



**2019 ANNUAL MONITORING REPORT
AND SITE CLOSURE REQUEST**

RED BYRD #1

**Unit Letter "H" (SE/NE), Section 1, Township 20 South, Range 36
East Latitude 32° 36' 10.15" North, Longitude 103° 18' 00.35" West
Lea County, New Mexico
Plains SRS Number: TNM Red Byrd 1
NMOCD Reference Number:
1R-0085**

PREPARED FOR:

**PLAINS MARKETING, L.P.
333 CLAY STREET, SUITE 1600
HOUSTON, TEXAS 77002**

PREPARED BY:

**TRC ENVIRONMENTAL CORPORATION
10 Desta Drive, Suite 150E
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February 2020

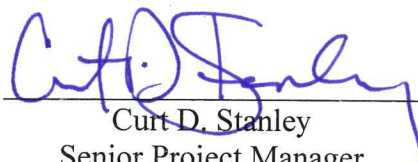

Curt D. Stanley
Senior Project Manager

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2019 Annual Monitoring Report and Site Closure Request

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INTRODUCTION

TRC Environmental Corporation (TRC), on behalf of Plains Marketing, LP (Plains), is pleased to submit this *Annual Monitoring Report* in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1st of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2019 only. For reference, a "Site Location Map" is provided as Figure 1.

Groundwater monitoring was conducted semi-annually during the 2019 reporting period to assess the levels and extent of dissolved phase constituents and Phase-Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 feet were not sampled.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The Site is located approximately four (4) miles southwest of the town of Monument, New Mexico. The legal description of the Site is Unit Letter "H" (SE/NE), Section 1, Township 20 South, Range 36 East. The geographic coordinates of the Site are 32° 36' 10.15" North latitude and 103° 18' 00.35" West longitude.

In January 2000, evidence of a historical release was discovered by the landowner, Mr. Red Byrd, and brought to the attention of Enron Oil Trading and Transportation (EOTT), who acquired the pipeline from Texas New Mexico Pipeline Company in 1999. On January 1, 2009, Basin assumed oversight of groundwater daily operations, sampling, and reporting at the Release Site. In the 4th quarter of 2017, TRC assumed oversight of groundwater daily operations, sampling, and reporting at the Release Site.

Approximately 8,900 cubic yards (cy) of impacted soil was excavated, shredded, and blended with nutrients. Approximately 3,700 cy of the impacted soil was transported to Plains Lea Station Landfarm (Discharge Permit #GW-351). On completion of excavation activities, confirmation soil samples were collected from the excavation and stockpiles. Review of laboratory analytical results indicated soil samples collected from the excavation were less than NMOCD regulatory guidelines. The excavation was backfilled with the blended soil, approximately 3,500 cubic yards of non-impacted, locally obtained topsoil was transported to the Site, and the area was contoured to topographic grade.

At the Red Byrd #1 Site, two (2) areas of hydrocarbon impact related to the Plains pipeline have been identified as Red Byrd #1 and Red Byrd Ranch Historical. The first area of impact (Red Byrd #1) is centered on and around monitor well MW-1. The second area of impact (Red Byrd Ranch Historical – 1R 1299) related to the Plains pipeline is the subject of this Annual Monitoring Report and is centered on monitor well MW-12. The soil issues at the Red Byrd #1 and Red Byrd Ranch Historical sites have been remediated, and groundwater monitoring and sampling are ongoing. For the purpose of groundwater monitoring, the remaining activities at the Site are conducted at Red Byrd #1.

On November 17, 2008, Plains assigned excavation oversight of the Red Byrd Ranch Historical Release Site to Basin. On December 10, 2008, Basin resumed excavation activities at the Release Site,

and on September 9, 2009, backfilling and restoration activities at the Red Byrd Ranch Historical Release Site were completed.

During sampling conducted in the first quarter of 2009, additional groundwater samples were collected from each of the nineteen (19) on-site monitor wells and analyzed for concentrations of chloride and total dissolved solids (TDS). The analytical results indicated elevated TDS concentrations, in excess of 10,000 mg/L, were present in fifteen (15) monitor wells. On September 9, 2009, Plains requested NMOCD approval to plug and abandon monitor wells exhibiting TDS concentrations exceeding 10,000 mg/L (MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, MW-15, MW-16, and MW-19). Plains requested monitor wells associated with the ongoing groundwater issues at the Red Byrd Ranch Historical release (MW-6, MW-7, MW-11, MW-12, MW-17, and MW-18) be placed on a semi-annual sampling schedule to monitor the Red Byrd Ranch Historical PSH plume.

On October 2, 2009, Plains received NMOCD approval to reduce the sampling frequency for monitor wells MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19 to a semi-annual schedule, and plug and abandon monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15.

In October 2009, a *Red Byrd Ranch Historical Remediation Summary and Soil Closure Request* was submitted to the NMOCD Santa Fe Office. On December 9, 2009, Plains received correspondence from the NMOCD Santa Fe Office, indicating the report was accepted and no further soil remediation was required at the Site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Monitor well MW-2 was plugged on November 9, 2006. Following the plugging activities, plugging reports were submitted to the NMOCD Santa Fe Office.

Currently, eight (8) monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19) are located on the Red Byrd #1 Site. Monitor wells MW-6, MW-7, MW-11, MW-16, MW-17, MW-18, and MW-19 are gauged quarterly and sampled on a semi-annual schedule.

FIELD ACTIVITIES

Product Recovery Efforts

During the 2019 reporting period, a measureable thickness of PSH was detected in monitor well MW-12 during all four (4) quarters. The average PSH thickness in monitor well MW-12 was 2.39 feet and a maximum PSH thickness of 2.48 feet was observed on November 25, 2019. Table 1 depicts the groundwater gauging data for the reporting period. No PSH was recovered from the Site during the 2019 reporting period. Approximately 465 gallons (11.1 barrels) of PSH was recovered from monitor well MW-12 from February 2009 through December 2019.

Groundwater Monitoring

The on-site monitor wells were gauged and sampled for benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations on June 4, and November 25, 2019. During the sampling events, the monitoring wells were purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos pump. Groundwater was allowed to recharge, and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer-mounted polystyrene tank and disposed of at an NMOCD-approved disposal facility near Monument, New Mexico.

Locations of the groundwater monitoring wells and the inferred groundwater elevations, which were constructed from measurements collected during the 1st, 2nd, 3rd and 4th quarters of 2019, are depicted in Figures 2A through 2D. The "Inferred Groundwater Gradient Map" from the most recent gauging event (Figure 2D, November 25, 2019) indicates a general gradient of approximately 0.0026 feet/foot to the south-southeast as measured between groundwater monitor wells MW-18 and MW-19.

The corrected groundwater elevation ranged between 3,530.31 and 3,533.69 feet above mean sea level in monitor wells MW-19 on November 25, 2019 and MW-18 on February 19, 2019, respectively. The "2019 Groundwater Elevation Data" is provided as Table 1.

LABORATORY RESULTS

As requested by the NMOCD in a November 2017 meeting, a sample of PSH was collected from monitor well MW-12 and submitted to Permian Basin Environmental Lab, L.P. in Midland, Texas. The PSH was analyzed for concentrations of TPH by EPA Method 8015M. The analytical results indicated the sample exhibited a gasoline range organics (GRO) concentration of 217,000 mg/kg (wet), a diesel range organics (DRO) concentration of 218,000 mg/Kg (wet). The total TPH concentration of the PSH sample was 505,000 mg/Kg (wet). Please reference the laboratory report provided as Appendix A.

Semi-annual groundwater samples collected from the monitor wells during the 2nd and 4th quarter sampling events were delivered to Permian Basin Environmental Laboratories in Midland, Texas, for determination of BTEX concentrations by EPA Method SW846-8021B. A summary of benzene and BTEX constituent concentrations is presented in Table 2, "2019 Concentrations of BTEX in Groundwater". During the 4th quarter sampling event the monitor wells were sampled for concentrations of Polynuclear Aromatic Hydrocarbons (PAH) by EPA Method 8270. A summary of "2018 - 2019 Concentrations of Polynuclear Aromatic Hydrocarbons in Groundwater" is presented in Table 3. Laboratory analytical reports are provided as Appendix A. The 2nd and 4th quarter "Groundwater Concentration & Inferred PSH Extent" map are provided as Figure 3A and Figure 3B.

For the purposes of this annual monitoring report, laboratory analytical results were compared to NMOCD regulatory guidelines based on the New Mexico groundwater standards found in Section 20.6.2.3103 of the New Mexico Administrative Code (NMAC). However, it should be noted, due to the TDS concentrations in the groundwater in the immediate area, the closure criteria for this Site is not based on the standards noted above.

Monitor well MW-6 is sampled on a semi-annual schedule and the analytical results indicated benzene concentrations ranged from less than the applicable laboratory reporting limit (RL) during the 4th quarter to 0.00470 mg/L during the 2nd quarter. The analytical results indicated benzene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarters of the reporting period. Toluene, ethylbenzene, and xylene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarters of the reporting period.

PAH analysis during the 4th quarter sampling event indicated all PAH concentrations were below NMWQCC Drinking Water Standards.

Monitor well MW-7 is sampled on a semi-annual schedule and the analytical results indicated BTEX constituent concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated all PAH concentrations were below NMWQCC Drinking Water Standards.

Monitor well MW-11 is sampled on a semi-annual schedule and the analytical results indicated benzene concentrations ranged from 0.0163 mg/L during the 4th quarter to 0.0302 mg/L during the 2nd quarter. Benzene concentrations were above the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Toluene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarters. Ethylbenzene concentrations ranged from less than the applicable laboratory RL during the 2nd quarter to 0.00358 mg/L during the 4th quarter. Ethylbenzene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Xylene concentrations ranged from 0.0279 mg/L during the 2nd quarter to 0.0361 mg/L during the 4th quarter. Xylene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated all PAH concentrations were below NMWQCC Drinking Water Standards.

Monitor well MW-12 is monitored on a semi-annual schedule. Monitor well MW-12 was not sampled during the 2nd and 4th quarters of the reporting period due to the presence of PSH in the monitor well. PSH thicknesses of 2.25 feet and 2.48 feet were reported during the 2nd and 4th quarters of the reporting period. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-16 is sampled on a semi-annual schedule and the analytical results indicated benzene concentrations ranged from 0.00687 mg/L during the 4th quarter to 0.0158 mg/L during the 2nd quarter. Benzene concentrations were above the NMOCD regulatory guidelines during 2nd quarter sampling event. Toluene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarters. Ethylbenzene concentrations ranged from less than the applicable laboratory RL during the 2nd quarter to 0.00988 mg/L during the 4th quarter. Ethylbenzene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Xylene concentrations ranged from 0.00200 mg/L during the 2nd quarter to

0.00593 mg/L during the 4th quarter. Xylene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated all PAH concentrations were below NMWQCC Drinking Water Standards.

Monitor well MW-17 is sampled on a semi-annual schedule and the analytical results indicated benzene concentrations ranged from 0.0115 mg/L during the 4th quarter to 0.0931 mg/L during the 2nd quarter. Benzene concentrations were above the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Toluene concentrations ranged from less than the applicable laboratory RL during the 4th quarter to 0.00105 mg/L during the 2nd quarter. Toluene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Ethylbenzene concentrations ranged from 0.0357 mg/L during the 4th quarter to 0.0480 mg/L during the 2nd quarter. Ethylbenzene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events. Xylene concentrations ranged from 0.03898 mg/L during the 4th quarter to 0.0533 mg/L during the 2nd quarter. Xylene concentrations were below the NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated elevated concentrations of benzo[a]anthracene (0.00027 mg/L), chrysene (0.00073 mg/L), fluorene (0.0049 mg/L), phenanthrene (0.0052 mg/L), pyrene (0.0016 mg/L), and naphthalene (0.0613 mg/L), which are above NMWQCC Drinking Water Standards.

Monitor well MW-18 is sampled on a semi-annual schedule and the analytical results indicated BTEX constituent concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated elevated concentrations of chrysene (0.00042 mg/L), which is above NMWQCC Drinking Water Standards.

Monitor well MW-19 is sampled on a semi-annual schedule and the analytical results indicated BTEX constituent concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines during the 2nd and 4th quarter sampling events.

PAH analysis during the 4th quarter sampling event indicated all PAH concentrations were below NMWQCC Drinking Water Standards.

SUMMARY

This report presents the results of monitoring activities for the 2019 annual monitoring period. Currently, there are eight (8) groundwater monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19) on-site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14 and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Following the plugging activities, plugging reports were

submitted to the NMOCD Santa Fe Office. Monitor well MW-2 had previously been abandoned on November 9, 2006.

The "Inferred Groundwater Gradient Map" from the most recent gauging event (Figure 2D, November 25, 2019) indicates a general gradient of approximately 0.0026 feet/foot to the south-southeast as measured between groundwater monitor wells MW-18 and MW-19.

During the 2019 reporting period, a measurable thickness of PSH was detected in monitor well MW-12 during all four (4) quarters. The average PSH thickness in monitor well MW-12 was 2.39 feet and a maximum PSH thickness of 2.48 feet was observed on November 25, 2019. Table 1 depicts the groundwater gauging data for the reporting period. No PSH was recovered from the Site during the 2019 reporting period. Approximately 465 gallons (11.1 barrels) of PSH was recovered from monitor well MW-12 from February 2009 through December 2019.

As requested by the NMOCD in a November 2017 meeting, a sample of PSH was collected from monitor well MW-12 and submitted to Permian Basin Environmental Lab, L.P. in Midland, Texas. The PSH was analyzed for concentrations of TPH by EPA Method 8015M. The analytical results indicated the sample exhibited a gasoline range organics (GRO) concentration of 217,000 mg/kg (wet), a diesel range organics (DRO) concentration of 218,000 mg/Kg (wet). The total TPH concentration of the PSH sample was 505,000 mg/Kg (wet). Please reference the laboratory report provided as Appendix A.

In addition, the NMOCD requested a copy of the "fingerprint" analysis and laboratory study which were initially provided to the NMOCD in the *Stage 1 Abatement Plan* dated May 2000. Per the *Stage 1 Abatement Plan*, "During the drilling and completion of the site monitor wells, a distinct odor similar to a solvent was detected in the groundwater". The study was conducted to compare soil samples in the smear zone with surface soil samples (Samples SS-1 and SS-2) and a crude oil standard. The "fingerprint" analysis and study are provided in Appendix B.

