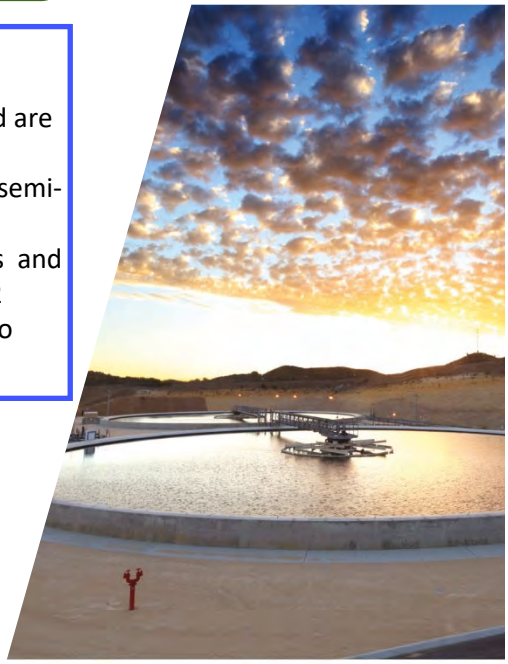
APPROVED
By Nelson Velez at 3:26 pm, Jan 11, 2022

Review of 2020 Annual Groundwater Monitoring Report: **Content satisfactory**
Contractor recommendations approved by OCD and are as follows;
1. Continue NMOCD-approved quarterly and semi-annual groundwater monitoring events
2. Continue weekly BTEX abatement events and operation of the oxygen emitter installed in MW-12
Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.



2020 Annual Groundwater Monitoring Report

Lovington Gathering WTI
Lea County, New Mexico
SRS #2006-142
NMOCD Remediation
Permit Number AP-96
Incident ID # nAPP2108928398

Plains All American Pipeline, LP

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1. Introduction

This 2020 Annual Groundwater Monitoring Report presents data collected at the Lovington Gathering WTI location (hereafter referred to as the "Site") by GHD Services, Inc. (GHD) on behalf of Plains All American Pipeline, LP (Plains) in compliance with the New Mexico Oil Conservation Division (NMOCD) requirements. This Site falls under NMOCD Abatement Plan number AP-96. This report presents groundwater assessment activities associated with quarterly well gauging and groundwater sampling events conducted in February, May, September, and November 2020.

1.1 Site Location and History

The legal description of the Site is SE 1/4, NE 1/4, Section 6, Township 17 South, Range 37 East, Lea County, New Mexico. The Site coordinates are 32.8649° N and 103.2853°W (Figure 1). The location is situated in a pasture containing various oil and gas production facilities. The surface owner is Mr. Robert Rice. Monitoring and remediation at the Site is currently the responsibility of Plains. The Site is characterized by a fenced, excavated, and backfilled release area, including a Plains pipeline right-of-way adjacent to an idle Plains pump station.

On April 21, 2006, during purging of the 6-inch steel Lovington Gathering WTI Pipeline owned by Plains, a release of sweet crude oil occurred as the result of internal corrosion. At the time the release was discovered, it was estimated that approximately 12 barrels (bbls) of crude oil were released with an aerial extent of surface impact estimated at approximately 1,500 square feet. A copy of the Release Notification and Corrective Action, NMOCD Form C-141 is attached as Appendix A. Cleanup action began the same day with approximately 8 bbls of crude oil being recovered. Basin Environmental Service Technologies, LLC (Basin) was notified by Plains to respond to the pipeline release, to repair the pipeline, and to excavate impacted soil. The pipeline was repaired utilizing a clamp, and visually stained soil was excavated and placed on plastic sheeting. Excavation activities during the response and subsequent remediation of the Site covered an area approximately 30 feet long by 27 feet wide and was approximately 5 to 6 feet below ground surface (bgs). On April 21, 2006, remediation and project management responsibilities were assumed by Basin. GHD assumed Site groundwater remediation and project management responsibilities on October 1, 2016.

