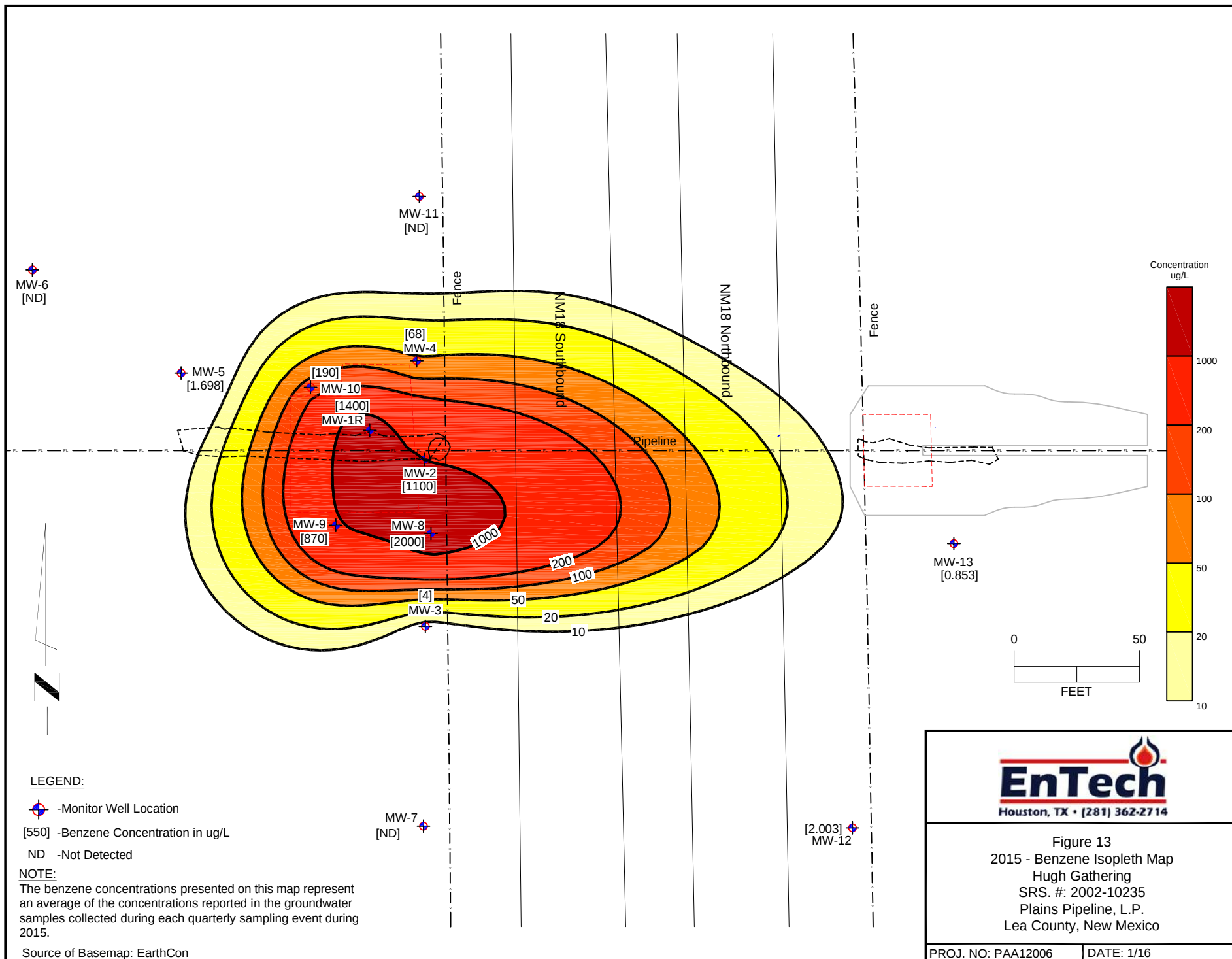
Figure 9
2011 Benzene Isopleth Map
Plains Pipeline, L.P.
Hugh Gathering
SRS. No.: 2002-10235
Lea County, New Mexico