CONCLUSIONS

On March 10, 2017, Plains hand-delivered a copy of the Red Byrd #1 *Groundwater Resource Assessment* (Report) to the NMOCD in Santa Fe. The Report was prepared for Plains by ESE Partners, LLC (ESE) of Houston, Texas and dated December 6, 2016. The purpose of the Report was to review existing data provided to ESE by Plains and propose an alternative abatement plan in accordance with New Mexico Administrative Code (NMAC) 19.15.30.9E. The ESE Report concluded the following findings:

- Based on TDS data collected from the Site, and previous determinations from the NMOCD with regard to plugging and abandoning other on-site wells, the groundwater resource appears to be unfit for human ingestion and irrigation;
- According to the United States Geological Survey (USGS), groundwater in the vicinity of the Site is obtained from the formations that are not sufficient for irrigation use and barely provide enough (groundwater) for rural domestic and livestock requirements;
- A Mobil Dual Phase Extraction (MDPE) event conducted in 2011 only recovered 11.19 gallons of PSH, indicating a low level of recovery (approximately 0.57% by volume). Additionally, recorded recharge from the event was approximately 0.001 gal/day, suggesting the groundwater

bearing unit does not appear to yield sufficient volume of PSH for MDPE to be an effective remedy;

- Approximately four (4) years of weekly bailing appear to have had minimal or no effect on PSH levels, suggesting that the Site has likely reached the point of diminishing returns;
- Other options, such as in-situ chemical oxidation via subsurface injection is not typically effective in the remediation of free-phase PSH;
- On-site soil has been abated so that water contaminants in the vadose zone are not capable of contaminating groundwater or surface water;
- Statistical extrapolation of benzene concentrations has indicated a projected decrease in concentration of benzene over the remainder of a twenty (20) year period, such that projected future reductions during that time would be less than 20 percent of the current concentration;
- Based on data obtained from sampling events, contaminant concentrations in groundwater at the Site do not exceed their respective NMOCD Target Cleanup Levels and/or Alternate Abatement Standards;
- There is strong evidence to suggest that at least some of the groundwater contamination at the Red Byrd #1 Site is attributable to an off-site source. Based on the up-gradient position of monitor wells containing elevated TDS and BTEX concentrations, and the presence of numerous (20-plus) pipelines in the area, abandoned pits located northwest and south of the Release, numerous facility and drilling pads, production wells, a refinery and a chemical plant all within one-half mile of the Release Site, there appears to be multiple potential responsible parties contributing to the contaminant plume.

Please reference the Red Byrd #1 *Groundwater Resource Assessment* dated December 6, 2016 for additional details.

In addition to the aforementioned findings, Plains submits a copy of a letter dated August 16, 1991 from the Hazardous and Radioactive Materials Bureau (HRMB) of the New Mexico Environmental Department (NMED) concerning groundwater contamination caused by the Climax Chemical Company. The Climax Chemical Company Plant is located approximately three (3) miles west of the City of Monument and approximately one and one quarter (1.25) miles up-gradient of the Red Byrd #1 Release Site. Please reference the NMED letter provided as Appendix C.

GROUNDWATER CLOSURE REQUEST

Based on the findings presented:

- In the Red Byrd #1 *Groundwater Resource Assessment* dated December 6, 2016. This Report was submitted to the NMOCD on March 10, 2017.
- The 1991 HRMB NMED letter concerning the groundwater contamination caused by the Climax Chemical Company, located approximately one and one-quarter (1.25) miles up-gradient of the Red Byrd #1 Site (Appendix C).
- The analytical results and laboratory study of “fingerprint” analysis of soil samples at the Release Site (Appendix B).
- The historical BTEX impact in monitor well MW-18, located up-gradient of the Red Byrd #1 Release Site.

- The majority of on-site monitor wells exhibit TDS concentrations in excess of the abatable standard of 10,000 mg/L and are considered non-abatable under NMAC 20.6.2.3101, US EPA potable water standards and USBR irrigation standards. This information was presented to the NMOCD in the 2016 Annual Monitoring Report and in the *Groundwater Resource Assessment*.
- Numerous pipelines, facilities and likely historical drilling, production, or disposal pits located on and adjacent to the Red Byrd #1 Release Site.

Based on the aforementioned findings, Plains requests NMOCD approval to cease groundwater monitoring and sampling at the Red Byrd #1 Release Site. On NMOCD approval, the eight (8) remaining monitor wells will be plugged and abandoned by a New Mexico licensed water well driller in accordance with New Mexico Office of the State Engineer (NMOSE) and NMOCD rules. Following the plugging and abandonment of the monitor wells, plugging reports will be submitted to the NMOSE and NMOCD.

SITE CLOSURE REQUEST

Plains requests NMOCD Site Closure for the Red Byrd #1 Release Site.

LIMITATIONS

TRC has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

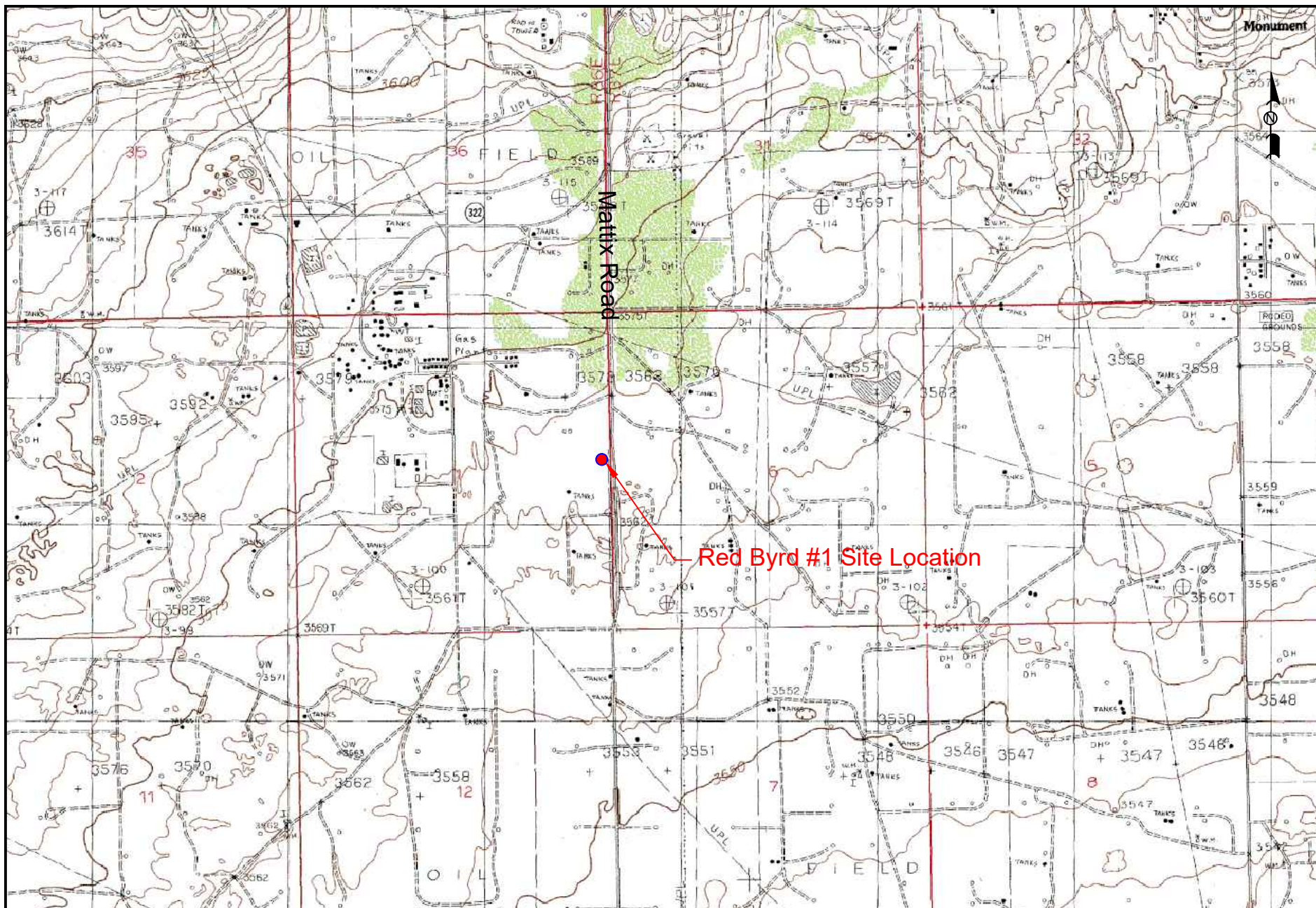
TRC has examined and relied upon documents referenced in the report and has relied on Basin and on oral statements made by certain individuals and information generated by Basin. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.


This report has been prepared for the benefit of Plains. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or Plains.

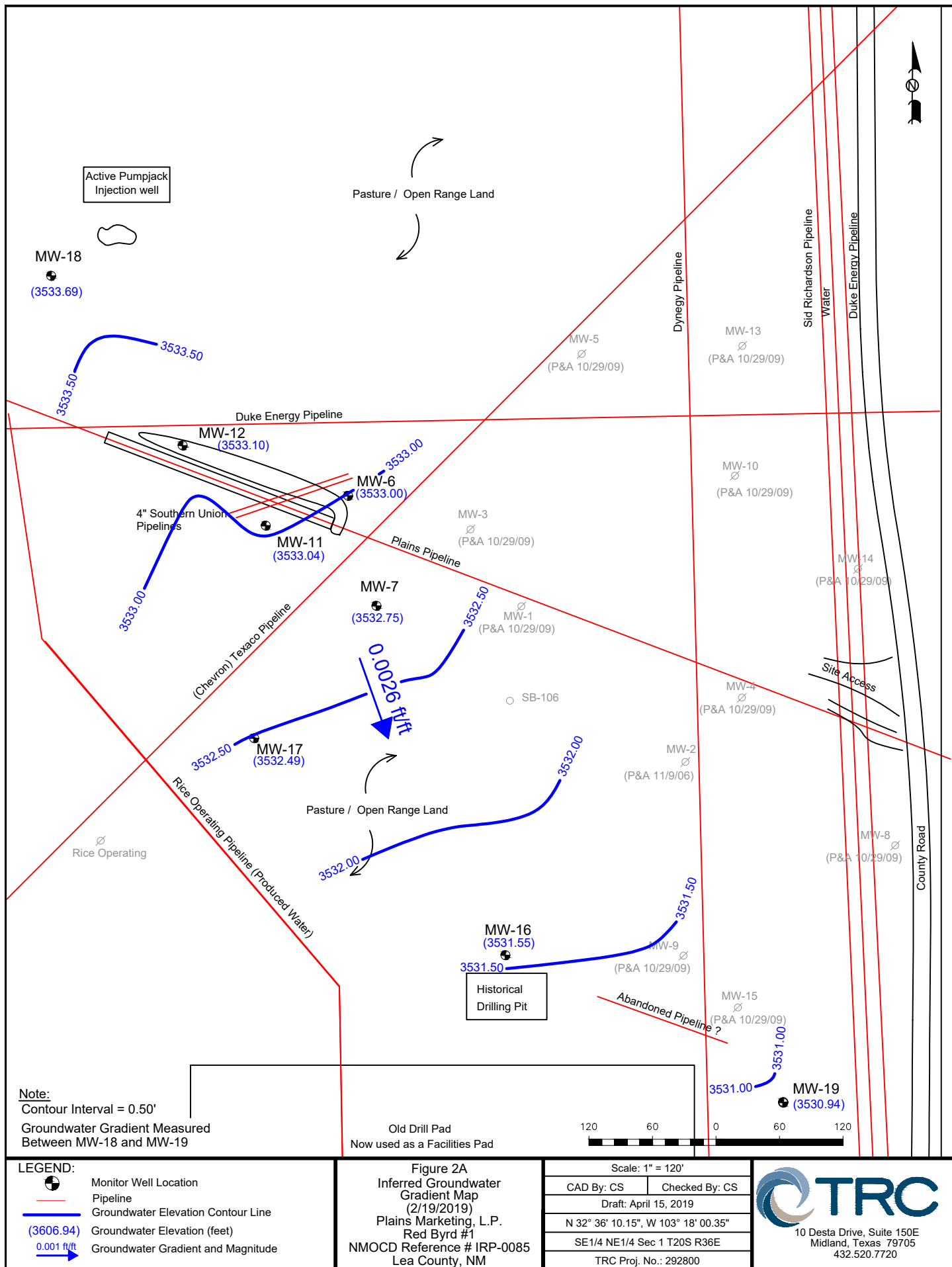
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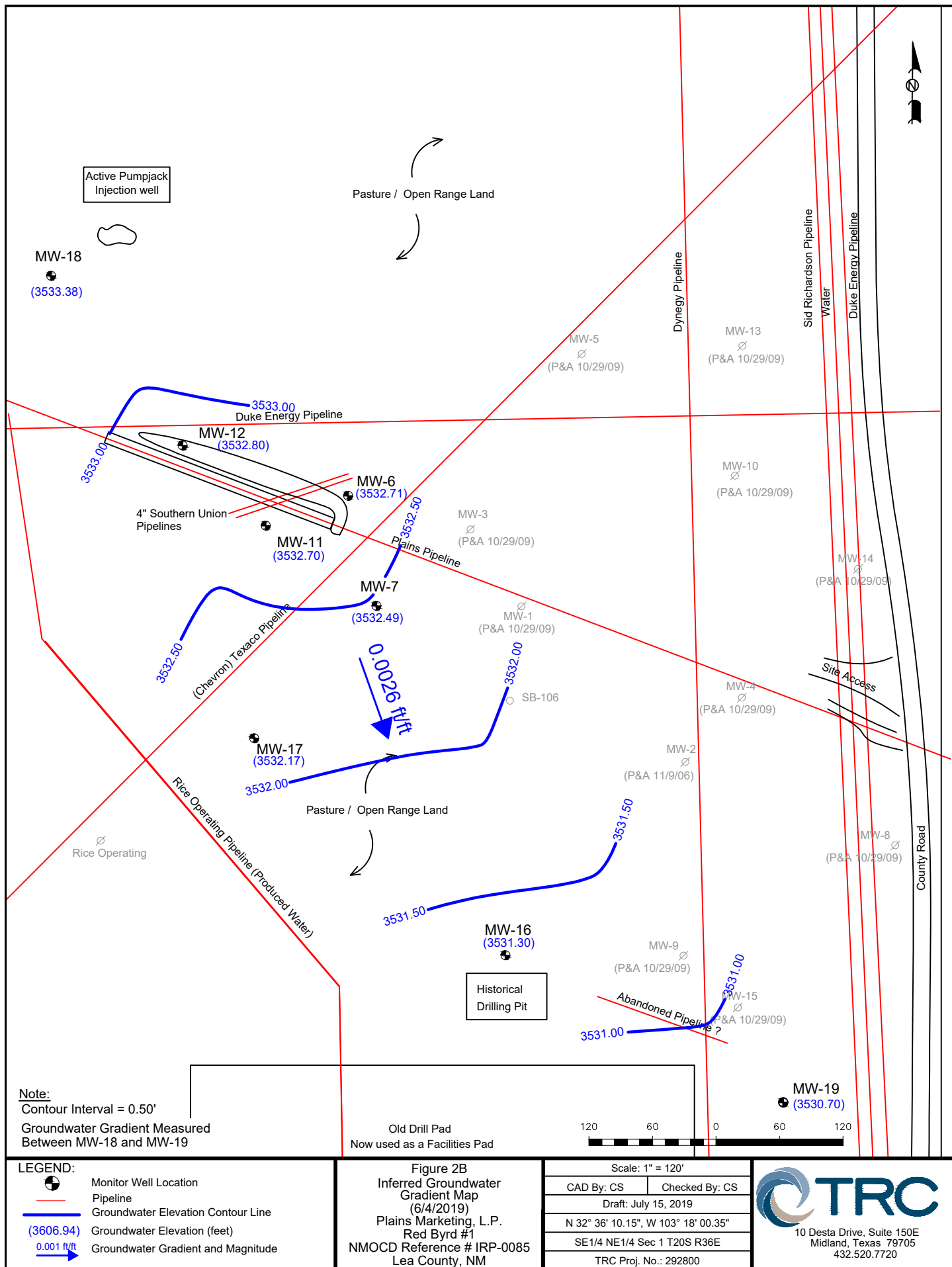
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New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
- Copy 2: New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240
- Copy 3: Camille Bryant
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cjbryant@paalp.com
- Copy 4: Jeff Dann
Plains Marketing, L.P.
333 Clay Street
Suite 1600
Houston, TX 77002
jpdann@paalp.com
- Copy 5: TRC Environmental Corporation
10 Desta Drive, Suite 150E
Midland, TX 79705
cdstanley@trcsolutions.com