Monitor wells MW-1, MW-2, and MW-3 were installed in July 2006. Monitor wells MW-4, MW-5, MW-6, and MW-7 were installed in November 2006. Monitor well MW-8 was installed in February 2007. Monitor well MW-9 was installed in August 2007. Monitor well MW-10 was installed in October 2009.

On September 17, 2018, monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5 were plugged and abandoned at the Site. On September 19, 2018, GHD completed the installation of five 2-inch replacement monitor wells (MW-1R, MW-2R, MW-3R, MW-4R, and MW-5R) to maintain delineation and replace the five plugged and abandoned wells. The new monitor wells were installed in proximity to the original well locations (Figure 2). Additionally, two new monitoring wells, MW-11 and MW-12, were installed to further delineate down-gradient conditions at the southern portion of the Site. On May 27, 2020, GHD installed an oxygen emitter system into monitor well MW-12 to address benzene concentrations in the downgradient portion of the site.

2. Regulatory Framework

The NMOCD guidelines require groundwater to be analyzed for potential contaminants as defined by the New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103 Section A, which provides Human Health Standards for Groundwater. The constituents of concern (COCs) in affected groundwater at the Site are benzene, toluene, ethylbenzene, and total xylenes (BTEX). In this report, groundwater analytical results for the COCs are compared to the NMWQCC standards as shown in the following table:

Table 2.1 NMWQCC Human Health Standards for Groundwater

Analyte	NMWQCC Human Health Standards for Groundwater (mg/kg)
Benzene	0.01 mg/L
Toluene	0.75 mg/L
Ethylbenzene	0.75 mg/L
Total Xylenes	0.62 mg/L

The table below depicts the Site sampling schedule as approved by the NMOCD on November 4, 2013:

Table 2.2 NMOCD Approved Sampling Schedule

Location	*Schedule*
MW-1, MW-4, MW-5, MW-8	Semi-Annually
MW-2, MW-3, MW-6, MW-7, MW-9, MW-10, Goff Dairy Well, Goff Dairy Center Pivot, Goff Dairy Center Pivot Begin, Goff Dairy Center Pivot End, JW House Well	Quarterly

3. Groundwater Monitoring Activities

GHD conducted quarterly groundwater monitoring activities at the Site on February 20-21, May 20-21, September 2-3, and November 5, 2020. The Site is monitored in 12 on-site monitoring wells and five off-Site locations (Goff Dairy Well, Goff Dairy Center Pivot Well, Goff Dairy Center Pivot Beginning, Goff Dairy Center Pivot End, and JW House Well. All on-site monitor wells and off-Site locations (when accessible) were sampled in accordance with the sampling schedule referred to in Section 2.

3.1 Groundwater Monitoring Methodology

Prior to gauging activity, each well cap was removed to allow groundwater levels to stabilize. Static fluid levels were gauged with an oil-water interface probe to the nearest hundredth of a foot. Each well was purged of three casing volumes of water, and groundwater samples were collected. One or two duplicate samples were collected during each quarterly sampling event using clean disposable polyvinyl chloride (PVC) bailers. Laboratory-supplied sample containers

were filled directly from bailers. Groundwater samples were placed on ice and chilled to a temperature of approximately 4°C (40°F). Proper chain-of-custody documentation accompanied the samples to Pace National Analytical Laboratory in Mt. Juliet, Tennessee for analysis of BTEX by EPA Method 8021B. No samples were collected for analysis of PAH by EPA Method 8270C-SIM during 2020 because all wells have met NMWQCC and NMOCD standards.

3.2 Groundwater Monitoring Results

Table 1 presents gauging data and calculated groundwater elevations using top-of-casing elevations obtained from a professional survey. Groundwater gradient maps for February 20, May 20, September 2, and November 5, 2020 are provided as Figures 3, 4, 5 and 6, respectively.