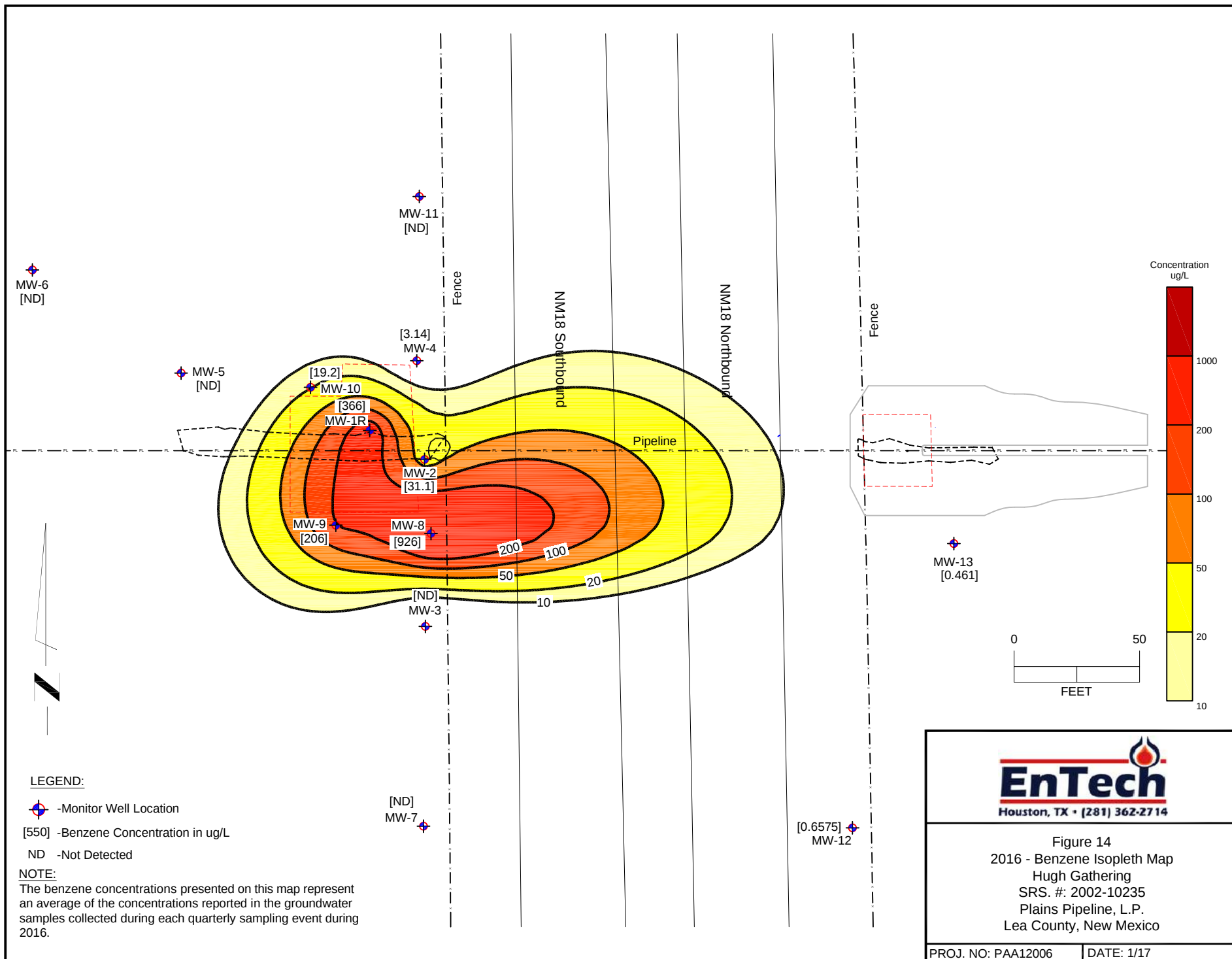
PROJ. NO: 207032.00 | ELW | DATE: 01/12

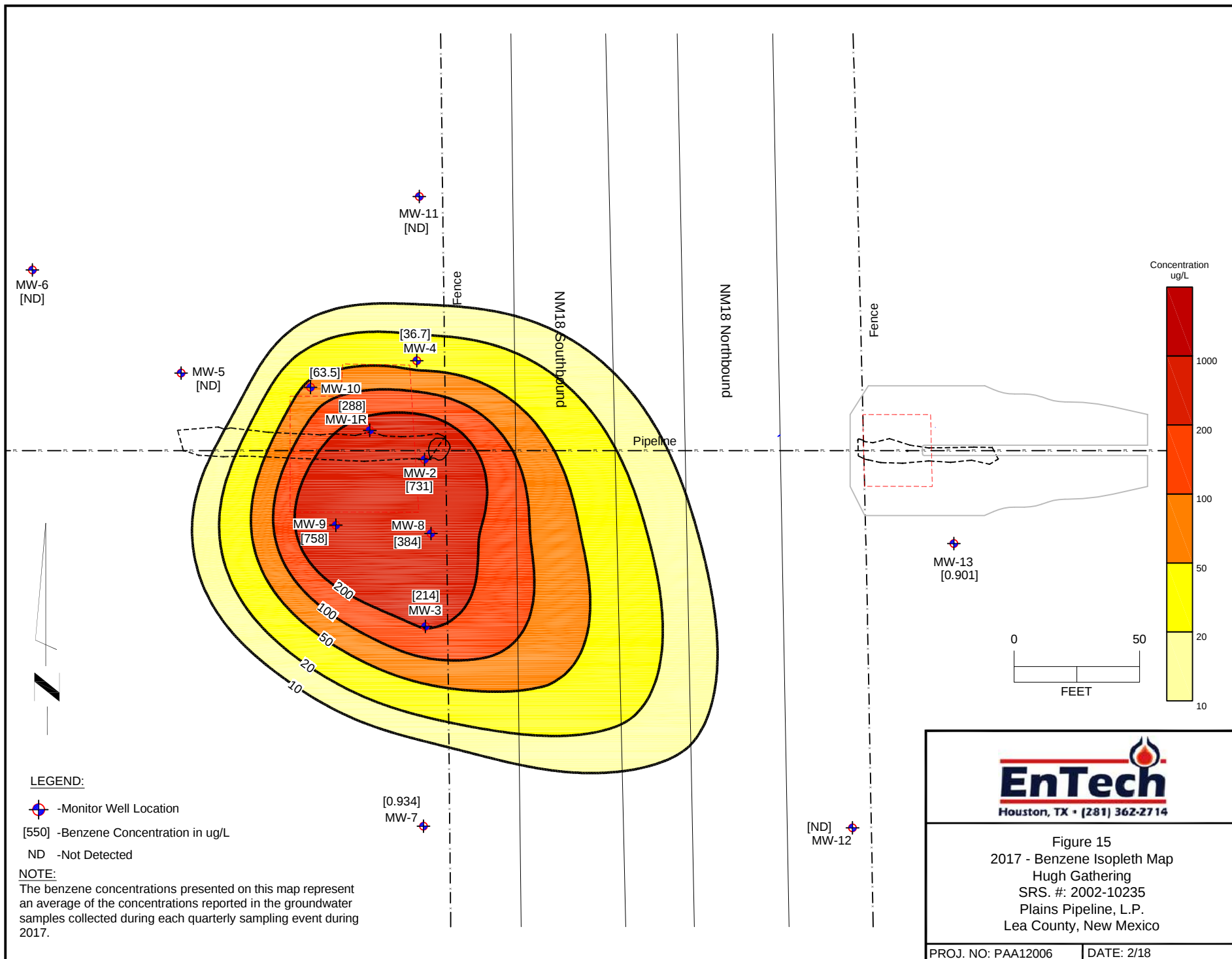


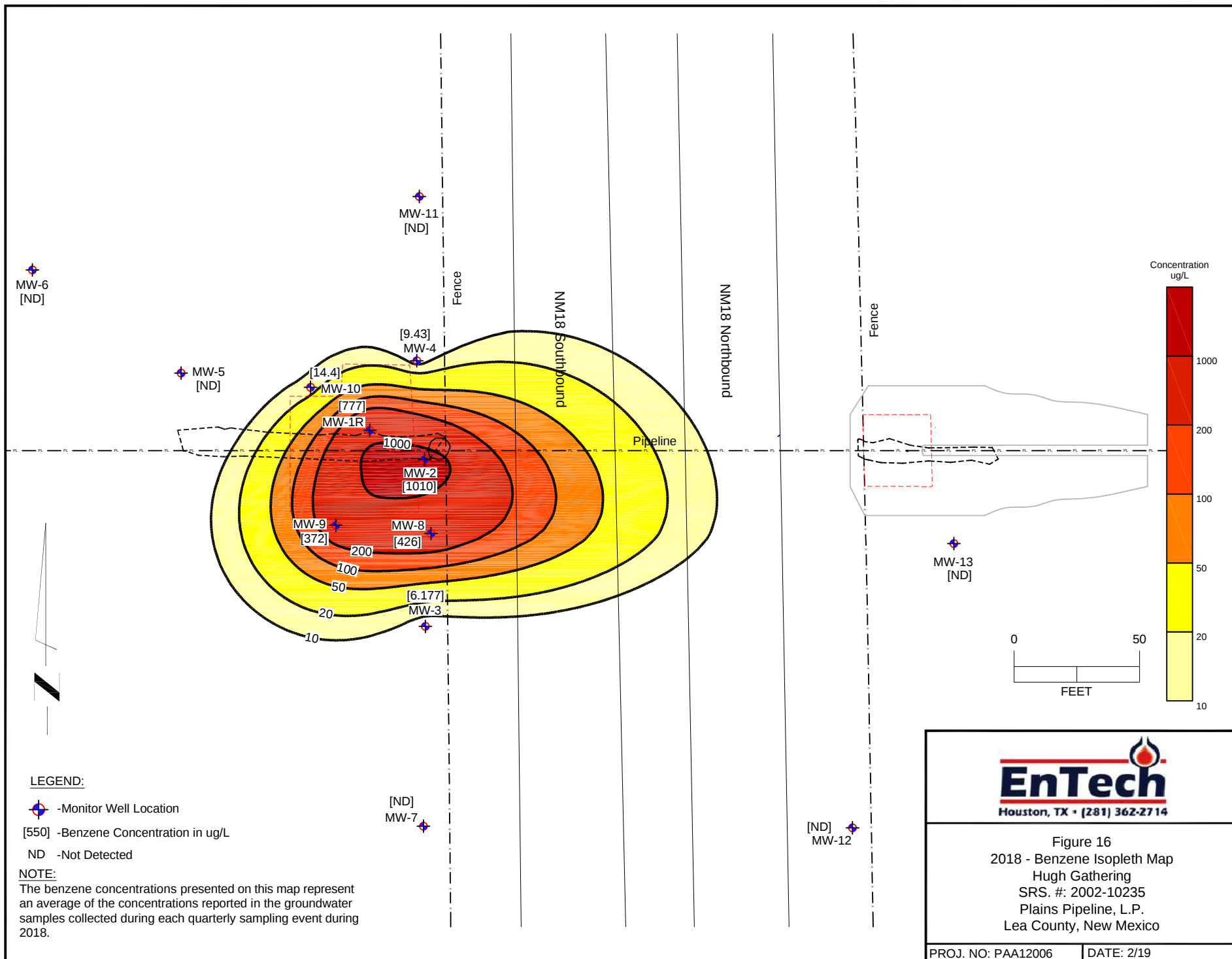


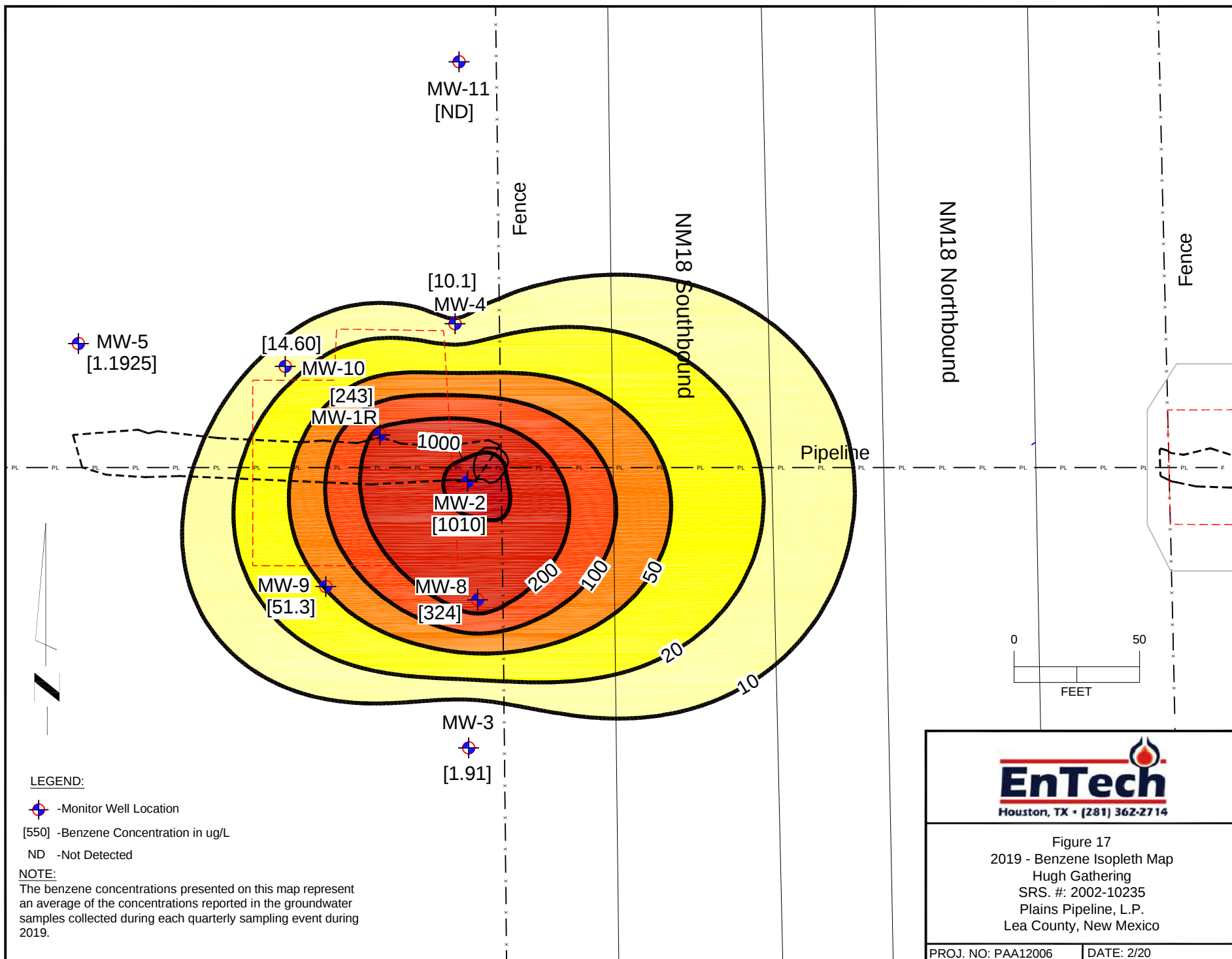


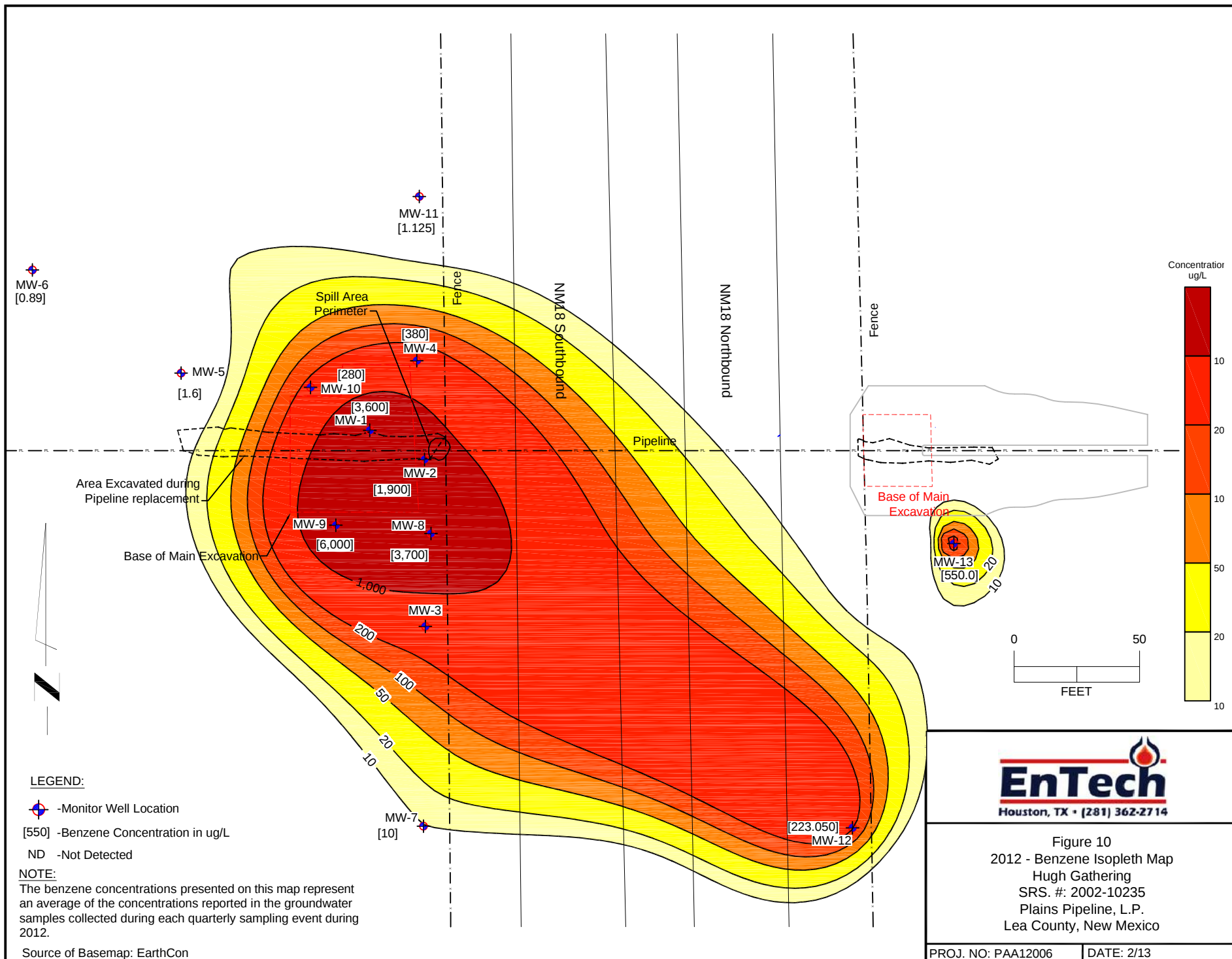


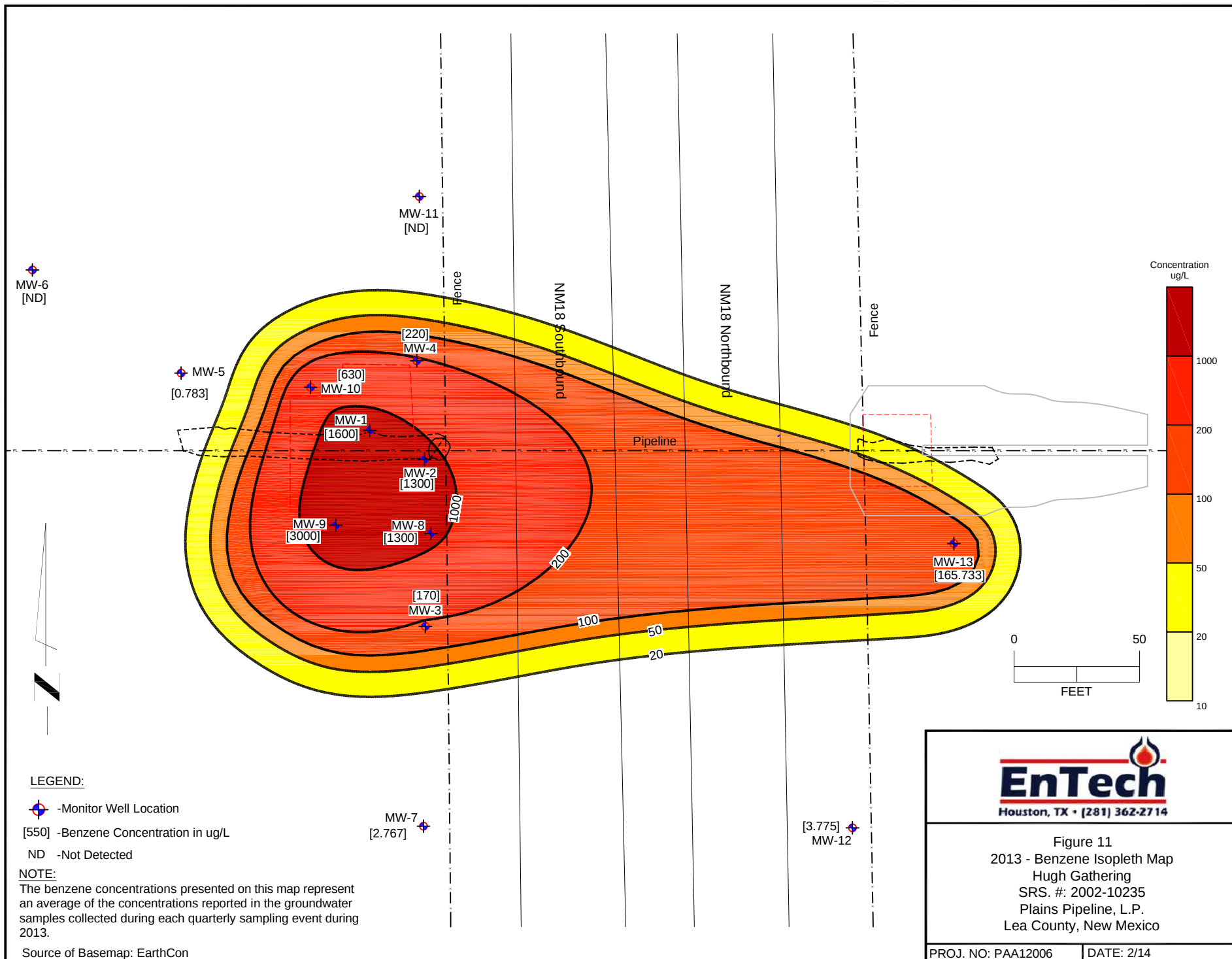


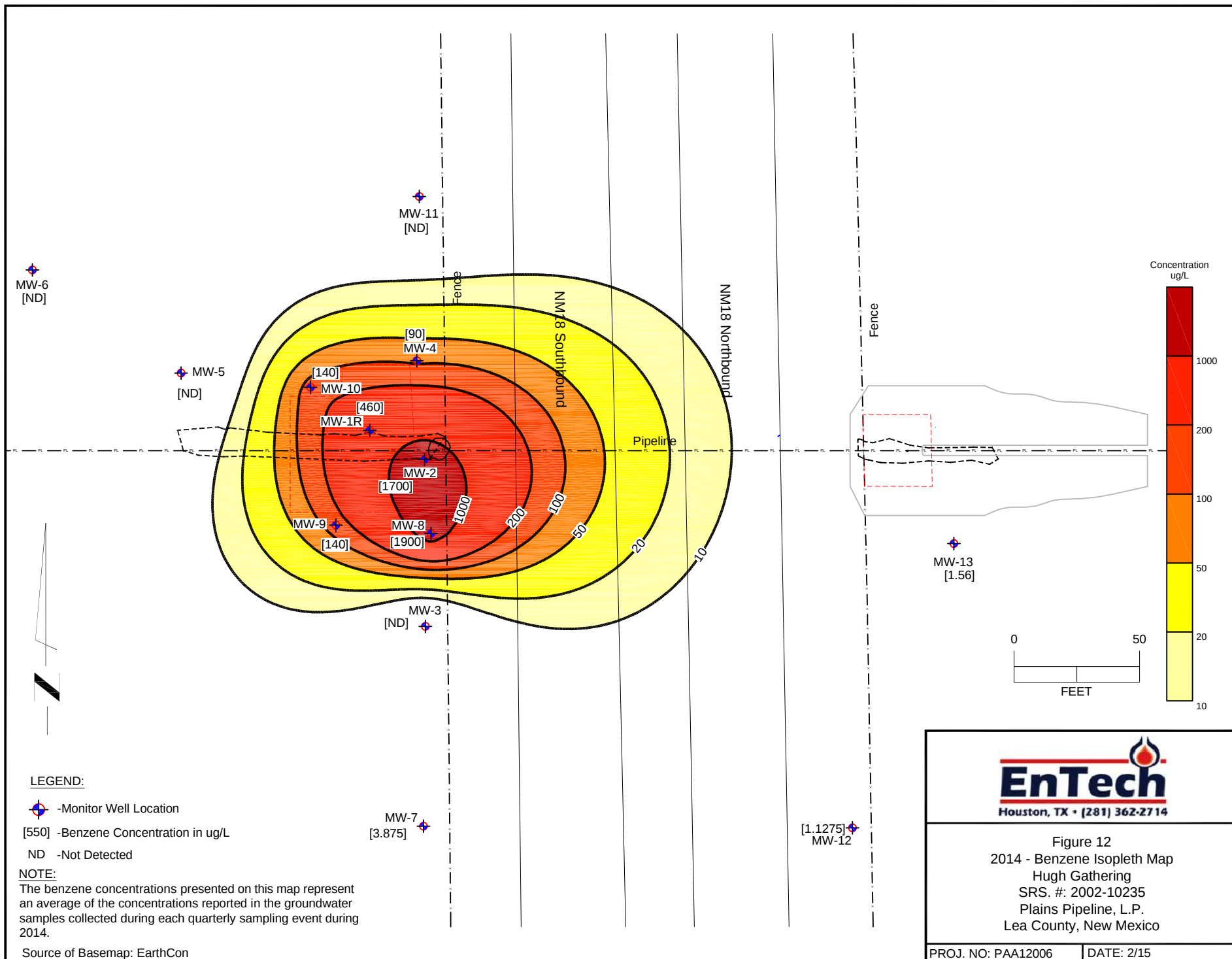


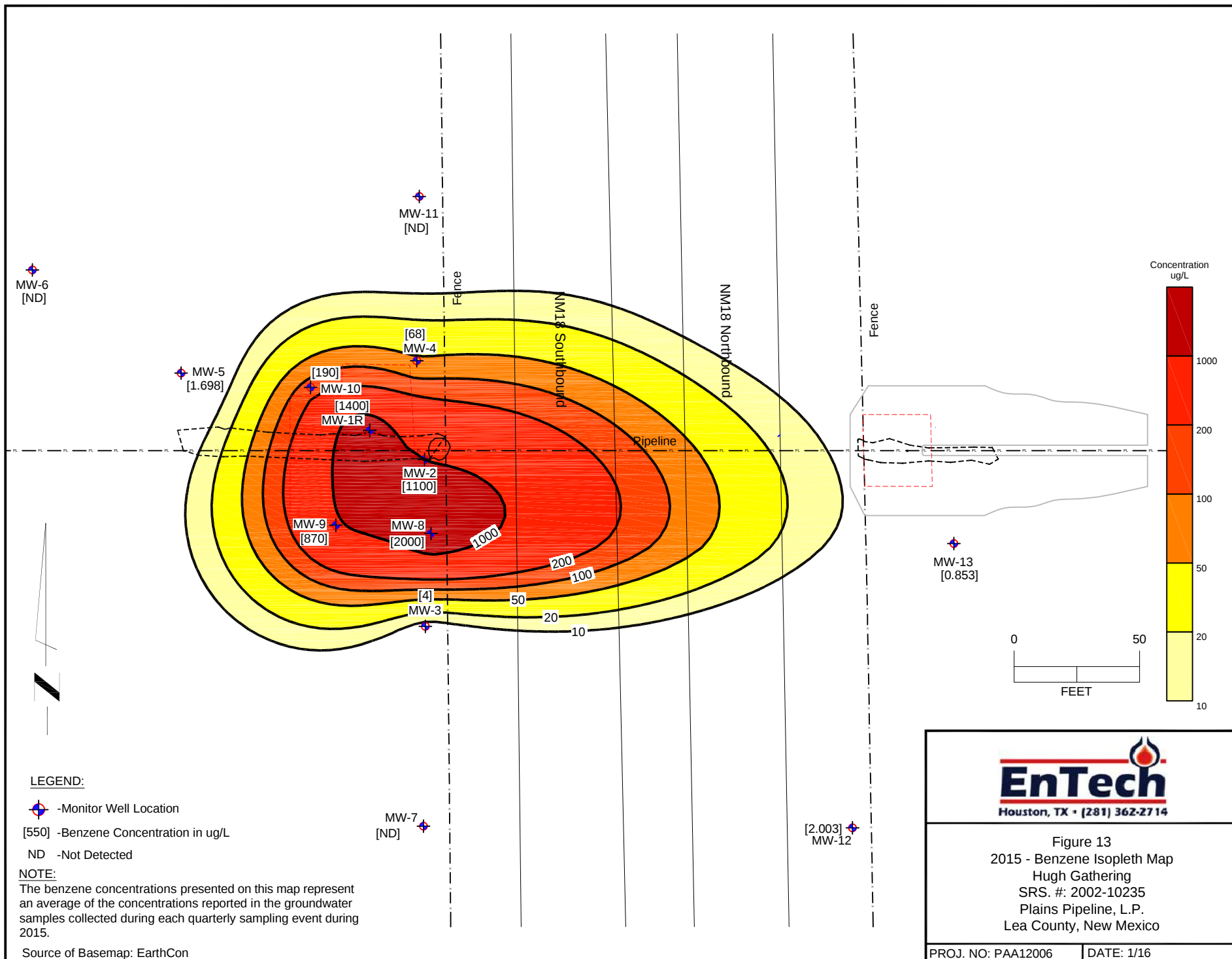


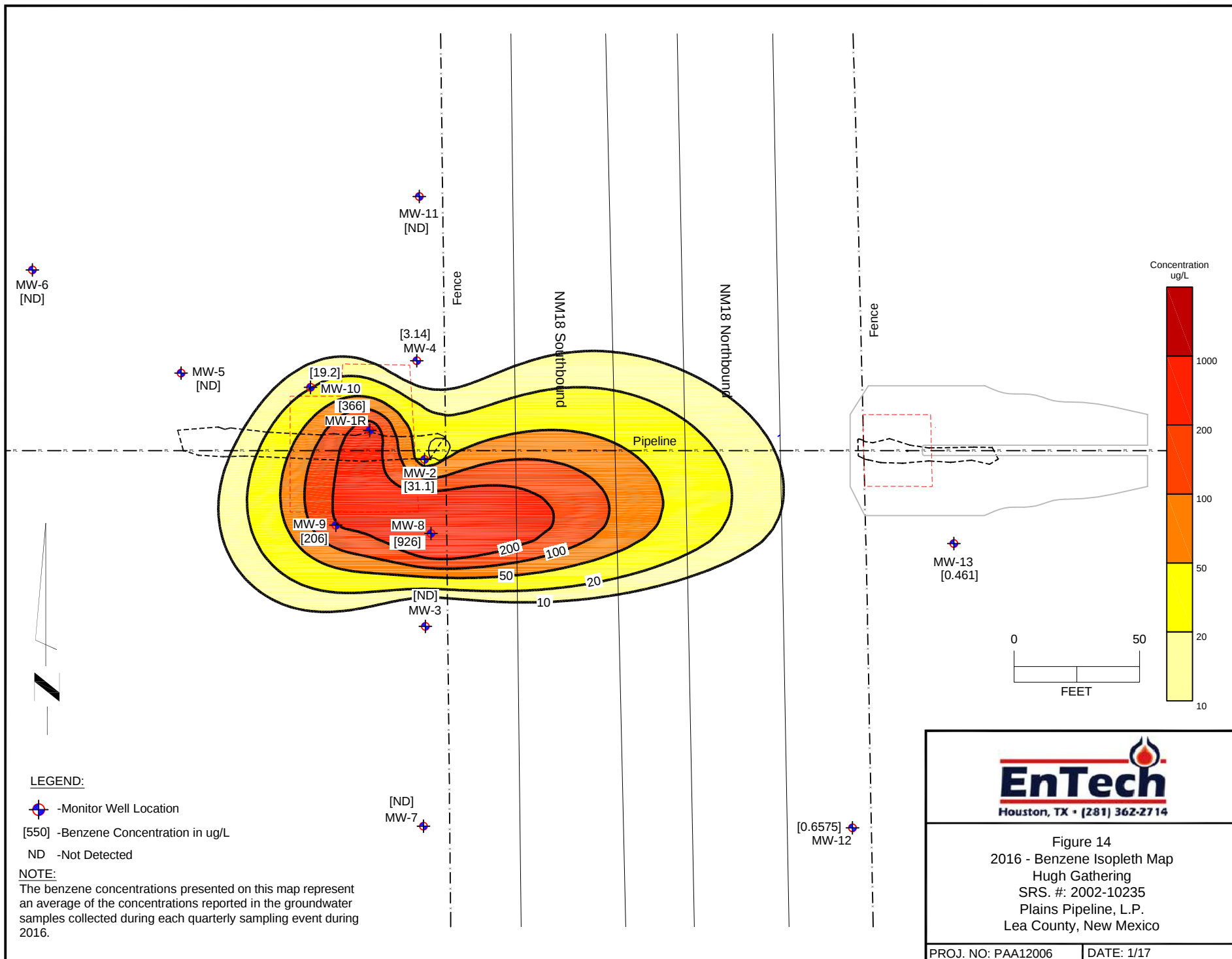


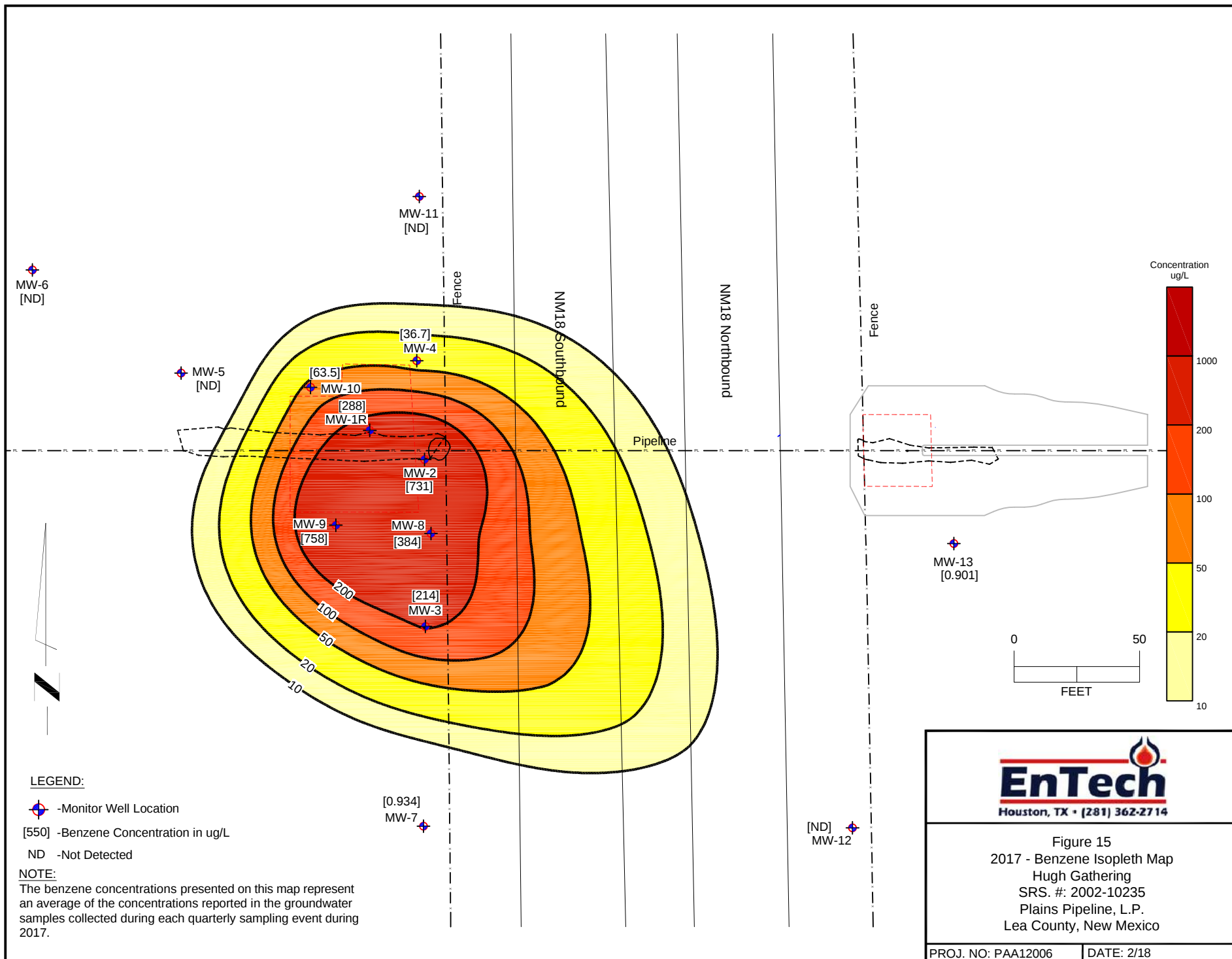


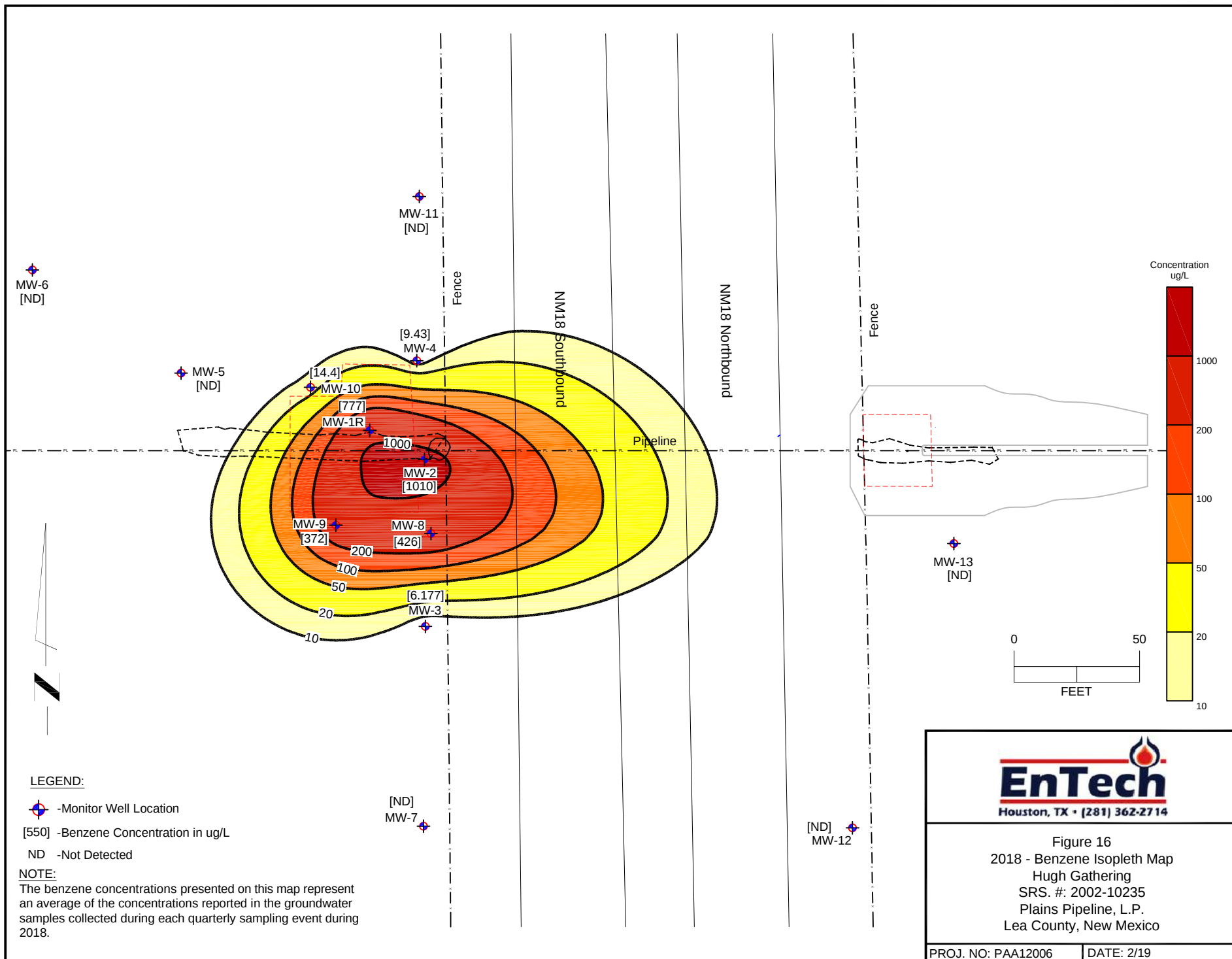


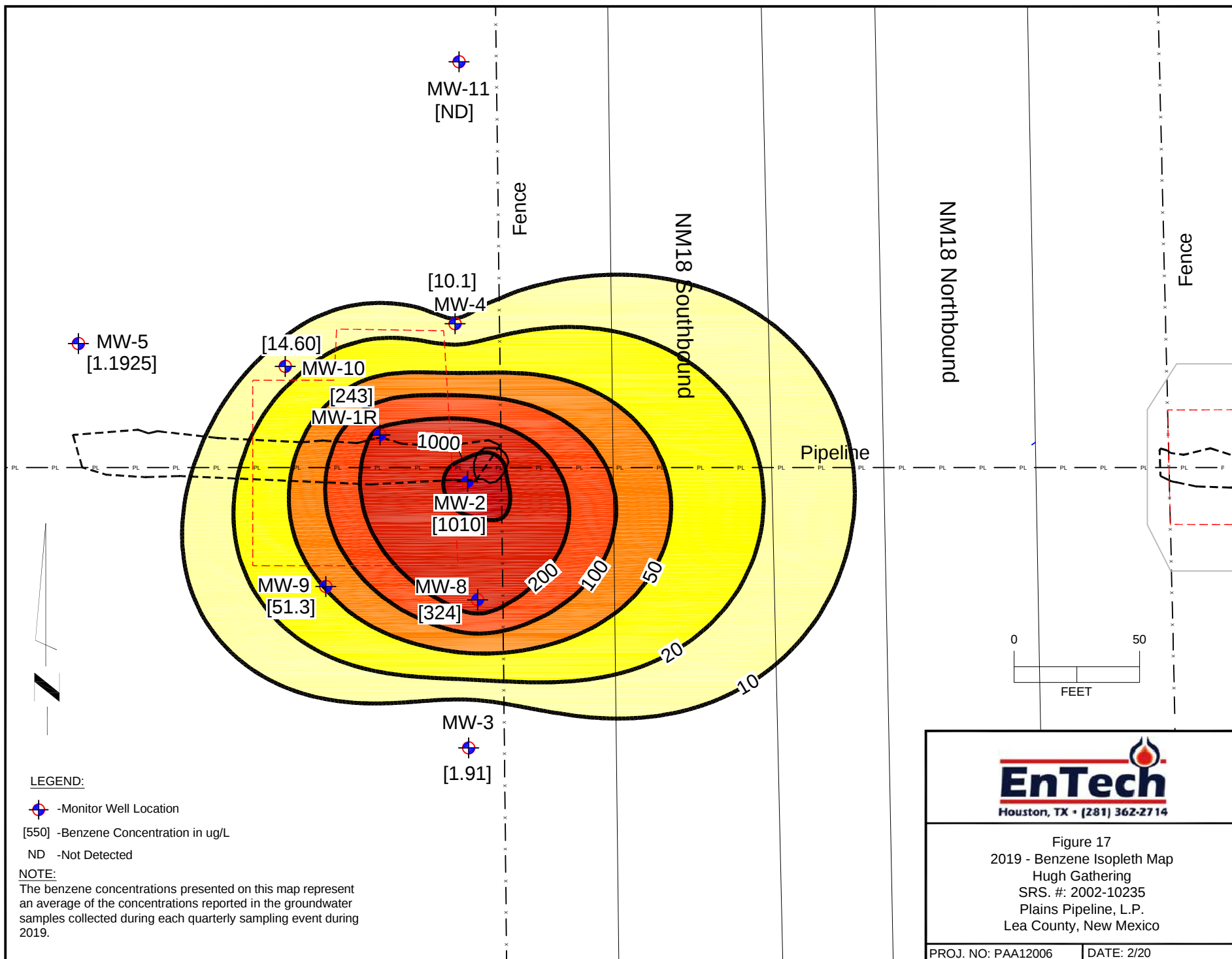












TABLES

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TABLE 1
2019 WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery		Corrected Groundwater Elevation (ft)
							PSH	H ₂ O	
MW1-R	02/14/19	3429.95	58.96	59.12	0.16	NA	NA	NA	3370.97
MW1-R	05/14/19	3429.95	59.10	59.31	0.21	NA	NA	NA	3370.82
MW-1R	08/27/19	3429.95	59.62	59.80	0.18	NA	NA	NA	3370.30
MW-1R	11/19/19	3429.95	59.44	59.81	0.37	NA	NA	NA	3370.45
MW-2	02/14/19	3429.97	59.00	59.08	0.08	NA	NA	NA	3370.96
MW-2	05/14/19	3429.97	59.05	59.15	0.10	NA	NA	NA	3370.91
MW-2	08/27/19	3429.97	59.49	59.55	0.06	NA	NA	NA	3370.47
MW-2	11/19/19	3429.97	59.34	59.38	0.04	NA	NA	NA	3370.62
MW-3	02/14/19	3429.89	ND	59.24	ND	NA	NA	NA	3370.65
MW-3	05/14/19	3429.89	ND	59.30	ND	NA	NA	NA	3370.59
MW-3	08/27/19	3429.89	ND	59.63	ND	NA	NA	NA	3370.26
MW-3	11/19/19	3429.89	ND	59.49	ND	NA	NA	NA	3370.40
MW-4	02/14/19	3430.36	59.55	59.64	0.09	NA	NA	NA	3370.80
MW-4	05/14/19	3430.36	59.59	59.71	0.12	NA	NA	NA	3370.75
MW-4	08/27/19	3430.36	59.91	59.96	0.05	NA	NA	NA	3370.44
MW-4	11/19/19	3430.36	59.77	59.80	0.03	NA	NA	NA	3370.59
MW-5	02/14/19	3428.93	ND	58.11	ND	NA	NA	NA	3370.82
MW-5	05/14/19	3428.93	ND	58.20	ND	NA	NA	NA	3370.73
MW-5	08/27/19	3428.93	ND	58.49	ND	NA	NA	NA	3370.44
MW-5	11/19/19	3428.93	ND	58.35	ND	NA	NA	NA	3370.58
MW-6	02/14/19	3429.24	ND	58.26	ND	NA	NA	NA	3370.98
MW-6	05/14/19	3429.24	ND	58.34	ND	NA	NA	NA	3370.90
MW-6	08/27/19	3429.24	ND	58.63	ND	NA	NA	NA	3370.61

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2019 WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
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SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery		Corrected Groundwater Elevation (ft)
							PSH	H ₂ O	
MW-6	11/19/19	3429.24	ND	58.51	ND	NA	NA	NA	3370.73
MW-7	02/14/19	3429.8	ND	59.22	ND	NA	NA	NA	3370.58
MW-7	05/14/19	3429.8	ND	59.30	ND	NA	NA	NA	3370.50
MW-7	08/27/19	3429.8	ND	59.65	ND	NA	NA	NA	3370.15
MW-7	11/19/19	3429.8	ND	59.46	ND	NA	NA	NA	3370.34
MW-8	02/14/19	3430.21	59.36	59.38	0.02	NA	NA	NA	3370.85
MW-8	05/14/19	3430.21	59.44	59.51	0.07	NA	NA	NA	3370.76
MW-8	08/27/19	3430.21	59.77	59.84	0.07	NA	NA	NA	3370.43
MW-8	11/19/19	3430.21	59.60	59.66	0.06	NA	NA	NA	3370.60
MW-9	02/14/19	3429.88	58.99	59.26	0.27	NA	NA	NA	3370.85
MW-9	05/14/19	3429.88	59.12	59.25	0.13	NA	NA	NA	3370.74
MW-9	08/27/19	3429.88	59.47	59.50	0.03	NA	NA	NA	3370.41
MW-9	11/19/19	3429.88	59.30	59.34	0.04	NA	NA	NA	3370.57
MW-10	02/14/19	3430.65	59.68	59.71	0.03	NA	NA	NA	3370.97
MW-10	05/14/19	3430.65	59.80	59.84	0.04	NA	NA	NA	3370.84
MW-10	08/27/19	3430.65	60.11	60.18	0.07	NA	NA	NA	3370.53
MW-10	11/19/19	3430.65	59.99	60.02	0.03	NA	NA	NA	3370.66
MW-11	02/14/19	3430.94	ND	60.04	ND	NA	NA	NA	3370.90
MW-11	05/14/19	3430.94	ND	60.11	ND	NA	NA	NA	3370.83
MW-11	08/27/19	3430.94	ND	60.41	ND	NA	NA	NA	3370.53
MW-11	11/19/19	3430.94	ND	60.28	ND	NA	NA	NA	3370.66

TABLE 1
 2019 WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
 Plains Marketing, L.P.
 Hugh Gathering
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 Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery		Corrected Groundwater Elevation (ft)
							PSH	H ₂ O	
MW-12	02/14/19	3426.47	ND	55.97	ND	NA	NA	NA	3370.50
MW-12	05/14/19	3426.47	ND	56.00	ND	NA	NA	NA	3370.47
MW-12	08/27/19	3426.47	ND	56.40	ND	NA	NA	NA	3370.07
MW-12	11/19/19	3426.47	ND	56.19	ND	NA	NA	NA	3370.28
MW 13	02/14/19	3431.13	ND	60.70	ND	NA	NA	NA	3370.43
MW 13	05/14/19	3431.13	ND	60.72	ND	NA	NA	NA	3370.41
MW 13	08/27/19	3431.13	ND	61.02	ND	NA	NA	NA	3370.11
MW 13	11/19/19	3431.13	ND	60.82	ND	NA	NA	NA	3370.31

NA: Not applicable
 ND: Not detected
 NG: Not Gauged

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW1-R	01/03/18	3429.95	69.59	58.86	59.14	0.28	NA	0.25	9.75	3371.05	
MW1-R	01/10/18	3429.95	69.59	58.80	59.05	0.25	NA	0.25	9.75	3371.11	
MW1-R	01/18/18	3429.95	69.59	58.84	58.95	0.11	NA	sheen	10.00	3371.09	
MW1-R	01/26/18	3429.95	69.59	58.76	58.90	0.14	NA	1.00	9.00	3371.17	
MW1-R	02/01/18	3429.95	69.59	58.71	59.40	0.69	NA	1.00	9.00	3371.14	
MW1-R	02/08/18	3429.95	69.59	58.53	58.54	0.01	NA	1.00	9.00	3371.42	
MW1-R	02/14/18	3429.95	69.59	58.73	58.94	0.21	NA	0.25	9.75	3371.19	
MW1-R	02/21/18	3429.95	69.59	58.75	58.90	0.15	NA	sheen	10.00	3371.18	
MW1-R	02/28/18	3429.95	69.59	58.74	58.83	0.09	NA	sheen	10.00	3371.20	
MW1-R	03/09/18	3429.95	69.59	58.88	59.01	0.13	NA	NA	NA	3371.05	
MW1-R	03/15/18	3429.95	69.59	58.85	59.02	0.17	NA	sheen	10.00	3371.07	
MW1-R	03/22/18	3429.95	69.59	58.86	58.96	0.10	NA	sheen	10.00	3371.08	
MW1-R	03/28/18	3429.95	69.59	58.85	59.00	0.15	NA	1.00	9.00	3371.08	
MW1-R	04/03/18	3429.95	69.59	58.89	59.02	0.13	NA	sheen	10.00	3371.04	
MW1-R	04/10/18	3429.95	69.59	58.94	59.05	0.11	NA	sheen	10.00	3370.99	
MW1-R	04/19/18	3429.95	69.59	58.97	59.05	0.08	NA	sheen	10.00	3370.97	
MW1-R	04/25/18	3429.95	69.59	59.00	59.08	0.08	NA	sheen	10.00	3370.94	
MW1-R	05/02/18	3429.95	69.59	58.78	58.87	0.09	NA	sheen	10.00	3371.16	
MW1-R	05/10/18	3429.95	69.59	58.93	59.05	0.12	NA	sheen	10.00	3371.00	
MW1-R	05/15/18	3429.95	69.59	58.95	59.03	0.08	NA	sheen	10.00	3370.99	
MW1-R	05/23/18	3429.95	69.59	58.96	59.02	0.06	NA	sheen	10.00	3370.98	
MW1-R	06/07/18	3429.95	69.59	59.00	59.23	0.23	NA	NA	NA	3370.92	Sampled
MW1-R	06/13/18	3429.95	69.59	59.05	59.18	0.13	NA	sheen	10.00	3370.88	
MW1-R	06/20/18	3429.95	69.59	58.94	58.97	0.03	NA	sheen	10.00	3371.01	
MW1-R	06/28/18	3429.95	69.59	59.01	59.23	0.22	NA	0.25	9.75	3370.91	
MW1-R	07/05/18	3429.95	69.59	59.05	59.25	0.20	NA	0.25	9.75	3370.87	
MW1-R	07/12/18	3429.95	69.59	59.08	59.22	0.14	NA	sheen	10.00	3370.85	
MW1-R	07/20/18	3429.95	69.59	59.06	59.30	0.24	NA	0.25	9.75	3370.85	
MW1-R	08/01/18	3429.95	69.59	59.10	59.28	0.18	NA	sheen	10.00	3370.82	
MW1-R	08/08/18	3429.95	69.59	59.11	59.27	0.16	NA	sheen	10.00	3370.82	
MW1-R	08/21/18	3429.95	69.59	59.10	59.31	0.21	NA	sheen	10.00	3370.82	
MW1-R	08/30/18	3429.95	69.59	59.12	59.34	0.22	NA	sheen	10.00	3370.80	
MW1-R	09/12/18	3429.95	69.59	59.24	59.39	0.15	NA	sheen	10.00	3370.69	
MW1-R	09/26/18	3429.95	69.59	59.29	59.41	0.12	NA	sheen	10.00	3370.64	
MW1-R	10/04/18	3429.95	69.59	59.31	59.40	0.09	NA	sheen	10.00	3370.63	

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW1-R	10/11/18	3429.95	69.59	59.30	59.43	0.13	NA	sheen	10.00	3370.63	
MW1-R	10/17/18	3429.95	69.59	59.15	59.21	0.06	NA	sheen	10.00	3370.79	
MW1-R	10/24/18	3429.95	69.59	59.10	59.14	0.04	NA	sheen	10.00	3370.84	
MW1-R	11/01/18	3429.95	69.59	59.26	59.34	0.08	NA	sheen	10.00	3370.68	
MW1-R	11/07/18	3429.95	69.59	59.32	59.44	0.12	NA	sheen	10.00	3370.61	
MW1-R	11/13/18	3429.95	69.59	59.38	59.50	0.12	NA	sheen	10.00	3370.55	
MW1-R	11/21/18	3429.95	69.59	59.12	59.25	0.13	NA	sheen	10.00	3370.81	
MW1-R	11/30/18	3429.95	69.59	59.05	59.21	0.16	NA	sheen	10.00	3370.88	
MW1-R	12/07/18	3429.95	69.59	59.09	59.18	0.09	NA	sheen	10.00	3370.85	
MW1-R	12/13/18	3429.95	69.59	59.09	59.25	0.16	NA	sheen	10.00	3370.84	
MW1-R	12/19/18	3429.95	69.59	59.10	59.21	0.11	NA	sheen	10.00	3370.83	
MW1-R	01/03/19	3429.95	69.59	59.15	59.30	0.15	NA	0.25	9.75	3370.78	
MW1-R	01/09/19	3429.95	69.59	59.18	59.40	0.22	NA	0.25	9.75	3370.74	
MW1-R	01/18/19	3429.95	69.59	58.97	60.68	1.71	NA	1.50	8.50	3370.72	
MW1-R	01/23/19	3429.95	69.59	59.00	60.70	1.70	NA	2.00	8.00	3370.70	
MW1-R	01/30/19	3429.95	69.59	59.15	59.36	0.21	NA	sheen	10.00	3370.77	
MW1-R	02/06/19	3429.95	69.59	59.23	59.36	0.13	NA	sheen	10.00	3370.70	
MW1-R	02/14/19	3429.95	69.59	58.96	59.12	0.16	NA	NA	NA	3370.97	
MW1-R	02/22/19	3429.95	69.59	58.99	60.81	1.82	NA	2.00	8.00	3370.69	
MW1-R	02/28/19	3429.95	69.59	59.00	59.15	0.15	NA	sheen	10.00	3370.93	
MW1-R	03/06/19	3429.95	69.59	59.08	59.20	0.12	NA	sheen	10.00	3370.85	
MW1-R	03/12/19	3429.95	69.59	59.06	59.19	0.13	NA	sheen	10.00	3370.87	
MW1-R	03/22/19	3429.95	69.59	59.07	59.16	0.09	NA	sheen	10.00	3370.87	
MW1-R	03/28/19	3429.95	69.59	58.99	59.10	0.11	NA	sheen	10.00	3370.94	
MW1-R	04/03/19	3429.95	69.59	59.01	59.15	0.14	NA	sheen	10.00	3370.92	
MW1-R	04/11/19	3429.95	69.59	58.96	59.10	0.14	NA	sheen	10.00	3370.97	
MW1-R	04/16/19	3429.95	69.59	58.99	59.11	0.12	NA	sheen	10.00	3370.94	
MW1-R	04/25/19	3429.95	69.59	59.01	59.16	0.15	NA	sheen	10.00	3370.92	
MW1-R	05/01/19	3429.95	69.59	58.88	59.00	0.12	NA	sheen	10.00	3371.05	
MW1-R	05/14/19	3429.95	69.59	59.10	59.31	0.21	NA	NA	NA	3370.82	Sampled
MW1-R	05/24/19	3429.95	69.59	59.15	59.28	0.13	NA	sheen	10.00	3370.78	
MW1-R	06/05/19	3429.95	69.59	59.20	59.32	0.12	NA	sheen	10.00	3370.73	
MW1-R	06/14/19	3429.95	69.59	59.32	59.63	0.31	NA	0.50	9.50	3370.58	
MW1-R	06/20/19	3429.95	69.59	59.22	59.36	0.14	NA	sheen	10.00	3370.71	
MW1-R	06/26/19	3429.95	69.59	59.38	59.86	0.48	NA	0.50	9.50	3370.50	

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								PSH	H ₂ O		
MW1-R	07/03/19	3429.95	69.59	59.38	59.88	0.50	NA	0.50	9.50	3370.50	
MW1-R	07/11/19	3429.95	69.59	59.49	59.63	0.14	NA	0.25	9.75	3370.44	
MW1-R	07/26/19	3429.95	69.59	59.58	59.85	0.27	NA	0.25	9.75	3370.33	
MW1-R	08/10/19	3429.95	69.59	59.56	59.77	0.21	NA	0.25	9.75	3370.36	
MW1-R	08/15/19	3429.95	69.59	59.54	59.76	0.22	NA	0.25	9.75	3370.38	
MW1-R	08/27/19	3429.95	69.59	59.62	59.80	0.18	NA	sheen	10.00	3370.30	
MW1-R	09/06/19	3429.95	69.59	59.58	59.84	0.26	NA	sheen	10.00	3370.33	
MW1-R	09/13/19	3429.95	69.59	56.60	59.80	3.20	NA	sheen	10.00	3372.87	
MW1-R	09/20/19	3429.95	69.59	60.23	60.54	0.31	NA	0.25	9.75	3369.67	
MW1-R	10/09/19	3429.95	69.59	59.30	60.01	0.71	NA	0.25	9.75	3370.54	
MW1-R	10/17/19	3429.95	69.59	59.56	59.98	0.42	NA	0.25	9.75	3370.33	
MW1-R	10/24/19	3429.95	69.59	59.84	59.98	0.14	NA	0.25	9.75	3370.09	
MW1-R	11/01/19	3429.95	69.59	59.51	59.70	0.19	NA	1.00	9.00	3370.41	
MW1-R	11/08/19	3429.95	69.59	59.48	59.85	0.37	NA	sheen	10.00	3370.41	
MW1-R	11/15/19	3429.95	69.59	59.65	59.87	0.22	NA	0.25	9.75	3370.27	
MW1-R	11/19/19	3429.95	69.59	59.44	59.81	0.37	NA	sheen	10.00	3370.45	
MW1-R	11/26/19	3429.95	69.59	59.42	59.92	0.50	NA	0.25	9.75	3370.46	
MW1-R	12/04/19	3429.95	69.59	59.40	59.94	0.54	NA	sheen	10.00	3370.47	
MW1-R	12/13/19	3429.95	69.59	59.43	59.72	0.29	NA	0.25	9.75	3370.48	
MW1-R	12/20/19	3429.95	69.59	59.39	59.70	0.31	NA	0.25	9.75	3370.51	
MW1-R	12/27/19	3429.95	69.59	59.32	59.60	0.28	NA	0.25	9.75	3370.59	
							2019	11.75	418.25		
MW-2	01/03/18	3429.97	71.75	58.75	58.77	0.02	NA	SHEEN	10.00	3371.22	
MW-2	01/10/18	3429.97	71.75	58.68	58.72	0.04	NA	SHEEN	10.00	3371.28	
MW-2	01/18/18	3429.97	71.75	58.72	58.78	0.06	NA	1.00	9.00	3371.24	
MW-2	01/26/18	3429.97	71.75	58.65	58.70	0.05	NA	SHEEN	10.00	3371.31	
MW-2	02/01/18	3429.97	71.75	58.65	58.70	0.05	NA	0.50	9.50	3371.31	
MW-2	02/08/18	3429.97	71.75	Sheen	58.54	Sheen	NA	NA	NA	3371.43	
MW-2	02/14/18	3429.97	71.75	Sheen	58.64	Sheen	NA	NA	NA	3371.33	
MW-2	02/21/18	3429.97	71.75	58.60	58.62	0.02	NA	SHEEN	10.00	3371.37	
MW-2	02/28/18	3429.97	71.75	58.64	58.74	0.10	NA	SHEEN	10.00	3371.32	
MW-2	03/09/18	3429.97	71.75	58.70	58.94	0.24	NA	NA	NA	3371.23	
MW-2	03/15/18	3429.97	71.75	58.73	58.87	0.14	NA	SHEEN	10.00	3371.22	
MW-2	03/22/18	3429.97	71.75	58.74	58.83	0.09	NA	SHEEN	10.00	3371.22	
MW-2	03/28/18	3429.97	71.75	58.75	58.87	0.12	NA	SHEEN	10.00	3371.20	