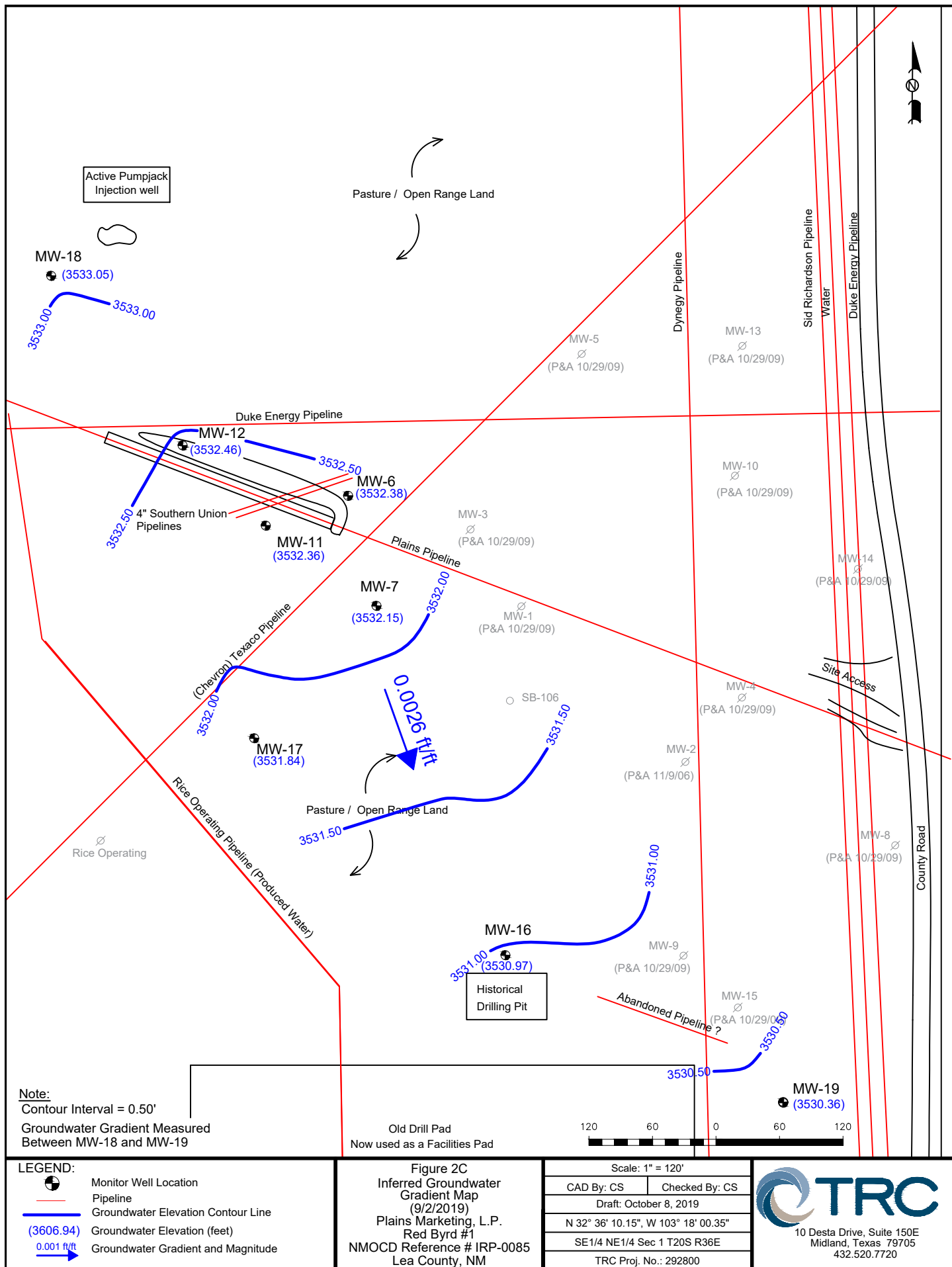
Figures

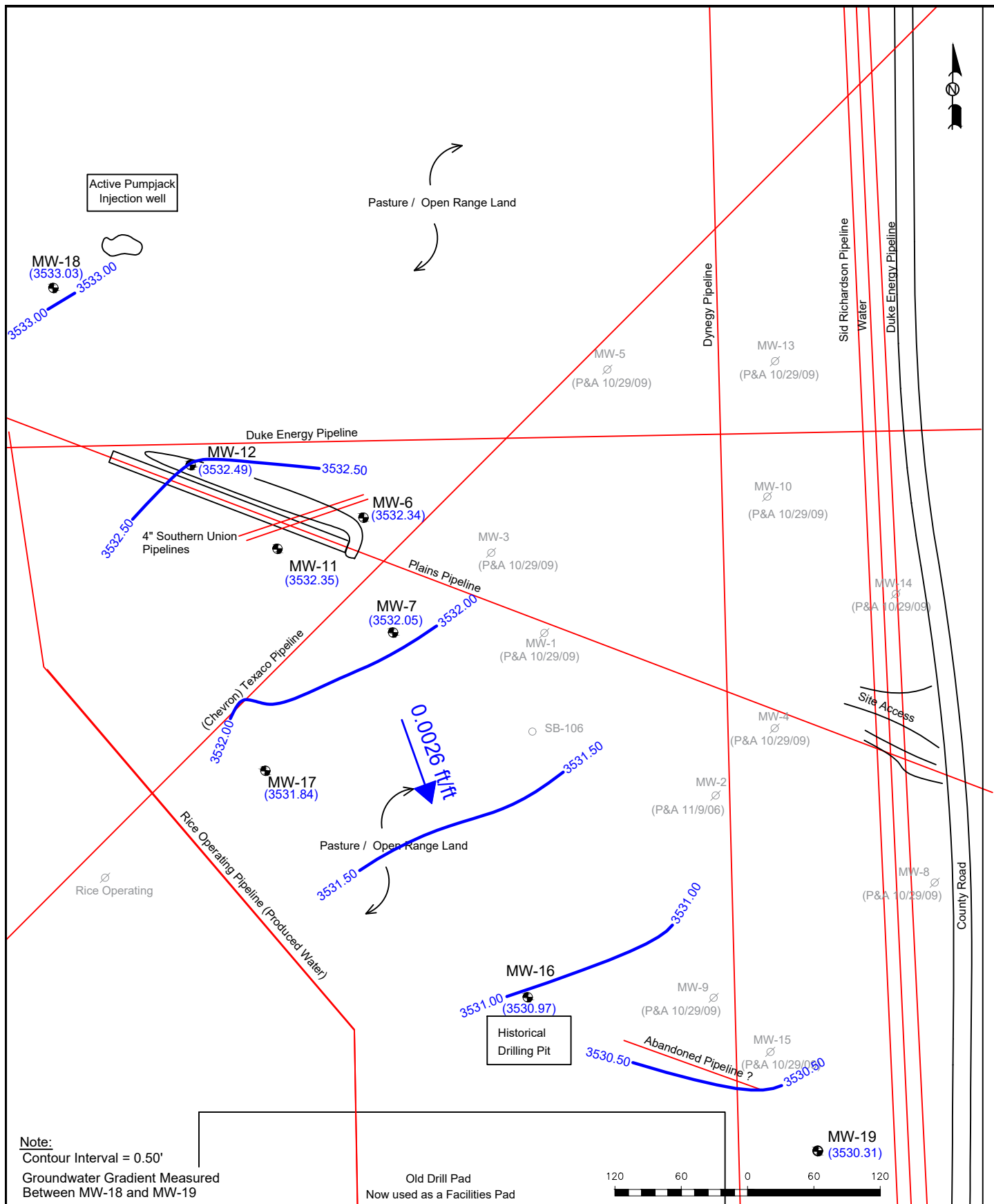


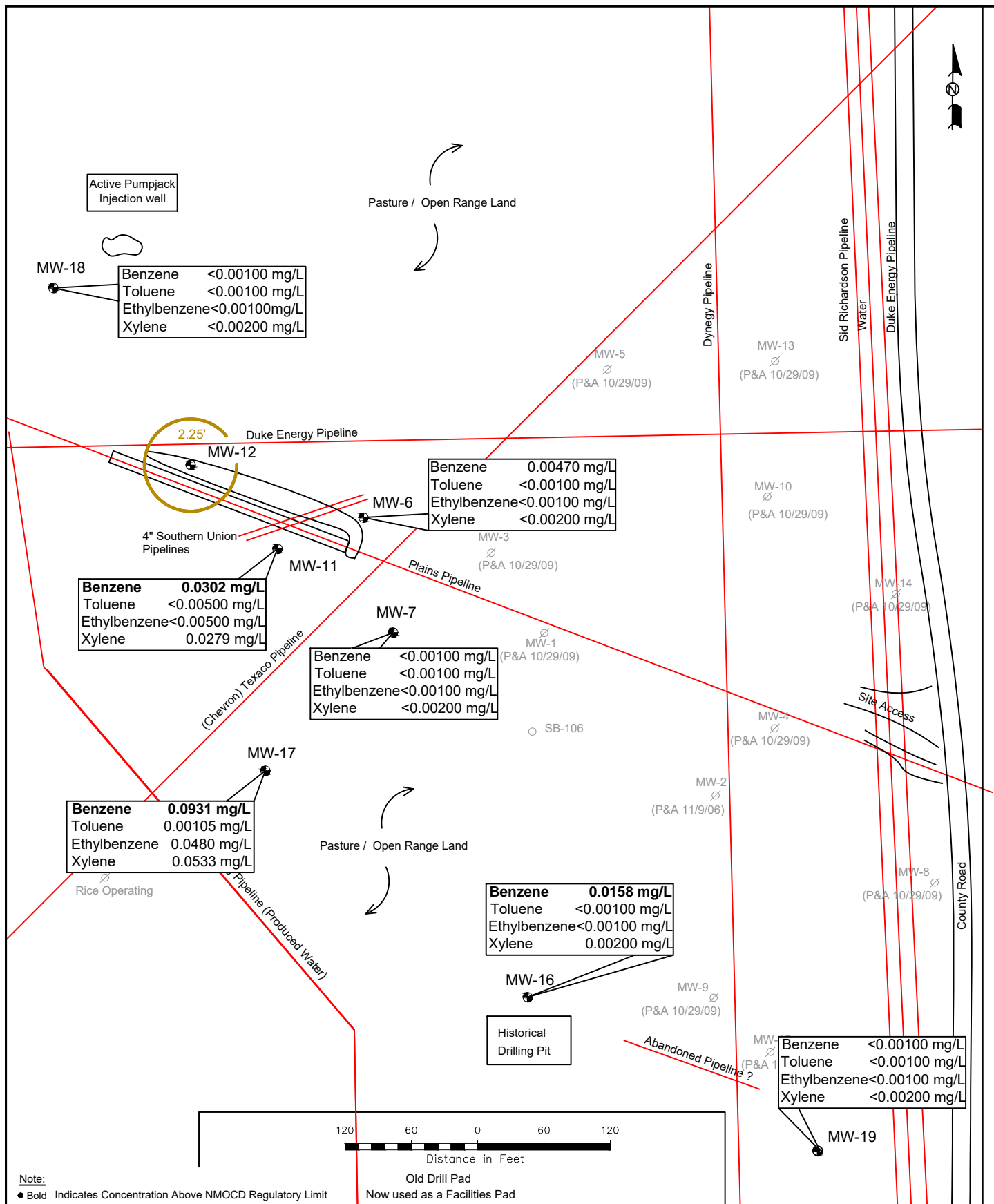
LEGEND:	Figure 1 Site Location Map Plains Marketing, L.P. Red Byrd #1 NMOC Reference # 1RP-0085 Lea County, NM	NTS		 10 Desta Drive, Suite 150E Midland, Texas 79705 432.520.7720
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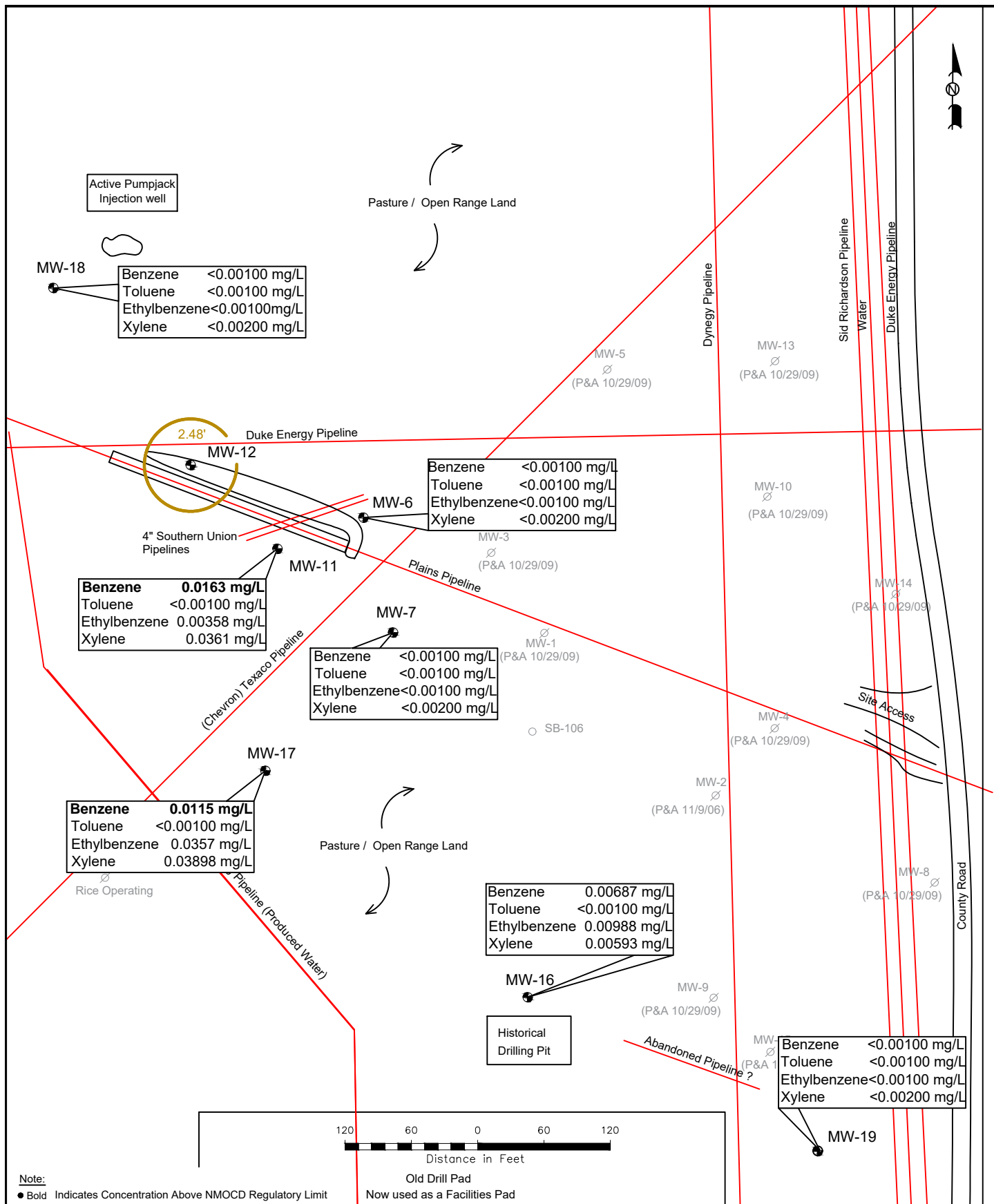