The groundwater flow direction during the reporting period was to the southeast; which is generally consistent with historical data. The average groundwater gradient determined for the Site from the four groundwater monitoring events was approximately 0.0069 ft/ft. Pertinent well gauging data indicated an increase in groundwater elevations for the first and fourth quarters of 2020 and a decline for the second and third quarters of 2020. Fluctuations in the groundwater elevation can be attributed to seasonal operation of the Goff Dairy center pivot irrigation system located adjacent and south-southwest of the Site. No measurable LNAPL was detected at the site during 2020 which is consistent with historical data.

During the February 20 and 21, 2020, quarterly monitoring event, monitor wells MW-6, MW-8, and MW-10 were gauged dry. MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-7, MW-9, MW-11, and MW-12, were sampled. The Goff Dairy Center Pivot, Goff Dairy Center Pivot Beg, and Goff Dairy Center Pivot End were sampled were sampled on March 26, 2020, and the Goff Dairy Well was sampled on April 1, 2020. Groundwater samples weren't collected from the off-Site JW House Well due to property being inaccessible. Analytical results indicated MW-1R, MW-2R, MW-3R, MW-4R, and MW-12 exhibited benzene concentrations above the Human Health Standard, ranging from 0.0114 mg/L in MW-3R to 1.04 mg/L in MW-4R. Benzene concentrations were not detected in any of the other wells. Toluene concentrations were not detected in any of the wells and MW-3R exhibited ethylbenzene concentrations below the Human Health Standard of 0.75 mg/L. Total xylenes were detected in MW-2R, MW-3R, MW-4R, MW-12, and Goff Dairy Well; however, these concentrations were all below the Human Health Standard of 0.62 mg/L.

The second quarter sampling event was conducted on May 20 and 21, 2020. Monitor wells MW-6, MW-8, and MW-10 were gauged dry. Groundwater samples were collected from monitor wells MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-7, MW-9, MW-11, and MW-12. The Goff Dairy Well, Goff Dairy Center Pivot, Goff Dairy Center Pivot Beg, and Goff Dairy Center Pivot End were sampled were sampled on July 2, 2020. Groundwater samples weren't collected from the off-Site JW House Well due to property being inaccessible. Analytical results for samples collected in second quarter indicated benzene concentrations above the Human Health Standard for MW-1R, MW-2R, MW-4R, and MW-12, ranging from 0.0987 in MW-2R to 0.918 in MW-4R. Monitor well MW-3R exhibited benzene concentrations at a level below the Human Health Standard of 0.01 mg/L. None of the wells exhibited concentrations of toluene and ethylbenzene. Total xylenes were detected in MW-4R and MW-12; however, these concentrations were all below the Human Health Standard of 0.62 mg/L.

During the September 2 and 3, 2020, groundwater sampling event monitor wells MW-6, MW-8, and MW-10 were gauged dry. Groundwater samples were collected from MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-7, MW-9, MW-11, MW-12, Goff Dairy Well, Goff Dairy Center Pivot, Goff Dairy Center Pivot Beg, and Goff Dairy Center Pivot End. Groundwater samples weren't collected from the off-Site JW House Well due to property being inaccessible. Analytical results indicated benzene concentrations above the Human Health Standard were detected in MW-1R, MW-2R, MW-4R, and MW-12, ranging from 0.0773 mg/L in MW-2R to 1.58 mg/L in MW-4R. Benzene concentrations were not detected in any other wells. MW-1R and MW-12 exhibited toluene concentrations below the Human Health Standard of 0.75 mg/L. Ethylbenzene was not detected in any of the wells. Total xylenes were detected in MW-4R and MW-12; however, these concentrations were all below the Human Health Standard of 0.62 mg/L.