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
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SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-2	04/03/18	3429.97	71.75	59.76	59.84	0.08	NA	SHEEN	10.00	3370.20	
MW-2	04/10/18	3429.97	71.75	58.80	58.82	0.02	NA	SHEEN	10.00	3371.17	
MW-2	04/19/18	3429.97	71.75	58.86	58.89	0.03	NA	SHEEN	10.00	3371.11	
MW-2	04/25/18	3429.97	71.75	58.85	58.89	0.04	NA	SHEEN	10.00	3371.11	
MW-2	05/02/18	3429.97	71.75	58.78	58.87	0.09	NA	SHEEN	10.00	3371.18	
MW-2	05/10/18	3429.97	71.75	58.76	58.80	0.04	NA	SHEEN	10.00	3371.20	
MW-2	05/15/18	3429.97	71.75	58.80	58.88	0.08	NA	SHEEN	10.00	3371.16	
MW-2	05/23/18	3429.97	71.75	58.80	58.84	0.04	NA	SHEEN	10.00	3371.16	
MW-2	06/07/18	3429.97	71.75	58.88	58.92	0.04	NA	NA	NA	3371.08	Sampled
MW-2	06/13/18	3429.97	71.75	58.91	58.94	0.03	NA	SHEEN	10.00	3371.06	
MW-2	06/20/18	3429.97	71.75	58.94	58.97	0.03	NA	SHEEN	10.00	3371.03	
MW-2	06/28/18	3429.97	71.75	58.91	58.98	0.07	NA	0.25	9.75	3371.05	
MW-2	07/05/18	3429.97	71.75	58.93	58.99	0.06	NA	0.25	9.75	3371.03	
MW-2	07/12/18	3429.97	71.75	58.94	58.97	0.03	NA	SHEEN	10.00	3371.03	
MW-2	07/20/18	3429.97	71.75	58.98	59.08	0.10	NA	SHEEN	10.00	3370.98	
MW-2	08/01/18	3429.97	71.75	59.00	59.11	0.11	NA	SHEEN	10.00	3370.95	
MW-2	08/08/18	3429.97	71.75	59.04	59.12	0.08	NA	SHEEN	10.00	3370.92	
MW-2	08/14/18	3429.97	71.75				NA	SHEEN	10.00	3429.97	
MW-2	08/21/18	3429.97	71.75	59.00	59.09	0.09	NA	SHEEN	10.00	3370.96	
MW-2	08/30/18	3429.97	71.75	59.02	59.07	0.05	NA	SHEEN	10.00	3370.94	
MW-2	09/12/18	3429.97	71.75	59.12	59.14	0.02	NA	SHEEN	10.00	3370.85	
MW-2	09/26/18	3429.97	71.75	59.15	59.16	0.01	NA	SHEEN	10.00	3370.82	
MW-2	10/04/18	3429.97	71.75	59.15	59.17	0.02	NA	SHEEN	10.00	3370.82	
MW-2	10/11/18	3429.97	71.75	59.15	59.18	0.03	NA	SHEEN	10.00	3370.82	
MW-2	10/17/18	3429.97	71.75	58.88	58.92	0.04	NA	SHEEN	10.00	3371.08	
MW-2	10/24/18	3429.97	71.75	58.86	58.92	0.06	NA	SHEEN	10.00	3371.10	
MW-2	11/01/18	3429.97	71.75	58.96	59.06	0.10	NA	SHEEN	10.00	3371.00	
MW-2	11/07/18	3429.97	71.75	58.99	59.04	0.05	NA	SHEEN	10.00	3370.97	
MW-2	11/13/18	3429.97	71.75	58.98	59.10	0.12	NA	SHEEN	10.00	3370.97	
MW-2	11/21/18	3429.97	71.75	59.02	59.04	0.02	NA	SHEEN	10.00	3370.95	
MW-2	11/30/18	3429.97	71.75	59.08	59.12	0.04	NA	SHEEN	10.00	3370.88	
MW-2	12/07/18	3429.97	71.75	59.10	59.13	0.03	NA	SHEEN	10.00	3370.87	
MW-2	12/13/18	3429.97	71.75	59.10	59.13	0.03	NA	SHEEN	10.00	3370.87	
MW-2	12/19/18	3429.97	71.75	59.12	59.15	0.03	NA	SHEEN	10.00	3370.85	
MW-2	01/03/19	3429.97	71.75	59.15	59.16	0.01	NA	SHEEN	10.00	3370.82	

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-2	01/09/19	3429.97	71.75	59.20	59.21	0.01	NA	SHEEN	10.00	3370.77	
MW-2	01/18/19	3429.97	71.75	59.02	59.65	0.63	NA	0.50	9.50	3370.86	
MW-2	01/23/19	3429.97	71.75	59.02	59.70	0.68	NA	0.50	9.50	3370.85	
MW-2	01/30/19	3429.97	71.75	59.16	59.17	0.01	NA	SHEEN	10.00	3370.81	
MW-2	02/06/19	3429.97	71.75	59.21	59.22	0.01	NA	SHEEN	10.00	3370.76	
MW-2	02/14/19	3429.97	71.75	59.00	59.08	0.08	NA	NA	NA	3370.96	
MW-2	02/22/19	3429.97	71.75	59.03	59.78	0.75	NA	1.00	9.00	3370.83	
MW-2	02/28/19	3429.97	71.75	59.06	59.10	0.04	NA	SHEEN	10.00	3370.90	
MW-2	03/06/19	3429.97	71.75	59.11	59.13	0.02	NA	SHEEN	10.00	3370.86	
MW-2	03/12/19	3429.97	71.75	59.10	59.14	0.04	NA	SHEEN	10.00	3370.86	
MW-2	03/22/19	3429.97	71.75	59.10	59.13	0.03	NA	SHEEN	10.00	3370.87	
MW-2	03/28/19	3429.97	71.75	59.01	59.04	0.03	NA	SHEEN	10.00	3370.96	
MW-2	04/03/19	3429.97	71.75	59.05	59.11	0.06	NA	SHEEN	10.00	3370.91	
MW-2	04/11/19	3429.97	71.75	59.02	59.09	0.07	NA	SHEEN	10.00	3370.94	
MW-2	04/16/19	3429.97	71.75	59.06	59.09	0.03	NA	SHEEN	10.00	3370.91	
MW-2	04/25/19	3429.97	71.75	59.08	59.11	0.03	NA	SHEEN	10.00	3370.89	
MW-2	05/01/19	3429.97	71.75	Sheen	59.01	Sheen	NA	NA	NA	3370.96	
MW-2	05/14/19	3429.97	71.75	59.05	59.15	0.10	NA	NA	NA	3370.91	Sampled
MW-2	05/24/19	3429.97	71.75	59.09	59.14	0.05	NA	SHEEN	10.00	3370.87	
MW-2	06/05/19	3429.97	71.75	59.11	59.18	0.07	NA	SHEEN	10.00	3370.85	
MW-2	06/14/19	3429.97	71.75	59.25	59.32	0.07	NA	0.25	9.75	3370.71	
MW-2	06/20/19	3429.97	71.75	59.18	59.20	0.02	NA	SHEEN	10.00	3370.79	
MW-2	06/26/19	3429.97	71.75	59.28	59.38	0.10	NA	SHEEN	10.00	3370.68	
MW-2	07/03/19	3429.97	71.75	59.32	59.36	0.04	NA	SHEEN	10.00	3370.64	
MW-2	07/11/19	3429.97	71.75	59.34	59.35	0.01	NA	SHEEN	10.00	3370.63	
MW-2	07/26/19	3429.97	71.75	59.47	59.52	0.05	NA	SHEEN	10.00	3370.49	
MW-2	08/10/19	3429.97	71.75	59.45	59.50	0.05	NA	SHEEN	10.00	3370.51	
MW-2	08/15/19	3429.97	71.75	59.44	59.48	0.04	NA	SHEEN	10.00	3370.52	
MW-2	08/27/19	3429.97	71.75	59.49	59.55	0.06	NA	SHEEN	10.00	3370.47	
MW-2	09/06/19	3429.97	71.75	59.50	59.52	0.02	NA	SHEEN	10.00	3370.47	
MW-2	09/13/19	3429.97	71.75	59.52	59.60	0.08	NA	SHEEN	10.00	3370.44	
MW-2	09/20/19	3429.97	71.75	59.52	59.55	0.03	NA	SHEEN	10.00	3370.45	
MW-2	10/09/19	3429.97	71.75	59.52	59.55	0.03	NA	SHEEN	10.00	3370.45	
MW-2	10/17/19	3429.97	71.75	59.52	59.57	0.05	NA	SHEEN	10.00	3370.44	
MW-2	11/01/19	3429.97	71.75	59.41	59.50	0.09	NA	SHEEN	10.00	3370.55	

TABLE 2
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Plains Marketing, L.P.
Hugh Gathering
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Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-2	11/08/19	3429.97	71.75	59.38	59.40	0.02	NA	SHEEN	10.00	3370.59	
MW-2	11/15/19	3429.97	71.75	59.36	59.38	0.02	NA	SHEEN	10.00	3370.61	
MW-2	11/19/19	3429.97	71.75	59.34	59.38	0.04	NA	SHEEN	10.00	3370.62	
MW-2	11/26/19	3429.97	71.75	59.33	59.42	0.09	NA	SHEEN	10.00	3370.63	
MW-2	12/04/19	3429.97	71.75	59.33	59.40	0.07	NA	0.25	9.75	3370.63	
MW-2	12/13/19	3429.97	71.75	59.32	59.36	0.04	NA	SHEEN	10.00	3370.64	
MW-2	12/20/19	3429.97	71.75	59.35	59.42	0.07	NA	SHEEN	10.00	3370.61	
MW-2	12/27/19	3429.97	71.75	59.38	59.40	0.02	NA	SHEEN	10.00	3370.59	0.09
								2.50	407.50		
MW-3	01/03/18	3429.89	65.55	ND	58.86	ND	NA	NA	NA	3371.03	dry
MW-3	01/10/18	3429.89	65.55	ND	58.84	ND	NA	NA	NA	3371.05	dry
MW-3	01/18/18	3429.89	65.55	ND	58.47	ND	NA	NA	NA	3371.42	dry
MW-3	01/26/18	3429.89	65.55	ND	58.69	ND	NA	NA	NA	3371.20	dry
MW-3	02/08/18	3429.89	65.55	ND	58.75	ND	NA	NA	NA	3371.14	dry
MW-3	02/01/18	3429.89	65.55	ND	58.70	ND	NA	NA	NA	3371.19	dry
MW-3	02/14/18	3429.89	65.55	ND	58.76	ND	NA	NA	NA	3371.13	dry
MW-3	02/21/18	3429.89	65.55	ND	58.80	ND	NA	NA	NA	3371.09	dry
MW-3	02/28/18	3429.89	65.55	ND	58.75	ND	NA	NA	NA	3371.14	dry
MW-3	03/09/18	3429.89	65.55	ND	58.84	ND	NA	NA	NA	3371.05	dry
MW-3	03/15/18	3429.89	65.55	ND	59.65	ND	NA	NA	NA	3370.24	dry
MW-3	03/22/18	3429.89	65.55	ND	58.95	ND	NA	NA	NA	3370.94	dry
MW-3	03/28/18	3429.89	65.55	ND	58.87	ND	NA	NA	3.00	3371.02	dry
MW-3	04/03/18	3429.89	65.55	ND	59.38	ND	NA	NA	3.00	3370.51	dry
MW-3	04/10/18	3429.89	65.55	ND	59.44	ND	NA	NA	NA	3370.45	dry
MW-3	04/19/18	3429.89	65.55	ND	59.50	ND	NA	NA	NA	3370.39	dry
MW-3	04/25/18	3429.89	65.55	ND	59.49	ND	NA	NA	NA	3370.40	dry
MW-3	05/02/18	3429.89	65.55	ND	58.88	ND	NA	NA	NA	3371.01	dry
MW-3	05/10/18	3429.89	65.55	ND	58.90	ND	NA	NA	NA	3370.99	dry
MW-3	05/15/18	3429.89	65.55	ND	58.92	ND	NA	NA	NA	3370.97	dry
MW-3	05/21/18	3429.89	65.55	ND	58.91	ND	NA	NA	NA	3370.98	dry
MW-3	06/07/18	3429.89	65.55	ND	58.97	ND	NA	NA	NA	3370.92	sampled
MW-3	06/13/18	3429.89	65.55	ND	58.99	ND	NA	NA	NA	3370.90	dry
MW-3	06/20/18	3429.89	65.55	ND	59.00	ND	NA	NA	NA	3370.89	dry
MW-3	06/28/18	3429.89	65.55	ND	59.05	ND	NA	NA	NA	3370.84	dry
MW-3	07/05/18	3429.89	65.55	ND	59.09	ND	NA	NA	NA	3370.80	dry

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								PSH	H ₂ O		
MW-3	07/12/18	3429.89	65.55	ND	59.08	ND	NA	NA	NA	3370.81	dry
MW-3	07/20/18	3429.89	65.55	ND	59.13	ND	NA	NA	NA	3370.76	dry
MW-3	08/01/18	3429.89	65.55	ND	59.15	ND	NA	NA	NA	3370.74	dry
MW-3	08/08/18	3429.89	65.55	ND	59.17	ND	NA	NA	NA	3370.72	dry
MW-3	08/21/18	3429.89	65.55	ND	59.18	ND	NA	NA	NA	3370.71	dry
MW-3	08/30/18	3429.89	65.55	ND	59.20	ND	NA	NA	NA	3370.69	dry
MW-3	09/12/18	3429.89	65.55	ND	59.34	ND	NA	NA	NA	3370.55	dry
MW-3	09/26/18	3429.89	65.55	ND	59.35	ND	NA	NA	NA	3370.54	dry
MW-3	10/04/18	3429.89	65.55	ND	59.36	ND	NA	NA	3.00	3370.53	dry
MW-3	10/11/18	3429.89	65.55	ND	59.39	ND	NA	NA	3.00	3370.50	dry
MW-3	10/17/18	3429.89	65.55	ND	59.18	ND	NA	NA	NA	3370.71	dry
MW-3	10/24/18	3429.89	65.55	ND	59.12	ND	NA	NA	NA	3370.77	dry
MW-3	11/01/18	3429.89	65.55	ND	59.15	ND	NA	NA	NA	3370.74	dry
MW-3	11/07/18	3429.89	65.55	ND	59.18	ND	NA	NA	NA	3370.71	dry
MW-3	11/13/18	3429.89	65.55	ND	59.20	ND	NA	NA	NA	3370.69	dry
MW-3	11/21/18	3429.89	65.55	ND	59.24	ND	NA	NA	NA	3370.65	sampled
MW-3	11/30/18	3429.89	65.55	ND	59.29	ND	NA	NA	NA	3370.60	dry
MW-3	12/07/18	3429.89	65.55	ND	59.30	ND	NA	NA	NA	3370.59	dry
MW-3	12/13/18	3429.89	65.55	ND	59.31	ND	NA	NA	NA	3370.58	dry
MW-3	12/19/18	3429.89	65.55	ND	59.29	ND	NA	NA	NA	3370.60	dry
MW-3	01/03/19	3429.89	65.55	ND	59.30	ND	NA	NA	NA	3370.59	dry
MW-3	01/09/19	3429.89	65.55	ND	59.32	ND	NA	NA	NA	3370.57	dry
MW-3	01/18/19	3429.89	65.55	ND	59.23	ND	NA	NA	NA	3370.66	dry
MW-3	01/23/19	3429.89	65.55	ND	59.25	ND	NA	NA	NA	3370.64	dry
MW-3	01/30/19	3429.89	65.55	ND	59.30	ND	NA	NA	NA	3370.59	dry
MW-3	02/06/19	3429.89	65.55	ND	59.34	ND	NA	NA	NA	3370.55	dry
MW-3	02/14/19	3429.89	65.55	ND	59.24	ND	NA	NA	NA	3370.65	dry
MW-3	02/22/19	3429.89	65.55	ND	59.29	ND	NA	NA	NA	3370.60	dry
MW-3	02/28/19	3429.89	65.55	ND	59.25	ND	NA	NA	NA	3370.64	dry
MW-3	03/06/19	3429.89	65.55	ND	59.29	ND	NA	NA	NA	3370.60	dry
MW-3	03/12/19	3429.89	65.55	ND	59.27	ND	NA	NA	NA	3370.62	dry
MW-3	03/22/19	3429.89	65.55	ND	59.26	ND	NA	NA	NA	3370.63	dry
MW-3	03/28/19	3429.89	65.55	ND	59.24	ND	NA	NA	NA	3370.65	dry
MW-3	04/03/19	3429.89	65.55	ND	59.27	ND	NA	NA	NA	3370.62	sampled
MW-3	04/11/19	3429.89	65.55	ND	59.24	ND	NA	NA	NA	3370.65	dry

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								PSH	H ₂ O		
MW-3	04/16/19	3429.89	65.55	ND	59.26	ND	NA	NA	NA	3370.63	dry
MW-3	04/25/19	3429.89	65.55	ND	59.28	ND	NA	NA	NA	3370.61	dry
MW-3	05/01/19	3429.89	65.55	ND	59.17	ND	NA	NA	NA	3370.72	dry
MW-3	05/14/19	3429.89	65.55	ND	59.30	ND	NA	NA	NA	3370.59	sampled
MW-3	05/24/19	3429.89	65.55	ND	59.31	ND	NA	NA	NA	3370.58	dry
MW-3	06/05/19	3429.89	65.55	ND	59.36	ND	NA	NA	NA	3370.53	dry
MW-3	06/14/19	3429.89	65.55	ND	59.37	ND	NA	NA	NA	3370.52	dry
MW-3	06/20/19	3429.89	65.55	ND	59.30	ND	NA	NA	NA	3370.59	dry
MW-3	06/26/19	3429.89	65.55	ND	59.41	ND	NA	NA	NA	3370.48	dry
MW-3	07/03/19	3429.89	65.55	ND	59.44	ND	NA	NA	NA	3370.45	dry
MW-3	07/11/19	3429.89	65.55	ND	59.46	ND	NA	NA	NA	3370.43	dry
MW-3	07/26/19	3429.89	65.55	ND	59.56	ND	NA	NA	NA	3370.33	dry
MW-3	08/10/19	3429.89	65.55	ND	59.58	ND	NA	NA	NA	3370.31	dry
MW-3	08/15/19	3429.89	65.55	ND	59.57	ND	NA	NA	NA	3370.32	dry
MW-3	08/27/19	3429.89	65.55	ND	59.63	ND	NA	NA	NA	3370.26	dry
MW-3	09/06/19	3429.89	65.55	ND	59.54	ND	NA	NA	NA	3370.35	dry
MW-3	09/13/19	3429.89	65.55	ND	59.54	ND	NA	NA	NA	3370.35	dry
MW-3	09/20/19	3429.89	65.55	ND	59.65	ND	NA	NA	NA	3370.24	dry
MW-3	10/09/19	3429.89	65.55	ND	59.68	ND	NA	NA	NA	3370.21	dry
MW-3	10/17/19	3429.89	65.55	ND	59.67	ND	NA	NA	NA	3370.22	dry
MW-3	10/24/19	3429.89	65.55	ND	59.65	ND	NA	NA	NA	3370.24	dry
MW-3	11/01/19	3429.89	65.55	ND	59.58	ND	NA	NA	NA	3370.31	dry
MW-3	11/08/19	3429.89	65.55	ND	59.55	ND	NA	NA	NA	3370.34	dry
MW-3	11/15/19	3429.89	65.55	ND	59.53	ND	NA	NA	NA	3370.36	dry
MW-3	11/19/19	3429.89	65.55	ND	59.49	ND	NA	NA	NA	3370.40	dry
MW-3	11/26/19	3429.89	65.55	ND	59.49	ND	NA	NA	NA	3370.40	dry
MW-3	12/04/19	3429.89	65.55	ND	59.53	ND	NA	NA	NA	3370.36	dry
MW-3	12/13/19	3429.89	65.55	ND	59.49	ND	NA	NA	NA	3370.40	dry
MW-3	12/20/19	3429.89	65.55	ND	59.50	ND	NA	NA	NA	3370.39	dry
MW-3	12/27/19	3429.89	65.55	ND	59.48	ND	NA	NA	NA	3370.41	dry
MW-4	01/03/18	3430.36	71.90	59.15	59.16	0.01	NA	NA	10.00	3371.21	
MW-4	01/10/18	3430.36	71.90	59.11	59.20	0.09	NA	sheen	10.00	3371.24	
MW-4	01/18/18	3430.36	71.90	59.14	59.15	0.01	NA	sheen	10.00	3371.22	
MW-4	01/26/18	3430.36	71.90	59.07	59.11	0.04	NA	sheen	10.00	3371.28	
MW-4	02/01/18	3430.36	71.90	SHEEN	58.90	SHEEN	NA	sheen	10.00	3371.46	

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-4	02/08/18	3430.36	71.90	59.04	59.07	0.03	NA	sheen	10.00	3371.32	
MW-4	02/14/18	3430.36	71.90	SHEEN	59.16	SHEEN	NA	NA	NA	3371.20	
MW-4	02/21/18	3430.36	71.90	59.20	59.21	0.01	NA	NA	10.00	3371.16	
MW-4	02/28/18	3430.36	71.90	SHEEN	59.05	SHEEN	NA	NA	NA	3371.31	
MW-4	03/09/18	3430.36	71.90	59.10	59.15	0.05	NA	NA	NA	3371.25	
MW-4	03/15/18	3430.36	71.90	SHEEN	59.16	SHEEN	NA	NA	10.00	3371.20	
MW-4	03/22/18	3430.36	71.90	SHEEN	59.12	SHEEN	NA	NA	10.00	3371.24	
MW-4	03/28/18	3430.36	71.90	SHEEN	59.18	SHEEN	NA	NA	10.00	3371.18	
MW-4	04/03/18	3430.36	71.90	59.17	59.24	0.07	NA	sheen	10.00	3371.18	
MW-4	04/10/18	3430.36	71.90	SHEEN	59.21	SHEEN	NA	sheen	10.00	3371.15	
MW-4	04/19/18	3430.36	71.90	SHEEN	59.21	SHEEN	NA	sheen	10.00	3371.15	
MW-4	04/25/18	3430.36	71.90	SHEEN	59.25	SHEEN	NA	NA	10.00	3371.11	
MW-4	05/02/18	3430.36	71.90	59.19	59.20	0.01	NA	sheen	10.00	3371.17	
MW-4	05/10/18	3430.36	71.90	59.20	59.23	0.03	NA	sheen	10.00	3371.16	
MW-4	05/15/18	3430.36	71.90	59.22	59.23	0.01	NA	sheen	10.00	3371.14	
MW-4	05/23/18	3430.36	71.90	ND	58.91	ND	NA	NA	NA	3371.45	
MW-4	06/07/18	3430.36	71.90	SHEEN	59.31	SHEEN	NA	NA	NA	3371.05	Sampled
MW-4	06/13/18	3430.36	71.90	SHEEN	59.37	SHEEN	NA	sheen	10.00	3370.99	
MW-4	06/20/18	3430.36	71.90	ND	59.41	ND	NA	sheen	10.00	3370.95	
MW-4	06/28/18	3430.36	71.90	59.35	59.36	0.01	NA	NA	NA	3371.01	
MW-4	07/05/18	3430.36	71.90	59.38	59.39	0.01	NA	NA	NA	3370.98	
MW-4	07/12/18	3430.36	71.90	59.40	59.41	0.01	NA	sheen	10.00	3370.96	
MW-4	07/20/18	3430.36	71.90	59.41	59.45	0.04	NA	sheen	10.00	3370.94	
MW-4	08/01/18	3430.36	71.90	59.43	59.47	0.04	NA	sheen	10.00	3370.92	
MW-4	08/08/18	3430.36	71.90	59.40	59.44	0.04	NA	sheen	10.00	3370.95	
MW-4	08/21/18	3430.36	71.90	59.41	59.46	0.05	NA	sheen	10.00	3370.94	
MW-4	08/30/18	3430.36	71.90	59.45	59.47	0.02	NA	sheen	10.00	3370.91	
MW-4	09/12/18	3430.36	71.90	59.49	59.52	0.03	NA	sheen	10.00	3370.87	
MW-4	09/26/18	3430.36	71.90	59.51	59.54	0.03	NA	sheen	10.00	3370.85	
MW-4	10/04/18	3430.36	71.90	59.51	59.56	0.05	NA	sheen	10.00	3370.84	
MW-4	10/11/18	3430.36	71.90	59.50	59.54	0.04	NA	sheen	10.00	3370.85	
MW-4	10/17/18	3430.36	71.90	59.25	59.27	0.02	NA	sheen	10.00	3371.11	
MW-4	10/24/18	3430.36	71.90	59.19	59.20	0.01	NA	0.25	9.75	3371.17	
MW-4	11/01/18	3430.36	71.90	59.32	59.33	0.01	NA	sheen	10.00	3371.04	Sampled
MW-4	11/07/18	3430.36	71.90	SHEEN	59.45	SHEEN	NA	sheen	10.00	3370.91	
MW-4	11/13/18	3430.36	71.90	59.47	59.50	0.03	NA	sheen	10.00	3370.89	

TABLE 2
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Plains Marketing, L.P.
Hugh Gathering
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Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-4	11/21/18	3430.36	71.90	59.54	59.60	0.06	NA	sheen	10.00	3370.81	
MW-4	11/30/18	3430.36	71.90	59.50	59.55	0.05	NA	sheen	10.00	3370.85	
MW-4	12/07/18	3430.36	71.90	59.52	59.56	0.04	NA	sheen	10.00	3370.83	
MW-4	12/13/18	3430.36	71.90	59.52	59.56	0.04	NA	sheen	10.00	3370.83	
MW-4	12/19/18	3430.36	71.90	59.55	59.57	0.02	NA	sheen	10.00	3370.81	
MW-4	01/03/19	3430.36	71.90	SHEEN	59.59	SHEEN	NA	sheen	10.00	3370.77	
MW-4	01/09/19	3430.36	71.90	SHEEN	59.64	SHEEN	NA	sheen	10.00	3370.72	
MW-4	01/18/19	3430.36	71.90	59.52	59.53	0.01	NA	sheen	10.00	3370.84	
MW-4	01/23/19	3430.36	71.90	59.54	59.55	0.01	NA	NA	NA	3370.82	
MW-4	01/30/19	3430.36	71.90	59.60	59.61	0.01	NA	sheen	10.00	3370.76	
MW-4	02/06/19	3430.36	71.90	59.62	59.66	0.04	NA	sheen	10.00	3370.73	
MW-4	02/14/19	3430.36	71.90	59.55	59.64	0.09	NA	NA	NA	3370.80	
MW-4	02/22/19	3430.36	71.90	59.55	59.56	0.01	NA	NA	NA	3370.81	
MW-4	02/28/19	3430.36	71.90	59.58	59.69	0.11	NA	sheen	10.00	3370.76	
MW-4	03/06/19	3430.36	71.90	59.61	59.67	0.06	NA	sheen	10.00	3370.74	
MW-4	03/12/19	3430.36	71.90	59.60	59.66	0.06	NA	sheen	10.00	3370.75	Sampled
MW-4	03/22/19	3430.36	71.90	59.59	59.64	0.05	NA	sheen	10.00	3370.76	
MW-4	03/28/19	3430.36	71.90	59.50	59.60	0.10	NA	sheen	10.00	3370.85	
MW-4	04/03/19	3430.36	71.90	59.55	59.63	0.08	NA	sheen	10.00	3370.80	
MW-4	04/11/19	3430.36	71.90	59.52	59.59	0.07	NA	sheen	10.00	3370.83	
MW-4	04/16/19	3430.36	71.90	59.54	59.61	0.07	NA	sheen	10.00	3370.81	
MW-4	04/25/19	3430.36	71.90	59.56	59.60	0.04	NA	sheen	10.00	3370.79	
MW-4	05/01/19	3430.36	71.90	59.46	59.58	0.12	NA	sheen	10.00	3370.88	
MW-4	05/14/19	3430.36	71.90	59.59	59.71	0.12	NA	NA	NA	3370.75	Sampled
MW-4	05/24/19	3430.36	71.90	59.64	59.72	0.08	NA	sheen	10.00	3370.71	
MW-4	06/05/19	3430.36	71.90	59.67	59.72	0.05	NA	sheen	10.00	3370.68	
MW-4	06/14/19	3430.36	71.90	59.60	59.67	0.07	NA	sheen	10.00	3370.75	
MW-4	06/20/19	3430.36	71.90	59.66	59.73	0.07	NA	sheen	10.00	3370.69	
MW-4	06/26/19	3430.36	71.90	59.70	59.71	0.01	NA	sheen	10.00	3370.66	
MW-4	07/03/19	3430.36	71.90	59.74	59.79	0.04	NA	sheen	10.00	3370.61	
MW-4	07/11/19	3430.36	71.90	59.76	59.77	0.01	NA	NA	NA	3370.60	
MW-4	07/26/19	3430.36	71.90	59.85	59.90	0.05	NA	sheen	10.00	3370.50	
MW-4	08/10/19	3430.36	71.90	59.84	59.89	0.05	NA	sheen	10.00	3370.51	
MW-4	08/15/19	3430.36	71.90	59.84	59.91	0.07	NA	sheen	10.00	3370.51	
MW-4	08/27/19	3430.36	71.90	59.91	59.96	0.05	NA	sheen	10.00	3370.44	

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Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-4	09/06/19	3430.36	71.90	59.92	60.02	0.10	NA	sheen	10.00	3370.43	
MW-4	09/13/19	3430.36	71.90	59.80	60.03	0.23	NA	sheen	10.00	3370.53	
MW-4	09/20/19	3430.36	71.90	59.93	59.95	0.02	NA	1.00	9.00	3370.43	
MW-4	10/09/19	3430.36	71.90	59.62	59.82	0.20	NA	0.25	9.75	3370.71	
MW-4	10/17/19	3430.36	71.90	59.91	60.00	0.09	NA	sheen	10.00	3370.44	
MW-4	10/24/19	3430.36	71.90	59.94	60.00	0.06	NA	sheen	10.00	3370.41	
MW-4	11/01/19	3430.36	71.90	59.84	59.86	0.02	NA	1.00	9.00	3370.52	
MW-4	11/08/19	3430.36	71.90	59.81	59.83	0.02	NA	sheen	10.00	3370.55	
MW-4	11/15/19	3430.36	71.90	59.79	59.80	0.01	NA	sheen	10.00	3370.57	
MW-4	11/19/19	3430.36	71.90	59.77	59.80	0.03	NA	sheen	10.00	3370.59	
MW-4	11/26/19	3430.36	71.90	59.76	59.95	0.19	NA	0.25	9.75	3370.57	
MW-4	12/04/19	3430.36	71.90	59.74	59.95	0.21	NA	sheen	10.00	3370.59	
MW-4	12/13/19	3430.36	71.90	59.75	59.81	0.06	NA	sheen	10.00	3370.60	
MW-4	12/20/19	3430.36	71.90	59.76	59.79	0.03	NA	sheen	10.00	3370.60	
MW-4	12/27/19	3430.36	71.90	59.76	59.77	0.01	NA	sheen	10.00	3370.60	
								2.50	397.50		
MW-5	03/09/18	3428.93		ND	57.73	ND	NA	NA	NA	3371.20	Sampled
MW-5	06/07/18	3428.93		ND	57.88	ND	NA	NA	NA	3371.05	Sampled
MW-5	11/30/18	3428.93		ND	58.12	ND	NA	NA	NA	3370.81	Sampled
MW-5	02/14/19	3428.93		ND	58.11	ND	NA	NA	NA	3370.82	Sampled
MW-5	05/14/19	3428.93		ND	58.20	ND	NA	NA	NA	3370.73	Sampled
MW-5	08/27/19	3428.93		ND	58.49	ND	NA	NA	NA	3370.44	Sampled
MW-5	11/19/19	3428.93		ND	58.35	ND	NA	NA	NA	3370.58	Sampled
MW-6	03/09/18	3429.24		ND	57.88	ND	NA	NA	NA	3371.36	Sampled
MW-6	06/07/18	3429.24		ND	58.06	ND	NA	NA	NA	3371.18	Sampled
MW-6	11/30/18	3429.24		ND	58.30	ND	NA	NA	NA	3370.94	Sampled
MW-6	02/14/19	3429.24		ND	58.26	ND	NA	NA	NA	3370.98	Sampled
MW-6	05/14/19	3429.24		ND	58.34	ND	NA	NA	NA	3370.90	Sampled
MW-6	08/27/19	3429.24		ND	58.63	ND	NA	NA	NA	3370.61	Sampled
MW-6	11/19/19	3429.24		ND	58.51	ND	NA	NA	NA	3370.73	Sampled
MW-7	03/09/18	3429.8		ND	58.88	ND	NA	NA	NA	3370.92	Sampled
MW-7	06/07/18	3429.8		ND	59.03	ND	NA	NA	NA	3370.77	Sampled
MW-7	11/30/18	3429.8		ND	59.32	ND	NA	NA	NA	3370.48	Sampled