LEGEND:

- Monitor Well Location
- (NS) Not Sampled
- Inferred Extent of PSH
- <0.001 Constituent Concentration (mg/L)
- 1.90' PSH Thickness (feet)

Figure 3B
Groundwater Concentration
and Inferred PSH Extent Map
(11/26/2019)
Plains Marketing, L.P.
Red Byrd #1
NMOCD Reference # IRP-0085
Lea County, NM

Scale: 1" = 120'

CAD By: CS Checked By: CS
Draft: November 26, 2019
N 32° 36' 10.105", W 103° 18' 00.35"
SE1/4 NE1/4 Sec 1 T20S R36E
TRC Proj. No.: 292800

TRC
10 Desta Drive, Suite 150E
Midland, Texas 79705
432.520.7720

2019 Tables

TABLE 1
2019 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0085

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-6	1/15/2019	3,570.91	-	37.94	0.00	3,532.97
MW-6	2/19/2019	3,570.91	-	37.91	0.00	3,533.00
MW-6	6/4/2019	3,570.91	-	38.20	0.00	3,532.71
MW-6	8/7/2019	3,570.91	-	38.42	0.00	3,532.49
MW-6	9/2/2019	3,570.91	-	38.53	0.00	3,532.38
MW-6	11/25/2019	3,570.91	-	38.57	0.00	3,532.34
MW-7	1/15/2019	3,567.53	-	34.79	0.00	3,532.74
MW-7	2/19/2019	3,567.53	-	34.78	0.00	3,532.75
MW-7	6/4/2019	3,567.53	-	35.04	0.00	3,532.49
MW-7	8/7/2019	3,567.53	-	35.27	0.00	3,532.26
MW-7	9/2/2019	3,567.53	-	35.38	0.00	3,532.15
MW-7	11/25/2019	3,567.53	-	35.48	0.00	3,532.05
MW-11	1/15/2019	3,567.96	-	34.98	0.00	3,532.98
MW-11	2/19/2019	3,567.96	-	34.92	0.00	3,533.04
MW-11	6/4/2019	3,567.96	-	35.26	0.00	3,532.70
MW-11	8/7/2019	3,567.96	-	35.42	0.00	3,532.54
MW-11	9/2/2019	3,567.96	-	35.60	0.00	3,532.36
MW-11	11/25/2019	3,567.96	-	35.61	0.00	3,532.35
MW-12	1/15/2019	3,570.95	37.51	39.88	2.37	3,533.08
MW-12	2/19/2019	3,570.95	37.50	39.86	2.36	3,533.10
MW-12	6/4/2019	3,570.95	37.81	40.06	2.25	3,532.80
MW-12	8/7/2019	3,570.95	38.90	40.51	1.61	3,531.81
MW-12	9/2/2019	3,570.95	38.12	40.58	2.46	3,532.46
MW-12	11/25/2019	3,570.95	38.09	40.57	2.48	3,532.49
MW-16	2/19/2019	3,568.89	-	37.34	0.00	3,531.55
MW-16	6/4/2019	3,568.89	-	37.59	0.00	3,531.30
MW-16	8/7/2019	3,568.89	-	37.79	0.00	3,531.10
MW-16	9/2/2019	3,568.89	-	37.92	0.00	3,530.97
MW-16	11/25/2019	3,568.89	-	37.92	0.00	3,530.97
MW-17	1/15/2019	3,569.66	-	37.24	0.00	3,532.42
MW-17	2/19/2019	3,569.66	-	37.17	0.00	3,532.49
MW-17	6/4/2019	3,569.66	-	37.49	0.00	3,532.17
MW-17	8/7/2019	3,569.66	-	37.72	0.00	3,531.94
MW-17	9/2/2019	3,569.66	-	37.82	0.00	3,531.84
MW-17	11/25/2019	3,569.66	-	37.82	0.00	3,531.84
MW-18	1/15/2019	3,571.17	-	37.51	0.00	3,533.66
MW-18	2/19/2019	3,571.17	-	37.48	0.00	3,533.69
MW-18	6/4/2019	3,571.17	-	37.79	0.00	3,533.38
MW-18	8/7/2019	3,571.17	-	38.02	0.00	3,533.15

TABLE 1
2019 GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0085

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-18	9/2/2019	3,571.17	-	38.12	0.00	3,533.05
MW-18	11/25/2019	3,571.17	-	38.14	0.00	3,533.03
MW-19	1/15/2019	3,569.78	-	38.89	0.00	3,530.89
MW-19	2/19/2019	3,569.78	-	38.84	0.00	3,530.94
MW-19	6/4/2019	3,569.78	-	39.08	0.00	3,530.70
MW-19	8/7/2019	3,569.78	-	39.29	0.00	3,530.49
MW-19	9/2/2019	3,569.78	-	39.42	0.00	3,530.36
MW-19	11/25/2019	3,569.78	-	39.47	0.00	3,530.31

Elevations based on the North American Vertical Datum of 1929.

TABLE 2
2019 CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: TNM RED BYRD #1
NMOCD REF NO: 1R-0085

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030				
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)
MW-6	06/04/2019	0.00470	<0.00100	<0.00100	<0.00200	
MW-6	11/26/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-7	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-7	11/26/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-11	06/04/2019	0.0302	<0.00500	<0.00500	0.0279	
MW-11	11/26/2019	0.0163	<0.00100	0.00358	0.0361	
MW-12	06/04/2019	Not Sampled Due to Presence of PSH				
MW-12	11/26/2019	Not Sampled Due to Presence of PSH				
MW-16	06/04/2019	0.0158	<0.00100	<0.00100	0.00200	
MW-16	11/26/2019	0.00687	<0.00100	0.00988	0.00593	
MW-17	06/04/2019	0.0931	0.00105	0.0480	0.0533	
MW-17	11/26/2019	0.0115	<0.00100	0.0357	0.03898	
MW-18	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-18	11/26/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-19	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00200	
MW-19	11/26/2019	<0.00100	<0.00100	<0.00100	<0.00200	
NMOCD CRITERIA		0.01	0.75	0.75	0.62	

Note: Monitor wells MW-1 through MW-5, MW-8 through MW-10, and MW-13 through MW-15 have been plugged & abandoned.

TABLE 3

2018-2019 POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.

RED BYRD #1

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER 1R-0085

All water concentrations are reported in mg/L.

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																		
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		---	---	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	---	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L	0.03 mg/L			---
MW-6	11/19/18	0.00023	0.00012	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	0.00055			0.00099
MW-6	11/25/19	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	0.00048			0.00061
MW-7	11/19/18	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	0.00031	<0.000098		0.00089		0.00021	
MW-7	11/25/19	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015		0.00011	
MW-11	11/19/18	0.00052	0.00046	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	0.0011	<0.00010	0.00030	0.00020		0.00397		0.0024
MW-11	11/25/19	0.00019	0.00023	0.00010	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	0.00016	<0.000097	<0.000097	0.00065	<0.000097	0.00094	0.00019		0.00898		0.0010
MW-12	11/19/18	Not Sampled due to presence of PSH.																		
MW-12	11/25/19	Not Sampled due to presence of PSH.																		
MW-16	11/19/18	0.00023	0.00018	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	<0.000098	0.00046	<0.000098	0.00089	<0.000098		0.00569		0.0016
MW-16	11/25/19	0.00013	0.00014	<0.000097	<0.000097	0.00013	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	0.00036	<0.000097	0.00041	0.00011		0.00814		0.00095
MW-17	11/19/18	0.00062	0.00092	0.00023	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	0.00025	<0.00010	0.00016	0.0026	<0.00010	0.0029	0.00044		0.0582		0.0037
MW-17	11/25/19	0.0013	0.0012	0.00059	0.00027	0.00012	<0.000096	<0.000096	<0.000096	0.00073	<0.000096	0.00053	0.0049	<0.000096	0.0052	0.0016		0.0613		0.0071
MW-18	11/19/18	0.00026	0.00017	<0.000099	<0.000099	<0.000099	<0.000099	<0.000099	<0.000099	<0.000099	<0.000099	0.00086	<0.000099	<0.000099	0.0011	<0.000099		0.03464		0.0017
MW-18	11/25/19	0.00019	0.00026	0.00042	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	0.00042	<0.000097	0.00023	0.00035	<0.000097	0.00072	0.00054		0.00129		0.0021
MW-19	11/19/18	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	0.00050	<0.00010		0.00110		0.00034
MW-19	11/25/19	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097	<0.000097		0.00021		0.00027

Appendices

Appendix A

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Location: Lea Co NM
Lab Order Number: 7L28014



NELAP/TCEQ # T104704516-16-7

Report Date: 12/29/17

TRC Solutions- Midland, Texas
2057 Commerce Street
Midland TX, 79703

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-12	7L28014-01	Oil	12/27/17 11:06	12-28-2017 09:37

TRC Solutions- Midland, Texas
2057 Commerce Street
Midland TX, 79703

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW-12
7L28014-01 (Oil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	217000	250	mg/kg wet	10	P7L2808	12/28/17	12/28/17	TPH 8015M
>C12-C28	218000	250	mg/kg wet	10	P7L2808	12/28/17	12/28/17	TPH 8015M
>C28-C35	70200	250	mg/kg wet	10	P7L2808	12/28/17	12/28/17	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		95.6 %	70-130		P7L2808	12/28/17	12/28/17	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		101 %	70-130		P7L2808	12/28/17	12/28/17	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	505000	250	mg/kg wet	10	[CALC]	12/28/17	12/28/17	calc

TRC Solutions- Midland, Texas
2057 Commerce Street
Midland TX, 79703

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7L2808 - TX 1005										
Blank (P7L2808-BLK1)										
Prepared & Analyzed: 12/28/17										
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	157		"	150		105	70-130			
Surrogate: o-Terphenyl	91.8		"	75.0		122	70-130			
LCS (P7L2808-BS1)										
Prepared & Analyzed: 12/28/17										
C6-C12	945	25.0	mg/kg wet	1000		94.5	75-125			
>C12-C28	1030	25.0	"	1000		103	75-125			
Surrogate: 1-Chlorooctane	166		"	150		111	70-130			
Surrogate: o-Terphenyl	80.7		"	75.0		108	70-130			
LCS Dup (P7L2808-BSD1)										
Prepared & Analyzed: 12/28/17										
C6-C12	946	25.0	mg/kg wet	1000		94.6	75-125	0.121	20	
>C12-C28	1030	25.0	"	1000		103	75-125	0.575	20	
Surrogate: 1-Chlorooctane	166		"	150		110	70-130			
Surrogate: o-Terphenyl	79.3		"	75.0		106	70-130			
Duplicate (P7L2808-DUP1)										
Source: 7L22001-09 Prepared & Analyzed: 12/28/17										
C6-C12	11.9	26.9	mg/kg dry		ND				20	
>C12-C28	10.5	26.9	"		ND				20	
Surrogate: 1-Chlorooctane	117		"	108		109	70-130			
Surrogate: o-Terphenyl	66.4		"	53.8		123	70-130			

TRC Solutions- Midland, Texas
2057 Commerce Street
Midland TX, 79703

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date:

12/29/2017

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Appendix B

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

Environmental Technology Group, Inc.
Mr. Jesse Taylor
Post Office Box 4845
Midland, Texas 79704

February 17, 2000

RE: Fingerprint analysis from Red Byrd project #EOT1043C.

Dear Mr. Taylor;

In reference to the comparison of the surface analysis (SS-1 and SS-2) to the MW-3 (35') and MW-1 (35'); there seems to be few similarities.

All analysis were performed under the same chromatographic conditions, enabling any hydrocarbon chain from C-6 through C-28 to be seen.

As evidenced by the chromatogram the SS-1 and SS-2 samples have no reportable gasoline range organics (C6-C10) and only starts to show evidences of hydrocarbon around C-20. Due to the nature of this sample, most of the hydrocarbon within this sample is beyond the diesel range (C28). Visually and physically, the sample appears to be asphaltic in nature.

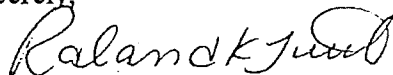
In contrast, the MW-1 (35') and MW-3(35') samples exhibit a large total percentage of hydrocarbons within the gasoline range; and a very defined cut-off within the first part of the diesel range. This is usually found in refined products. It would be possible for a condensate to exhibit similar characteristics, but it is not typically found in a crude (i.e. 40wt). As seen on the enclosed chromatogram "crude" even though the crude may contain (GRO's), most typical crudes will usually exhibit a wider range of hydrocarbon chains.

The possibility of the lighter end (GRO) traveling from the surface to 35' is possible, but the evidence of no significant traces of either GRO or DRO between the surface to 35' make this theory very unlikely.