The fourth quarterly sampling event was conducted on November 5, 2020. Monitor wells MW-6, MW-8, and MW-10 were gauged dry. Groundwater samples were collected from MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-7, MW-9, MW-11, MW-12. The Goff Dairy Well and pivot system were not sampled as the pivot was not in operation. Additionally, the JW House Well was not sampled due to it being inaccessible. Analytical results indicated benzene concentrations above the NMWQCC Human Health Standard (0.01 mg/L) in MW-1R, MW-2R, MW-4R, and MW-12, ranging from 0.0924 mg/L in MW-2R to 2.43 in MW-4R. None of the wells exhibited toluene concentrations. Ethylbenzene and total xylenes were detected in the MW-3R (DUP-1) sample at concentrations below the NMWQCC Human Health Standard of 0.75 mg/L and 0.62 mg/L, respectively.

Charts of concentrations of dissolved benzene versus time for MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-7, MW-9, MW-11, and MW-12 were generated to evaluate trends of benzene concentrations. These charts indicate stable or declining trends at all samples points except for MW-4R and MW-12. The charts are provided in Appendix B.

Results of BTEX analyses in groundwater are summarized in Table 2. Maps of concentrations of BTEX in groundwater during monitoring events conducted in February, May, September, and November 2020 are presented as Figures 7, 8, 9, and 10, respectively.

Groundwater samples were not analyzed for polycyclic aromatic hydrocarbons (PAHs) as all wells have met NMWQCC and NMOCD standards. A summary of PAH analytical results is included as Table 3. Copies of certified laboratory reports and chain-of-custody documentation are attached in Appendix C.

4. Corrective Action

Due to increases in benzene concentrations in MW-4R and MW-12 Plains was proactive and made the decision to conduct BTEX abatement via hand bailing. Beginning on March 26, 2020, weekly BTEX abatement events were conducted on monitor wells MW-1R, MW-2R, MW-3R, MW-4R and MW-12, via manual recovery of groundwater. Additionally, an oxygen emitter system was installed into MW-12 to enhance aerobic biodegradation of dissolved-phase hydrocarbons in groundwater on May 27, 2020. The oxygen emitter was removed prior to gauging and sampling activities, as appropriate, and replaced after these activities were completed.

5. Summary of Findings

Based on groundwater assessment monitoring and remedial activities performed at the Site in 2020, the following summary of findings is presented:

- The Site is monitored in 12 groundwater monitoring wells and five off-Site groundwater sample points.
- Wells MW-6, MW-8, and MW-10 were gauged dry during all four quarterly events of 2020.
- An oxygen emitter system was installed in MW-12 on May 27, 2020.
- The groundwater flow direction was to the southeast. The average groundwater gradient for 2020 was approximately 0.0069 ft./ft.
- Fluctuations in the elevation of the potentiometric surface can be attributed to seasonal operation of the Goff Dairy center pivot irrigation system located adjacent and south-southwest of the Site and the regional decline of the potentiometric surface.
- No wells exhibited measurable LNAPL.
- Benzene concentrations were detected in MW-1R, MW-2R, MW-4R, and MW-12 in all four quarterly monitoring events, and MW-3R during the first quarter, at concentrations exceeding the NMWQCC Human Health Standard. Benzene was detected in MW-3R during the second quarter at concentrations below the NMWQCC Human Health Standard.
- Charts of dissolved benzene versus time demonstrate stable or declining trends in all sample points except for MW-4R and MW-12.
- PAH constituents were not analyzed for as all wells have met NMWQCC and NMOCD standards.

6. Recommendations

Based upon the data and findings presented in this report, the following are recommended for 2021:

- Continue NMOCD-approved quarterly and semi-annual groundwater monitoring events with annual reporting to the NMOCD. Each monitoring event will include gauging, purging, and sampling groundwater for BTEX.
- Continue quarterly monitoring of MW-1R, MW-2R, MW-3R, MW-4R, and MW-12, paying particular attention to trends of contaminant levels in these wells. Determination of the need for additional delineation wells will be made at a later date.
- Continue weekly BTEX abatement events and operation of the oxygen emitter installed in MW-12.