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								PSH	H ₂ O		
MW-7	02/14/19	3429.8		ND	59.22	ND	NA	NA	NA	3370.58	Sampled
MW-7	05/14/19	3429.8		ND	59.30	ND	NA	NA	NA	3370.50	Sampled
MW-7	08/27/19	3429.8		ND	59.65	ND	NA	NA	NA	3370.15	Sampled
MW-7	11/19/19	3429.8		ND	59.46	ND	NA	NA	NA	3370.34	Sampled
MW-8	01/03/18	3430.21	64.46	59.00	59.10	0.10	NA	SHEEN	10.00	3371.20	DRY
MW-8	01/10/18	3430.21	64.46	58.94	59.02	0.08	NA	SHEEN	10.00	3371.26	DRY
MW-8	01/18/18	3430.21	64.46	58.97	59.04	0.07	NA	SHEEN	10.00	3371.23	DRY
MW-8	01/26/18	3430.21	64.46	58.95	59.03	0.08	NA	1.00	9.00	3371.25	DRY
MW-8	02/01/18	3430.21	64.46	58.64	58.69	0.05	NA	SHEEN	10.00	3371.56	DRY
MW-8	02/08/18	3430.21	64.46	58.92	58.94	0.02	NA	SHEEN	10.00	3371.29	DRY
MW-8	02/14/18	3430.21	64.46	58.92	58.98	0.06	NA	SHEEN	10.00	3371.28	DRY
MW-8	02/21/18	3430.21	64.46	58.98	59.03	0.05	NA	SHEEN	10.00	3371.22	DRY
MW-8	02/28/18	3430.21	64.46	58.93	59.05	0.12	NA	SHEEN	10.00	3371.26	DRY
MW-8	03/09/18	3430.21	64.46	59.01	59.63	0.62	NA	NA	NA	3371.11	Dry
MW-8	03/15/18	3430.21	64.46	59.01	59.10	0.09	NA	SHEEN	7.00	3371.19	Dry
MW-8	03/22/18	3430.21	64.46	59.02	59.05	0.03	NA	SHEEN	10.00	3371.19	Dry
MW-8	03/28/18	3430.21	64.46	59.04	59.06	0.02	NA	SHEEN	10.00	3371.17	Dry
MW-8	04/03/18	3430.21	64.46	59.04	59.11	0.07	NA	SHEEN	10.00	3371.16	Dry
MW-8	04/10/18	3430.21	64.46	59.08	59.12	0.04	NA	SHEEN	10.00	3371.12	Dry
MW-8	04/19/18	3430.21	64.46	59.12	59.15	0.03	NA	SHEEN	10.00	3371.09	Dry
MW-8	04/25/18	3430.21	64.46	59.10	59.13	0.03	NA	SHEEN	10.00	3371.11	Dry
MW-8	05/02/18	3430.21	64.46	59.06	59.16	0.10	NA	NA	10.00	3371.14	Dry
MW-8	05/10/18	3430.21	64.46	59.02	59.05	0.03	NA	NA	10.00	3371.19	Dry
MW-8	05/15/18	3430.21	64.46	59.08	59.15	0.07	NA	SHEEN	10.00	3371.12	Dry
MW-8	05/23/18	3430.21	64.46	59.21	59.22	0.01	NA	NA	10.00	3371.00	Dry
MW-8	06/07/18	3430.21	64.46	59.18	59.20	0.02	NA	NA	NA	3371.03	Sampled
MW-8	06/13/18	3430.21	64.46	59.21	59.23	0.02	NA	SHEEN	10.00	3371.00	Dry
MW-8	06/20/18	3430.21	64.46	59.22	59.23	0.01	NA	SHEEN	10.00	3370.99	Dry
MW-8	07/03/18	3430.21	64.46	59.21	59.23	0.02	NA	NA	NA	3371.00	Dry
MW-8	07/05/18	3430.21	64.46	59.25	59.27	0.02	NA	0.50	9.50	3370.96	Dry
MW-8	07/12/18	3430.21	64.46	59.27	59.28	0.01	NA	SHEEN	10.00	3370.94	Dry
MW-8	07/20/18	3430.21	64.46	59.25	59.35	0.10	NA	SHEEN	10.00	3370.95	Dry
MW-8	08/01/18	3430.21	64.46	59.26	59.34	0.08	NA	0.25	9.75	3370.94	Dry
MW-8	08/08/18	3430.21	64.46	59.25	59.32	0.07	NA	SHEEN	10.00	3370.95	Dry

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								PSH	H ₂ O		
MW-8	08/21/18	3430.21	64.46	59.23	59.31	0.08	NA	SHEEN	10.00	3370.97	Dry
MW-8	08/30/18	3430.21	64.46	59.26	59.29	0.03	NA	SHEEN	10.00	3370.95	Dry
MW-8	09/12/18	3430.21	64.46	59.31	59.33	0.02	NA	SHEEN	10.00	3370.90	Dry
MW-8	09/26/18	3430.21	64.46	59.33	59.35	0.02	NA	SHEEN	10.00	3370.88	Dry
MW-8	10/04/18	3430.21	64.46	59.32	59.35	0.03	NA	SHEEN	10.00	3370.89	Dry
MW-8	10/11/18	3430.21	64.46	59.35	59.39	0.04	NA	NA	10.00	3370.85	Dry
MW-8	10/17/18	3430.21	64.46	59.11	59.13	0.02	NA	SHEEN	10.00	3371.10	Dry
MW-8	10/24/18	3430.21	64.46	59.08	59.09	0.01	NA	SHEEN	10.00	3371.13	Dry
MW-8	11/01/18	3430.21	64.46	SHEEN	59.20	SHEEN	NA	SHEEN	10.00	3371.01	Dry
MW-8	11/07/18	3430.21	64.46	SHEEN	59.32	SHEEN	NA	SHEEN	10.00	3370.89	Dry
MW-8	11/13/18	3430.21	64.46	59.35	59.37	0.02	NA	SHEEN	10.00	3370.86	Dry
MW-8	11/21/18	3430.21	64.46	59.38	59.39	0.01	NA	SHEEN	10.00	3370.83	Dry
MW-8	11/30/18	3430.21	64.46	SHEEN	59.39	SHEEN	NA	SHEEN	10.00	3370.82	Dry
MW-8	12/07/18	3430.21	64.46	59.42	59.43	0.01	NA	SHEEN	10.00	3370.79	Dry
MW-8	12/13/18	3430.21	64.46	SHEEN	59.43	SHEEN	NA	SHEEN	10.00	3370.78	Dry
MW-8	12/19/18	3430.21	64.46	SHEEN	59.41	SHEEN	NA	NA	10.00	3370.80	Dry
MW-8	01/03/19	3430.21	64.46	ND	59.50	ND	NA	SHEEN	10.00	3370.71	Dry
MW-8	01/09/19	3430.21	64.46	ND	59.52	ND	NA	SHEEN	10.00	3370.69	Dry
MW-8	01/18/19	3430.21	64.46	59.35	59.40	0.05	NA	0.25	9.75	3370.85	Dry
MW-8	01/23/19	3430.21	64.46	59.36	59.45	0.09	NA	0.25	9.75	3370.84	Dry
MW-8	01/30/19	3430.21	64.46	ND	59.49	ND	NA	NA	NA	3370.72	Dry
MW-8	02/06/19	3430.21	64.46	ND	59.35	ND	NA	NA	NA	3370.86	Dry
MW-8	02/14/19	3430.21	64.46	59.36	59.38	0.02	NA	NA	NA	3370.85	Dry
MW-8	02/22/19	3430.21	64.46	59.30	59.39	0.09	NA	SHEEN	10.00	3370.90	Dry
MW-8	02/28/19	3430.21	64.46	SHEEN	59.39	SHEEN	NA	NA	NA	3370.82	Dry
MW-8	03/06/19	3430.21	64.46	SHEEN	59.40	SHEEN	NA	NA	NA	3370.81	Dry
MW-8	03/12/19	3430.21	64.46	SHEEN	59.40	SHEEN	NA	NA	NA	3370.81	Dry
MW-8	03/22/19	3430.21	64.46	SHEEN	59.38	SHEEN	NA	NA	NA	3370.83	Dry
MW-8	03/28/19	3430.21	64.46	59.39	59.40	0.01	NA	SHEEN	10.00	3370.82	Dry
MW-8	04/03/19	3430.21	64.46	59.55	59.69	0.14	NA	SHEEN	10.00	3370.64	Dry
MW-8	04/11/19	3430.21	64.46	59.36	59.40	0.04	NA	SHEEN	10.00	3370.84	Dry
MW-8	04/16/19	3430.21	64.46	59.39	59.42	0.03	NA	SHEEN	10.00	3370.82	Dry
MW-8	04/25/19	3430.21	64.46	59.40	59.42	0.02	NA	SHEEN	10.00	3370.81	Dry
MW-8	05/01/19	3430.21	64.46	SHEEN	59.29	SHEEN	NA	NA	NA	3370.92	Dry
MW-8	05/14/19	3430.21	64.46	59.44	59.51	0.07	NA	NA	NA	3370.76	Sampled

TABLE 2
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Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-8	05/24/19	3430.21	64.46	59.47	59.50	0.03	NA	SHEEN	10.00	3370.74	Dry
MW-8	06/05/19	3430.21	64.46	59.51	59.56	0.05	NA	SHEEN	10.00	3370.69	Dry
MW-8	06/14/19	3430.21	64.46	59.52	59.70	0.18	NA	0.25	9.75	3370.66	Dry
MW-8	06/20/19	3430.21	64.46	59.54	59.60	0.06	NA	SHEEN	10.00	3370.66	Dry
MW-8	06/26/19	3430.21	64.46	59.58	59.70	0.12	NA	SHEEN	10.00	3370.61	Dry
MW-8	07/03/19	3430.21	64.46	59.60	59.62	0.02	NA	NA	10.00	3370.61	Dry
MW-8	07/11/19	3430.21	64.46	59.63	59.65	0.02	NA	SHEEN	10.00	3370.58	Dry
MW-8	07/26/19	3430.21	64.46	59.74	59.85	0.11	NA	SHEEN	10.00	3370.45	Dry
MW-8	08/10/19	3430.21	64.46	59.73	59.86	0.13	NA	SHEEN	10.00	3370.46	Dry
MW-8	08/15/19	3430.21	64.46	59.72	59.76	0.04	NA	SHEEN	10.00	3370.48	Dry
MW-8	08/27/09	3430.21	64.46	59.77	59.84	0.07	NA	SHEEN	10.00	3370.43	Dry
MW-8	09/06/19	3430.21	64.46	59.72	59.74	0.02	NA	SHEEN	10.00	3370.49	Dry
MW-8	09/13/19	3430.21	64.46	59.70	59.74	0.04	NA	SHEEN	10.00	3370.50	Dry
MW-8	09/20/19	3430.21	64.46	59.80	59.83	0.03	NA	SHEEN	10.00	3370.41	Dry
MW-8	10/09/19	3430.21	64.46	59.80	59.83	0.03	NA	SHEEN	10.00	3370.41	Dry
MW-8	10/17/19	3430.21	59.75	59.82	59.85	0.03	NA	0.25	9.75	3370.39	Dry
MW-8	10/24/19	3430.21	64.46	59.76	59.79	0.03	NA	1.00	9.00	3370.45	Dry
MW-8	11/01/19	3430.21	64.46	59.58	59.62	0.04	NA	0.25	9.75	3370.62	Dry
MW-8	11/08/19	3430.21	64.46	59.65	59.68	0.03	NA	0.25	9.75	3370.56	Dry
MW-8	11/15/19	3430.21	64.46	59.65	59.68	0.03	NA	SHEEN	10.00	3370.56	Dry
MW-8	11/19/19	3430.21	64.46	59.60	59.66	0.06	NA	SHEEN	10.00	3370.60	Dry
MW-8	11/26/19	3430.21	64.46	59.62	59.72	0.10	NA	SHEEN	10.00	3370.58	Dry
MW-8	12/04/19	3430.21	64.46	59.74	59.85	0.11	NA	0.25	9.75	3370.45	Dry
MW-8	12/13/19	3430.21	64.46	59.65	59.68	0.03	NA	SHEEN	10.00	3370.56	Dry
MW-8	12/20/19	3430.21	64.46	59.62	59.69	0.07	NA	SHEEN	10.00	3370.58	Dry
MW-8	12/27/19	3430.21	64.46	59.62	59.70	0.08	NA	SHEEN	10.00	3370.58	Dry
								2.75	357.25		
MW-9	01/03/18	3429.88	67.52	59.13	59.33	0.20	NA	0.25	9.75	3370.72	
MW-9	01/10/18	3429.88	67.52	58.62	58.80	0.18	NA	0.25	9.75	3371.23	
MW-9	01/18/18	3429.88	67.52	58.64	58.83	0.19	NA	1	9	3371.21	
MW-9	01/26/18	3429.88	67.52	58.60	58.78	0.18	NA	0.5	9.5	3371.25	
MW-9	02/01/18	3429.88	67.52	58.61	58.79	0.18	NA	1	9	3371.24	
MW-9	02/08/18	3429.88	67.52	58.58	58.80	0.22	NA	1	9	3371.27	
MW-9	02/14/18	3429.88	67.52	58.59	58.76	0.17	NA	0.25	9.75	3371.26	
MW-9	02/21/18	3429.88	67.52	58.62	58.80	0.18	NA	0.25	9.75	3371.23	

TABLE 2
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Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-9	02/28/18	3429.88	67.52	58.58	58.92	0.34	NA	SHEEN	10	3371.25	
MW-9	03/09/18	3429.88	67.52	58.70	58.82	0.12	NA	NA	NA	3371.16	
MW-9	03/15/18	3429.88	67.52	58.67	58.94	0.27	NA	0.25	9.75	3371.17	
MW-9	03/22/18	3429.88	67.52	58.80	58.91	0.11	NA	NA	NA	3371.06	
MW-9	03/28/18	3429.88	67.52	58.70	58.85	0.15	NA	1	9	3371.16	
MW-9	04/03/18	3429.88	67.52	58.70	58.86	0.16	NA	SHEEN	10	3371.16	
MW-9	04/10/18	3429.88	67.52	58.74	58.88	0.14	NA	SHEEN	10	3371.12	
MW-9	04/19/18	3429.88	67.52	58.79	58.92	0.13	NA	SHEEN	10	3371.07	
MW-9	04/25/18	3429.88	67.52	58.80	58.90	0.10	NA	SHEEN	10	3371.07	
MW-9	05/02/18	3429.88	67.52	58.71	59.03	0.32	NA	SHEEN	10	3371.12	
MW-9	05/10/18	3429.88	67.52	58.70	58.90	0.20	NA	SHEEN	10	3371.15	
MW-9	05/15/18	3429.88	67.52	58.73	58.89	0.16	NA	SHEEN	10	3371.13	
MW-9	05/23/18	3429.88	67.52	58.75	58.86	0.11	NA	SHEEN	10	3371.11	
MW-9	06/07/18	3429.88	67.52	58.83	59.05	0.22	NA	NA	NA	3371.02	Sampled
MW-9	06/13/18	3429.88	67.52	58.87	59.00	0.13	NA	SHEEN	10	3370.99	
MW-9	06/20/18	3429.88	67.52	58.88	58.98	0.10	NA	SHEEN	10	3370.99	
MW-9	06/28/18	3429.88	67.52	58.86	59.13	0.27	NA	0.5	9.5	3370.98	
MW-9	07/05/18	3429.88	67.52	58.89	59.15	0.26	NA	0.5	9.5	3370.95	
MW-9	07/12/18	3429.88	67.52	58.91	59.10	0.19	NA	0.25	9.75	3370.94	
MW-9	07/20/18	3429.88	67.52	58.92	59.11	0.19	NA	0.25	9.75	3370.93	
MW-9	08/01/18	3429.88	67.52	58.95	59.08	0.13	NA	SHEEN	10	3370.91	
MW-9	08/08/18	3429.88	67.52	58.97	59.05	0.08	NA	SHEEN	10	3370.90	
MW-9	08/21/18	3429.88	67.52	58.96	59.08	0.12	NA	SHEEN	10	3370.90	
MW-9	08/30/18	3429.88	67.52	58.99	59.13	0.14	NA	0.25	9.75	3370.87	
MW-9	09/12/18	3429.88	67.15	59.06	59.20	0.14	NA	SHEEN	10	3370.80	
MW-9	09/26/18	3429.88	67.15	59.10	59.24	0.14	NA	SHEEN	10	3370.76	
MW-9	10/04/18	3429.88	67.15	59.10	59.26	0.16	NA	0.25	9.75	3370.76	
MW-9	10/11/18	3429.88	67.15	59.11	59.34	0.23	NA	0.25	9.75	3370.74	
MW-9	10/17/18	3429.88	67.15	58.91	58.99	0.08	NA	SHEEN	10	3370.96	
MW-9	10/24/18	3429.88	67.15	58.83	58.95	0.12	NA	0.25	9.75	3371.03	
MW-9	11/01/18	3429.88	67.15	58.87	59.00	0.13	NA	SHEEN	10	3370.99	
MW-9	11/07/18	3429.88	67.15	58.93	58.99	0.06	NA	SHEEN	10	3370.94	
MW-9	11/13/18	3429.88	67.15	58.99	59.08	0.09	NA	SHEEN	10	3370.88	
MW-9	11/21/18	3429.88	67.15	59.00	59.22	0.22	NA	0.25	9.75	3370.85	
MW-9	11/30/18	3429.88	67.15	59.02	59.26	0.24	NA	SHEEN	10	3370.82	

TABLE 2
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Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-9	12/07/18	3429.88	67.15	59.08	59.24	0.16	NA	SHEEN	10	3370.78	
MW-9	12/13/18	3429.88	67.15	59.09	59.32	0.23	NA	SHEEN	10	3370.76	
MW-9	12/19/18	3429.88	67.15	59.11	59.33	0.22	NA	SHEEN	10	3370.74	
MW-9	01/03/19	3429.88	67.52	59.12	59.36	0.24	NA	0.25	9.75	3370.72	
MW-9	01/09/19	3429.88	67.52	59.15	59.37	0.22	NA	0.25	9.75	3370.70	
MW-9	01/18/19	3429.88	67.52	58.97	59.60	0.63	NA	0.25	9.75	3370.82	
MW-9	01/23/19	3429.88	67.52	59.00	59.65	0.65	NA	1	9	3370.78	
MW-9	01/30/19	3429.88	67.15	59.12	59.32	0.20	NA	SHEEN	10	3370.73	
MW-9	02/06/19	3429.88	67.15	59.18	59.31	0.13	NA	0.25	9.75	3370.68	
MW-9	02/14/19	3429.88	67.15	58.99	59.26	0.27	NA	NA	NA	3370.85	
MW-9	02/22/19	3429.88	67.15	59.01	59.63	0.62	NA	0.5	9.5	3370.78	
MW-9	02/28/19	3429.88	67.15	59.02	59.31	0.29	NA	0.25	9.75	3370.82	
MW-9	03/06/19	3429.88	67.15	59.06	59.30	0.24	NA	0.25	9.75	3370.78	
MW-9	03/12/19	3429.88	67.15	59.04	59.34	0.30	NA	0.25	9.75	3370.80	
MW-9	03/22/19	3429.88	67.15	59.06	59.33	0.27	NA	0.25	9.75	3370.78	
MW-9	03/28/19	3429.88	67.15	59.08	59.33	0.25	NA	0.25	9.75	3370.76	
MW-9	04/03/19	3429.88	67.15	59.06	59.28	0.22	NA	0.25	9.75	3370.79	
MW-9	04/11/19	3429.88	67.15	58.99	59.26	0.27	NA	0.25	9.75	3370.85	
MW-9	04/16/19	3429.88	67.15	59.05	59.24	0.19	NA	0.25	9.75	3370.80	
MW-9	04/25/19	3429.88	67.15	59.09	59.25	0.16	NA	0.25	9.75	3370.77	
MW-9	05/01/19	3429.88	67.15	58.95	59.20	0.25	NA	SHEEN	10	3370.89	
MW-9	05/14/19	3429.88	67.15	59.12	59.25	0.13	NA	NA	NA	3370.74	Sampled
MW-9	05/24/19	3429.88	67.15	59.16	59..25	59..25	NA	SHEEN	10	59..25	
MW-9	06/05/19	3429.88	67.15	59.20	59.31	0.11	NA	SHEEN	10	3370.66	
MW-9	06/14/19	3429.88	67.15	59.18	59.28	0.10	NA	0.25	9.75	3370.69	
MW-9	06/20/19	3429.88	67.15	59.22	59.34	0.12	NA	SHEEN	10	3370.64	
MW-9	06/26/19	3429.88	67.15	59.26	59.38	0.12	NA	SHEEN	10	3370.60	
MW-9	07/03/19	3429.88	67.15	59.28	59.34	0.06	NA	SHEEN	10	3370.59	
MW-9	07/11/19	3429.88	67.15	59.32	59.35	0.03	NA	0.25	9.75	3370.56	
MW-9	07/26/19	3429.88	67.15	59.46	59.56	0.10	NA	SHEEN	10	3370.41	
MW-9	08/10/19	3429.88	67.15	59.43	59.52	0.09	NA	SHEEN	10	3370.44	
MW-9	08/15/19	3429.88	67.15	59.39	59.43	0.04	NA	SHEEN	10	3370.48	
MW-9	08/27/19	3429.88	67.15	59.77	59.84	0.07	NA	SHEEN	10	3370.10	
MW-9	09/06/19	3429.88	67.15	59.45	59.48	0.03	NA	SHEEN	10	3370.43	
MW-9	09/13/19	3429.88	67.15	59.40	59.80	0.40	NA	SHEEN	10	3370.42	

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								PSH	H ₂ O		
MW-9	09/20/19	3429.88	67.15	59.48	59.52	0.04	NA	SHEEN	10	3370.39	
MW-9	10/09/19	3429.88	67.15	59.46	59.62	0.16	NA	SHEEN	10	3370.40	
MW-9	10/17/19	3429.88	67.15	59.03	59.08	0.05	NA	SHEEN	10	3370.84	
MW-9	10/24/19	3429.88	67.15	59.45	59.52	0.07	NA	SHEEN	10	3370.42	
MW-9	11/01/19	3429.88	67.15	59.38	59.43	0.05	NA	SHEEN	10	3370.49	
MW-9	11/08/19	3429.88	67.15	59.39	59.44	0.05	NA	SHEEN	10	3370.48	
MW-9	11/15/19	3429.88	67.15	59.32	59.35	0.03	NA	SHEEN	10	3370.56	
MW-9	11/19/19	3429.88	67.15	59.30	59.34	0.04	NA	SHEEN	10	3370.57	
MW-9	11/26/19	3429.88	67.15	59.28	59.33	0.05	NA	SHEEN	10	3370.59	
MW-9	12/04/19	3429.88	67.15	59.30	59.31	0.01	NA	SHEEN	10	3370.58	
MW-9	12/13/19	3429.88	67.15	59.27	59.32	0.05	NA	SHEEN	10	3370.60	
MW-9	12/20/19	3429.88	67.15	59.30	59.36	0.06	NA	SHEEN	10	3370.57	
MW-9	12/27/19	3429.88	67.15	59.27	59.32	0.05	NA	0.25	9.75	3370.60	
								5.5	424.5		
MW-10	01/03/18	3430.65	63.30	59.37	59.40	0.03	NA	SHEEN	10.00	3371.28	
MW-10	01/10/18	3430.65	63.30	59.31	59.41	0.10	NA	SHEEN	10.00	3371.33	
MW-10	01/18/18	3430.65	63.30	59.35	59.36	0.01	NA	1.00	9.00	3371.30	
MW-10	01/26/18	3430.65	63.30	59.27	59.37	0.10	NA	NA	NA	3371.37	
MW-10	02/01/18	3430.65	63.30	Sheen	58.28	Sheen	NA	NA	NA	3372.37	
MW-10	02/14/18	3430.65	63.30	59.29	59.33	0.04	NA	SHEEN	10.00	3371.35	
MW-10	02/21/18	3430.65	63.30	59.30	59.33	0.03	NA	SHEEN	10.00	3371.35	
MW-10	02/28/18	3430.65	63.30	Sheen	59.30	Sheen	NA	NA	NA	3371.35	
MW-10	03/09/18	3430.65	63.30	58.94	59.12	0.18	NA	NA	NA	3371.68	
MW-10	03/15/18	3430.65	63.30	59.35	59.36	0.01	NA	SHEEN	10.00	3371.30	
MW-10	03/22/18	3430.65	63.30	Sheen	59.36	Sheen	NA	NA	NA	3371.29	
MW-10	03/28/18	3430.65	63.30	Sheen	59.40	Sheen	NA	NA	10.00	3371.25	
MW-10	04/03/18	3430.65	63.30	59.39	59.40	0.01	NA	SHEEN	10.00	3371.26	
MW-10	04/10/18	3430.65	63.30	Sheen	59.42	Sheen	NA	NA	10.00	3371.23	
MW-10	04/19/18	3430.65	63.30	Sheen	59.46	Sheen	NA	SHEEN	10.00	3371.19	
MW-10	04/25/18	3430.65	63.30	Sheen	59.52	Sheen	NA	NA	10.00	3371.13	
MW-10	05/10/18	3430.65	63.30	59.45	59.47	0.02	NA	NA	10.00	3371.20	
MW-10	05/15/18	3430.65	63.30	59.46	59.49	0.03	NA	SHEEN	10.00	3371.19	
MW-10	05/23/18	3430.65	63.30	59.47	59.49	0.02	NA	SHEEN	10.00	3371.18	
MW-10	06/07/18	3430.65	63.30	59.50	59.52	0.02	NA	NA	NA	3371.15	Sampled
MW-10	06/13/18	3430.65	63.30	59.51	59.52	0.01	NA	SHEEN	10.00	3371.14	

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								PSH	H ₂ O		
MW-10	06/28/18	3430.65	63.30	59.54	59.55	0.01	NA	NA	NA	3371.11	
MW-10	07/05/18	3430.65	63.30	59.56	59.57	0.01	NA	NA	NA	3371.09	
MW-10	07/12/18	3430.65	63.30	59.58	59.59	0.01	NA	SHEEN	10.00	3371.07	
MW-10	07/20/18	3430.65	63.30	59.60	59.65	0.05	NA	SHEEN	10.00	3371.04	
MW-10	08/01/18	3430.65	63.30	59.56	59.59	0.03	NA	SHEEN	10.00	3371.09	
MW-10	08/21/18	3430.65	63.30	59.59	59.60	0.01	NA	SHEEN	10.00	3371.06	
MW-10	08/30/18	3430.65	63.30	59.60	59.62	0.02	NA	SHEEN	10.00	3371.05	
MW-10	09/12/18	3430.65	63.30	59.61	59.62	0.01	NA	SHEEN	10.00	3371.04	
MW-10	09/26/18	3430.65	63.30	59.60	59.61	0.01	NA	SHEEN	10.00	3371.05	
MW-10	10/04/18	3430.65	63.30	59.60	59.62	0.02	NA	SHEEN	10.00	3371.05	
MW-10	10/10/18	3430.65	63.30	59.58	59.59	0.01	NA	SHEEN	10.00	3371.07	
MW-10	10/17/18	3430.65	63.30	59.42	59.44	0.02	NA	SHEEN	10.00	3371.23	
MW-10	10/24/18	3430.65	63.30	59.36	59.37	0.01	NA	SHEEN	10.00	3371.29	
MW-10	11/01/18	3430.65	63.30	Sheen	59.69	Sheen	NA	NA	NA	3370.96	
MW-10	11/07/18	3430.65	63.30	Sheen	59.80	Sheen	NA	NA	NA	3370.85	
MW-10	11/13/18	3430.65	63.30	Sheen	59.78	Sheen	NA	SHEEN	10.00	3370.87	
MW-10	11/21/18	3430.65	63.30	59.74	59.76	0.02	NA	SHEEN	10.00	3370.91	
MW-10	11/30/18	3430.65	63.30	59.72	59.74	0.02	NA	SHEEN	10.00	3370.93	
MW-10	12/07/18	3430.65	63.30	59.74	59.75	0.01	NA	SHEEN	10.00	3370.91	
MW-10	12/13/18	3430.65	63.30	Sheen	59.70	Sheen	NA	SHEEN	10.00	3370.95	
MW-10	12/19/18	3430.65	63.30	59.66	59.67	0.01	NA	SHEEN	10.00	3370.99	
MW-10	01/03/19	3430.65	63.30	Sheen	59.69	Sheen	NA	SHEEN	10.00	3370.96	
MW-10	01/09/19	3430.65	63.30		59.71		NA	SHEEN	10.00	3370.94	
MW-10	01/18/19	3430.65	63.30	59.74	59.75	0.01	NA	SHEEN	10.00	3370.91	
MW-10	01/23/19	3430.65	63.30	59.73	59.75	0.02	NA	NA	NA	3370.92	
MW-10	01/30/19	3430.65	63.30	Sheen	59.63	Sheen	NA	NA	10.00	3371.02	
MW-10	02/06/19	3430.65	63.30	ND	59.65	ND	NA	NA	NA	3371.00	
MW-10	02/14/19	3430.65	63.30	59.68	59.71	0.03	NA	NA	NA	3370.97	
MW-10	02/22/19	3430.65	63.30	59.74	59.76	0.02	NA	NA	NA	3370.91	
MW-10	02/28/19	3430.65	63.30	59.69	59.70	0.01	NA	SHEEN	10.00	3370.96	
MW-10	03/06/19	3430.65	63.30	Sheen	59.71	Sheen	NA	NA	NA	3370.94	
MW-10	03/12/19	3430.65	63.30	59.68	59.69	0.01	NA	SHEEN	10.00	3370.97	
MW-10	03/22/19	3430.65	63.30	59.69	59.70	0.01	NA	SHEEN	10.00	3370.96	
MW-10	03/28/19	3430.65	63.30	59.70	59.71	0.01	NA	SHEEN	10.00	3370.95	
MW-10	04/03/19	3430.65	63.30	Sheen	59.72	Sheen	NA	NA	NA	3370.93	

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-10	04/11/19	3430.65	63.30	59.76	59.79	0.03	NA	SHEEN	10.00	3370.89	
MW-10	04/16/19	3430.65	63.30	Sheen	59.78	Sheen	NA	NA	NA	3370.87	
MW-10	04/25/19	3430.65	63.30	Sheen	59.79	Sheen	NA	SHEEN	10.00	3370.86	
MW-10	05/01/19	3430.65	63.30	Sheen	59.70	Sheen	NA	NA	NA	3370.95	
MW-10	05/14/19	3430.65	63.30	59.80	59.84	0.04	NA	SHEEN	10.00	3370.84	
MW-10	05/24/19	3430.65	63.30	59.80	59.81	0.01	NA	NA	10.00	3370.85	
MW-10	06/05/19	3430.65	63.30	59.75	59.78	0.03	NA	SHEEN	10.00	3370.90	
MW-10	06/14/19	3430.65	63.30	59.87	59.88	0.01	NA	SHEEN	10.00	3370.78	
MW-10	06/20/19	3430.65	63.30	59.75	59.76	0.01	NA	SHEEN	10.00	3370.90	
MW-10	06/26/19	3430.65	63.30	59.93	59.95	0.02	NA	NA	NA	3370.72	
MW-10	07/03/19	3430.65	63.30	59.93	59.94	0.01	NA	SHEEN	10.00	3370.72	
MW-10	07/11/19	3430.65	63.30	59.96	59.97	0.01	NA	NA	NA	3370.69	
MW-10	07/26/19	3430.65	63.30	60.00	60.02	0.02	NA	NA	10.00	3370.65	
MW-10	08/10/19	3430.65	63.30	60.01	60.02	0.01	NA	NA	10.00	3370.64	
MW-10	08/15/19	3430.65	63.30	59.72	59.76	0.04	NA	NA	10.00	3370.92	
MW-10	08/27/19	3430.65	63.30	60.11	60.18	0.07	NA	NA	10.00	3370.53	
MW-10	09/06/19	3430.65	63.30	59.82	60.04	0.22	NA	NA	10.00	3370.80	
MW-10	09/13/19	3430.65	63.30	59.80	60.05	0.25	NA	NA	10.00	3370.81	
MW-10	09/20/19	3430.65	63.30	60.12	60.30	0.18	NA	0.25	9.75	3370.50	
MW-10	10/09/19	3430.65	63.30	60.12	60.14	0.02	NA	SHEEN	10.00	3370.53	
MW-10	10/17/19	3430.65	63.30	60.10	60.11	0.01	NA	NA	NA	3370.55	
MW-10	10/24/19	3430.65	63.30	60.12	60.14	0.02	NA	NA	NA	3370.53	
MW-10	11/01/19	3430.65	63.30	60.04	60.06	0.02	NA	NA	NA	3370.61	
MW-10	11/08/19	3430.65	63.30	60.01	60.02	0.01	NA	NA	NA	3370.64	
MW-10	11/15/19	3430.65	63.30	60.00	60.02	0.02	NA	SHEEN	10.00	3370.65	
MW-10	11/19/19	3430.65	63.30	59.99	60.02	0.03	NA	NA	NA	3370.66	
MW-10	11/26/19	3430.65	63.30	59.96	59.99	0.03	NA	NA	NA	3370.69	
MW-10	12/04/19	3430.65	63.30	59.97	59.98	0.01	NA	SHEEN	10.00	3370.68	
MW-10	12/13/19	3430.65	63.30	59.95	59.97	0.02	NA	SHEEN	10.00	3370.70	
MW-10	12/20/19	3430.65	63.30	59.87	59.92	0.05	NA	SHEEN	10.00	3370.77	
MW-10	12/27/19	3430.65	63.30	NA	59.96	NA	NA	NA	NA	3370.69	0.04
								0.25	279.75		
MW-11	03/09/18	3430.94		ND	59.60	ND	NA	NA	NA	3371.34	Sampled
MW-11	06/07/18	3430.94		ND	59.80	ND	NA	NA	NA	3371.14	Sampled
MW-11	11/30/18	3430.94		ND	60.04	ND	NA	NA	NA	3370.90	Sampled