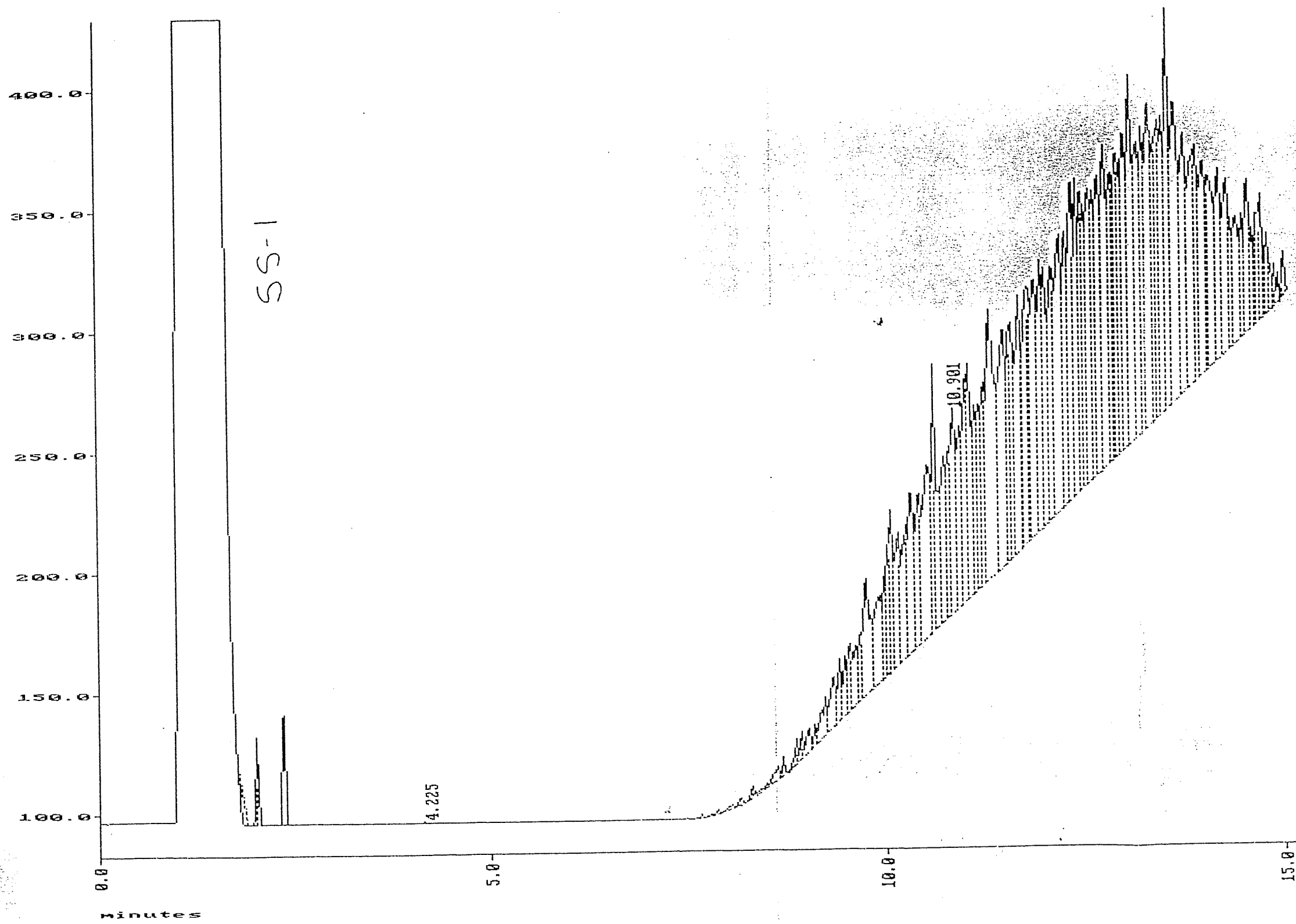
In conclusion, due to the vast differences in chemical make-up and lack of evidence of leaching from surface contamination; it is very unlikely that the contamination from 35' (MW-1 and MW-3) is from the same source as the surface contaminant (SS-1 and SS-2).

Should you have any further questions please do not hesitate to call.

Sincerely,

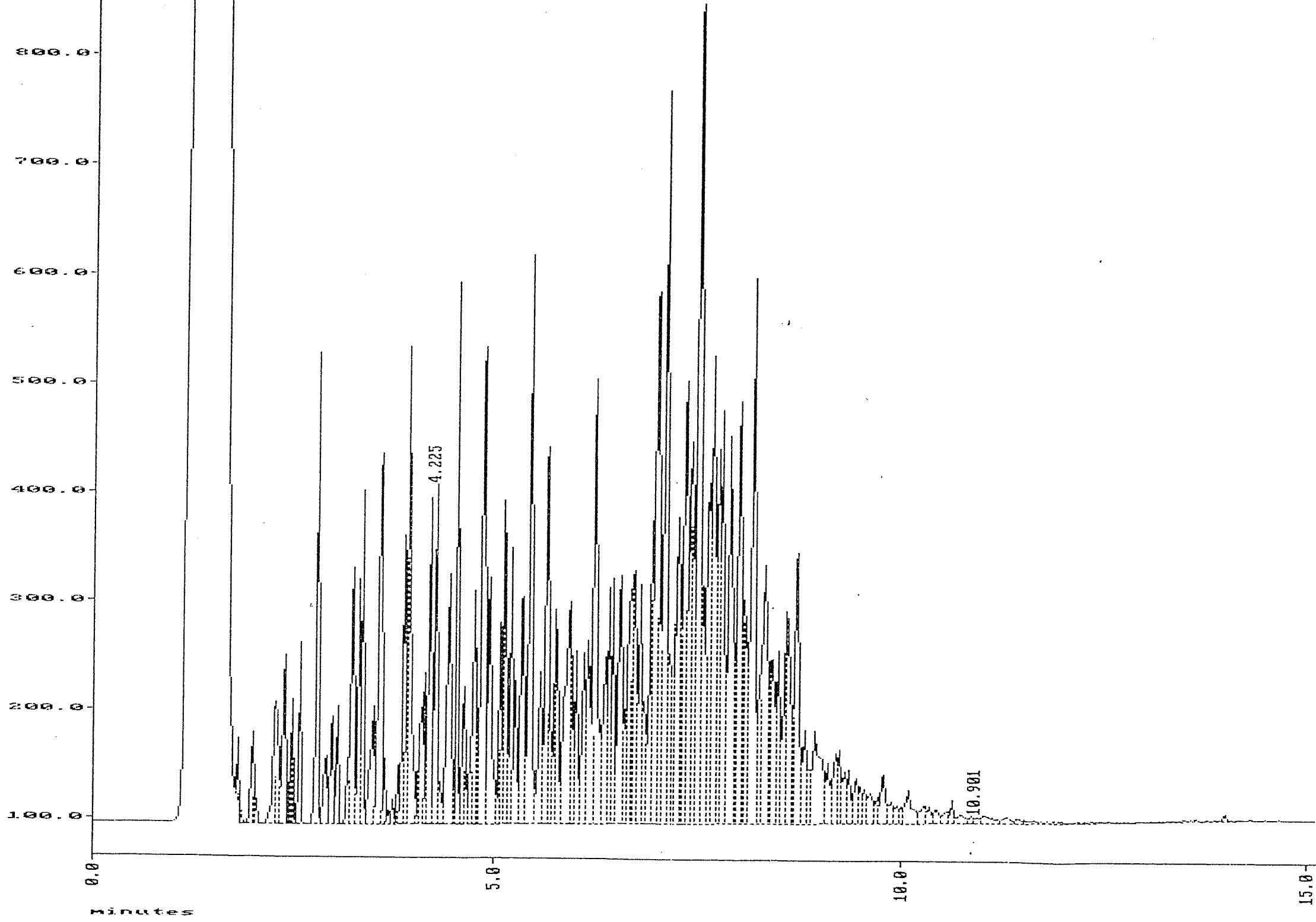


Raland K. Tuttle

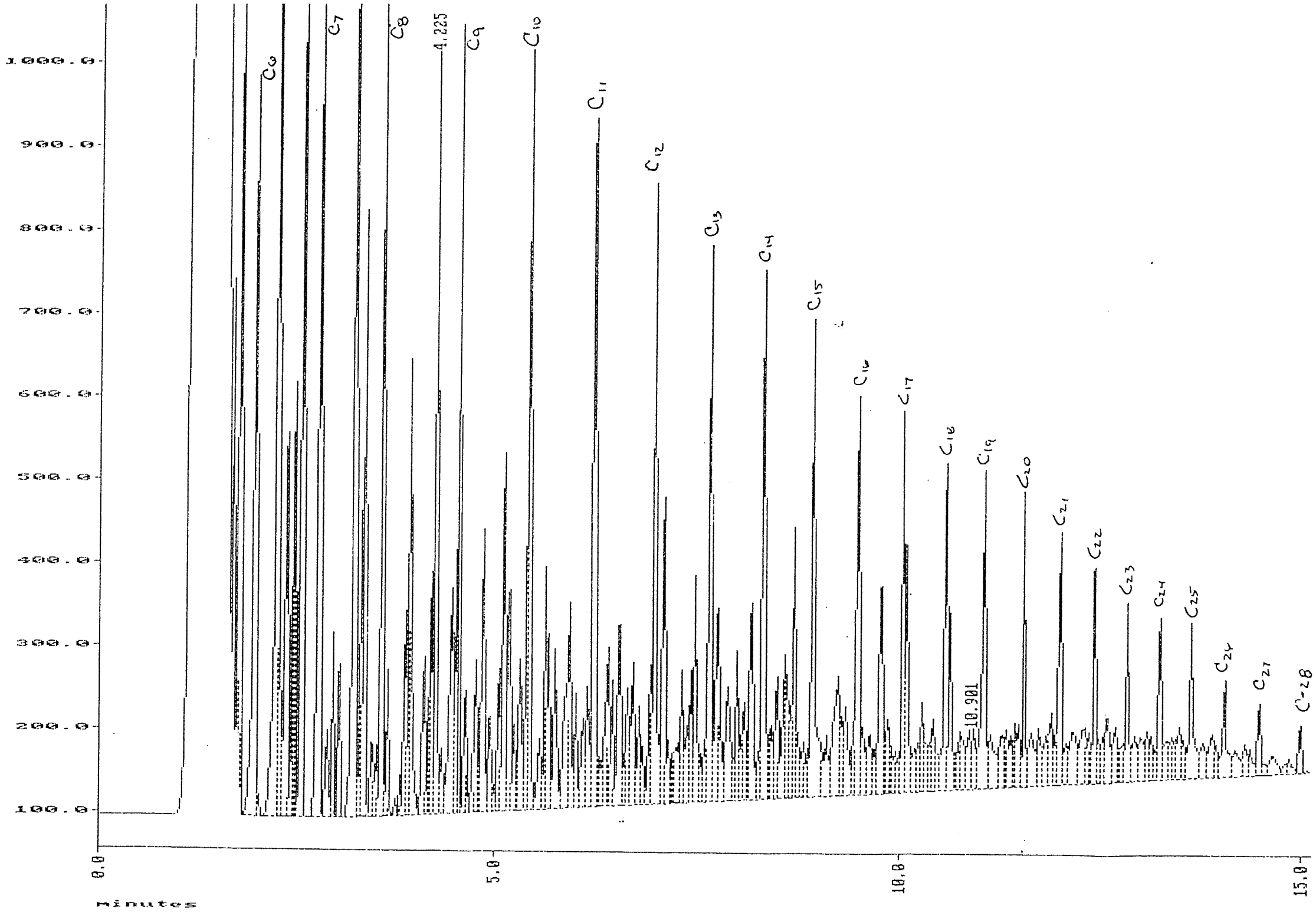


2 Peaks > Area Reject 57460560 Total Area
2 Peaks > Height Reject 23894.914 Total Height

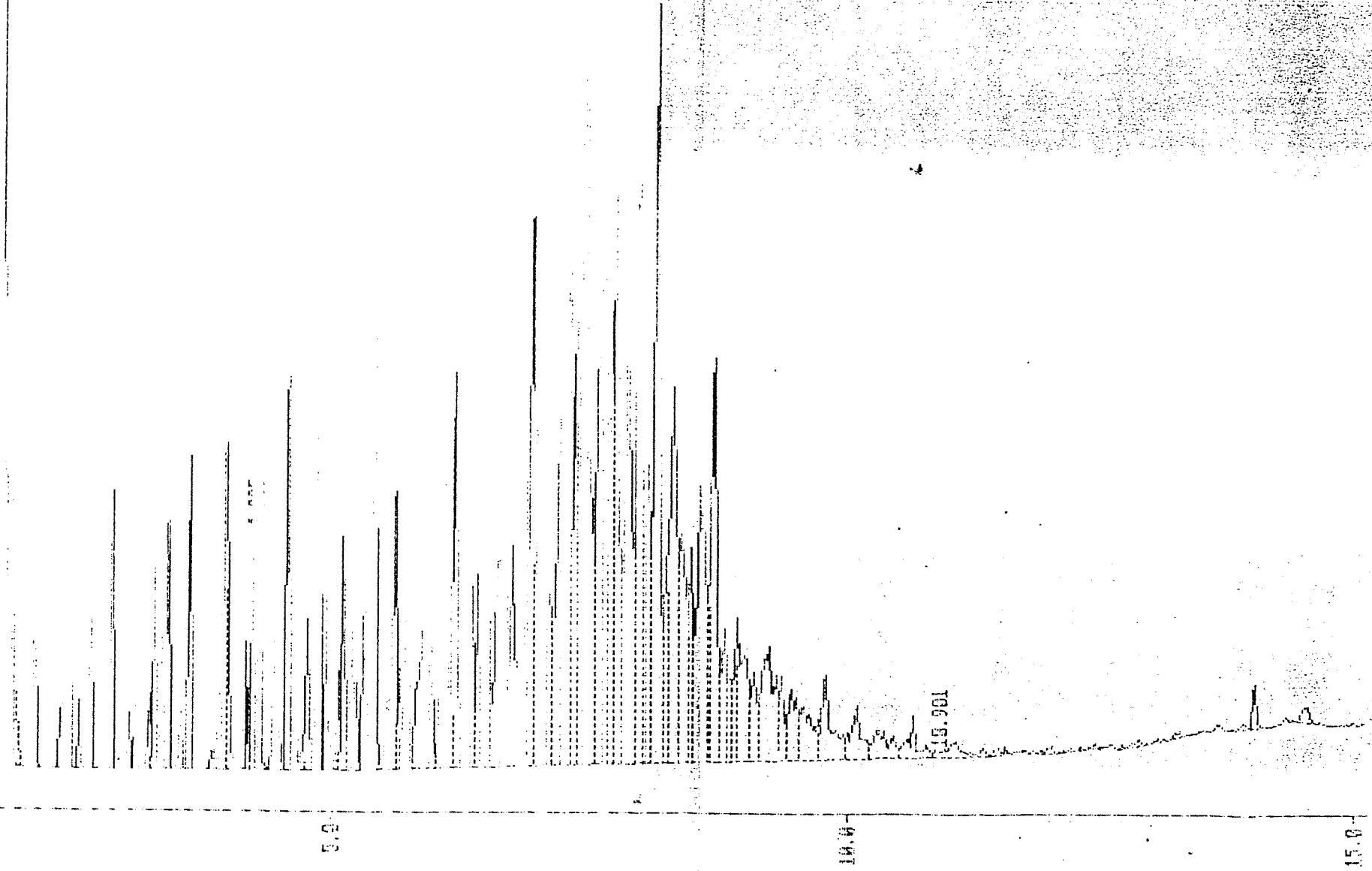
(TPH2_12.D01) MW MW-3-(35')



(TPH_25.D01) MU "Crude"



210.0
220.0
230.0
130.0
150.0
140.0
120.0
100.0



Appendix C

August 16, 1991

Dear Sir:

This letter is to inform you of Climax Chemical Company's petition to the New Mexico Environment Department's Hazardous and Radioactive Materials Bureau (HRMB) requesting Alternate Concentration Limits for hazardous constituents present in the groundwater below the Climax Chemical facility west of Monument, New Mexico. Groundwater samples taken from the upper-most aquifer below Climax Chemical Company's Monument, New Mexico plant contain Cadmium, Silver, 1,1,1, Trichloroethylene and Ethylene Dichloride in concentrations above the safe drinking water standards. Climax Chemical has provided evidence that Alternate Concentration Limits should be granted because the contamination does not pose a threat to human health or the environment. The requested limits are above the safe drinking water standard and could pose a danger to human health should individuals drink, eat or inhale significant amounts of contaminated water or soils. The health of individuals who do not intend to use the groundwater or come in contact with it would not be threatened.

Climax Chemical Company's Monument, New Mexico plant is located three miles west of Monument, New Mexico in Lea County. The plant is a producer of hydrochloric acid and sodium sulfate. Immediately adjacent to and downgradient of Climax Chemical is the Warren Petroleum Company (Chevron) refinery. The upper-most aquifer beneath the refinery has been significantly impacted by hydrocarbon contamination. Due to past oil-field brine contamination of this same aquifer the Oil Conservation Division (OCD) of the New Mexico Energy Minerals and Natural Resources Department is only requiring the refinery to recover hydrocarbon product floating on top of the groundwater within the aquifer.

Climax Chemical Company's argument for granting the Alternate Concentration Limits is: "the water downgradient from Climax Chemical has been contaminated beyond usability by the petroleum industry through brine disposal and hydrocarbon leakage. The addition of Heavy Metal and Volatile Organic contamination above the safe drinking water standard as the Climax plume moves through this area will not adversely affect the usability of the aquifer, since it is already unusable without the effect of Climax's constituents."

At this time the HRMB has no evidence that landowners are using groundwater from the contaminated aquifer. Should you now be using or anticipate using groundwater from the upper-most aquifer beneath your property and have questions or comments concerning the petition for granting of Climax Chemical Company's petition request for Alternate Concentration Limits please contact Steve Alexander

at 827-2929 or write: New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, 1190 Saint Francis Drive, P.O. Box 26110, Santa Fe, New Mexico, 87502, Attention: Steve Alexander. Please respond within thirty (30) days following receipt of this notification.

Sincerely,

Steven M. Alexander, Water Resources Specialist
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department

Appendix D

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Location: Lea County, NM
Lab Order Number: 9F05001



NELAP/TCEQ # T104704516-18-9

Report Date: 06/21/19

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 7	9F05001-01	Water	06/04/19 10:15	06-05-2019 08:29
MW 19	9F05001-02	Water	06/04/19 11:10	06-05-2019 08:29
MW 18	9F05001-03	Water	06/04/19 11:45	06-05-2019 08:29
MW 6	9F05001-04	Water	06/04/19 12:13	06-05-2019 08:29
MW 16	9F05001-05	Water	06/04/19 13:08	06-05-2019 08:29
MW 17	9F05001-06	Water	06/04/19 13:49	06-05-2019 08:29
MW 11	9F05001-07	Water	06/04/19 14:35	06-05-2019 08:29

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 7
9F05001-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	ND	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 4-Bromofluorobenzene		103 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 1,4-Difluorobenzene		106 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 19
9F05001-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	ND	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 4-Bromofluorobenzene		93.7 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 1,4-Difluorobenzene		88.6 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 18
9F05001-03 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	ND	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 4-Bromofluorobenzene		113 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B
Surrogate: 1,4-Difluorobenzene		93.0 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 6
9F05001-04 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.00470	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	ND	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		87.5 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B
<i>Surrogate: 1,4-Difluorobenzene</i>		90.0 %	80-120		P9F0503	06/05/19	06/05/19	EPA 8021B

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 16
9F05001-05 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.0158	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	ND	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	ND	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	0.00200	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>80.7 %</i>	<i>80-120</i>		<i>P9F0503</i>	<i>06/05/19</i>	<i>06/05/19</i>	<i>EPA 8021B</i>
<i>Surrogate: 1,4-Difluorobenzene</i>		<i>93.1 %</i>	<i>80-120</i>		<i>P9F0503</i>	<i>06/05/19</i>	<i>06/05/19</i>	<i>EPA 8021B</i>

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 17

9F05001-06 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.0931	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Toluene	0.00105	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Ethylbenzene	0.0480	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (p/m)	0.0367	0.00200	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
Xylene (o)	0.0166	0.00100	mg/L	1	P9F0503	06/05/19	06/05/19	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>89.7 %</i>	<i>80-120</i>		<i>P9F0503</i>	<i>06/05/19</i>	<i>06/05/19</i>	<i>EPA 8021B</i>
<i>Surrogate: 1,4-Difluorobenzene</i>		<i>114 %</i>	<i>80-120</i>		<i>P9F0503</i>	<i>06/05/19</i>	<i>06/05/19</i>	<i>EPA 8021B</i>

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW 11
9F05001-07 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.0302	0.00500	mg/L	5	P9F0503	06/05/19	06/06/19	EPA 8021B
Toluene	ND	0.00500	mg/L	5	P9F0503	06/05/19	06/06/19	EPA 8021B
Ethylbenzene	ND	0.00500	mg/L	5	P9F0503	06/05/19	06/06/19	EPA 8021B
Xylene (p/m)	ND	0.0100	mg/L	5	P9F0503	06/05/19	06/06/19	EPA 8021B
Xylene (o)	0.0279	0.00500	mg/L	5	P9F0503	06/05/19	06/06/19	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		92.8 %	80-120		P9F0503	06/05/19	06/06/19	EPA 8021B
<i>Surrogate: 1,4-Difluorobenzene</i>		80.8 %	80-120		P9F0503	06/05/19	06/06/19	EPA 8021B

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9F0503 - General Preparation (GC)

Blank (P9F0503-BLK1)

Prepared & Analyzed: 06/05/19

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.0684		"	0.0600		114	80-120			
Surrogate: 1,4-Difluorobenzene	0.0602		"	0.0600		100	80-120			

LCS (P9F0503-BS1)

Prepared & Analyzed: 06/05/19

Benzene	0.107	0.00100	mg/L	0.100		107	80-120			
Toluene	0.104	0.00100	"	0.100		104	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.176	0.00200	"	0.200		87.8	80-120			
Xylene (o)	0.101	0.00100	"	0.100		101	80-120			
Surrogate: 4-Bromofluorobenzene	0.0714		"	0.0600		119	80-120			
Surrogate: 1,4-Difluorobenzene	0.0672		"	0.0600		112	80-120			

LCS Dup (P9F0503-BSD1)

Prepared & Analyzed: 06/05/19

Benzene	0.0972	0.00100	mg/L	0.100		97.2	80-120	9.24	20	
Toluene	0.101	0.00100	"	0.100		101	80-120	2.65	20	
Ethylbenzene	0.114	0.00100	"	0.100		114	80-120	1.86	20	
Xylene (p/m)	0.169	0.00200	"	0.200		84.6	80-120	3.65	20	
Xylene (o)	0.0963	0.00100	"	0.100		96.3	80-120	4.77	20	
Surrogate: 4-Bromofluorobenzene	0.0696		"	0.0600		116	80-120			
Surrogate: 1,4-Difluorobenzene	0.0675		"	0.0600		112	80-120			

Calibration Blank (P9F0503-CCB1)

Prepared & Analyzed: 06/05/19

Benzene	0.00		mg/L							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.0597		"	0.0600		99.6	80-120			
Surrogate: 1,4-Difluorobenzene	0.0580		"	0.0600		96.6	80-120			

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9F0503 - General Preparation (GC)

Calibration Check (P9F0503-CCV1)

Prepared & Analyzed: 06/05/19

Benzene	0.100	0.00100	mg/L	0.100		100	80-120			
Toluene	0.0953	0.00100	"	0.100		95.3	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.163	0.00200	"	0.200		81.7	80-120			
Xylene (o)	0.0884	0.00100	"	0.100		88.4	80-120			
Surrogate: 4-Bromofluorobenzene	0.0686		"	0.0600		114	80-120			
Surrogate: 1,4-Difluorobenzene	0.0743		"	0.0600		124	80-120			S-GC

Calibration Check (P9F0503-CCV2)

Prepared & Analyzed: 06/05/19

Benzene	0.105	0.00100	mg/L	0.100		105	80-120			
Toluene	0.102	0.00100	"	0.100		102	80-120			
Ethylbenzene	0.102	0.00100	"	0.100		102	80-120			
Xylene (p/m)	0.172	0.00200	"	0.200		86.1	80-120			
Xylene (o)	0.101	0.00100	"	0.100		101	80-120			
Surrogate: 4-Bromofluorobenzene	0.0686		"	0.0600		114	80-120			
Surrogate: 1,4-Difluorobenzene	0.0718		"	0.0600		120	80-120			

Matrix Spike (P9F0503-MS1)

Source: 9F05001-01

Prepared & Analyzed: 06/05/19

Benzene	0.114	0.00100	mg/L	0.100	ND	114	80-120			
Toluene	0.109	0.00100	"	0.100	ND	109	80-120			
Ethylbenzene	0.115	0.00100	"	0.100	ND	115	80-120			
Xylene (p/m)	0.182	0.00200	"	0.200	ND	90.9	80-120			
Xylene (o)	0.107	0.00100	"	0.100	ND	107	80-120			
Surrogate: 4-Bromofluorobenzene	0.0694		"	0.0600		116	80-120			
Surrogate: 1,4-Difluorobenzene	0.0607		"	0.0600		101	80-120			

Matrix Spike Dup (P9F0503-MSD1)

Source: 9F05001-01

Prepared & Analyzed: 06/05/19

Benzene	0.112	0.00100	mg/L	0.100	ND	112	80-120	1.73	20	
Toluene	0.108	0.00100	"	0.100	ND	108	80-120	1.15	20	
Ethylbenzene	0.116	0.00100	"	0.100	ND	116	80-120	0.373	20	
Xylene (p/m)	0.183	0.00200	"	0.200	ND	91.5	80-120	0.652	20	
Xylene (o)	0.110	0.00100	"	0.100	ND	110	80-120	2.74	20	
Surrogate: 4-Bromofluorobenzene	0.0723		"	0.0600		121	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.0620		"	0.0600		103	80-120			

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

6/21/2019

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-686-7235

Project Manager:

Curt Stanley

Project Name: Red Byrd

Company Name

TRC

Project #: Turn Red Byrd #1

Company Address:

10 Dosta Dr Suite 150 E

Project Loc: Lea County, NM

City/State/Zip:

Midland TX 79705

PO #:

Telephone No:

432 520 2270

Fax No:

Report Format:

☐ Standard☐ TRRP☐ NPDES

Sampler Signature:

Sorey Rishi

e-mail:

(lab use only)

ORDER #: 41050001

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: TX 1005 TX 1006	Anions (Cl, SO ₄ , Alkalinity)	BTEX 8021B/5030 or BTEX 8260	ANALYZE FOR:	TCLP	TOTAL	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	MW 7			6/4	1015		3	X								GW								X
2	MW 19			6/4	1410		3	X								GW								X
3	MW 18			6/4	1445		3	X								GW								X
4	MW 6			6/4	1213		3	X								GW								X
5	MW 16			6/4	1308		3	X								GW								X
6	MW 17			6/4	1349		3	X								GW								X
7	MW 11			6/4	1425		3	X								GW								X

Special Instructions:

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on containers?

Custody seals on containers?

Custody seals on cooler(s)?

Sample Hand Delivered?

by Sampler/Client Rep.?

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 132 °C

Received: 132 °C

Adjusted: 132 °C

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Location: Lea Co. Nm
Lab Order Number: 9K26008



NELAP/TCEQ # T104704516-17-8

Report Date: 12/10/19

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW7	9K26008-01	Water	11/25/19 10:45	11-26-2019 07:58
MW17	9K26008-02	Water	11/25/19 11:08	11-26-2019 07:58
MW6	9K26008-03	Water	11/25/19 11:35	11-26-2019 07:58
MW11	9K26008-04	Water	11/25/19 12:00	11-26-2019 07:58
MW18	9K26008-05	Water	11/25/19 12:41	11-26-2019 07:58
MW16	9K26008-06	Water	11/25/19 13:31	11-26-2019 07:58
MW19	9K26008-07	Water	11/25/19 14:02	11-26-2019 07:58

Low Level PAH analysis were subcontracted to ALS Houston. Their report is attached after the Chain of Custody. Their TCEQ TNI certification number can be found here:

https://www.tceq.texas.gov/assets/public/compliance/compliance_support/qa/labs/als_svcs_houston.pdf

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW7
9K26008-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		128 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		106 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	

PAH compounds by Semivolatile GCMS

1-Methylnaphthalene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.00011	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00015	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	ND	0.00010	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW17
9K26008-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.0115	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	0.0357	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	0.0344	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	0.00458	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.5 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		87.2 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	

PAH compounds by Semivolatiles GCMS

1-Methylnaphthalene	0.046	0.00096	mg/L	1	P9L0901	11/27/19	12/05/19	8270C	SUB-13
2-Methylnaphthalene	0.0089	0.00096	mg/L	1	P9L0901	11/27/19	12/05/19	8270C	SUB-13
Acenaphthene	0.0013	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	0.0012	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	0.00059	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	0.00027	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	0.00012	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	0.00073	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.0071	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	0.00053	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	0.0049	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.0064	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	0.0052	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	0.0016	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW6
9K26008-03 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		119 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.8 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	

PAH compounds by Semivolatiles GCMS

1-Methylnaphthalene	0.00012	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.00061	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00036	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	ND	0.000096	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW11
9K26008-04 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.0163	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	0.00358	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	0.0255	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	0.0106	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>105 %</i>	<i>80-120</i>		<i>P9K2609</i>	<i>11/26/19</i>	<i>11/27/19</i>	<i>EPA 8021B</i>	
<i>Surrogate: 1,4-Difluorobenzene</i>		<i>93.8 %</i>	<i>80-120</i>		<i>P9K2609</i>	<i>11/26/19</i>	<i>11/27/19</i>	<i>EPA 8021B</i>	

PAH compounds by Semivolatile GCMS

1-Methylnaphthalene	0.0070	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	0.0011	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	0.00019	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	0.00023	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	0.00010	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	0.00016	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.0010	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	0.00065	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00088	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	0.00094	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	0.00019	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW18
9K26008-05 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		137 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		108 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	

PAH compounds by Semivolatiles GCMS

1-Methylnaphthalene	0.00072	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	0.00019	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	0.00026	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	0.00042	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	0.00042	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.0021	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	0.00023	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	0.00035	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00057	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	0.00072	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	0.00054	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW16
9K26008-06 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	0.00687	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	0.00988	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	0.00593	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>111 %</i>	<i>80-120</i>		<i>P9K2609</i>	<i>11/26/19</i>	<i>11/27/19</i>	<i>EPA 8021B</i>	
<i>Surrogate: 1,4-Difluorobenzene</i>		<i>103 %</i>	<i>80-120</i>		<i>P9K2609</i>	<i>11/26/19</i>	<i>11/27/19</i>	<i>EPA 8021B</i>	