TABLE 2
HISTORICAL WELL SURVEY DATA AND GROUNDWATER ELEVATIONS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Total Depth (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (ft)		Corrected Groundwater Elevation (ft)	Comments
								PSH	H ₂ O		
MW-11	02/14/19	3430.94		ND	60.04	ND	NA	NA	NA	3370.90	Sampled
MW-11	05/14/19	3430.94		ND	60.11	ND	NA	NA	NA	3370.83	Sampled
MW-11	08/27/19	3430.94		ND	60.41	ND	NA	NA	NA	3370.53	Sampled
MW-11	11/19/19	3430.94		ND	60.28	ND	NA	NA	NA	3370.66	Sampled
MW-12	03/09/18	3426.47		ND	55.60	ND	NA	NA	NA	3370.87	Sampled
MW-12	06/07/18	3426.47		ND	56.74	ND	NA	NA	NA	3369.73	Sampled
MW-12	11/30/18	3426.47		ND	56.00	ND	NA	NA	NA	3370.47	Sampled
MW-12	02/14/19	3426.47		ND	55.97	ND	NA	NA	NA	3370.50	Sampled
MW-12	05/14/19	3426.47		ND	56.00	ND	NA	NA	NA	3370.47	Sampled
MW-12	08/27/19	3426.47		ND	56.40	ND	NA	NA	NA	3370.07	Sampled
MW-12	11/19/19	3426.47		ND	56.19	ND	NA	NA	NA	3370.28	Sampled
MW 13	03/09/18	3431.13		ND	60.24	ND	NA	NA	NA	3370.89	Sampled
MW 13	06/07/18	3431.13		ND	60.42	ND	NA	NA	NA	3370.71	Sampled
MW 13	11/30/18	3431.13		ND	60.67	ND	NA	NA	NA	3370.46	Sampled
MW 13	02/14/19	3431.13		ND	60.70	ND	NA	NA	NA	3370.43	Sampled
MW 13	05/14/19	3431.13		ND	60.72	ND	NA	NA	NA	3370.41	Sampled
MW 13	08/27/19	3431.13		ND	61.02	ND	NA	NA	NA	3370.11	Sampled
MW 13	11/19/19	3431.13		ND	60.82	ND	NA	NA	NA	3370.31	Sampled

NA: Not applicable
ND: Not detected
NG: Not gauged

25.25 2284.75

TABLE 3
2019 GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Laboratory Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-1R	02/14/19	NS	NS	NS	NS	NS
MW-1R	05/14/19	L1099465-01	0.243	0.0682	0.0625	0.115
MW-1R	08/28/19	NS	NS	NS	NS	NS
MW-1R	11/20/19	NS	NS	NS	NS	NS
MW-2	02/14/19	NS	NS	NS	NS	NS
MW-2	05/14/19	L1099465-02	1.01	0.00271	0.238	0.205
MW-2	08/28/19	NS	NS	NS	NS	NS
MW-2	11/20/19	NS	NS	NS	NS	NS
MW-3	02/14/19	L1071076-01	<0.001	<0.001	<0.001	<0.003
MW-3	05/14/19	L1099465-03	<0.001	<0.001	<0.001	<0.003
MW-3	08/28/19	L1134083-01	0.00464	0.00507	<0.001	<0.003
MW-3	11/20/19	L1163774-01	<0.001	<0.001	<0.001	<0.003
MW-4	02/14/19	NS	NS	NS	NS	NS
MW-4	05/14/19	L1099465-04	0.0101	0.00408	0.0168	0.0170
MW-4	08/28/19	NS	NS	NS	NS	NS
MW-4	11/20/19	NS	NS	NS	NS	NS
MW-5	02/14/19	L1071076-02	<0.001	<0.001	0.0791	0.00391
MW-5	05/14/19	L1099465-05	<0.001	<0.001	0.0459	<0.003
MW-5	08/28/19	L1134083-02	0.00177	<0.001	<0.001	<0.003
MW-5	11/20/19	L1163774-02	<0.001	<0.001	0.00857	<0.003
MW-6	02/14/19	L1071076-03	<0.001	<0.001	<0.001	<0.003
MW-6	05/14/19	L1099465-06	<0.001	0.00183	<0.001	<0.003
MW-6	08/28/19	L1134083-03	<0.001	<0.001	0.00305	<0.003
MW-6	11/20/19	L1163774-03	<0.001	<0.001	<0.001	<0.003
MW 7	02/14/19	L1071076-04	<0.001	<0.001	<0.001	<0.003
MW 7	05/14/19	L1099465-07	<0.001	0.00203	<0.001	<0.003
MW 7	08/28/19	L1134083-04	<0.001	<0.001	<0.001	<0.003
MW 7	11/20/19	L1163774-04	<0.001	<0.001	<0.001	<0.003
MW-8	02/14/19	NS	NS	NS	NS	NS
MW-8	05/14/19	L1099465-08	0.324	0.0494	0.274	0.397
MW-8	08/28/19	NS	NS	NS	NS	NS
MW-8	11/20/19	NS	NS	NS	NS	NS

TABLE 3
2019 GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Laboratory Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-9	02/14/19	NS	NS	NS	NS	NS
MW-9	05/14/19	L1099465-09	0.0513	<0.0200	0.167	0.265
MW-9	08/28/19	NS	NS	NS	NS	NS
MW-9	11/20/19	NS	NS	NS	NS	NS
MW-10	02/14/19	NS	NS	NS	NS	NS
MW-10	05/14/19	L1099465-10	0.0146	0.00177	0.0387	0.0594
MW-10	08/28/19	NS	NS	NS	NS	NS
MW-10	11/20/19	NS	NS	NS	NS	NS
MW 11	02/14/19	L1071076-05	<0.001	<0.001	<0.001	<0.003
MW 11	05/14/19	L1099465-11	<0.001	0.00216	<0.001	<0.003
MW 11	08/28/19	L1134083-05	<0.001	<0.001	<0.001	<0.003
MW 11	11/20/19	L1163774-05	<0.001	<0.001	<0.001	<0.003
MW 12	02/14/19	L1071076-06	<0.001	<0.001	<0.001	<0.003
MW 12	05/14/19	L1099465-12	<0.001	0.00166	<0.001	<0.003
MW 12	08/28/19	L1134083-06	<0.001	<0.001	<0.001	<0.003
MW 12	11/20/19	L1163774-06	<0.001	<0.001	<0.001	<0.003
MW 13	02/14/19	L1071076-07	<0.001	<0.001	<0.001	<0.003
MW 13	05/14/19	L1099465-13	<0.001	<0.001	<0.001	<0.003
MW 13	08/28/19	L1134083-07	<0.001	<0.001	<0.001	<0.003
MW 13	11/20/19	L1163774-07	<0.001	<0.001	<0.001	<0.003

NMOCD: New Mexico Oil Conservation Division

Exceedences of NMOCD Remediation Criteria are shown in **bold**

^a Result is from run #2

^b Laboratory control spike recovery outside control limits, all reportable hits are considered to be an estimated concentration

J: Analyte detected below method detection limit (MDL) but above sample detection limit (SDL)

P: Dual Column results percent difference > 40%

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-1	05/24/12		3.6	1.5	0.8	1.7
MW-1	06/13/13		1.6	0.34	0.55	1.1
MW-1R	06/05/14		0.46	0.0580	0.065	0.051
MW-1R	06/17/15		1.4	0.4800	0.230	0.380
MW-1R	05/19/16	L837132-01	0.366	0.0594	0.0663	0.0553
MW-1R	05/16/17	L910272-01	0.288	0.0676	0.0655	0.121
MW-1R	06/07/18	L1000529-01	0.777	0.104	0.111	0.168
MW-1R	05/14/19	L1099465-01	0.243	0.068	0.063	0.115
MW-2	06/03/11		1.8	0.14	0.22	0.27
MW-2	05/24/12		1.9	0.061	0.41	0.4
MW-2	06/13/13		1.3	0.0400	0.35	0.39
MW-2	06/05/14		1.7	0.0480 J	0.520	0.540
MW-2	06/17/15		1.1	0.0082 J	0.250	0.240
MW-2	05/19/16	L837132-02	0.0311	<0.005	0.0121	0.00644
MW-2	05/16/17	L910272-02	0.731	0.0143	0.194	0.207
MW-2	06/07/18	L1000529-02	1.01	<0.02	0.333	0.349
MW-2	05/14/19	L1099465-02	1.01	0.00271	0.238	0.205
MW-3	06/13/13		0.17	0.0014	<0.001	0.19
MW-3	09/11/13		NS	NS	NS	NS
MW-3	12/13/13		NS	NS	NS	NS
MW-3	03/06/14		NS	NS	NS	NS
MW-3	06/06/14		<0.0010	<0.0050	<0.0010	0.002 J
MW-3	06/17/15		0.004	<0.0050	<0.0010	<0.003
MW-3	05/19/16	L837132-03	<0.001	<0.0050	<0.0010	<0.003
MW-3	05/16/17	L910272-03	0.214	0.000536 J	0.00562	0.00586
MW-3	06/07/18	L1000529-14	0.00946	<0.001	<0.001	<0.003
MW-3	09/12/18	L1025967-01	0.00540	<0.001	<0.001	<0.003
MW-3	11/30/18	L1050021-08	0.00367	<0.001	0.00123	0.00469
MW-3	02/14/19	L1071076-01	<0.001	<0.001	<0.001	<0.003
MW-3	05/14/19	L1099465-03	<0.001	<0.001	<0.001	<0.003
MW-3	08/28/19	L1134083-01	0.00464	0.0051	<0.001	<0.003
MW-3	11/20/19	L1163774-01	<0.001	<0.001	<0.001	<0.003
MW-4	06/03/11		0.59	0.0018	0.26	0.16
MW-4	05/24/12		0.38	<0.0050	0.250	0.076
MW-4	06/13/13		0.22	0.0280	0.098	0.097
MW-4	06/05/14		0.09	0.0370 J	0.077	0.067
MW-4	06/17/15		0.068	0.0140 J	0.058	0.041
MW-4	05/19/16	L837132-04	0.00314	<0.005	0.0229	0.00451
MW-4	05/16/17	L910272-04	0.0367	0.00754	0.0622	0.0554
MW-4	06/07/18	L1000529-04	0.00943	0.00173	0.0256	0.0176
MW-4	05/14/19	L1099465-04	0.0101	0.00408	0.0168	0.0170

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-5	03/01/07		0.1720 ^a	0.0062	0.1380	0.0900
MW-5	06/01/07		0.1210	0.0101	0.1030	0.0608
MW-5	09/06/07		0.0477	0.0113	0.0523	0.0335
MW-5	11/13/07		0.0775	0.0285	0.0906	0.0531
MW-5	02/26/08		0.00097 J	<0.00023	0.0031	<0.00055
MW-5	05/29/08		0.05730	0.0134	0.0804	0.0625
MW-5	08/18/08		0.01010	0.0039	0.0349	0.0194
MW-5	11/20/08		0.0290	0.00670	0.0827	0.0307
MW-5	02/18/09		0.0256	0.00220	0.1090	0.0403
MW-5	05/20/09		0.0131	0.00150	0.0589	0.02430 ^b
MW-5	08/27/09		0.0073	<0.000188	0.0452	0.01360
MW-5	11/17/09		0.00600	0.000500 J	0.0408	0.0157
MW-5	02/11/10		0.00770	<0.000208	0.0596	0.0225
MW-5	05/12/10		0.013	0.001700	0.0880	0.0420
MW-5	08/26/10		0.0026	<0.00020	0.0340	0.011
MW-5	11/18/10		0.0043	<0.0002	0.0570	0.021
MW-5	02/24/11		0.002	<0.0010	0.0370	0.015
MW-5	06/03/11		0.0011	<0.0010	0.0071	0.022
MW-5	08/29/11		0.0019	0.0036 P	0.068	0.029
MW-5	11/29/11		<0.0010	0.0023	0.074	0.028
MW-5	02/23/12		0.0014	0.0046	0.076	0.038
MW-5	05/24/12		0.0026	0.0032	0.140	0.065
MW-5	09/12/12		0.0013	0.0025	0.097	0.043
MW-5	11/19/12		0.0011	<0.001	0.056	0.014
MW-5	02/28/13		0.0004 J	0.0028 J	0.076	0.032
MW-5	06/13/13		<0.001	<0.005	0.024	0.0063
MW-5	09/11/13		0.00043 J	0.00088 J	0.084	0.026
MW-5	12/13/13		0.0013	<0.005	0.032	0.0064
MW-5	03/06/14		<0.0010	0.0013 J	0.083	0.0240
MW-5	06/05/14		<0.0010	<0.0050	0.012	0.0026 J
MW-5	09/18/14		<0.0010	<0.0050	<0.0010	<0.0030
MW-5	11/18/14		<0.0010	<0.0050	0.14	0.0280
MW-5	02/24/15		<0.0010	<0.0050	0.07 J6	0.0130
MW-5	06/17/15		<0.0010	<0.0050	0.014	0.0021 J
MW-5	08/28/15		0.000379 J	<0.0050	0.259	0.0499
MW-5	11/18/15		<0.001	<0.0050	0.0476	0.00753
MW-5	03/09/16	L822592-01	<0.001	<0.005	0.0107	0.00165 J
MW-5	05/19/16	L837132-05	<0.001	<0.005	0.223	0.0253
MW-5	09/21/16	L861612-01	<0.001	<0.005	0.0307	0.00359
MW-5	12/15/16	L879655-01	<0.001	<0.005	0.0223	0.00339
MW-5	03/02/17	L893635-01	<0.001	<0.001	0.0608	0.00809
MW-5	05/16/17	L910272-05	<0.001	<0.001	0.0292	0.00299 J
MW-5	09/12/17	L936462-01	<0.001	<0.001	0.0266	<0.003

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-5	11/29/17	L954391-01	<0.001	<0.001	0.0468	0.0033
MW-5	03/09/18	L976575-01	<0.001	<0.001	0.0215	0.00809
MW-5	06/07/18	L1000529-05	<0.001	<0.001	0.0496	0.00321
MW-5	09/12/18	L1025967-02	<0.001	<0.001	0.0410	<0.003
MW-5	11/30/18	L1050021-01	<0.001	<0.001	<0.001	<0.003
MW-5	02/14/19	L1071076-02	<0.001	<0.001	0.0791	0.00391
MW-5	05/14/19	L1099465-05	<0.001	<0.001	0.0459	<0.003
MW-5	08/28/19	L1134083-02	0.00177	<0.001	<0.001	<0.003
MW-5	11/20/19	L1163774-02	<0.001	<0.001	0.00857	<0.003
MW-6	03/01/07		<0.00035	<0.00020	<0.00033	<0.00036
MW-6	06/01/07		<0.00021	<0.00023	<0.00035	<0.00055
MW-6	09/06/07		<0.00021	<0.00023	<0.00035	<0.00055
MW-6	11/13/07		<0.0005	<0.0005	<0.0005	<0.001
MW-6	02/26/08		<0.00021	<0.00023	<0.00035	<0.00055
MW-6	05/29/08		<0.00021	<0.00023	<0.00035	<0.00055
MW-6	08/18/08		<0.0005	<0.0005	<0.0005	<0.001
MW-6	11/20/08		<0.00100	<0.00100	<0.00100	<0.00100
MW-6	02/18/09		<0.00100	<0.00100	0.0019	<0.00100
MW-6	05/20/09		<0.000149	<0.000188	<0.000178	<0.000163
MW-6	08/27/09		<0.000149	<0.000188	<0.000178	<0.000163
MW-6	11/17/09		<0.000133	<0.000281	<0.000535	<0.000960
MW-6	02/11/10		<0.000208	<0.000208	<0.000303	<0.000326
MW-6	05/12/10		<0.00020	<0.00020	0.00039 J	<0.00070
MW-6	08/26/10		<0.00020	<0.00020	<0.00020	<0.00070
MW-6	11/18/10		<0.00020	<0.00020	<0.00020	<0.00070
MW-6	02/24/11		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	06/03/11		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	08/29/11		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	11/29/11		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	02/23/12		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	05/24/12		<0.0010	<0.0010	<0.0010	<0.0030
MW-6	09/12/12		0.00056 J	<0.0010	<0.0010	<0.0030
MW-6	11/19/12		<0.001	<0.0010	<0.0010	<0.0030
MW-6	02/28/13		<0.001	<0.005	<0.0010	<0.0030
MW-6	06/13/13		<0.001	<0.005	<0.0010	<0.0030
MW-6	09/11/13		<0.001	<0.005	0.00046 J	<0.0030
MW-6	12/13/13		<0.001	<0.005	<0.0010	<0.0030
MW-6	03/06/14		<0.001	<0.005	0.0005 J	<0.0030
MW-6	06/05/14		<0.001	<0.005	<0.0005	<0.0030
MW-6	09/18/14		<0.001	<0.005	<0.0005	<0.0030
MW-6	11/18/14		<0.001	<0.005	0.0006 J	<0.0030
MW-6	02/24/15		<0.001	<0.005	<0.005	<0.0030
MW-6	06/17/15		<0.001	<0.005	<0.005	<0.0030

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-6	08/28/15		<0.001	<0.005	<0.001	<0.003
MW-6	11/18/15		<0.001	<0.005	<0.001	<0.003
MW-6	03/09/16	L822592-02	<0.001	<0.005	<0.001	<0.0030
MW-6	05/19/16	L837132-06	<0.001	<0.005	<0.001	<0.0030
MW-6	09/21/16	L861612-02	<0.001	<0.005	<0.001	<0.0030
MW-6	12/15/16	L879655-02	<0.001	<0.005	<0.001	<0.0030
MW-6	03/02/17	L893635-02	<0.001	<0.001	<0.001	<0.003
MW-6	05/15/17	L910272-06	<0.001	<0.001	<0.001	<0.003
MW-6	09/12/17	L936462-02	<0.001	<0.001	<0.001	<0.003
MW-6	11/29/17	L954391-02	<0.001	<0.001	<0.001	<0.003
MW-6	03/09/18	L976575-02	<0.001	<0.001	<0.001	<0.003
MW-6	06/07/18	L1000529-06	<0.001	<0.001	<0.001	<0.003
MW-6	09/12/18	L1025967-03	<0.001	<0.001	<0.001	<0.003
MW-6	11/30/18	L1050021-02	<0.001	<0.001	<0.001	<0.003
MW-6	02/14/19	L1071076-03	<0.001	<0.001	<0.001	<0.003
MW-6	05/14/19	L1099465-06	<0.001	0.00183	<0.001	<0.003
MW-6	08/28/19	L1134083-03	<0.001	<0.001	0.00305	<0.003
MW-6	11/20/19	L1163774-03	<0.001	<0.001	<0.001	<0.003
MW 7	03/01/07		<0.00035	<0.00020	<0.00033	<0.00036
MW 7	06/01/07		<0.00021	<0.00023	<0.00035	<0.00055
MW 7	09/06/07		<0.00021	<0.00023	<0.00035	<0.00055
MW 7	11/13/07		<0.0005	<0.0005	<0.0005	<0.001
MW 7	02/26/08		<0.00021	<0.00023	<0.00035	<0.00055
MW 7	05/29/08		<0.00021	<0.00023	<0.00035	<0.00055
MW 7	08/18/08		<0.0005	<0.0005	<0.0005	<0.001
MW 7	11/20/08		<0.00100	<0.00100	<0.00100	<0.00100
MW 7	02/18/09		<0.00100	<0.00100	<0.00100	<0.00100
MW 7	05/20/09		<0.000149	<0.000188	<0.000178	<0.000163
MW 7	08/27/09		0.0008 J	<0.000188	<0.000178	0.0014
MW 7	11/17/09		0.0031	<0.000281	<0.000535	0.0039
MW 7	02/11/10		0.0026	<0.000208	<0.000303	0.0030
MW 7	05/12/10		0.0030	<0.00020	<0.00020	0.0025 J
MW 7	08/26/10		0.0052	<0.00020	<0.00020	0.0033
MW 7	11/18/10		0.0020	<0.00020	<0.00020	<0.0007
MW 7	02/24/11		0.0032	<0.0010	<0.0010	<0.0030
MW 7	06/03/11		0.0014	<0.0010	<0.0010	<0.0030
MW 7	08/29/11		0.0090	<0.0010	<0.0010	<0.0030
MW 7	11/29/11		0.0110	<0.0010	<0.0010	<0.0030
MW 7	02/23/12		0.0070	<0.0010	<0.0010	<0.0030
MW 7	05/24/12		0.014	<0.0010	<0.0010	<0.0030
MW 7	09/12/12		0.018	<0.0010	<0.0010	<0.0030
MW 7	11/19/12		<0.001	<0.0010	<0.0010	<0.0030
MW 7	02/28/13		NS	NS	NS	NS

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW 7	06/13/13		0.0027	<0.0010	<0.0010	<0.0030
MW 7	09/11/13		0.0046	<0.005	<0.0010	<0.0030
MW 7	12/13/13		<0.001	<0.005	<0.0010	<0.0030
MW 7	03/06/14		0.0025	<0.005	<0.0010	<0.0030
MW 7	06/05/14		0.0050	<0.005	<0.0010	<0.0030
MW 7	09/18/14		<0.001	<0.005	<0.0010	<0.0030
MW 7	11/18/14		0.0070	<0.005	0.0004 J	<0.0030
MW 7	02/24/15		<0.001	<0.005	<0.001	<0.0030
MW 7	06/17/15		<0.001	<0.005	<0.001	<0.0030
MW 7	08/28/15		<0.001	<0.005	<0.001	<0.0030
MW 7	11/18/15		<0.001	<0.005	<0.001	<0.0030
MW 7	03/09/16	L822592-03	<0.001	<0.005	<0.0010	<0.0030
MW 7	05/19/16	L837132-07	<0.001	<0.005	<0.0010	<0.0030
MW 7	09/21/16	L861612-03	<0.001	<0.005	<0.0010	<0.0030
MW 7	12/15/16	L879655-03	<0.001	<0.005	<0.0010	<0.0030
MW 7	03/02/17	L893635-03	0.000737 J	<0.001	<0.001	<0.003
MW 7	05/15/17	L910272-07	<0.001	<0.001	<0.001	<0.003
MW 7	09/12/17	L936462-03	<0.001	<0.001	<0.001	<0.003
MW 7	11/29/17	L954391-03	<0.001	<0.001	<0.001	<0.003
MW 7	03/09/18	L976575-03	<0.001	<0.001	<0.001	<0.003
MW 7	06/07/18	L1000529-07	<0.001	<0.001	<0.001	<0.003
MW 7	09/12/18	L1025967-04	<0.001	<0.001	<0.001	<0.003
MW 7	11/30/18	L1050021-03	<0.001	<0.001	<0.001	<0.003
MW 7	02/14/19	L1071076-04	<0.001	<0.001	<0.001	<0.003
MW 7	05/14/19	L1099465-07	<0.001	0.00203	<0.001	<0.003
MW 7	08/28/19	L1134083-04	<0.001	<0.001	<0.001	<0.003
MW 7	11/20/19	L1163774-04	<0.001	<0.001	<0.001	<0.003
MW-8	06/03/11		3.9	0.014 P	0.49	0.59
MW-8	05/24/12		3.7	<0.05	0.49	0.39
MW-8	06/13/13		1.3	0.41	0.56	1.1
MW-8	06/05/14		1.9	0.4200	0.670	1.400
MW-8	06/17/15		2	0.1700	0.630	0.780
MW-8	05/19/16	L837132-08	0.926	0.0277 J	0.371	0.331
MW-8	05/16/17	L910272-08	0.384	0.0380	0.376	0.458
MW-8	06/07/18	L1000529-08	0.396	0.0745	0.486	0.652
MW-8	11/30/18	L1050021-04	0.456	0.1230	0.546	0.810
MW-8	05/14/19	L1099465-08	0.324	0.0494	0.274	0.397
MW-9	06/03/11		1.2	0.53	0.27	0.51
MW-9	05/24/12		6.0	3.0	1.1	2.2
MW-9	06/13/13		3.0	0.25	0.32	0.54
MW-9	06/05/14		0.14	0.0640	0.017	0.061
MW-9	06/17/15		0.87	0.2900	0.180	0.340

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW-9	05/19/16	L837132-09	0.206	0.0986 J	0.05	0.104
MW-9	05/16/17	L910272-09	0.758	0.330	0.151	0.294
MW-9	06/07/18	L1000529-09	0.372	0.0992	0.115	0.211
MW-9	05/14/19	L1099465-09	0.0513	<0.02	0.167	0.265
MW-10	06/03/11		0.54	0.11	0.1	0.15
MW-10	05/24/12		0.28	0.0083	0.059	0.057
MW-10	06/13/13		0.63	<0.005	0.067	0.097
MW-10	06/05/14		0.14	0.0240 J	0.056	0.065
MW-10	06/17/15		0.19	0.0220 J	0.096	0.150
MW-10	05/19/16	L837132-10	0.0192	0.000840 J	0.00465	0.00301
MW-10	05/16/17	L910272-10	0.0635	0.00628	0.0643	0.0737
MW-10	06/07/18	L1000529-10	0.0144	<0.001	0.0270	0.0556
MW-10	05/14/19	L1099465-10	0.0146	0.00177	0.0387	0.0594
MW 11	11/13/07		<0.0005	<0.0005	<0.0005	<0.001
MW 11	02/26/08		<0.00021	<0.00023	<0.00035	<0.00055
MW 11	05/29/08		<0.00021	0.0003 J	<0.00035	<0.00055
MW 11	08/18/08		<0.0005	<0.0005	<0.0005	<0.001
MW 11	11/20/08		<0.00100	<0.00100	<0.00100	<0.00100
MW 11	02/18/09		<0.00100	<0.00100	<0.00100	<0.00100
MW 11	05/20/09		<0.000149	<0.000188	<0.000178	<0.000163
MW 11	08/27/09		<0.000149	<0.000188	<0.000178	<0.000163
MW 11	11/17/09		<0.000133	<0.000281	<0.000535	<0.000960
MW 11	02/11/10		<0.000208	<0.000208	<0.000303	<0.000326
MW 11	05/12/10		0.00027 J	<0.00020	<0.00020	<0.00070
MW 11	08/26/10		<0.00020	<0.00020	<0.00020	<0.00070
MW 11	11/18/10		<0.00020	<0.00020	<0.00020	<0.00070
MW 11	02/24/11		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	06/03/11		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	08/29/11		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	11/29/11		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	02/23/12		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	05/24/12		<0.0010	<0.0010	<0.0010	<0.0030
MW 11	09/12/12		0.0015	<0.0010	<0.0010	<0.0030
MW 11	11/19/12		<0.001	<0.0010	<0.0010	<0.0030
MW 11	02/28/13		<0.001	<0.005	<0.0010	<0.0030
MW 11	06/13/13		<0.001	<0.005	<0.0010	<0.0030
MW 11	09/11/13		<0.001	<0.005	<0.0010	<0.0030
MW 11	12/13/13		<0.001	<0.005	<0.0010	<0.0030
MW 11	03/06/14		<0.001	<0.005	<0.0010	<0.0030
MW 11	06/05/14		<0.001	<0.005	<0.0010	<0.0030
MW 11	09/18/14		<0.001	<0.005	<0.0010	<0.0030
MW 11	11/18/14		<0.001	<0.005	<0.0010	<0.0030

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW 11	02/24/15		<0.001	<0.005	<0.0010	<0.0030
MW 11	06/17/15		<0.001	<0.005	<0.0010	<0.0030
MW 11	08/28/15		<0.001	<0.005	<0.0010	<0.0030
MW 11	11/18/15		<0.001	<0.005	<0.0010	<0.0030
MW 11	03/09/16	L822592-04	<0.001	<0.005	<0.0010	<0.0030
MW 11	05/19/16	L837132-11	<0.001	<0.005	<0.0010	<0.0030
MW 11	09/21/16	L861612-04	<0.001	<0.005	0.000595 J	<0.0030
MW 11	12/15/16	L879655-04	<0.001	<0.005	<0.0010	<0.0030
MW 11	03/02/17	L893635-04	<0.001	<0.001	<0.001	<0.003
MW 11	05/15/17	L910272-11	<0.001	<0.001	<0.001	<0.003
MW 11	09/12/17	L936462-04	<0.001	<0.001	<0.001	<0.003
MW 11	11/29/17	L954391-04	<0.001	<0.001	<0.001	<0.003
MW 11	03/09/18	L976575-04	<0.001	<0.001	<0.001	<0.003
MW 11	06/07/18	L1000529-11	<0.001	<0.001	<0.001	<0.003
MW 11	09/12/18	L1025967-05	<0.001	<0.001	<0.001	<0.003
MW 11	11/30/18	L1050021-05	<0.001	<0.001	<0.001	<0.003
MW 11	02/14/19	L1071076-05	<0.001	<0.001	<0.001	<0.003
MW 11	05/14/19	L1099465-11	<0.001	0.00216	<0.001	<0.003
MW 11	08/28/19	L1134083-05	<0.001	<0.001	<0.001	<0.003
MW 11	11/20/19	L1163774-05	<0.001	<0.001	<0.001	<0.003
MW 12	03/01/07		<0.00035	<0.00020	<0.00033	<0.00036
MW 12	06/01/07		<0.00021	<0.00023	<0.00035	<0.00055
MW 12	09/06/07		<0.00021	<0.00023	<0.00035	<0.00055
MW 12	11/13/07		<0.0005	<0.0005	<0.0005	<0.001
MW 12	02/26/08		<0.00021	<0.00023	<0.00035	<0.00055
MW 12	05/29/08		<0.00021	<0.00023	<0.00035	<0.00055
MW 12	08/18/08		<0.0005	<0.0005	<0.0005	<0.001
MW 12	11/20/08		<0.00100	<0.00100	<0.00100	<0.00100
MW 12	02/18/09		<0.00100	<0.00100	<0.00100	<0.00100
MW 12	05/20/09		0.0171	<0.000188	<0.000178	0.0019
MW 12	08/27/09		0.0281	<0.00094	<0.00089	<0.000815
MW 12	11/17/09		0.0359	<0.000281	<0.000535	<0.000960
MW 12	02/11/10		<0.000208	<0.000208	<0.000303	<0.000326
MW 12	05/12/10		0.48	<0.00020	<0.00020	<0.00070
MW 12	08/26/10		0.23	<0.00020	<0.00020	<0.00070
MW 12	11/18/10		0.17	<0.00020	<0.00020	0.0060
MW 12	02/24/11		0.88	<0.0010	<0.0010	0.039
MW 12	06/03/11		0.20	<0.0010	<0.0010	0.013
MW 12	08/29/11		0.25	<0.0010	<0.0010	0.033
MW 12	11/29/11		0.36	<0.0010	<0.0010	0.021
MW 12	02/23/12		0.32	<0.0050	<0.0050	0.025
MW 12	05/24/12		0.32	<0.0050	<0.0050	0.030
MW 12	09/12/12		0.25	<0.0010	<0.0010	0.023