PAH compounds by Semivolatile GCMS

1-Methylnaphthalene	0.0067	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	0.00055	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	0.00013	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	0.00014	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.00095	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	0.00036	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00089	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	0.00041	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	0.00011	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

MW19
9K26008-07 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Toluene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Xylene (o)	ND	0.00100	mg/L	1	P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		119 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.9 %	80-120		P9K2609	11/26/19	11/27/19	EPA 8021B	

PAH compounds by Semivolatile GCMS

1-Methylnaphthalene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
2-Methylnaphthalene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Acenaphthylene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (a) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (b) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (g,h,i) perylene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Benzo (k) fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Chrysene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzo (a,h) anthracene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Dibenzofuran	0.00027	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluoranthene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Fluorene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Indeno (1,2,3-cd) pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Naphthalene	0.00021	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Phenanthrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13
Pyrene	ND	0.000097	mg/L	1	P9L0901	11/27/19	12/04/19	8270C	SUB-13

TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9K2609 - General Preparation (GC)

Blank (P9K2609-BLK1)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.144		"	0.120		120	80-120			
Surrogate: 1,4-Difluorobenzene	0.120		"	0.120		99.8	80-120			

LCS (P9K2609-BS1)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.0892	0.00100	mg/L	0.100		89.2	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.114	0.00100	"	0.100		114	80-120			
Xylene (p/m)	0.230	0.00200	"	0.200		115	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 4-Bromofluorobenzene	0.152		"	0.120		127	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.130		"	0.120		108	80-120			

LCS Dup (P9K2609-BSD1)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.0907	0.00100	mg/L	0.100		90.7	80-120	1.66	20	
Toluene	0.117	0.00100	"	0.100		117	80-120	1.91	20	
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120	1.16	20	
Xylene (p/m)	0.228	0.00200	"	0.200		114	80-120	0.682	20	
Xylene (o)	0.116	0.00100	"	0.100		116	80-120	1.33	20	
Surrogate: 4-Bromofluorobenzene	0.160		"	0.120		133	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.136		"	0.120		114	80-120			

Calibration Blank (P9K2609-CCB1)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.00		mg/L							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.177		"	0.120		147	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.131		"	0.120		109	80-120			

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10 Desta Dr STE 150E
Midland TX, 79705

Project: Red Byrd #1
Project Number: TNM Red Byrd #1
Project Manager: Curt Stanley

Fax: (432) 520-7701

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9K2609 - General Preparation (GC)

Calibration Blank (P9K2609-CCB2)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.00		mg/L							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.152		"	0.120		127	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.125		"	0.120		104	80-120			

Calibration Check (P9K2609-CCV2)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.0868	0.00100	mg/L	0.100		86.8	80-120			
Toluene	0.118	0.00100	"	0.100		118	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.226	0.00200	"	0.200		113	80-120			
Xylene (o)	0.117	0.00100	"	0.100		117	80-120			
Surrogate: 4-Bromofluorobenzene	0.148		"	0.120		123	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.141		"	0.120		117	80-120			

Calibration Check (P9K2609-CCV3)

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.0843	0.00100	mg/L	0.100		84.3	80-120			
Toluene	0.120	0.00100	"	0.100		120	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.224	0.00200	"	0.200		112	80-120			
Xylene (o)	0.112	0.00100	"	0.100		112	80-120			
Surrogate: 4-Bromofluorobenzene	0.154		"	0.120		128	80-120			S-GC
Surrogate: 1,4-Difluorobenzene	0.140		"	0.120		116	80-120			

Matrix Spike (P9K2609-MS1)

Source: 9K22006-01

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.117	0.00100	mg/L	0.100	0.00979	107	80-120			
Toluene	0.144	0.00100	"	0.100	ND	144	80-120			QM-07
Ethylbenzene	0.130	0.00100	"	0.100	ND	130	80-120			QM-07
Xylene (p/m)	0.265	0.00200	"	0.200	ND	133	80-120			QM-07
Xylene (o)	0.132	0.00100	"	0.100	ND	132	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	0.140		"	0.120		117	80-120			
Surrogate: 1,4-Difluorobenzene	0.134		"	0.120		112	80-120			

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Project: Red Byrd #1
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Project Manager: Curt Stanley

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Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9K2609 - General Preparation (GC)

Matrix Spike Dup (P9K2609-MSD1)

Source: 9K22006-01

Prepared: 11/26/19 Analyzed: 11/27/19

Benzene	0.115	0.00100	mg/L	0.100	0.00979	105	80-120	2.14	20	
Toluene	0.140	0.00100	"	0.100	ND	140	80-120	2.71	20	QM-07
Ethylbenzene	0.132	0.00100	"	0.100	ND	132	80-120	2.21	20	QM-07
Xylene (p/m)	0.270	0.00200	"	0.200	ND	135	80-120	1.98	20	QM-07
Xylene (o)	0.125	0.00100	"	0.100	ND	125	80-120	4.72	20	QM-07
Surrogate: 4-Bromofluorobenzene	0.140		"	0.120		116	80-120			
Surrogate: 1,4-Difluorobenzene	0.137		"	0.120		114	80-120			

Notes and Definitions

SUB-13	Subcontract of analyte/analysis to ALS Houston.
S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:



Date:

12/10/2019

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.



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December 05, 2019

Brent Barron
Permian Basin Environmental Lab, LP
10014 SCR 1213
Midland, TX 79706

Work Order: **HS19111396**

Laboratory Results for: **9K26008**

Dear Brent,

ALS Environmental received 7 sample(s) on Nov 27, 2019 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Andy C. Neir

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
Work Order: HS19111396

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19111396-01	9K26008-01	Water		25-Nov-2019 10:45	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-02	9K26008-02	Water		25-Nov-2019 11:08	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-03	9K26008-03	Water		25-Nov-2019 11:35	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-04	9K26008-04	Water		25-Nov-2019 12:00	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-05	9K26008-05	Water		25-Nov-2019 12:41	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-06	9K26008-06	Water		25-Nov-2019 13:31	27-Nov-2019 10:00	<input type="checkbox"/>
HS19111396-07	9K26008-07	Water		25-Nov-2019 14:02	27-Nov-2019 10:00	<input type="checkbox"/>

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
Work Order: HS19111396

CASE NARRATIVE

GCMS Semivolatiles by Method SW8270

Batch ID: 148111

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-01
 Collection Date: 25-Nov-2019 10:45

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-01
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	ND	n	0.0995	ug/L	1	04-Dec-2019 15:47
2-Methylnaphthalene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Acenaphthene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Acenaphthylene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Anthracene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Benz(a)anthracene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Benzo(a)pyrene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Benzo(b)fluoranthene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Benzo(g,h,i)perylene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Benzo(k)fluoranthene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Chrysene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Dibenz(a,h)anthracene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Dibenzofuran	0.114		0.0995	ug/L	1	04-Dec-2019 15:47
Fluoranthene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Fluorene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Indeno(1,2,3-cd)pyrene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Naphthalene	0.150		0.0995	ug/L	1	04-Dec-2019 15:47
Phenanthrene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
Pyrene	ND		0.0995	ug/L	1	04-Dec-2019 15:47
<i>Surr: 2-Fluorobiphenyl</i>	99.2		32-130	%REC	1	04-Dec-2019 15:47
<i>Surr: 4-Terphenyl-d14</i>	47.5		40-135	%REC	1	04-Dec-2019 15:47
<i>Surr: Nitrobenzene-d5</i>	114		45-142	%REC	1	04-Dec-2019 15:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-02
 Collection Date: 25-Nov-2019 11:08

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-02
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	46.2	n	0.956	ug/L	10	05-Dec-2019 09:47
2-Methylnaphthalene	8.85		0.956	ug/L	10	05-Dec-2019 09:47
Acenaphthene	1.26		0.0956	ug/L	1	04-Dec-2019 16:13
Acenaphthylene	1.18		0.0956	ug/L	1	04-Dec-2019 16:13
Anthracene	0.590		0.0956	ug/L	1	04-Dec-2019 16:13
Benz(a)anthracene	0.270		0.0956	ug/L	1	04-Dec-2019 16:13
Benzo(a)pyrene	0.119		0.0956	ug/L	1	04-Dec-2019 16:13
Benzo(b)fluoranthene	ND		0.0956	ug/L	1	04-Dec-2019 16:13
Benzo(g,h,i)perylene	ND		0.0956	ug/L	1	04-Dec-2019 16:13
Benzo(k)fluoranthene	ND		0.0956	ug/L	1	04-Dec-2019 16:13
Chrysene	0.732		0.0956	ug/L	1	04-Dec-2019 16:13
Dibenz(a,h)anthracene	ND		0.0956	ug/L	1	04-Dec-2019 16:13
Dibenzofuran	7.14		0.0956	ug/L	1	04-Dec-2019 16:13
Fluoranthene	0.530		0.0956	ug/L	1	04-Dec-2019 16:13
Fluorene	4.93		0.0956	ug/L	1	04-Dec-2019 16:13
Indeno(1,2,3-cd)pyrene	ND		0.0956	ug/L	1	04-Dec-2019 16:13
Naphthalene	6.39		0.0956	ug/L	1	04-Dec-2019 16:13
Phenanthrene	5.18		0.0956	ug/L	1	04-Dec-2019 16:13
Pyrene	1.64		0.0956	ug/L	1	04-Dec-2019 16:13
<i>Surr: 2-Fluorobiphenyl</i>	<i>88.2</i>		<i>32-130</i>	<i>%REC</i>	<i>10</i>	<i>05-Dec-2019 09:47</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>78.8</i>		<i>32-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:13</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>69.0</i>		<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:13</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>56.0</i>		<i>40-135</i>	<i>%REC</i>	<i>10</i>	<i>05-Dec-2019 09:47</i>
<i>Surr: Nitrobenzene-d5</i>	<i>72.1</i>		<i>45-142</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:13</i>
<i>Surr: Nitrobenzene-d5</i>	<i>105</i>		<i>45-142</i>	<i>%REC</i>	<i>10</i>	<i>05-Dec-2019 09:47</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-03
 Collection Date: 25-Nov-2019 11:35

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-03
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	0.119	n	0.0964	ug/L	1	04-Dec-2019 16:33
2-Methylnaphthalene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Acenaphthene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Acenaphthylene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Anthracene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Benz(a)anthracene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Benzo(a)pyrene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Benzo(b)fluoranthene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Benzo(g,h,i)perylene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Benzo(k)fluoranthene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Chrysene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Dibenz(a,h)anthracene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Dibenzofuran	0.606		0.0964	ug/L	1	04-Dec-2019 16:33
Fluoranthene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Fluorene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Indeno(1,2,3-cd)pyrene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Naphthalene	0.356		0.0964	ug/L	1	04-Dec-2019 16:33
Phenanthrene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
Pyrene	ND		0.0964	ug/L	1	04-Dec-2019 16:33
<i>Surr: 2-Fluorobiphenyl</i>	<i>103</i>		<i>32-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:33</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>68.9</i>		<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:33</i>
<i>Surr: Nitrobenzene-d5</i>	<i>124</i>		<i>45-142</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:33</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-04
 Collection Date: 25-Nov-2019 12:00

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-04
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	6.95	n	0.0969	ug/L	1	04-Dec-2019 16:53
2-Methylnaphthalene	1.05		0.0969	ug/L	1	04-Dec-2019 16:53
Acenaphthene	0.192		0.0969	ug/L	1	04-Dec-2019 16:53
Acenaphthylene	0.234		0.0969	ug/L	1	04-Dec-2019 16:53
Anthracene	0.102		0.0969	ug/L	1	04-Dec-2019 16:53
Benz(a)anthracene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Benzo(a)pyrene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Benzo(b)fluoranthene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Benzo(g,h,i)perylene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Benzo(k)fluoranthene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Chrysene	0.155		0.0969	ug/L	1	04-Dec-2019 16:53
Dibenz(a,h)anthracene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Dibenzofuran	1.03		0.0969	ug/L	1	04-Dec-2019 16:53
Fluoranthene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Fluorene	0.648		0.0969	ug/L	1	04-Dec-2019 16:53
Indeno(1,2,3-cd)pyrene	ND		0.0969	ug/L	1	04-Dec-2019 16:53
Naphthalene	0.881		0.0969	ug/L	1	04-Dec-2019 16:53
Phenanthrene	0.937		0.0969	ug/L	1	04-Dec-2019 16:53
Pyrene	0.187		0.0969	ug/L	1	04-Dec-2019 16:53
<i>Surr: 2-Fluorobiphenyl</i>	<i>62.1</i>		<i>32-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:53</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>50.6</i>		<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:53</i>
<i>Surr: Nitrobenzene-d5</i>	<i>87.2</i>		<i>45-142</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 16:53</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-05
 Collection Date: 25-Nov-2019 12:41

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-05
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	0.716	n	0.0966	ug/L	1	04-Dec-2019 17:12
2-Methylnaphthalene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Acenaphthene	0.187		0.0966	ug/L	1	04-Dec-2019 17:12
Acenaphthylene	0.263		0.0966	ug/L	1	04-Dec-2019 17:12
Anthracene	0.423		0.0966	ug/L	1	04-Dec-2019 17:12
Benz(a)anthracene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Benzo(a)pyrene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Benzo(b)fluoranthene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Benzo(g,h,i)perylene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Benzo(k)fluoranthene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Chrysene	0.422		0.0966	ug/L	1	04-Dec-2019 17:12
Dibenz(a,h)anthracene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Dibenzofuran	2.05		0.0966	ug/L	1	04-Dec-2019 17:12
Fluoranthene	0.226		0.0966	ug/L	1	04-Dec-2019 17:12
Fluorene	0.352		0.0966	ug/L	1	04-Dec-2019 17:12
Indeno(1,2,3-cd)pyrene	ND		0.0966	ug/L	1	04-Dec-2019 17:12
Naphthalene	0.567		0.0966	ug/L	1	04-Dec-2019 17:12
Phenanthrene	0.719		0.0966	ug/L	1	04-Dec-2019 17:12
Pyrene	0.538		0.0966	ug/L	1	04-Dec-2019 17:12
<i>Surr: 2-Fluorobiphenyl</i>	67.2		32-130	%REC	1	04-Dec-2019 17:12
<i>Surr: 4-Terphenyl-d14</i>	66.4		40-135	%REC	1	04-Dec-2019 17:12
<i>Surr: Nitrobenzene-d5</i>	79.1		45-142	%REC	1	04-Dec-2019 17:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-06
 Collection Date: 25-Nov-2019 13:31