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW 12	11/19/12		0.0022	<0.0010	<0.0010	<0.0030
MW 12	02/28/13		0.0029	<0.005	0.0006 J	<0.003
MW 12	06/13/13		0.0069	<0.005	<0.0010	<0.0030
MW 12	09/11/13		0.0031	<0.005	<0.0010	<0.0030
MW 12	12/13/13		0.0022	<0.005	<0.0010	<0.0030
MW 12	03/06/14		0.0015	<0.005	<0.0010	<0.0030
MW 12	06/05/14		0.0013	<0.005	<0.0010	<0.0030
MW 12	09/18/14		0.00051 J	<0.005	<0.0010	<0.0030
MW 12	11/18/14		0.0012	<0.005	<0.0010	<0.0030
MW 12	02/24/15		0.00036 J	<0.005	<0.0010	<0.0030
MW 12	06/17/15		0.0011	<0.005	<0.0010	<0.0030
MW 12	08/28/15		<0.001	<0.005	<0.0010	<0.0030
MW 12	11/18/15		0.00555	<0.005	<0.0010	<0.0030
MW 12	03/09/16	L822592-05	0.000683 J	<0.005	<0.001	<0.0030
MW 12	05/19/16	L837132-12	<0.001	<0.005	<0.001	<0.0030
MW 12	09/21/16	L861612-05	0.000632 J	<0.005	<0.001	<0.0030
MW 12	12/15/16	L879655-05	<0.001	<0.005	<0.001	<0.0030
MW 12	03/02/17	L893635-05	<0.001	<0.001	<0.001	<0.003
MW 12	05/15/17	L910272-12	<0.001	<0.001	<0.001	<0.003
MW 12	09/12/17	L936462-05	<0.001	<0.001	<0.001	<0.003
MW 12	11/29/17	L954391-05	<0.001	<0.001	<0.001	<0.003
MW 12	03/09/18	L976575-05	<0.001	<0.001	<0.001	<0.003
MW 12	06/07/18	L1000529-12	<0.001	<0.001	<0.001	<0.003
MW 12	09/12/18	L1025967-06	<0.001	<0.001	<0.001	<0.003
MW 12	11/30/18	L1050021-06	<0.001	<0.001	<0.001	<0.003
MW 12	02/14/19	L1071076-06	<0.001	<0.001	<0.001	<0.003
MW 12	05/14/19	L1099465-12	<0.001	0.00166	<0.001	<0.003
MW 12	08/28/19	L1134083-06	<0.001	<0.001	<0.001	<0.003
MW 12	11/20/19	L1163774-06	<0.001	<0.001	<0.001	<0.003
MW 13	11/20/08		1.51	<0.0100	<0.0100	0.126
MW 13	02/18/09		0.923	<0.00100	<0.00100	0.0456
MW 13	05/20/09		1.56	<0.00562	<0.0107	0.1190
MW 13	08/27/09		2.73	<0.0166	<0.0115	0.1770
MW 13	11/17/09		2.52	<0.00664	<0.00460	0.112
MW 13	02/11/10		2.60	<0.00400	<0.00430	0.099
MW 13	05/12/10		2.00	0.00066 J	0.0010	0.075
MW 13	08/26/10		0.96	<0.00020	<0.00020	0.069
MW 13	11/18/10		1.10	<0.00020	<0.00020	0.0440
MW 13	02/24/11		0.72	<0.0010	<0.0010	0.045
MW 13	06/03/11		0.32	<0.0010	<0.0010	0.020
MW 13	08/29/11		0.11	<0.0010	<0.0010	0.0086 P
MW 13	11/29/11		0.25	<0.0010	<0.0010	0.005

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Well Number	Sample Date	Lab Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.010	0.750	0.750	0.620
MW 13	02/23/12		0.66	<0.0050	<0.0050	<0.015
MW 13	05/24/12		0.81	<0.0050	<0.0050	<0.015
MW 13	09/12/12		0.63	<0.0050	<0.0050	0.036 J
MW 13	11/19/12		0.10	<0.0010	<0.0010	<0.0030
MW 13	02/28/13		0.20	<0.005	0.00039 J	0.0014 J
MW 13	06/13/13		0.41	<0.005	0.00055 J	0.0079
MW 13	09/11/13		0.052	<0.005	<0.0010	<0.0030
MW 13	12/13/13		0.00093 J	<0.005	<0.0010	<0.0030
MW 13	03/06/14		0.0034	<0.005	<0.0010	<0.0030
MW 13	06/05/14		0.001	<0.005	<0.0010	<0.0030
MW 13	09/18/14		0.00084 J	<0.005	<0.0010	<0.0030
MW 13	11/18/14		<0.001	<0.005	<0.0010	<0.0030
MW 13	02/24/15		<0.001	<0.005	<0.0010	<0.0030
MW 13	06/17/15		<0.001	<0.005	<0.0010	<0.0030
MW 13	08/28/15		<0.001	<0.005	<0.0010	<0.0030
MW 13	11/18/15		0.000412 J	<0.005	<0.0010	<0.0030
MW 13	03/09/16	L822592-06	0.000555 J	<0.005	<0.001	<0.0030
MW 13	05/19/16	L837132-13	<0.001	<0.005	<0.001	<0.0030
MW 13	09/21/16	L861612-06	0.000367 J	<0.005	<0.001	<0.0030
MW 13	12/15/16	L879655-06	<0.001	<0.005	<0.001	<0.0030
MW 13	03/02/17	L893635-06	0.000603 J	<0.001	<0.001	<0.0030
MW 13	05/16/17	L910272-13	<0.001	<0.001	0.000540 J	<0.003
MW 13	09/12/17	L936462-06	<0.001	<0.001	<0.001	<0.003
MW 13	11/29/17	L954391-06	<0.001	<0.001	<0.001	<0.003
MW 13	03/09/18	L976575-06	<0.001	<0.001	<0.001	<0.003
MW 13	06/07/18	L1000529-13	<0.001	<0.001	<0.001	<0.003
MW 13	09/12/18	L1025967-07	<0.001	<0.001	<0.001	<0.003
MW 13	11/30/18	L1050021-07	<0.001	<0.001	<0.001	<0.003
MW 13	02/14/19	L1071076-07	<0.001	<0.001	<0.001	<0.003
MW 13	05/14/19	L1099465-13	<0.001	<0.001	<0.001	<0.003
MW 13	08/28/19	L1134083-07	<0.001	<0.001	<0.001	<0.003
MW 13	11/20/19	L1163774-07	<0.001	<0.001	<0.001	<0.003

NMOCD: New Mexico Oil Conservation Division

Exceedences of NMOCD Remediation Criteria are shown in **bold**

^a Result is from run #2

^b Laboratory control spike recovery outside control limits, all reportable hits are considered to be an estimated concentration

J: Analyte detected below method detection limit (MDL) but above sample detection limit (SDL)

P: Dual Column results percent difference > 40%

Table 5
PAH GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Monitoring Well	Sample Date	Lab ID	Napthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)-anthracene	Chrysene	Benzo (b)-fluoranthene	Benzo (k) fluoranthene	benzo(a) pyrene	Indeno(1,2,3-cd)pyrene	Dibenzofuran	Dibenz(a,h)-anthracene	Benzo(g,h,i)=perylene	1-Methylnaphthalene	2-Methylnaphthalene	Total Methylnaphthalene	TPH-GRO (C6-C10)	TPH (C10-C28)	TPH (C28-C35)
NMOCD Target Level 30 ug/L			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Other regulatory limits (Tap Water) *					365	243	1100	1830	1460	183	0.91	29.1	0.91	9.1	0.7**	0.91		0.091				***			
MW-1	5/24/2012	12051184-01	737	22.9	22.1	59.6	197	22.1	6.81	2.25	<1.90	25	<1.90	<1.90	<1.90	<1.90		<1.90	<1.90						
MW-1	6/13/2013	L641641-01	82	1.2	3.6	6.4	14	1.9	0.43	1.2	0.14	0.36	<0.050	<0.050	<0.050	<0.050	8.7	<0.050	<0.050	90	92				
MW-1	6/5/2014	L703462-01	6.6	0.071	1.8	0.51	0.63	<0.050	<0.050	0.000018	<0.050	0.000013	<0.050	<0.050	<0.050	<0.050	0.0009	<0.050	<0.050	0.01	0.0073	0.0173			
MW-1R	6/17/2015	L772306-01	46	0.14	0.26	0.86	1	0.1	<0.050	0.052	0.051	0.024 J	0.01 J	<0.050	0.013 J	<0.050	0.0014	<0.050	<0.050	0.015	0.014	0.029			
MW-1R	5/19/2016	L837132-01	3.41	0.0486 J	0.0834	0.266	0.275	0.0167 J	<0.050	<0.050	0.0101 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.517	<0.050	<0.050	3.24	1.97	5.21			
MW-1R	5/16/2017	L910272-01	14.4	0.181	0.229	1.2	2.01	0.17	<0.050	0.0525	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.76	<0.050	0.00909 BJ	18.9	18	36.9			
MW-1R	6/7/2018	L1000529-01	21.5	<0.050	0.377	0.941	1.27	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.167	<0.050	<0.050	19.9	17.9	37.8			
MW-1R	5/14/2019	L1099465-01	5.55	<0.050	0.148	0.523	0.427	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.777	<0.050	<0.050	4.82	4.14	8.96			
MW-2	5/24/2012	12051184-02	59.4	0.471	0.555	2.23	4.64	<0.0959	<0.0959	<0.0959	<0.0959	0.567	<0.0959	<0.0959	<0.0959	<0.0959		<0.0959	<0.0959						
MW-2	6/13/2013	L641641-02	51	0.9	1.8	4.2	6.9	1.8	0.24	1	<0.050	0.28	<0.050	<0.050	<0.050	<0.050	6.3	<0.050	<0.050	48	42				
MW-2	6/5/2014	L703462-02	48	0.42	1.1	2.6	4	0.15	<0.050	0.34	<0.050	0.21	<0.050	<0.050	0.15	<0.050	4.4	<0.050	0.000038	0.044	0.043	0.087			
MW-2	6/17/2015	L772306-02	25	0.22	0.46	1.1	1	<0.1	<0.1	<0.1	0.068 J	0.028 J	<0.1	<0.1	<0.1	<0.1	2.2	<0.1	<0.0001	0.024	0.021	0.045			
MW-2	5/19/2016	L837132-02	1.26	0.0958	0.191	0.59	0.127	0.116	<0.050	0.0653	<0.050	0.0276 J	0.00714 BJ	<0.050	<0.050	<0.050	0.951	<0.050	<0.050	1.06	0.742	1.802			
MW-2	5/16/2017	L910272-02	27.2	0.213	0.283	1.5	1.83	0.224	<0.050	0.0662	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	2.35	<0.050	0.012 BJ	22.6	20	42.6			
MW-2	6/7/2018	L1000529-02	40.2	0.271	0.716	0.154	2.44	<0.050	<0.050	0.211	<0.050	0.0999	<0.050	<0.050	0.0702	<0.050	2.74	<0.050	<0.050	35.5	30.2	65.7			
MW-2	5/14/2019	L1099465-02	36.5	<0.050	0.38	1.06	0.961	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.98	<0.050	<0.050	27	21.8	48.8			
MW-3	6/13/2013	L641641-03	19	0.27	0.51	1.3	0.72	0.48	0.043	0.28	0.021	0.13	0.03	0.025	0.14	<0.50	2	<0.50	0.024	11	9.7				
MW-3	6/6/2014	L703462-03	1.9	0.31	0.59	1.5	1.2	0.51	<0.050	<0.050	<0.050	0.13	<0.050	<0.050	0.12	<0.050	2.2	<0.050	0.029	7.8	2	9.8			
MW-3	6/17/2015	L772306-03	0.45 J	<0.1	<0.1	0.03 J	<0.1	<0.1	<0.1	0.026 J	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.054 J	<0.1	<0.1	<0.050	<0.050	<0.050			
MW-3	5/19/2016	L837132-03	0.163 BJ	0.0325 J	0.105	0.335	0.019 J	0.0445 J	<0.050	0.016 J	0.0179 J	<0.050	0.00323 BJ	<0.050	<0.050	<0.050	0.738	<0.050	<0.050	<0.250	<0.250	<0.250			
MW-3	5/16/2017	L910272-03	3.88	0.0555	0.11	0.491	0.236	0.0238 J	<0.050	0.0249 J	<0.050	<0.050	0.0052 BJ	<0.050	<0.050	<0.050	0.836	<0.050	<0.050	4.45	2.88	7.33			
MW-3	6/7/2018	L1000529-14	<0.25	<0.050	0.0557	0.194	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.315	<0.050	<0.050	<0.250	<0.250	<0.250			
MW-3	5/14/2019	L1099465-03	<0.25	<0.050	<0.050	0.144	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.45	<0.050	<0.050	<0.250	<0.250	<0.250			
MW-4	5/24/2012	12051184-03	150	1.54	1.54	6.67	19.6	<0.0962	<0.0962	<0.0962	<0.0962	2.38	<0.0962	<0.0962	<0.0962	<0.0962		<0.0962	<0.0962						
MW-4	6/13/2013	L641641-04	150	3	7.8	15	25	4.9	0.63	3	0.41	1.2	0.93	0.36	0.34	<0.50	20	0.21	0.36	200	180	380			
MW-4	6/5/2014	L703462-04	0.11	1.5	4.6	9.4	15	<0.050	<0.050	1.7	0.13	1.3	<0.050	<0.050	0.7	0.1	13	0.13	0.24	17	13	30			
MW-4	6/17/2015	L772306-04	0.046	0.3	0.64	1.8	2	<0.050	<0.050	0.098	0.11	0.08	<0.050	<0.050	<0.050	<0.050	3	<0.050	<0.050	4.6	27	31.6			
MW-4	5/19/2016	L837132-04	46.7	0.475	1.3	2.99	3.23	0.647	<0.250	0.366	0.0309 J	0.174 J	0.0505 BJ	<0.250	<0.250	<0.250	4.22	<0.250	0.0399 J	54.5	37.2	91.7			
MW-4	5/16/2017	L910272-04	59.4	0.558	0.837	4.39	5.66	<0.050	0.107	0.244	<0.050	0.366	<0.050	<0.050	<0.050	<0.050	5.42	<0.050	0						

Table 5
PAH GROUNDWATER ANALYTICAL RESULTS
Plains Marketing, L.P.
Hugh Gathering
SRS #2002-10235
Lea County, New Mexico

Monitoring Well	Sample Date	Lab ID	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)-anthracene	Chrysene	Benzo (b)-fluoranthene	Benzo (k) fluoranthene	benzo(a) pyrene	Indeno(1,2,3-cd)pyrene	Dibenzofuran	Dibenz(a,h)-anthracene	Benzo(g,h,i)=perylene	1-Methylnaphthalene	2-Methylnaphthalene	Total Methylnaphthalene	TPH-GRO (C6-C10)	TPH (C10-C28)	TPH (C28-C35)
NMOCD Target Level 30 ug/L			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Other regulatory limits (Tap Water) *					365	243	1100	1830	1460	183	0.91	29.1	0.91	9.1	0.7**	0.91		0.091				***			
MW-10	3/2/2006	NA	Not Sampled due to PSH																						
MW-10	6/1/2007	NA	Not Sampled due to PSH																						
MW-10	5/25/2008	T22388-10	5.3	<1.6	<1.5	<2.1	1.9 J	<1.8	<1.6	<1.1	<1.4	<1.3	<1.5	<1.6	<1.6	<2.4		<1.3	<2.5		6.2	6.2	2.17	7.62	
MW-10	5/27/2009	9060112	7.63	<0.0710	<0.131	<0.0527	1.51	<0.0811	<0.0883	<0.0460	<0.0304	<0.0914	<0.0633	<0.0768	<0.0508	<0.0805	1.14	<0.0560	<0.0631	8.49	7.67	16.16	2.12	<0.876	
MW-10	5/12/2010	1005465-10	0.68	<0.070	<0.090	0.13 J	0.34	<0.070	<0.070	<0.070	<0.070	<0.070	<0.090	<0.10	<0.080	<0.10	0.22	<0.080	<0.090	0.55	0.43	0.98	35	93	18
MW-10	5/24/2012	12051184-09	0.0282	0.36	0.454	1.52	3.13	<0.0968	<0.0968	<0.0968	<0.0968	0.355	<0.0968	<0.0968	<0.0968	<0.0968		<0.0968	<0.0968						
MW-10	6/13/2013	L641641-10	28	0.34	0.72	1.7	2.1	0.14	<0.050	0.068	0.066	0.040 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	37	15				
MW-10	6/5/2014	L703462-10	28	0.71	1.9	4	6.3	<0.050	<0.050	0.00068	<0.050	0.00052	<0.050	<0.050	<0.050	0.091	6.2	0.09	0.16	47	28	75			
MW-10	6/17/2015	L772306-10	3.8	0.23	0.55	1.3	1.8	<0.050	0.02 J	0.2	0.15	0.095	<0.050	<0.050	0.059	<0.050	1.6	<0.050	<0.050	11	7.2	18.2			
MW-10	5/19/2016	L837132-10	0.668	0.114	0.209	0.537	0.14	0.127	<0.050	0.0637	0.0547	0.0237 J	0.00703 BJ	<0.050	<0.050	<0.050	0.86	<0.050	<0.050	0.434	0.271	0.705			
MW-10	5/16/2017	L910272-10	0.133 J	0.112	0.215	0.695	0.823	0.0608	<0.050	0.0247 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.04	<0.050	<0.050	6.82	1.53	8.35			
MW-10	6/7/2018	L1000529-10	20.3	<0.475	1.56	2.82	5.31	<0.475	<0.475	0.59	<0.475	<0.475	<0.475	<0.475	<0.475	<0.475	3.99	<0.475	<0.475	35.8	28.2	64			
MW-10	5/14/2019	L1099465-10	25.5	<0.50	1.39	3.48	4.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.85	<0.50	<0.50	40	30.3	70.3			
MW-11	3/2/2006	177443	0.577	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05						
MW-11	3/1/2007	T17665	<1.6	<2.4	<2.3	<2.3	<2.7	<2.7	<2.9	<3.6	<3.6	<3.2	<2.8	<3.0	<3.0	<2.5		<2.9	<2.7						
MW-11	5/19/2016	L837132-11	0.084 BJ	<0.050	<0.050	0.0161 J	0.0278 J	<0.050	<0.050	<0.050	0.00899 J	<0.050	0.00451 BJ	<0.050	<0.050	<0.050	0.0181 BJ	<0.050	<0.050	0.0971 J	0.0842 J	0.1813			
MW-11	5/15/2017	L910272-11	0.0584 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.00575 BJ	<0.050	<0.050	0.0215 J	0.0176 J	0.0391			
MW-12	3/2/2006	177461	0.548	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05						
MW-12	6/1/2007	T17665	<1.6	<2.4	<2.3	<2.3	<2.7	<2.7	<2.9	<3.6	<3.6	<3.2	<2.8	<3.0	<3.0	<2.5		<2.9	<2.7						
MW-12	5/24/2012	12051184-11	5.91	<0.0982	<0.0982	0.186	0.267	<0.0982	<0.0982	<0.0982	<0.0982	<0.0982	<0.0982	<0.0982	<0.0982	<0.0982		<0.0982	<0.0982						
MW-12	6/13/2013	L641641-12	0.29	0.067	0.066	0.35	0.33	0.015 J	<0.050	<0.050	0.012 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.93	<0.050	<0.050	0.22 J	0.024 J	0.244			
MW-12	5/19/2016	L837132-12	0.0565 BJ	<0.050	<0.050	0.0248 J	0.0571	<0.050	<0.050	<0.050	0.00853 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.217	<0.050	<0.050	0.0127 J	0.0114 J	0.0241			
MW-12	5/15/2017	L910272-12	0.068 J	<0.050	<0.050	<0.050	0.0312 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.16	<0.050	<0.050	0.0153 J	0.0131 J	0.0284			
MW-13	12/7/2011	111225-01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002						
MW-13	5/24/2012	12051184-12	7.75	<0.0948	<0.0948	0.254	0.563	0.138	<0.0948	<0.0948	<0.0948	<0.0948	<0.0948	<0.0948	<0.0948	<0.0948		<0.0948	<0.0948						
MW-13	6/13/2013	L641641-13	3.4	0.057	0.11	<0.050	0.79	0.058	<0.050	0.017 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.1	<0.050	<0.050	3.4	0.4				
MW-13	6/5/2014	L703462-13	0.24	0.02	<0.050	0.36	0.75	0.084	<0.050	0.036	<0.050	<0.050	<0.050	<0.050	<0.050	<0.50	0.92	<0.050	<0.050	1.8	0.87	2.67			
MW-13	5/19/2016	L837132-13	0.0513 BJ	<0.050	<0.050	0.0559	0.0207 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.0148 BJ	<0.050	<0.050	<0.050	0.131	<0.050	<0.050	0.028 J	0.0135 J	0.0415			
MW-13	5/16/2017	L910272-13	0.155 J	<0.050	0.0228 J	0.221	0.369	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.874	<0.050	<0.050	0.0411 J	0.0217 J	0.0628			

NMOCD: New Mexico Oil Conservation Division

Exceedences of NMOCD Remediation Criteria are shown in **bold**

^a Result is from run #2

^b Laboratory control spike recovery outside control limits, all reportable hits are considered to be an estimated concentration

J: Analyte detected below method detection limit (MDL) but above sample detection limit (SDL)

P: Dual Column results percent difference > 40%

Table 6
 2019 PSH and Dissolved Phase Groundwater Recovery Data
 Plains Marketing, L.P.
 Hugh Gathering
 SRS #2002-10235
 Lea County, New Mexico

Well Number	PSH Recoverd (gallons)	Total Fluids Recovered (gallons)
MW-1(MW-1R)	11.75	418.25
MW-2	2.50	407.50
MW-3	0.00	0.00
MW-4	2.50	397.50
MW-8	2.75	357.25
MW-9	5.50	424.50
MW-10	0.25	279.75
Total Fluids Recovered in 2018	25.25	2284.75

Note: The above estimated gallons of total fluids (PSH and groundwater) include those pumped and manually bailed; these are estimates only and do not include sheens that were purged during routine PSH recovery events

APPENDIX A

2018 Laboratory Reports and Chain of Custody Documentation

February 21, 2019

Plains All American Pipeline - Entech

Sample Delivery Group: L1071076
Samples Received: 02/16/2019
Project Number: PAA12006
Description: Hugh Gathering

Report To: Kathleen Buxton
21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
MW3 L1071076-01	5	
MW5 L1071076-02	6	⁴ Cn
MW6 L1071076-03	7	⁵ Sr
MW7 L1071076-04	8	
MW11 L1071076-05	9	⁶ Qc
MW12 L1071076-06	10	
MW13 L1071076-07	11	⁷ Gl
Qc: Quality Control Summary	12	⁸ Al
Volatile Organic Compounds (GC/MS) by Method 8260B	12	
Gl: Glossary of Terms	13	⁹ Sc
Al: Accreditations & Locations	14	
Sc: Sample Chain of Custody	15	

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW3 L1071076-01 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 14:20	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 03:14	02/18/19 03:14	TJJ

¹ Cp

² Tc

³ Ss

MW5 L1071076-02 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 13:45	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 03:35	02/18/19 03:35	TJJ

⁴ Cn

⁵ Sr

MW6 L1071076-03 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 13:55	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 03:56	02/18/19 03:56	TJJ

⁶ Qc

⁷ Gl

MW7 L1071076-04 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 14:15	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 04:17	02/18/19 04:17	TJJ

⁸ Al

⁹ Sc

MW11 L1071076-05 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 14:05	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 04:37	02/18/19 04:37	TJJ

MW12 L1071076-06 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 14:30	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 04:58	02/18/19 04:58	TJJ

MW13 L1071076-07 GW

			Collected by Shane A. Diller	Collected date/time 02/14/19 14:35	Received date/time 02/16/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1238497	1	02/18/19 05:19	02/18/19 05:19	TJJ

ACCOUNT:

Plains All American Pipeline - Entech

PROJECT:

PAA12006

SDG:

L1071076

DATE/TIME:

02/21/19 14:42

PAGE:

3 of 16



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 03:14	WG1238497
Toluene	ND		0.00100	1	02/18/2019 03:14	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 03:14	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 03:14	WG1238497
(S) Toluene-d8	100		80.0-120		02/18/2019 03:14	WG1238497
(S) o,o,a-Trifluorotoluene	107		80.0-120		02/18/2019 03:14	WG1238497
(S) 4-Bromofluorobenzene	88.4		77.0-126		02/18/2019 03:14	WG1238497
(S) 1,2-Dichloroethane-d4	87.8		70.0-130		02/18/2019 03:14	WG1238497

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 03:35	WG1238497
Toluene	ND		0.00100	1	02/18/2019 03:35	WG1238497
Ethylbenzene	0.0791		0.00100	1	02/18/2019 03:35	WG1238497
Total Xylenes	0.00391		0.00300	1	02/18/2019 03:35	WG1238497
(S) Toluene-d8	94.2		80.0-120		02/18/2019 03:35	WG1238497
(S) o,o,a-Trifluorotoluene	104		80.0-120		02/18/2019 03:35	WG1238497
(S) 4-Bromofluorobenzene	90.2		77.0-126		02/18/2019 03:35	WG1238497
(S) 1,2-Dichloroethane-d4	94.2		70.0-130		02/18/2019 03:35	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 03:56	WG1238497
Toluene	ND		0.00100	1	02/18/2019 03:56	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 03:56	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 03:56	WG1238497
(S) Toluene-d8	101		80.0-120		02/18/2019 03:56	WG1238497
(S) o,o,a-Trifluorotoluene	108		80.0-120		02/18/2019 03:56	WG1238497
(S) 4-Bromofluorobenzene	85.4		77.0-126		02/18/2019 03:56	WG1238497
(S) 1,2-Dichloroethane-d4	86.9		70.0-130		02/18/2019 03:56	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 04:17	WG1238497
Toluene	ND		0.00100	1	02/18/2019 04:17	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 04:17	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 04:17	WG1238497
(S) Toluene-d8	100		80.0-120		02/18/2019 04:17	WG1238497
(S) o,o,a-Trifluorotoluene	110		80.0-120		02/18/2019 04:17	WG1238497
(S) 4-Bromofluorobenzene	87.6		77.0-126		02/18/2019 04:17	WG1238497
(S) 1,2-Dichloroethane-d4	92.6		70.0-130		02/18/2019 04:17	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 04:37	WG1238497
Toluene	ND		0.00100	1	02/18/2019 04:37	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 04:37	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 04:37	WG1238497
(S) Toluene-d8	98.2		80.0-120		02/18/2019 04:37	WG1238497
(S) o,o,a-Trifluorotoluene	106		80.0-120		02/18/2019 04:37	WG1238497
(S) 4-Bromofluorobenzene	84.6		77.0-126		02/18/2019 04:37	WG1238497
(S) 1,2-Dichloroethane-d4	95.5		70.0-130		02/18/2019 04:37	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 04:58	WG1238497
Toluene	ND		0.00100	1	02/18/2019 04:58	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 04:58	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 04:58	WG1238497
(S) Toluene-d8	101		80.0-120		02/18/2019 04:58	WG1238497
(S) o,o,a-Trifluorotoluene	105		80.0-120		02/18/2019 04:58	WG1238497
(S) 4-Bromofluorobenzene	92.9		77.0-126		02/18/2019 04:58	WG1238497
(S) 1,2-Dichloroethane-d4	94.1		70.0-130		02/18/2019 04:58	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/18/2019 05:19	WG1238497
Toluene	ND		0.00100	1	02/18/2019 05:19	WG1238497
Ethylbenzene	ND		0.00100	1	02/18/2019 05:19	WG1238497
Total Xylenes	ND		0.00300	1	02/18/2019 05:19	WG1238497
(S) Toluene-d8	98.5		80.0-120		02/18/2019 05:19	WG1238497
(S) o,o,a-Trifluorotoluene	109		80.0-120		02/18/2019 05:19	WG1238497
(S) 4-Bromofluorobenzene	87.6		77.0-126		02/18/2019 05:19	WG1238497
(S) 1,2-Dichloroethane-d4	91.8		70.0-130		02/18/2019 05:19	WG1238497

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Method Blank (MB)

(MB) R3384738-3 02/18/19 01:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	101			80.0-120
(S) a,a,a-Trifluorotoluene	108			80.0-120
(S) 4-Bromofluorobenzene	87.7			77.0-126
(S) 1,2-Dichloroethane-d4	91.7			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3384738-1 02/18/19 00:28 • (LCSD) R3384738-2 02/18/19 00:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0258	0.0257	103	103	70.0-123			0.488	20
Ethylbenzene	0.0250	0.0258	0.0260	103	104	79.0-123			0.920	20
Toluene	0.0250	0.0252	0.0257	101	103	79.0-120			1.95	20
Xylenes, Total	0.0750	0.0751	0.0753	100	100	79.0-123			0.266	20
(S) Toluene-d8				93.9	98.0	80.0-120				
(S) a,a,a-Trifluorotoluene				108	107	80.0-120				
(S) 4-Bromofluorobenzene				94.0	93.1	77.0-126				
(S) 1,2-Dichloroethane-d4				98.7	91.3	70.0-130				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

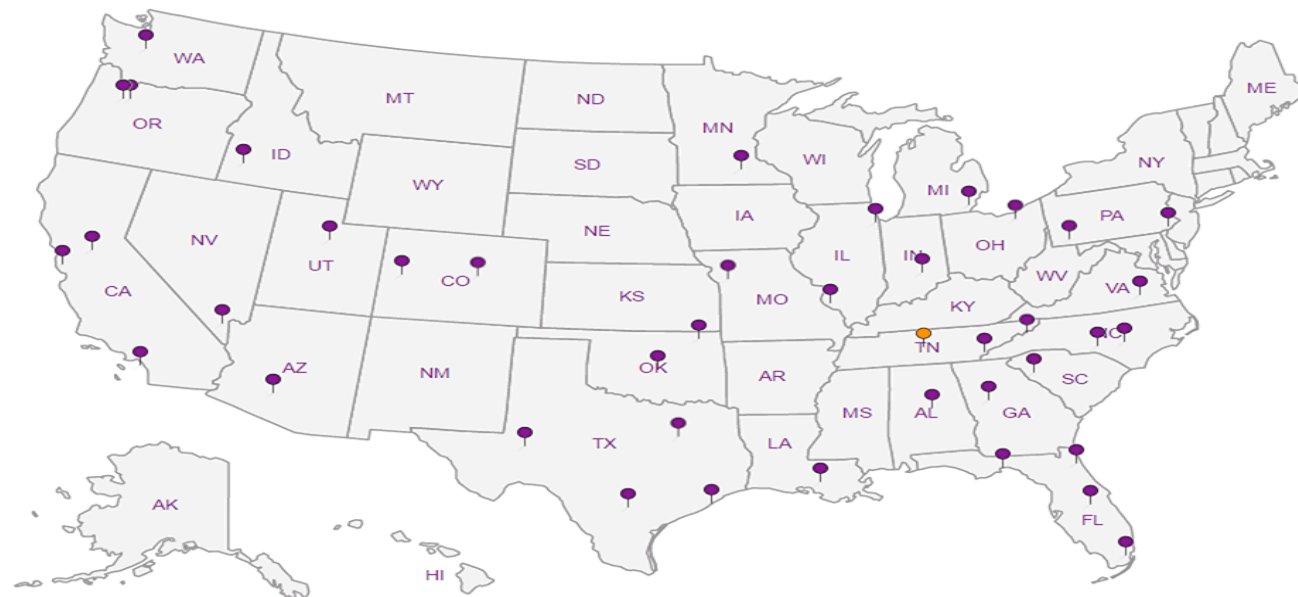
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Company Name/Address:
Plains All American Pipeline
EnTech
21 Waterway Ave. Suite 300
The woodlands, TX 77380

Billing Information:
Attn: Accounts Payable
333 Clay St., Ste 1600
Houston, TX 77002

Report to:
Kathleen Buxton

Email To:
Kathleen.buxton@entechservice.com

Project
Description: **Hugh Gathering**

City/State
Collected: **Eunice NM**

Phone: **281-362-2714**

Client Project #
PAA 12006

Fax:

Lab Project #

Collected by (print):
SHANE DILLER

Site/Facility ID #

Collected by (signature):
[Signature]

P.O. #

Immediately
Packed on Ice N ☐ Y ☒

Rush? (Lab MUST Be Notified)
☐ Same Day200%
☐ Next Day100%
☐ Two Day50%
☐ Three Day25%

Date Results Needed

Email? ☐ No ☐ Yes
FAX? ☐ No ☐ Yes

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs
mw3		GW		2-14-19	1420	2
mw5					1345	
mw6					1355	
mw7					1415	
mw11					1405	
mw12		✓		↓	1430	✓
mw13		GW		2-14-19	1435	2

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: **2-15-19**

Relinquished by: (Signature)
[Signature]

Date: **2-15-19**

Time: **14:00**

Received by: (Signature)
[Signature]

Received by: (Signature)

Received for lab by: (Signature)
[Signature]

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: ☐ UPS
☐ FedEx ☐ Courier ☐ _____

Temp: _____ °C Bottles Received: **14 YB**

Date: **2/15/19** Time: **0800**

Hold #

Condition: (lab use only)
GW

COC Seal Intact: ☐ Y ☒ N ☐ NA

PH Checked: NCF:

Analysis / Container / Preservative

Chain of Custody Page ____ of ____

ESC
L.A.B S.C.I.E.N.C.E.S
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# **L1671676**
E178

Acctnum: PLAINSENT
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Rem./Contaminant **Sample # (lab only)**

-01
02
03
04
05
06
07

Pace Analytical National Center for Testing & Innovation

Cooler Receipt Form

Client:	PLAINSENT	SDG#:	L1071076	
Cooler Received/Opened On:	2 / 16 / 19	Temperature:	1.9	
Received By: Eric Struck				
Signature: 				
Receipt Check List	NP	Yes	No	
COC Seal Present / Intact?	/			
COC Signed / Accurate?		/		
Bottles arrive intact?		/		
Correct bottles used?		/		
Sufficient volume sent?		/		
If Applicable				
VOA Zero headspace?		/		
Preservation Correct / Checked?				

May 24, 2019

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Plains All American Pipeline - Entech

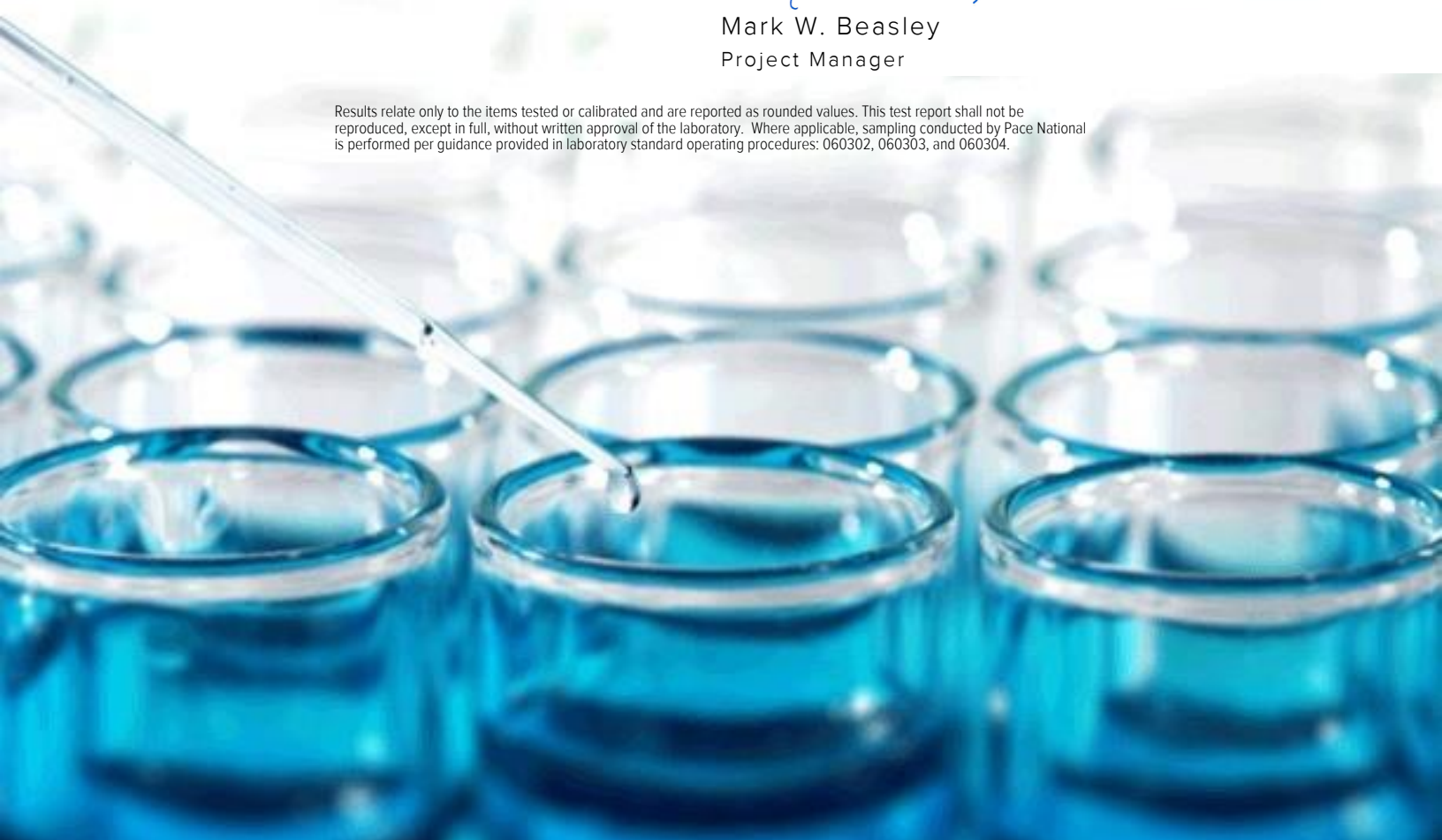
Sample Delivery Group: L1099465
Samples Received: 05/16/2019
Project Number: PAA12006
Description: Hugh Gathering
Site: SRS - 2002-10235
Report To: Kathleen Buxton
21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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MW8 L1099465-08	13	⁸ Al
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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW1R L1099465-01 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:50	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	5	05/18/19 17:09	05/18/19 17:09	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	1	05/19/19 16:17	05/19/19 22:47	AO	Mt. Juliet, TN

MW2 L1099465-02 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:20	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 17:30	05/18/19 17:30	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1285715	10	05/23/19 22:20	05/23/19 22:20	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	1	05/19/19 16:17	05/19/19 23:08	AO	Mt. Juliet, TN

MW3 L1099465-03 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 14:00	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 17:52	05/18/19 17:52	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1285715	1	05/23/19 22:40	05/23/19 22:40	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	1	05/19/19 16:17	05/19/19 23:29	AO	Mt. Juliet, TN

MW4 L1099465-04 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:40	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 18:14	05/18/19 18:14	JAH	Mt. Juliet, TN

MW5 L1099465-05 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 14:10	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1285715	1	05/23/19 23:00	05/23/19 23:00	ADM	Mt. Juliet, TN

MW6 L1099465-06 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 11:50	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 18:57	05/18/19 18:57	JAH	Mt. Juliet, TN

MW7 L1099465-07 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 11:05	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 19:18	05/18/19 19:18	JAH	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCOUNT:

Plains All American Pipeline - Entech

PROJECT:

PAA12006

SDG:

L1099465

DATE/TIME:

05/24/19 15:18

PAGE:

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW8 L1099465-08 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:00	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	5	05/18/19 19:40	05/18/19 19:40	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	1	05/19/19 16:17	05/19/19 23:49	AO	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

MW9 L1099465-09 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:10	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	20	05/18/19 20:01	05/18/19 20:01	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	10	05/19/19 16:17	05/20/19 02:56	AO	Mt. Juliet, TN

⁴ Cn

⁵ Sr

⁶ Qc

MW10 L1099465-10 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:30	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 20:23	05/18/19 20:23	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1282658	10	05/19/19 16:17	05/20/19 03:17	AO	Mt. Juliet, TN

⁷ Gl

⁸ Al

⁹ Sc

MW11 L1099465-11 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 12:30	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283355	1	05/18/19 20:44	05/18/19 20:44	JAH	Mt. Juliet, TN

MW12 L1099465-12 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 13:35	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283361	1	05/18/19 21:42	05/18/19 21:42	ACG	Mt. Juliet, TN

MW13 L1099465-13 GW

				Collected by Shane A. Diller	Collected date/time 05/14/19 14:20	Received date/time 05/16/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1283361	1	05/18/19 22:02	05/18/19 22:02	ACG	Mt. Juliet, TN

ACCOUNT:

Plains All American Pipeline - Entech

PROJECT:

PAA12006

SDG:

L1099465

DATE/TIME:

05/24/19 15:18

PAGE:

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Project Narrative

Due to a vendor supply error, AAA-TFT was not included in the surrogate mixed used for this analytical batch.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.243		0.00500	5	05/18/2019 17:09	WG1283355
Toluene	0.0682		0.00500	5	05/18/2019 17:09	WG1283355
Ethylbenzene	0.0625		0.00500	5	05/18/2019 17:09	WG1283355
Total Xylenes	0.115		0.0150	5	05/18/2019 17:09	WG1283355
(S) Toluene-d8	103		80.0-120		05/18/2019 17:09	WG1283355
(S) a,a,a-Trifluorotoluene	11.4	<u>J2</u>	80.0-120		05/18/2019 17:09	WG1283355
(S) 4-Bromofluorobenzene	88.7		77.0-126		05/18/2019 17:09	WG1283355
(S) 1,2-Dichloroethane-d4	98.0		70.0-130		05/18/2019 17:09	WG1283355

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Acenaphthene	0.000148		0.0000500	1	05/19/2019 22:47	WG1282658
Acenaphthylene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Benzo(a)anthracene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Benzo(a)pyrene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Benzo(b)fluoranthene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Benzo(g,h,i)perylene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Benzo(k)fluoranthene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Chrysene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Dibenz(a,h)anthracene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Dibenzofuran	0.000777		0.0000500	1	05/19/2019 22:47	WG1282658
Fluoranthene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Fluorene	0.000523		0.0000500	1	05/19/2019 22:47	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
Naphthalene	0.00555		0.000250	1	05/19/2019 22:47	WG1282658
Phenanthrene	0.000427		0.0000500	1	05/19/2019 22:47	WG1282658
Pyrene	ND		0.0000500	1	05/19/2019 22:47	WG1282658
1-Methylnaphthalene	0.00482		0.000250	1	05/19/2019 22:47	WG1282658
2-Methylnaphthalene	0.00414		0.000250	1	05/19/2019 22:47	WG1282658
2-Chloronaphthalene	ND		0.000250	1	05/19/2019 22:47	WG1282658
(S) Nitrobenzene-d5	86.5		31.0-160		05/19/2019 22:47	WG1282658
(S) 2-Fluorobiphenyl	86.5		48.0-148		05/19/2019 22:47	WG1282658
(S) p-Terphenyl-d14	94.0		37.0-146		05/19/2019 22:47	WG1282658

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

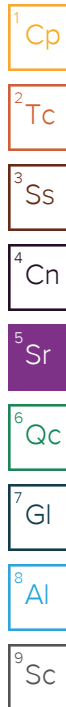


Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	1.01		0.0100	10	05/23/2019 22:20	WG1285715
Toluene	0.00271		0.00100	1	05/18/2019 17:30	WG1283355
Ethylbenzene	0.238		0.0100	10	05/23/2019 22:20	WG1285715
Total Xylenes	0.205		0.00300	1	05/18/2019 17:30	WG1283355
(S) Toluene-d8	104		80.0-120		05/18/2019 17:30	WG1283355
(S) Toluene-d8	92.1		80.0-120		05/23/2019 22:20	WG1285715
(S) a,a,a-Trifluorotoluene	11.2	<u>J2</u>	80.0-120		05/18/2019 17:30	WG1283355
(S) a,a,a-Trifluorotoluene	102		80.0-120		05/23/2019 22:20	WG1285715
(S) 4-Bromofluorobenzene	95.0		77.0-126		05/18/2019 17:30	WG1283355
(S) 4-Bromofluorobenzene	99.7		77.0-126		05/23/2019 22:20	WG1285715
(S) 1,2-Dichloroethane-d4	99.1		70.0-130		05/18/2019 17:30	WG1283355
(S) 1,2-Dichloroethane-d4	100		70.0-130		05/23/2019 22:20	WG1285715

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Acenaphthene	0.000380		0.0000500	1	05/19/2019 23:08	WG1282658
Acenaphthylene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Benzo(a)anthracene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Benzo(a)pyrene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Benzo(b)fluoranthene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Benzo(g,h,i)perylene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Benzo(k)fluoranthene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Chrysene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Dibenz(a,h)anthracene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Dibenzofuran	0.00198		0.0000500	1	05/19/2019 23:08	WG1282658
Fluoranthene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Fluorene	0.00106		0.0000500	1	05/19/2019 23:08	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
Naphthalene	0.0365		0.000250	1	05/19/2019 23:08	WG1282658
Phenanthrene	0.000961		0.0000500	1	05/19/2019 23:08	WG1282658
Pyrene	ND		0.0000500	1	05/19/2019 23:08	WG1282658
1-Methylnaphthalene	0.0270		0.000250	1	05/19/2019 23:08	WG1282658
2-Methylnaphthalene	0.0218		0.000250	1	05/19/2019 23:08	WG1282658
2-Chloronaphthalene	ND		0.000250	1	05/19/2019 23:08	WG1282658
(S) Nitrobenzene-d5	94.5		31.0-160		05/19/2019 23:08	WG1282658
(S) 2-Fluorobiphenyl	73.5		48.0-148		05/19/2019 23:08	WG1282658
(S) p-Terphenyl-d14	94.0		37.0-146		05/19/2019 23:08	WG1282658





Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/23/2019 22:40	WG1285715
Toluene	ND		0.00100	1	05/18/2019 17:52	WG1283355
Ethylbenzene	ND		0.00100	1	05/18/2019 17:52	WG1283355
Total Xylenes	ND		0.00300	1	05/18/2019 17:52	WG1283355
(S) Toluene-d8	105		80.0-120		05/18/2019 17:52	WG1283355
(S) Toluene-d8	93.8		80.0-120		05/23/2019 22:40	WG1285715
(S) a,a,a-Trifluorotoluene	12.2	<u>J2</u>	80.0-120		05/18/2019 17:52	WG1283355
(S) a,a,a-Trifluorotoluene	102		80.0-120		05/23/2019 22:40	WG1285715
(S) 4-Bromofluorobenzene	96.9		77.0-126		05/18/2019 17:52	WG1283355
(S) 4-Bromofluorobenzene	98.6		77.0-126		05/23/2019 22:40	WG1285715
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/18/2019 17:52	WG1283355
(S) 1,2-Dichloroethane-d4	107		70.0-130		05/23/2019 22:40	WG1285715

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Acenaphthene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Acenaphthylene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Benzo(a)anthracene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Benzo(a)pyrene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Benzo(b)fluoranthene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Benzo(g,h,i)perylene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Benzo(k)fluoranthene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Chrysene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Dibenz(a,h)anthracene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Dibenzofuran	0.000450		0.0000500	1	05/19/2019 23:29	WG1282658
Fluoranthene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Fluorene	0.000144		0.0000500	1	05/19/2019 23:29	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Naphthalene	ND		0.000250	1	05/19/2019 23:29	WG1282658
Phenanthrene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
Pyrene	ND		0.0000500	1	05/19/2019 23:29	WG1282658
1-Methylnaphthalene	ND		0.000250	1	05/19/2019 23:29	WG1282658
2-Methylnaphthalene	ND		0.000250	1	05/19/2019 23:29	WG1282658
2-Chloronaphthalene	ND		0.000250	1	05/19/2019 23:29	WG1282658
(S) Nitrobenzene-d5	79.0		31.0-160		05/19/2019 23:29	WG1282658
(S) 2-Fluorobiphenyl	77.0		48.0-148		05/19/2019 23:29	WG1282658
(S) p-Terphenyl-d14	96.5		37.0-146		05/19/2019 23:29	WG1282658

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0101		0.00100	1	05/18/2019 18:14	WG1283355
Toluene	0.00408		0.00100	1	05/18/2019 18:14	WG1283355
Ethylbenzene	0.0168		0.00100	1	05/18/2019 18:14	WG1283355
Total Xylenes	0.0170		0.00300	1	05/18/2019 18:14	WG1283355
(S) Toluene-d8	102		80.0-120		05/18/2019 18:14	WG1283355
(S) o,o,a-Trifluorotoluene	11.1	J2	80.0-120		05/18/2019 18:14	WG1283355
(S) 4-Bromofluorobenzene	97.4		77.0-126		05/18/2019 18:14	WG1283355
(S) 1,2-Dichloroethane-d4	99.2		70.0-130		05/18/2019 18:14	WG1283355

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/23/2019 23:00	WG1285715
Toluene	ND		0.00100	1	05/23/2019 23:00	WG1285715
Ethylbenzene	0.0459		0.00100	1	05/23/2019 23:00	WG1285715
Total Xylenes	ND		0.00300	1	05/23/2019 23:00	WG1285715
(S) Toluene-d8	92.0		80.0-120		05/23/2019 23:00	WG1285715
(S) o,o,a-Trifluorotoluene	105		80.0-120		05/23/2019 23:00	WG1285715
(S) 4-Bromofluorobenzene	96.4		77.0-126		05/23/2019 23:00	WG1285715
(S) 1,2-Dichloroethane-d4	103		70.0-130		05/23/2019 23:00	WG1285715

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/18/2019 18:57	WG1283355
Toluene	0.00183		0.00100	1	05/18/2019 18:57	WG1283355
Ethylbenzene	ND		0.00100	1	05/18/2019 18:57	WG1283355
Total Xylenes	ND		0.00300	1	05/18/2019 18:57	WG1283355
(S) Toluene-d8	105		80.0-120		05/18/2019 18:57	WG1283355
(S) a,a,a-Trifluorotoluene	10.8	J2	80.0-120		05/18/2019 18:57	WG1283355
(S) 4-Bromofluorobenzene	90.1		77.0-126		05/18/2019 18:57	WG1283355
(S) 1,2-Dichloroethane-d4	105		70.0-130		05/18/2019 18:57	WG1283355

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/18/2019 19:18	WG1283355
Toluene	0.00203		0.00100	1	05/18/2019 19:18	WG1283355
Ethylbenzene	ND		0.00100	1	05/18/2019 19:18	WG1283355
Total Xylenes	ND		0.00300	1	05/18/2019 19:18	WG1283355
(S) Toluene-d8	99.7		80.0-120		05/18/2019 19:18	WG1283355
(S) a,a,a-Trifluorotoluene	11.0	J2	80.0-120		05/18/2019 19:18	WG1283355
(S) 4-Bromofluorobenzene	84.8		77.0-126		05/18/2019 19:18	WG1283355
(S) 1,2-Dichloroethane-d4	102		70.0-130		05/18/2019 19:18	WG1283355

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.324		0.00500	5	05/18/2019 19:40	WG1283355
Toluene	0.0494		0.00500	5	05/18/2019 19:40	WG1283355
Ethylbenzene	0.274		0.00500	5	05/18/2019 19:40	WG1283355
Total Xylenes	0.397		0.0150	5	05/18/2019 19:40	WG1283355
(S) Toluene-d8	97.7		80.0-120		05/18/2019 19:40	WG1283355
(S) a,a,a-Trifluorotoluene	10.7	<u>J2</u>	80.0-120		05/18/2019 19:40	WG1283355
(S) 4-Bromofluorobenzene	89.0		77.0-126		05/18/2019 19:40	WG1283355
(S) 1,2-Dichloroethane-d4	99.6		70.0-130		05/18/2019 19:40	WG1283355

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Acenaphthene	0.000333		0.0000500	1	05/19/2019 23:49	WG1282658
Acenaphthylene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Benzo(a)anthracene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Benzo(a)pyrene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Benzo(b)fluoranthene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Benzo(g,h,i)perylene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Benzo(k)fluoranthene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Chrysene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Dibenz(a,h)anthracene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Dibenzofuran	0.00216		0.0000500	1	05/19/2019 23:49	WG1282658
Fluoranthene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Fluorene	0.00106		0.0000500	1	05/19/2019 23:49	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
Naphthalene	0.0488		0.000250	1	05/19/2019 23:49	WG1282658
Phenanthrene	0.00105		0.0000500	1	05/19/2019 23:49	WG1282658
Pyrene	ND		0.0000500	1	05/19/2019 23:49	WG1282658
1-Methylnaphthalene	0.0311		0.000250	1	05/19/2019 23:49	WG1282658
2-Methylnaphthalene	0.0294		0.000250	1	05/19/2019 23:49	WG1282658
2-Chloronaphthalene	ND		0.000250	1	05/19/2019 23:49	WG1282658
(S) Nitrobenzene-d5	92.5		31.0-160		05/19/2019 23:49	WG1282658
(S) 2-Fluorobiphenyl	70.5		48.0-148		05/19/2019 23:49	WG1282658
(S) p-Terphenyl-d14	90.0		37.0-146		05/19/2019 23:49	WG1282658

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0513		0.0200	20	05/18/2019 20:01	WG1283355
Toluene	ND		0.0200	20	05/18/2019 20:01	WG1283355
Ethylbenzene	0.167		0.0200	20	05/18/2019 20:01	WG1283355
Total Xylenes	0.265		0.0600	20	05/18/2019 20:01	WG1283355
(S) Toluene-d8	99.9		80.0-120		05/18/2019 20:01	WG1283355
(S) a,a,a-Trifluorotoluene	10.3	<u>J2</u>	80.0-120		05/18/2019 20:01	WG1283355
(S) 4-Bromofluorobenzene	90.1		77.0-126		05/18/2019 20:01	WG1283355
(S) 1,2-Dichloroethane-d4	96.4		70.0-130		05/18/2019 20:01	WG1283355

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Acenaphthene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Acenaphthylene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Benzo(a)anthracene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Benzo(a)pyrene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Benzo(b)fluoranthene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Benzo(g,h,i)perylene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Benzo(k)fluoranthene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Chrysene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Dibenz(a,h)anthracene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Dibenzofuran	0.00188		0.000500	10	05/20/2019 02:56	WG1282658
Fluoranthene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Fluorene	0.00145		0.000500	10	05/20/2019 02:56	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.000500	10	05/20/2019 02:56	WG1282658
Naphthalene	0.0177		0.00250	10	05/20/2019 02:56	WG1282658
Phenanthrene	0.00149		0.000500	10	05/20/2019 02:56	WG1282658
Pyrene	ND		0.000500	10	05/20/2019 02:56	WG1282658
1-Methylnaphthalene	0.0208		0.00250	10	05/20/2019 02:56	WG1282658
2-Methylnaphthalene	0.0210		0.00250	10	05/20/2019 02:56	WG1282658
2-Chloronaphthalene	ND		0.00250	10	05/20/2019 02:56	WG1282658
(S) Nitrobenzene-d5	88.5		31.0-160		05/20/2019 02:56	WG1282658
(S) 2-Fluorobiphenyl	82.0		48.0-148		05/20/2019 02:56	WG1282658
(S) p-Terphenyl-d14	86.5		37.0-146		05/20/2019 02:56	WG1282658

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0146		0.00100	1	05/18/2019 20:23	WG1283355
Toluene	0.00177		0.00100	1	05/18/2019 20:23	WG1283355
Ethylbenzene	0.0387		0.00100	1	05/18/2019 20:23	WG1283355
Total Xylenes	0.0594		0.00300	1	05/18/2019 20:23	WG1283355
(S) Toluene-d8	104		80.0-120		05/18/2019 20:23	WG1283355
(S) a,a,a-Trifluorotoluene	11.1	<u>J2</u>	80.0-120		05/18/2019 20:23	WG1283355
(S) 4-Bromofluorobenzene	116		77.0-126		05/18/2019 20:23	WG1283355
(S) 1,2-Dichloroethane-d4	99.5		70.0-130		05/18/2019 20:23	WG1283355

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Acenaphthene	0.00139		0.000500	10	05/20/2019 03:17	WG1282658
Acenaphthylene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Benzo(a)anthracene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Benzo(a)pyrene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Benzo(b)fluoranthene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Benzo(g,h,i)perylene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Benzo(k)fluoranthene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Chrysene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Dibenz(a,h)anthracene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Dibenzofuran	0.00385		0.000500	10	05/20/2019 03:17	WG1282658
Fluoranthene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Fluorene	0.00348		0.000500	10	05/20/2019 03:17	WG1282658
Indeno(1,2,3-cd)pyrene	ND		0.000500	10	05/20/2019 03:17	WG1282658
Naphthalene	0.0255		0.00250	10	05/20/2019 03:17	WG1282658
Phenanthrene	0.00447		0.000500	10	05/20/2019 03:17	WG1282658
Pyrene	ND		0.000500	10	05/20/2019 03:17	WG1282658
1-Methylnaphthalene	0.0400		0.00250	10	05/20/2019 03:17	WG1282658
2-Methylnaphthalene	0.0303		0.00250	10	05/20/2019 03:17	WG1282658
2-Chloronaphthalene	ND		0.00250	10	05/20/2019 03:17	WG1282658
(S) Nitrobenzene-d5	0.000	<u>J2</u>	31.0-160		05/20/2019 03:17	WG1282658
(S) 2-Fluorobiphenyl	80.5		48.0-148		05/20/2019 03:17	WG1282658
(S) p-Terphenyl-d14	83.0		37.0-146		05/20/2019 03:17	WG1282658

Sample Narrative:

L1099465-10 WG1282658: Dilution due to matrix.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/18/2019 20:44	WG1283355
Toluene	0.00216		0.00100	1	05/18/2019 20:44	WG1283355
Ethylbenzene	ND		0.00100	1	05/18/2019 20:44	WG1283355
Total Xylenes	ND		0.00300	1	05/18/2019 20:44	WG1283355
(S) Toluene-d8	100		80.0-120		05/18/2019 20:44	WG1283355
(S) o,o,a-Trifluorotoluene	10.2	<u>J2</u>	80.0-120		05/18/2019 20:44	WG1283355
(S) 4-Bromofluorobenzene	89.6		77.0-126		05/18/2019 20:44	WG1283355
(S) 1,2-Dichloroethane-d4	103		70.0-130		05/18/2019 20:44	WG1283355

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/18/2019 21:42	WG1283361
Toluene	0.00166		0.00100	1	05/18/2019 21:42	WG1283361
Ethylbenzene	ND		0.00100	1	05/18/2019 21:42	WG1283361
Total Xylenes	ND		0.00300	1	05/18/2019 21:42	WG1283361
(S) Toluene-d8	108		80.0-120		05/18/2019 21:42	WG1283361
(S) a,a,a-Trifluorotoluene	2.16	J2	80.0-120		05/18/2019 21:42	WG1283361
(S) 4-Bromofluorobenzene	98.9		77.0-126		05/18/2019 21:42	WG1283361
(S) 1,2-Dichloroethane-d4	95.8		70.0-130		05/18/2019 21:42	WG1283361

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	05/18/2019 22:02	WG1283361
Toluene	ND		0.00100	1	05/18/2019 22:02	WG1283361
Ethylbenzene	ND		0.00100	1	05/18/2019 22:02	WG1283361
Total Xylenes	ND		0.00300	1	05/18/2019 22:02	WG1283361
(S) Toluene-d8	105		80.0-120		05/18/2019 22:02	WG1283361
(S) o,o,a-Trifluorotoluene	2.18	J2	80.0-120		05/18/2019 22:02	WG1283361
(S) 4-Bromofluorobenzene	99.9		77.0-126		05/18/2019 22:02	WG1283361
(S) 1,2-Dichloroethane-d4	98.3		70.0-130		05/18/2019 22:02	WG1283361

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3414208-3 05/18/19 13:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	100			80.0-120
(S) a,a,a-Trifluorotoluene	12.2	J2		80.0-120
(S) 4-Bromofluorobenzene	91.1			77.0-126
(S) 1,2-Dichloroethane-d4	103			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3414208-1 05/18/19 12:20 • (LCSD) R3414208-2 05/18/19 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0256	0.0253	102	101	70.0-123			1.21	20
Ethylbenzene	0.0250	0.0242	0.0241	96.9	96.5	79.0-123			0.330	20
Toluene	0.0250	0.0227	0.0225	90.7	89.8	79.0-120			0.905	20
Xylenes, Total	0.0750	0.0712	0.0700	94.9	93.3	79.0-123			1.70	20
(S) Toluene-d8				93.4	93.8	80.0-120				
(S) a,a,a-Trifluorotoluene				13.6	12.5	80.0-120	J2	J2		
(S) 4-Bromofluorobenzene				87.2	84.7	77.0-126				
(S) 1,2-Dichloroethane-d4				113	110	70.0-130				



Method Blank (MB)

(MB) R3413312-3 05/18/19 17:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	109			80.0-120
(S) a,a,a-Trifluorotoluene	2.50	J2		80.0-120
(S) 4-Bromofluorobenzene	96.3			77.0-126
(S) 1,2-Dichloroethane-d4	94.4			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3413312-1 05/18/19 16:45 • (LCSD) R3413312-2 05/18/19 17:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0242	0.0236	96.8	94.6	70.0-123			2.25	20
Ethylbenzene	0.0250	0.0258	0.0247	103	98.9	79.0-123			4.42	20
Toluene	0.0250	0.0256	0.0242	102	96.6	79.0-120			5.72	20
Xylenes, Total	0.0750	0.0758	0.0723	101	96.4	79.0-123			4.73	20
(S) Toluene-d8				110	106	80.0-120				
(S) a,a,a-Trifluorotoluene				2.32	2.37	80.0-120	J2	J2		
(S) 4-Bromofluorobenzene				98.9	97.2	77.0-126				
(S) 1,2-Dichloroethane-d4				93.7	93.1	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3414515-3 05/23/19 15:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	93.4			80.0-120
(S) a,a,a-Trifluorotoluene	99.7			80.0-120
(S) 4-Bromofluorobenzene	97.4			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3414515-1 05/23/19 14:30 • (LCSD) R3414515-2 05/23/19 14:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0274	0.0301	110	120	70.0-123			9.35	20
Ethylbenzene	0.0250	0.0257	0.0261	103	105	79.0-123			1.86	20
Toluene	0.0250	0.0226	0.0237	90.3	94.8	79.0-120			4.83	20
Xylenes, Total	0.0750	0.0715	0.0752	95.3	100	79.0-123			5.04	20
(S) Toluene-d8				91.6	90.3	80.0-120				
(S) a,a,a-Trifluorotoluene				103	99.3	80.0-120				
(S) 4-Bromofluorobenzene				102	97.4	77.0-126				
(S) 1,2-Dichloroethane-d4				96.9	111	70.0-130				



Method Blank (MB)

(MB) R3412771-3 05/19/19 20:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000140	0.0000500
Acenaphthene	U		0.0000100	0.0000500
Acenaphthylene	U		0.0000120	0.0000500
Benzo(a)anthracene	U		0.00000410	0.0000500
Benzo(a)pyrene	U		0.0000116	0.0000500
Benzo(b)fluoranthene	U		0.00000212	0.0000500
Benzo(g,h,i)perylene	U		0.00000227	0.0000500
Benzo(k)fluoranthene	U		0.0000136	0.0000500
Chrysene	U		0.0000108	0.0000500
Dibenz(a,h)anthracene	U		0.00000396	0.0000500
Fluoranthene	U		0.0000157	0.0000500
Fluorene	U		0.00000850	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000148	0.0000500
Naphthalene	U		0.0000198	0.000250
Phenanthrene	U		0.00000820	0.0000500
Pyrene	U		0.0000117	0.0000500
1-Methylnaphthalene	U		0.00000821	0.000250
2-Methylnaphthalene	U		0.00000902	0.000250
2-Chloronaphthalene	U		0.00000647	0.000250
Dibenzofuran	0.00000507	U	0.00000105	0.0000500
(S) Nitrobenzene-d5	99.0			31.0-160
(S) 2-Fluorobiphenyl	73.0			48.0-148
(S) p-Terphenyl-d14	103			37.0-146

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3412771-1 05/19/19 20:01 • (LCSD) R3412771-2 05/19/19 20:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dibenzofuran	0.00200	0.00179	0.00183	89.5	91.5	67.0-134			2.21	20
Anthracene	0.00200	0.00167	0.00187	83.5	93.5	67.0-150			11.3	20
Acenaphthene	0.00200	0.00177	0.00183	88.5	91.5	65.0-138			3.33	20
Acenaphthylene	0.00200	0.00184	0.00190	92.0	95.0	66.0-140			3.21	20
Benzo(a)anthracene	0.00200	0.00195	0.00197	97.5	98.5	61.0-140			1.02	20
Benzo(a)pyrene	0.00200	0.00207	0.00204	103	102	60.0-143			1.46	20
Benzo(b)fluoranthene	0.00200	0.00192	0.00178	96.0	89.0	58.0-141			7.57	20
Benzo(g,h,i)perylene	0.00200	0.00171	0.00168	85.5	84.0	52.0-153			1.77	20
Benzo(k)fluoranthene	0.00200	0.00220	0.00216	110	108	58.0-148			1.83	20
Chrysene	0.00200	0.00172	0.00184	86.0	92.0	64.0-144			6.74	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3412771-1 05/19/19 20:01 • (LCSD) R3412771-2 05/19/19 20:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dibenz(a,h)anthracene	0.00200	0.00159	0.00155	79.5	77.5	52.0-155			2.55	20
Fluoranthene	0.00200	0.00195	0.00211	97.5	105	69.0-153			7.88	20
Fluorene	0.00200	0.00189	0.00185	94.5	92.5	64.0-136			2.14	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00170	0.00166	85.0	83.0	54.0-153			2.38	20
Naphthalene	0.00200	0.00173	0.00181	86.5	90.5	61.0-137			4.52	20
Phenanthrene	0.00200	0.00178	0.00184	89.0	92.0	62.0-137			3.31	20
Pyrene	0.00200	0.00189	0.00196	94.5	98.0	60.0-142			3.64	20
1-Methylnaphthalene	0.00200	0.00180	0.00199	90.0	99.5	66.0-142			10.0	20
2-Methylnaphthalene	0.00200	0.00172	0.00187	86.0	93.5	62.0-136			8.36	20
2-Chloronaphthalene	0.00200	0.00181	0.00176	90.5	88.0	64.0-140			2.80	20
(S) Nitrobenzene-d5				89.0	99.5	31.0-160				
(S) 2-Fluorobiphenyl				79.5	76.0	48.0-148				
(S) p-Terphenyl-d14				87.5	94.5	37.0-146				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Guide to Reading and Understanding Your Laboratory Report

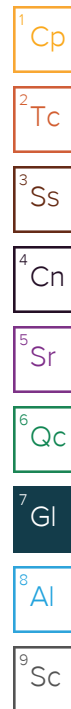
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.





Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

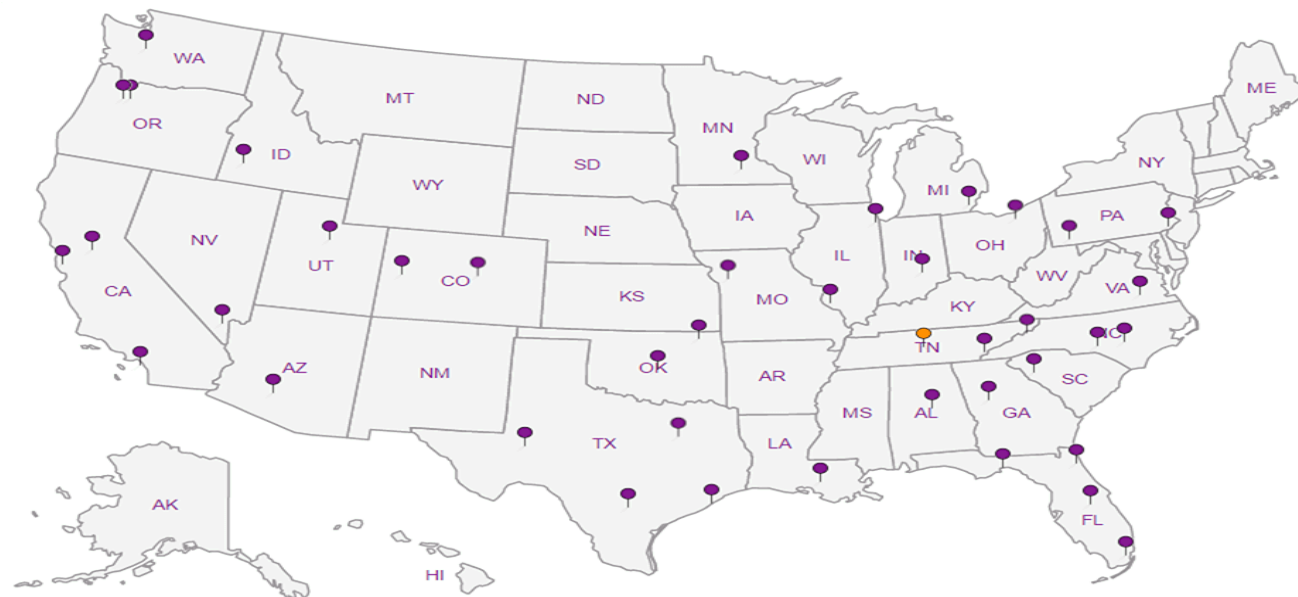
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Plains All American Pipeline - Entech

21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Billing Information:

Accounts Payable
333 Clay St., Ste 1600
Houston, TX 77002

Report to:
Kathleen Buxton

Email To: kathleen.buxton@entechservice.com,
cjbryant@paalp.com

Project
Description: **Hugh Gathering**

City/State
Collected: *Eunice NM*

Phone: **979-997-2338**
Fax:

Client Project #
PAA12006

Lab Project #
PLAINSENT-HUGH

Collected by (print):
SHANE DILLER

Site/Facility ID #
SRS - 2002-10235

P.O. #

Collected by (signature):
Shane Diller

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N ☐ Y ☒

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Date Results Needed

No.
of
Cntrs
34

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
<i>MW11</i>	<i>6</i>	<i>GW</i>		<i>5-14</i>	<i>1230</i>	<i>2</i>
<i>MW12</i>	<i>6</i>	<i>GW</i>		<i>5-14</i>	<i>1335</i>	<i>2</i>
<i>MW13</i>	<i>6</i>	<i>GW</i>		<i>5-14</i>	<i>1420</i>	<i>2</i>
		<i>GW</i>				
		<i>GW</i>				
		<i>GW</i>				
		<i>GW</i>				
		<i>GW</i>				
		<i>GW</i>				
		<i>GW</i>				

PAHSIMLV 40mlAmb-NoPres-WT

V8260BTEX 40mlAmb-HCI

RAD SCREEN: <0.5 mR/hr

Analysis / Container / Preservative

Chain of Custody

Page *2* of *2*



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# *L1099465*

Table #

Acctnum: **PLAINSENT**

Template: **T94129**

Prelogin: **P707772**

TSR: **134 - Mark W. Beasley**

PB:

Shipped Via:

Remarks Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: ☐ NP ☐ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☐ Y ☐ N

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes ☒ No ☐
HCL/MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: *1.9 ± 0.1 °C* Bottles Received: *38*

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: *5/16/19* Time: *8:45*

Hold:

Condition:
NCF ☒ OK

Plains All American Pipeline - Entech

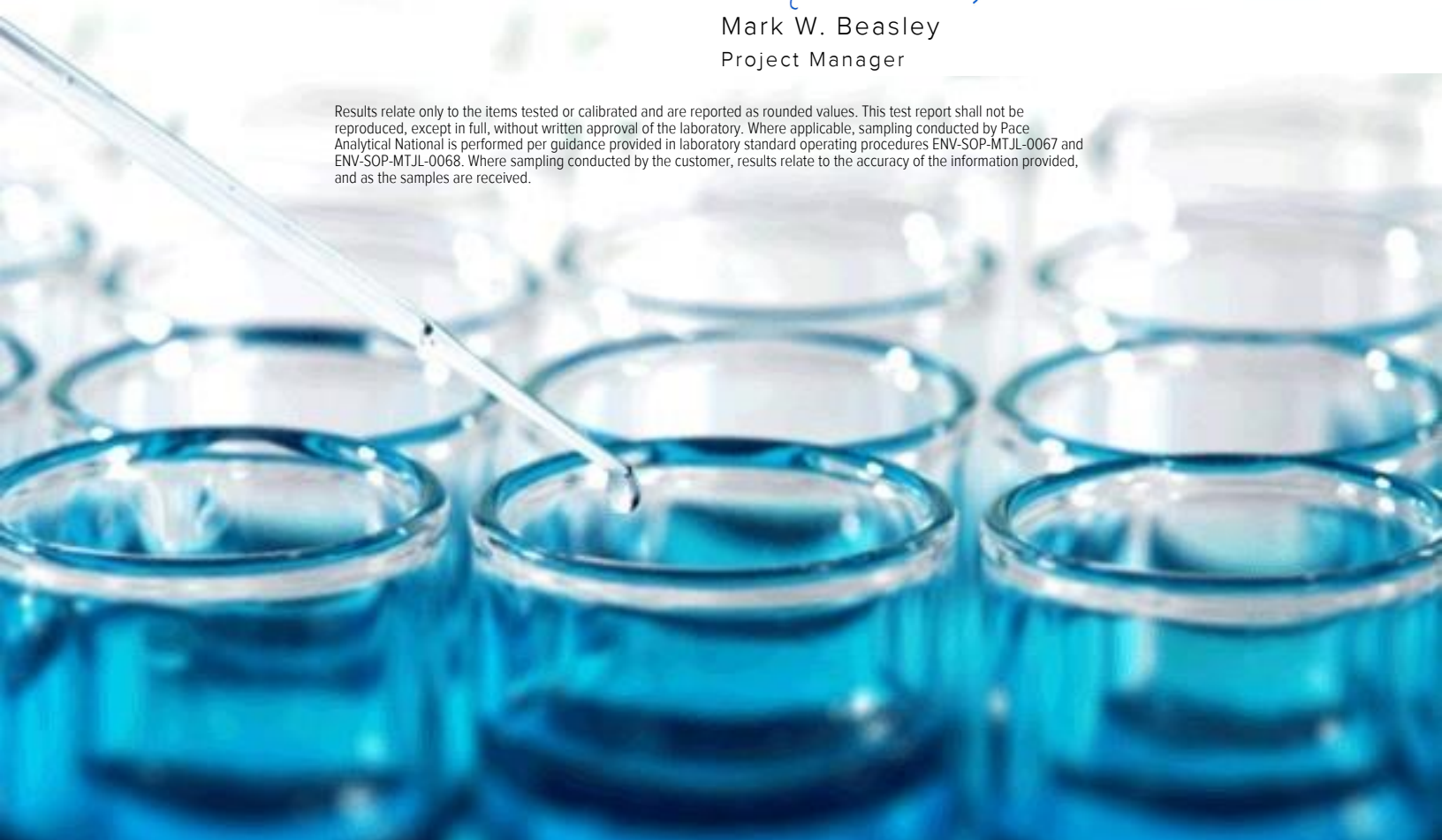
Sample Delivery Group: L1134083
Samples Received: 08/29/2019
Project Number: PAA12006
Description: Hugh Gathering
Site: SRS - 2002-10235
Report To: Kathleen Buxton
21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
MW3 L1134083-01	5	
MW5 L1134083-02	6	⁴ Cn
MW6 L1134083-03	7	⁵ Sr
MW7 L1134083-04	8	
MW11 L1134083-05	9	⁶ Qc
MW12 L1134083-06	10	
MW13 L1134083-07	11	⁷ Gl
Qc: Quality Control Summary	12	⁸ Al
Volatile Organic Compounds (GC/MS) by Method 8260B	12	
Gl: Glossary of Terms	13	⁹ Sc
Al: Accreditations & Locations	14	
Sc: Sample Chain of Custody	15	

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW3 L1134083-01 GW

				Collected by Greg Flores	Collected date/time 08/28/19 11:00	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 14:53	09/03/19 14:53	ZJM	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

MW5 L1134083-02 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:50	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 15:14	09/03/19 15:14	ZJM	Mt. Juliet, TN

⁴ Cn

⁵ Sr

MW6 L1134083-03 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:45	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 15:35	09/03/19 15:35	ZJM	Mt. Juliet, TN

⁶ Qc

⁷ Gl

MW7 L1134083-04 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:55	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 15:56	09/03/19 15:56	ZJM	Mt. Juliet, TN

⁸ Al

⁹ Sc

MW11 L1134083-05 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:40	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 16:17	09/03/19 16:17	ZJM	Mt. Juliet, TN

MW12 L1134083-06 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:35	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 16:37	09/03/19 16:37	ZJM	Mt. Juliet, TN

MW13 L1134083-07 GW

				Collected by Greg Flores	Collected date/time 08/28/19 10:30	Received date/time 08/29/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339163	1	09/03/19 16:58	09/03/19 16:58	ZJM	Mt. Juliet, TN

ACCOUNT:

Plains All American Pipeline - Entech

PROJECT:

PAA12006

SDG:

L1134083

DATE/TIME:

09/05/19 13:40

PAGE:

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.00464		0.00100	1	09/03/2019 14:53	WG1339163
Toluene	0.00507		0.00100	1	09/03/2019 14:53	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 14:53	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 14:53	WG1339163
(S) Toluene-d8	110		80.0-120		09/03/2019 14:53	WG1339163
(S) 4-Bromofluorobenzene	93.5		77.0-126		09/03/2019 14:53	WG1339163
(S) 1,2-Dichloroethane-d4	105		70.0-130		09/03/2019 14:53	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.00177		0.00100	1	09/03/2019 15:14	WG1339163
Toluene	ND		0.00100	1	09/03/2019 15:14	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 15:14	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 15:14	WG1339163
(S) Toluene-d8	107		80.0-120		09/03/2019 15:14	WG1339163
(S) 4-Bromofluorobenzene	92.6		77.0-126		09/03/2019 15:14	WG1339163
(S) 1,2-Dichloroethane-d4	105		70.0-130		09/03/2019 15:14	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/03/2019 15:35	WG1339163
Toluene	ND		0.00100	1	09/03/2019 15:35	WG1339163
Ethylbenzene	0.00305		0.00100	1	09/03/2019 15:35	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 15:35	WG1339163
(S) Toluene-d8	110		80.0-120		09/03/2019 15:35	WG1339163
(S) 4-Bromofluorobenzene	93.4		77.0-126		09/03/2019 15:35	WG1339163
(S) 1,2-Dichloroethane-d4	103		70.0-130		09/03/2019 15:35	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/03/2019 15:56	WG1339163
Toluene	ND		0.00100	1	09/03/2019 15:56	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 15:56	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 15:56	WG1339163
(S) Toluene-d8	110		80.0-120		09/03/2019 15:56	WG1339163
(S) 4-Bromofluorobenzene	91.1		77.0-126		09/03/2019 15:56	WG1339163
(S) 1,2-Dichloroethane-d4	104		70.0-130		09/03/2019 15:56	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/03/2019 16:17	WG1339163
Toluene	ND		0.00100	1	09/03/2019 16:17	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 16:17	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 16:17	WG1339163
(S) Toluene-d8	109		80.0-120		09/03/2019 16:17	WG1339163
(S) 4-Bromofluorobenzene	93.1		77.0-126		09/03/2019 16:17	WG1339163
(S) 1,2-Dichloroethane-d4	105		70.0-130		09/03/2019 16:17	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/03/2019 16:37	WG1339163
Toluene	ND		0.00100	1	09/03/2019 16:37	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 16:37	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 16:37	WG1339163
(S) Toluene-d8	109		80.0-120		09/03/2019 16:37	WG1339163
(S) 4-Bromofluorobenzene	92.3		77.0-126		09/03/2019 16:37	WG1339163
(S) 1,2-Dichloroethane-d4	104		70.0-130		09/03/2019 16:37	WG1339163

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/03/2019 16:58	WG1339163
Toluene	ND		0.00100	1	09/03/2019 16:58	WG1339163
Ethylbenzene	ND		0.00100	1	09/03/2019 16:58	WG1339163
Total Xylenes	ND		0.00300	1	09/03/2019 16:58	WG1339163
(S) Toluene-d8	110		80.0-120		09/03/2019 16:58	WG1339163
(S) 4-Bromofluorobenzene	92.3		77.0-126		09/03/2019 16:58	WG1339163
(S) 1,2-Dichloroethane-d4	105		70.0-130		09/03/2019 16:58	WG1339163

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3447215-4 09/03/19 13:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	109			80.0-120
(S) 4-Bromofluorobenzene	93.8			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3447215-1 09/03/19 11:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0250	0.0220	88.0	70.0-123	
Ethylbenzene	0.0250	0.0236	94.5	79.0-123	
Toluene	0.0250	0.0235	94.2	79.0-120	
Xylenes, Total	0.0750	0.0700	93.3	79.0-123	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			89.3	77.0-126	
(S) 1,2-Dichloroethane-d4			106	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

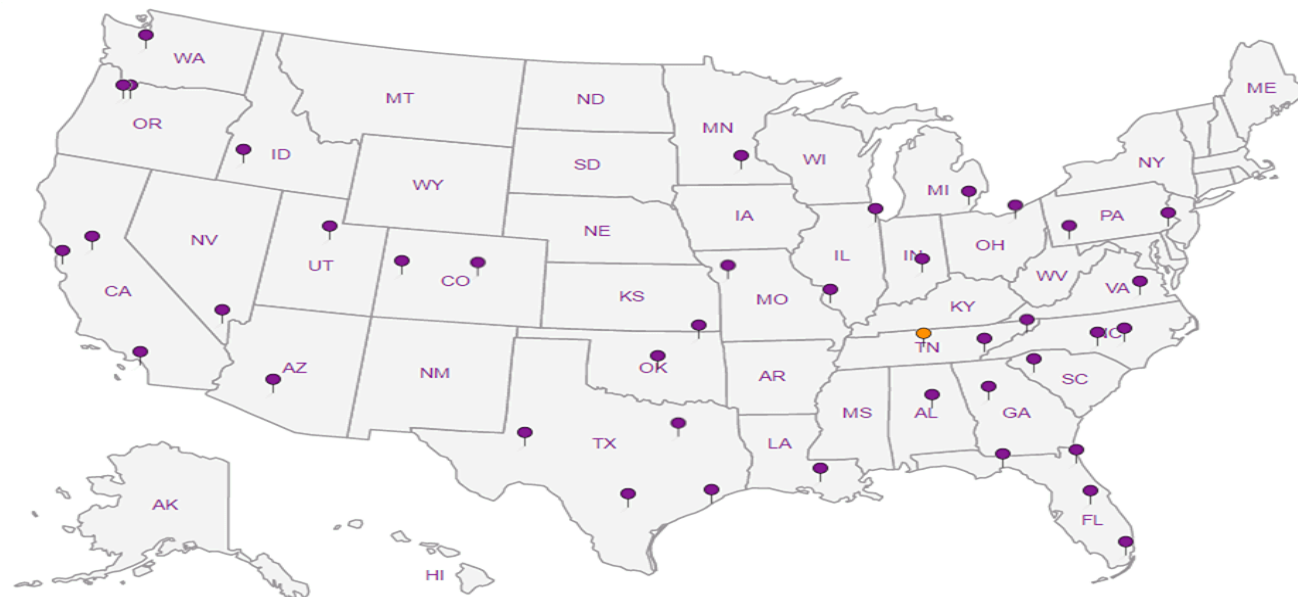
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Plains All American Pipeline - Entech

21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Billing Information:

Accounts Payable
333 Clay St., Ste 1600
Houston, TX 77002

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Kathleen Buxton

Email To: kathleen.buxton@entechservice.com,
cjbryant@paalp.com

Project
Description: **Hugh Gathering**

City/State
Collected: **Edwice, NM**

Phone: 979-997-2338
Fax:

Client Project #
PAA12006

Lab Project #
PLAINSENT-HUGH

Collected by (print):
Greg Flores

Site/Facility ID #
SRS - 2002-10235

P.O. #

Collected by (signature):
Greg Flores

Rush? (Lab MUST Be Notified)
☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Quote #

Date Results Needed

Immediately

Packed on Ice N ☐ Y ☒

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW 3		GW		8-28-19	1100	2
MW 5		GW		↑	1050	↑
MW 6		GW			1045	
MW 7		GW			1055	
MW 11		GW			1040	
MW 12		GW		↓	1035	↓
MW 13		GW		8-28-19	1030	2
		GW				
		GW				
		GW				

PAHSIMELV 40mlAmb-NoPres-WT

V8260BTEX 40mlAmb-HCl

Acctnum: PLAINSENT

Template: T94129

Prelogin: P707772

TSR: 134 - Mark W. Beasley

PB:

Shipped Via:

Remarks Sample # (lab only)

-01
02
03
04
05
06
07

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
☐ UPS ☐ FedEx ☐ Courier

Tracking # **Southwest**

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N
 COC Signed/Accurate: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 If Applicable
 VOA Zero Headspace: ☒ Y ☐ N
 Preservation Correct/Checked: ☒ Y ☐ N

RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)

Date: 8-28-19 Time: 14:00

Received by: (Signature)

Trip Blank Received: Yes (No) ☒
HCL / MeOH
TBR

Relinquished by: (Signature)

Date: 8-28-19 Time: 16:00

Received by: (Signature)

Temp: 13.0°C Bottles Received: 14
0.9±0.0.9

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: 8-28-19 Time: 8:00

Received for lab by: (Signature)

Date: 8/28/19 Time: 8:00

Hold:

Condition:
NCF / OK

Plains All American Pipeline - Entech

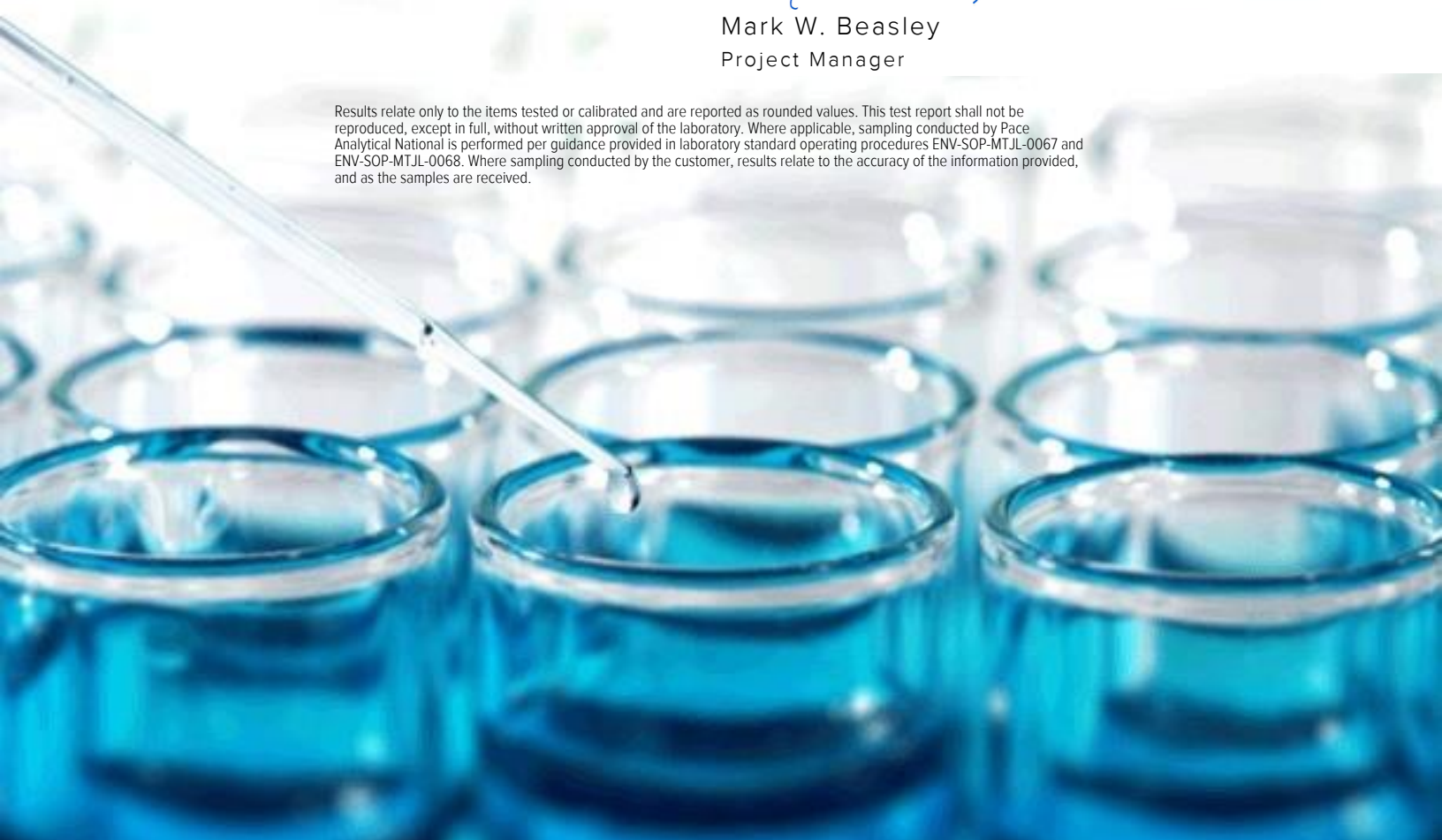
Sample Delivery Group: L1163774
Samples Received: 11/21/2019
Project Number: PAA12006
Description: Hugh Gathering
Site: SRS - 2002-10235
Report To: Kathleen Buxton
21 Waterway Ave., Suite 300
The Woodlands, TX 77380

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW3 L1163774-01 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 12:30	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 01:27	11/30/19 01:27	BMB	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

MW5 L1163774-02 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 13:00	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 01:47	11/30/19 01:47	BMB	Mt. Juliet, TN

⁴ Cn

⁵ Sr

MW6 L1163774-03 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 12:50	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 02:07	11/30/19 02:07	BMB	Mt. Juliet, TN

⁶ Qc

⁷ Gl

MW7 L1163774-04 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 12:40	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 02:28	11/30/19 02:28	BMB	Mt. Juliet, TN

⁸ Al

⁹ Sc

MW11 L1163774-05 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 13:10	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 02:48	11/30/19 02:48	BMB	Mt. Juliet, TN

MW12 L1163774-06 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 13:20	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 03:08	11/30/19 03:08	BMB	Mt. Juliet, TN

MW13 L1163774-07 GW

				Collected by Chris Sanchez	Collected date/time 11/20/19 13:30	Received date/time 11/21/19 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388799	1	11/30/19 03:28	11/30/19 03:28	BMB	Mt. Juliet, TN

ACCOUNT:

Plains All American Pipeline - Entech

PROJECT:

PAA12006

SDG:

L1163774

DATE/TIME:

12/04/19 09:18

PAGE:

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 01:27	WG1388799
Toluene	ND		0.00100	1	11/30/2019 01:27	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 01:27	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 01:27	WG1388799
(S) Toluene-d8	110		80.0-120		11/30/2019 01:27	WG1388799
(S) 4-Bromofluorobenzene	117		77.0-126		11/30/2019 01:27	WG1388799
(S) 1,2-Dichloroethane-d4	112		70.0-130		11/30/2019 01:27	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 01:47	WG1388799
Toluene	ND		0.00100	1	11/30/2019 01:47	WG1388799
Ethylbenzene	0.00857		0.00100	1	11/30/2019 01:47	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 01:47	WG1388799
(S) Toluene-d8	109		80.0-120		11/30/2019 01:47	WG1388799
(S) 4-Bromofluorobenzene	111		77.0-126		11/30/2019 01:47	WG1388799
(S) 1,2-Dichloroethane-d4	108		70.0-130		11/30/2019 01:47	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 02:07	WG1388799
Toluene	ND		0.00100	1	11/30/2019 02:07	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 02:07	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 02:07	WG1388799
(S) Toluene-d8	141	<u>J1</u>	80.0-120		11/30/2019 02:07	WG1388799
(S) 4-Bromofluorobenzene	136	<u>J1</u>	77.0-126		11/30/2019 02:07	WG1388799
(S) 1,2-Dichloroethane-d4	108		70.0-130		11/30/2019 02:07	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 02:28	WG1388799
Toluene	ND		0.00100	1	11/30/2019 02:28	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 02:28	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 02:28	WG1388799
(S) Toluene-d8	93.9		80.0-120		11/30/2019 02:28	WG1388799
(S) 4-Bromofluorobenzene	101		77.0-126		11/30/2019 02:28	WG1388799
(S) 1,2-Dichloroethane-d4	109		70.0-130		11/30/2019 02:28	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 02:48	WG1388799
Toluene	ND		0.00100	1	11/30/2019 02:48	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 02:48	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 02:48	WG1388799
(S) Toluene-d8	114		80.0-120		11/30/2019 02:48	WG1388799
(S) 4-Bromofluorobenzene	110		77.0-126		11/30/2019 02:48	WG1388799
(S) 1,2-Dichloroethane-d4	112		70.0-130		11/30/2019 02:48	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 03:08	WG1388799
Toluene	ND		0.00100	1	11/30/2019 03:08	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 03:08	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 03:08	WG1388799
(S) Toluene-d8	111		80.0-120		11/30/2019 03:08	WG1388799
(S) 4-Bromofluorobenzene	105		77.0-126		11/30/2019 03:08	WG1388799
(S) 1,2-Dichloroethane-d4	111		70.0-130		11/30/2019 03:08	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	11/30/2019 03:28	WG1388799
Toluene	ND		0.00100	1	11/30/2019 03:28	WG1388799
Ethylbenzene	ND		0.00100	1	11/30/2019 03:28	WG1388799
Total Xylenes	ND		0.00300	1	11/30/2019 03:28	WG1388799
(S) Toluene-d8	116		80.0-120		11/30/2019 03:28	WG1388799
(S) 4-Bromofluorobenzene	113		77.0-126		11/30/2019 03:28	WG1388799
(S) 1,2-Dichloroethane-d4	112		70.0-130		11/30/2019 03:28	WG1388799

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Method Blank (MB)

(MB) R3477979-2 11/29/19 21:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	120			80.0-120
(S) 4-Bromofluorobenzene	116			77.0-126
(S) 1,2-Dichloroethane-d4	96.1			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3477979-1 11/29/19 20:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00469	93.8	70.0-123	
Ethylbenzene	0.00500	0.00496	99.2	79.0-123	
Toluene	0.00500	0.00516	103	79.0-120	
Xylenes, Total	0.0150	0.0162	108	79.0-123	
(S) Toluene-d8			114	80.0-120	
(S) 4-Bromofluorobenzene			114	77.0-126	
(S) 1,2-Dichloroethane-d4			105	70.0-130	

L1163712-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1163712-01 11/30/19 03:49 • (MS) R3477979-3 11/30/19 04:09 • (MSD) R3477979-4 11/30/19 04:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	U	0.00457	0.00538	91.4	108	1	17.0-158			16.3	27
Ethylbenzene	0.00500	U	0.00513	0.00564	103	113	1	30.0-155			9.47	27
Toluene	0.00500	U	0.00502	0.00605	100	121	1	26.0-154			18.6	28
Xylenes, Total	0.0150	U	0.0153	0.0168	102	112	1	29.0-154			9.35	28
(S) Toluene-d8					111	116		80.0-120				
(S) 4-Bromofluorobenzene					111	101		77.0-126				
(S) 1,2-Dichloroethane-d4					112	109		70.0-130				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

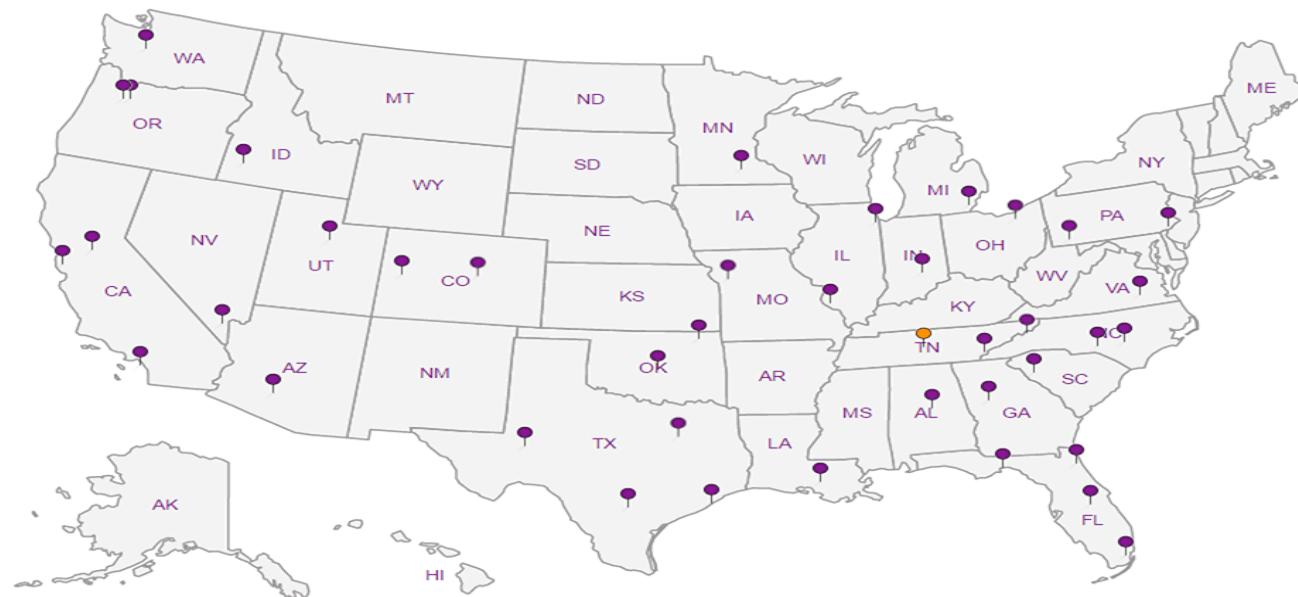
Third Party Federal Accreditations

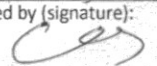
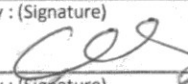
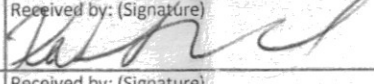
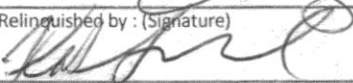
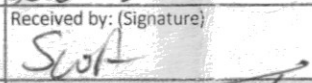
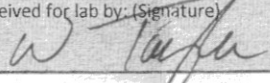
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A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Plains All American Pipeline - Entech 21 Waterway Ave., Suite 300 The Woodlands, TX 77380				Billing Information: Accounts Payable 333 Clay St., Ste 1600 Houston, TX 77002				Analysis / Container / Preservative				Chain of Custody Page 1 of 1	
				Email To: kathleen.buxton@entechservice.com, cjbryant@paalp.com				Pres Chk					
Report to: Kathleen Buxton				Project Description: Hugh Gathering				City/State Collected: EUNICE NM				12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Phone: 979-997-2338 Fax:		Client Project # PAA12006		Lab Project # PLAINSENT-HUGH		P.O. #		Quote #		L # 1165779 Table # B234			
Collected by (print): CITUS SANCHEZ		Site/Facility ID # SRS - 2002-10235		Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed		No. of Cntrs		Acctnum: PLAINSENT Template: T94129 Prelogin: P707772 TSR: 134 - Mark W. Beasley PB:			
Collected by (signature): 		Immediately Packed on Ice N ☐ Y ☒		Samples returned via: ☐ UPS ☐ FedEx ☐ Courier		Tracking #		RAD SCREEN: <0.5 mR/hr		Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N COC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N If Applicable VOA Zero Headspace: ☒ Y ☐ N Preservation Correct/Checked: ☒ Y ☐ N			
Sample ID		Comp/Grab		Matrix *		Depth		Date		Time			
M/W 3				GW				11-20-19		1230			
M/W 5				GW				↑		1300			
M/W 6				GW						1250			
M/W 7				GW						1240			
M/W 11				GW						1310			
M/W 12				GW				↓		1320			
M/W 13				GW				11-20-13		1330			
				GW									
				GW									
				GW									
Relinquished by: (Signature) 		Date: 11-20-19		Time: 14:00		Received by: (Signature) 		Trip Blank Received: Yes ☒ No ☐ HCL / MeOH TBR		Temp: 44.1 °C Bottles Received: 14			
Relinquished by: (Signature) 		Date: 11-20-19		Time: 17:45		Received by: (Signature) 		Temp: 44.1 °C Bottles Received: 14		If preservation required by Login: Date/Time			
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) 		Date: 11/21/19		Time: 800			
								Hold:		Condition: NCF / OK			

APPENDIX B

Mann-Kendall Trend Test