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-06
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	6.70	n	0.0973	ug/L	1	04-Dec-2019 17:32
2-Methylnaphthalene	0.548		0.0973	ug/L	1	04-Dec-2019 17:32
Acenaphthene	0.134		0.0973	ug/L	1	04-Dec-2019 17:32
Acenaphthylene	0.138		0.0973	ug/L	1	04-Dec-2019 17:32
Anthracene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Benz(a)anthracene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Benzo(a)pyrene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Benzo(b)fluoranthene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Benzo(g,h,i)perylene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Benzo(k)fluoranthene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Chrysene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Dibenz(a,h)anthracene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Dibenzofuran	0.949		0.0973	ug/L	1	04-Dec-2019 17:32
Fluoranthene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Fluorene	0.361		0.0973	ug/L	1	04-Dec-2019 17:32
Indeno(1,2,3-cd)pyrene	ND		0.0973	ug/L	1	04-Dec-2019 17:32
Naphthalene	0.891		0.0973	ug/L	1	04-Dec-2019 17:32
Phenanthrene	0.409		0.0973	ug/L	1	04-Dec-2019 17:32
Pyrene	0.105		0.0973	ug/L	1	04-Dec-2019 17:32
<i>Surr: 2-Fluorobiphenyl</i>	<i>67.4</i>		<i>32-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:32</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>56.8</i>		<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:32</i>
<i>Surr: Nitrobenzene-d5</i>	<i>110</i>		<i>45-142</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:32</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Permian Basin Environmental Lab, LP
 Project: 9K26008
 Sample ID: 9K26008-07
 Collection Date: 25-Nov-2019 14:02

ANALYTICAL REPORT

WorkOrder:HS19111396
 Lab ID:HS19111396-07
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL PAHS - 8270D		Method:SW8270		Prep:SW3511 / 27-Nov-2019		Analyst: LG
1-Methylnaphthalene	ND	n	0.0972	ug/L	1	04-Dec-2019 17:52
2-Methylnaphthalene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Acenaphthene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Acenaphthylene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Anthracene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Benz(a)anthracene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Benzo(a)pyrene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Benzo(b)fluoranthene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Benzo(g,h,i)perylene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Benzo(k)fluoranthene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Chrysene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Dibenz(a,h)anthracene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Dibenzofuran	0.271		0.0972	ug/L	1	04-Dec-2019 17:52
Fluoranthene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Fluorene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Indeno(1,2,3-cd)pyrene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Naphthalene	0.214		0.0972	ug/L	1	04-Dec-2019 17:52
Phenanthrene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
Pyrene	ND		0.0972	ug/L	1	04-Dec-2019 17:52
<i>Surr: 2-Fluorobiphenyl</i>	<i>94.6</i>		<i>32-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:52</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>52.1</i>		<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:52</i>
<i>Surr: Nitrobenzene-d5</i>	<i>123</i>		<i>45-142</i>	<i>%REC</i>	<i>1</i>	<i>04-Dec-2019 17:52</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

Batch ID: 148111	Start Date: 27 Nov 2019 14:56	End Date:
Method: SW3511		Prep Code: 3511_PAH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19111396-01		33.15 (mL)	2 (mL)	0.06033
HS19111396-02		34.52 (mL)	2 (mL)	0.05794
HS19111396-03		34.23 (mL)	2 (mL)	0.05843
HS19111396-04		34.04 (mL)	2 (mL)	0.05875
HS19111396-05		34.17 (mL)	2 (mL)	0.05853
HS19111396-06		33.92 (mL)	2 (mL)	0.05896
HS19111396-07		33.95 (mL)	2 (mL)	0.05891

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 148111 (0)		Test Name : LOW-LEVEL PAHS - 8270D			Matrix: Water	
HS19111396-01	9K26008-01	25 Nov 2019 10:45		27 Nov 2019 14:56	04 Dec 2019 15:47	1
HS19111396-02	9K26008-02	25 Nov 2019 11:08		27 Nov 2019 14:56	05 Dec 2019 09:47	10
HS19111396-02	9K26008-02	25 Nov 2019 11:08		27 Nov 2019 14:56	04 Dec 2019 16:13	1
HS19111396-03	9K26008-03	25 Nov 2019 11:35		27 Nov 2019 14:56	04 Dec 2019 16:33	1
HS19111396-04	9K26008-04	25 Nov 2019 12:00		27 Nov 2019 14:56	04 Dec 2019 16:53	1
HS19111396-05	9K26008-05	25 Nov 2019 12:41		27 Nov 2019 14:56	04 Dec 2019 17:12	1
HS19111396-06	9K26008-06	25 Nov 2019 13:31		27 Nov 2019 14:56	04 Dec 2019 17:32	1
HS19111396-07	9K26008-07	25 Nov 2019 14:02		27 Nov 2019 14:56	04 Dec 2019 17:52	1

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

QC BATCH REPORT

Batch ID: 148111 (0)		Instrument: SV-6		Method: LOW-LEVEL PAHS - 8270D					
MBLK		Sample ID: MBLK-148111		Units: ug/L		Analysis Date: 04-Dec-2019 10:07			
Client ID:		Run ID: SV-6_351789		SeqNo: 5373749		PrepDate: 27-Nov-2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1-Methylnaphthalene	ND	0.100							
2-Methylnaphthalene	ND	0.100							
Acenaphthene	ND	0.100							
Acenaphthylene	ND	0.100							
Anthracene	ND	0.100							
Benz(a)anthracene	ND	0.100							
Benzo(a)pyrene	ND	0.100							
Benzo(b)fluoranthene	ND	0.100							
Benzo(g,h,i)perylene	ND	0.100							
Benzo(k)fluoranthene	ND	0.100							
Chrysene	ND	0.100							
Dibenz(a,h)anthracene	ND	0.100							
Dibenzofuran	ND	0.100							
Fluoranthene	ND	0.100							
Fluorene	ND	0.100							
Indeno(1,2,3-cd)pyrene	ND	0.100							
Naphthalene	ND	0.100							
Phenanthrene	ND	0.100							
Pyrene	ND	0.100							
Surr: 2-Fluorobiphenyl	3.026	0.100	3.03	0	99.9	32 - 130			
Surr: 4-Terphenyl-d14	3.057	0.100	3.03	0	101	40 - 135			
Surr: Nitrobenzene-d5	3.909	0.100	3.03	0	129	45 - 142			

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

QC BATCH REPORT

Batch ID: 148111 (0)		Instrument: SV-6		Method: LOW-LEVEL PAHS - 8270D					
LCS		Sample ID: LCS-148111		Units: ug/L		Analysis Date: 04-Dec-2019 10:26			
Client ID:		Run ID: SV-6_351789		SeqNo: 5373750		PrepDate: 27-Nov-2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1-Methylnaphthalene	3.638	0.100	3.03	0	120	40 - 140			
2-Methylnaphthalene	3.532	0.100	3.03	0	117	40 - 140			
Acenaphthene	3.279	0.100	3.03	0	108	40 - 140			
Acenaphthylene	3.555	0.100	3.03	0	117	40 - 140			
Anthracene	3.059	0.100	3.03	0	101	40 - 140			
Benz(a)anthracene	3.067	0.100	3.03	0	101	40 - 140			
Benzo(a)pyrene	2.982	0.100	3.03	0	98.4	40 - 140			
Benzo(b)fluoranthene	2.728	0.100	3.03	0	90.0	40 - 140			
Benzo(g,h,i)perylene	2.88	0.100	3.03	0	95.1	40 - 140			
Benzo(k)fluoranthene	3.161	0.100	3.03	0	104	40 - 140			
Chrysene	3.039	0.100	3.03	0	100	40 - 140			
Dibenz(a,h)anthracene	2.782	0.100	3.03	0	91.8	40 - 140			
Dibenzofuran	3.244	0.100	3.03	0	107	40 - 140			
Fluoranthene	2.543	0.100	3.03	0	83.9	40 - 140			
Fluorene	3.311	0.100	3.03	0	109	40 - 140			
Indeno(1,2,3-cd)pyrene	2.522	0.100	3.03	0	83.2	40 - 140			
Naphthalene	3.159	0.100	3.03	0	104	40 - 140			
Phenanthrene	3.145	0.100	3.03	0	104	40 - 140			
Pyrene	3.557	0.100	3.03	0	117	40 - 140			
Surr: 2-Fluorobiphenyl	2.912	0.100	3.03	0	96.1	32 - 130			
Surr: 4-Terphenyl-d14	2.837	0.100	3.03	0	93.6	40 - 135			
Surr: Nitrobenzene-d5	3.271	0.100	3.03	0	108	45 - 142			

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

QC BATCH REPORT

Batch ID: 148111 (0)		Instrument: SV-6		Method: LOW-LEVEL PAHS - 8270D						
LCSD		Sample ID: LCSD-148111		Units: ug/L		Analysis Date: 04-Dec-2019 10:46				
Client ID:		Run ID: SV-6_351789		SeqNo: 5373751		PrepDate: 27-Nov-2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	3.52	0.100	3.03	0	116	40 - 140	3.638	3.28	25	
2-Methylnaphthalene	3.428	0.100	3.03	0	113	40 - 140	3.532	2.98	25	
Acenaphthene	3.27	0.100	3.03	0	108	40 - 140	3.279	0.28	25	
Acenaphthylene	3.601	0.100	3.03	0	119	40 - 140	3.555	1.27	25	
Anthracene	3.191	0.100	3.03	0	105	40 - 140	3.059	4.22	25	
Benz(a)anthracene	3.259	0.100	3.03	0	108	40 - 140	3.067	6.08	25	
Benzo(a)pyrene	2.955	0.100	3.03	0	97.5	40 - 140	2.982	0.915	25	
Benzo(b)fluoranthene	2.864	0.100	3.03	0	94.5	40 - 140	2.728	4.84	25	
Benzo(g,h,i)perylene	3.043	0.100	3.03	0	100	40 - 140	2.88	5.5	25	
Benzo(k)fluoranthene	3.36	0.100	3.03	0	111	40 - 140	3.161	6.1	25	
Chrysene	3.227	0.100	3.03	0	107	40 - 140	3.039	6.02	25	
Dibenz(a,h)anthracene	2.82	0.100	3.03	0	93.1	40 - 140	2.782	1.38	25	
Dibenzofuran	3.258	0.100	3.03	0	108	40 - 140	3.244	0.425	25	
Fluoranthene	2.577	0.100	3.03	0	85.0	40 - 140	2.543	1.31	25	
Fluorene	3.31	0.100	3.03	0	109	40 - 140	3.311	0.0293	25	
Indeno(1,2,3-cd)pyrene	2.425	0.100	3.03	0	80.0	40 - 140	2.522	3.91	25	
Naphthalene	3.203	0.100	3.03	0	106	40 - 140	3.159	1.39	25	
Phenanthrene	3.174	0.100	3.03	0	105	40 - 140	3.145	0.892	25	
Pyrene	3.622	0.100	3.03	0	120	40 - 140	3.557	1.81	25	
Surr: 2-Fluorobiphenyl	2.862	0.100	3.03	0	94.5	32 - 130	2.912	1.72	25	
Surr: 4-Terphenyl-d14	2.897	0.100	3.03	0	95.6	40 - 135	2.837	2.09	25	
Surr: Nitrobenzene-d5	3.474	0.100	3.03	0	115	45 - 142	3.271	6	25	

The following samples were analyzed in this batch:

HS19111396-01	HS19111396-02	HS19111396-03	HS19111396-04
HS19111396-05	HS19111396-06	HS19111396-07	

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
WorkOrder: HS19111396

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2019	31-Dec-2019
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	TX104704231-19-23	30-Apr-2020

Client: Permian Basin Environmental Lab, LP
Project: 9K26008
Work Order: HS19111396

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS19111396-01	9K26008-01	Login	11/27/2019 11:51:34 AM	AC	LVI002
HS19111396-02	9K26008-02	Login	11/27/2019 11:51:34 AM	AC	LVI002
HS19111396-03	9K26008-03	Login	11/27/2019 11:51:34 AM	AC	LVI002
HS19111396-04	9K26008-04	Login	11/27/2019 11:51:34 AM	AC	LVI002
HS19111396-05	9K26008-05	Login	11/27/2019 11:51:34 AM	AC	LVI002

Sample Receipt Checklist

Client Name: Permian Basin Lab
Work Order: HS19111396

Date/Time Received: **27-Nov-2019 10:00**
Received by: **AC**

Checklist completed by: Asad Chaudhry 27-Nov-2019
eSignature Date

Reviewed by: Andy C. Neir 27-Nov-2019
eSignature Date

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?
Custody seals intact on shipping container/cooler?
Custody seals intact on sample bottles?
VOA/TX1005/TX1006 Solids in hermetically sealed vials?
Chain of custody present?
Chain of custody signed when relinquished and received?
Samplers name present on COC?
Chain of custody agrees with sample labels?
Samples in proper container/bottle?
Sample containers intact?
Sufficient sample volume for indicated test?
All samples received within holding time?
Container/Temp Blank temperature in compliance?
Temperature(s)/Thermometer(s):
Cooler(s)/Kit(s):
Date/Time sample(s) sent to storage:
Water - VOA vials have zero headspace?
Water - pH acceptable upon receipt?
pH adjusted?
pH adjusted by:

Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1 Page(s)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	COC IDs:N/A
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

1.5c U/C	IR 25	
Red		
11/27/2019 12:00		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

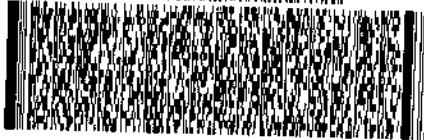

Regarding:

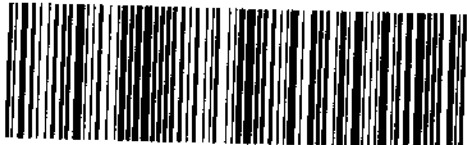
Comments:

Corrective Action:

ORIGIN ID:MAFA (281) 863-0561		SHIP DATE: 26NOV19	
ALS		ACTWT: 26.50 LB	
10450 STANCLIFF RD		CAO: 6994462/SSFE2021	
STE 216		DIMS: 16x8x14 IN	
HOUSTON, TX 77099		BILL THIRD PARTY	
UNITED STATES US			

TO			
ALS 10450 STANCLIFF RD STE 216 HOUSTON TX 77099			
(281) 863-0561		REF:	
YAU:		DEPT:	

		FedEx Express 	
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WED - 27 NOV 3:00P STANDARD OVERNIGHT	
TRK# 8147 5084 8112	77099 TX-US IAH
AB SGRA	
	

Appendix E

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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name:	Red Byrd # 1	Facility Type:	Steel Pipeline
Surface Owner:	Red Byrd	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	1	20S	36E					Lea

Latitude 32° 36' 09.8" N Longitude 103° 17' 58.5" W

NATURE OF RELEASE

Type of Release:	Crude Oil	Volume of Release:	Unknown	Volume Recovered
Source of Release:	Steel Pipeline	Date and Hour of Occurrence	Date and Hour of Discovery	
Was Immediate Notice Given?	Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required <input type="checkbox"/>	If YES, To Whom?		
By Whom?		Date and Hour		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.		

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable.

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

Signature:	<u>OIL CONSERVATION DIVISION</u>		
Printed Name:	Camille Reynolds	Approved by District Supervisor:	
Title:	Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address:	cjreynolds@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/21/2005	Phone: (505)441-0965		

* Attach Additional Sheets If Necessary