All of which is Respectfully Submitted,

GHD

Becky Haskell
Senior Project Manager

Tom Larson
Midland Operations Manager

about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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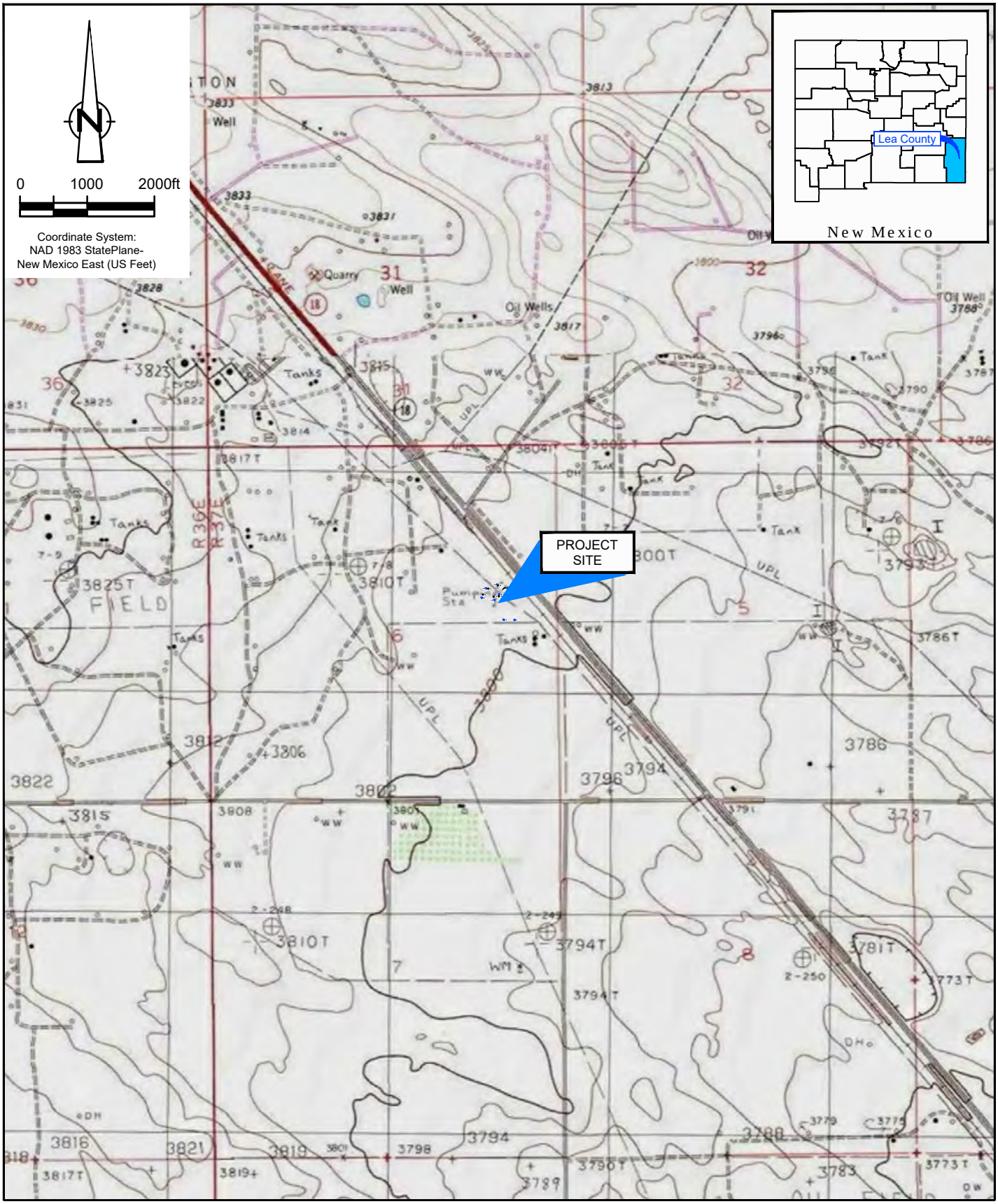
Figures



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

Lat/Long: 32.8649° North, 103.2853° West

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

11209905-00

Oct 29, 2020

SITE LOCATION MAP

FIGURE 1

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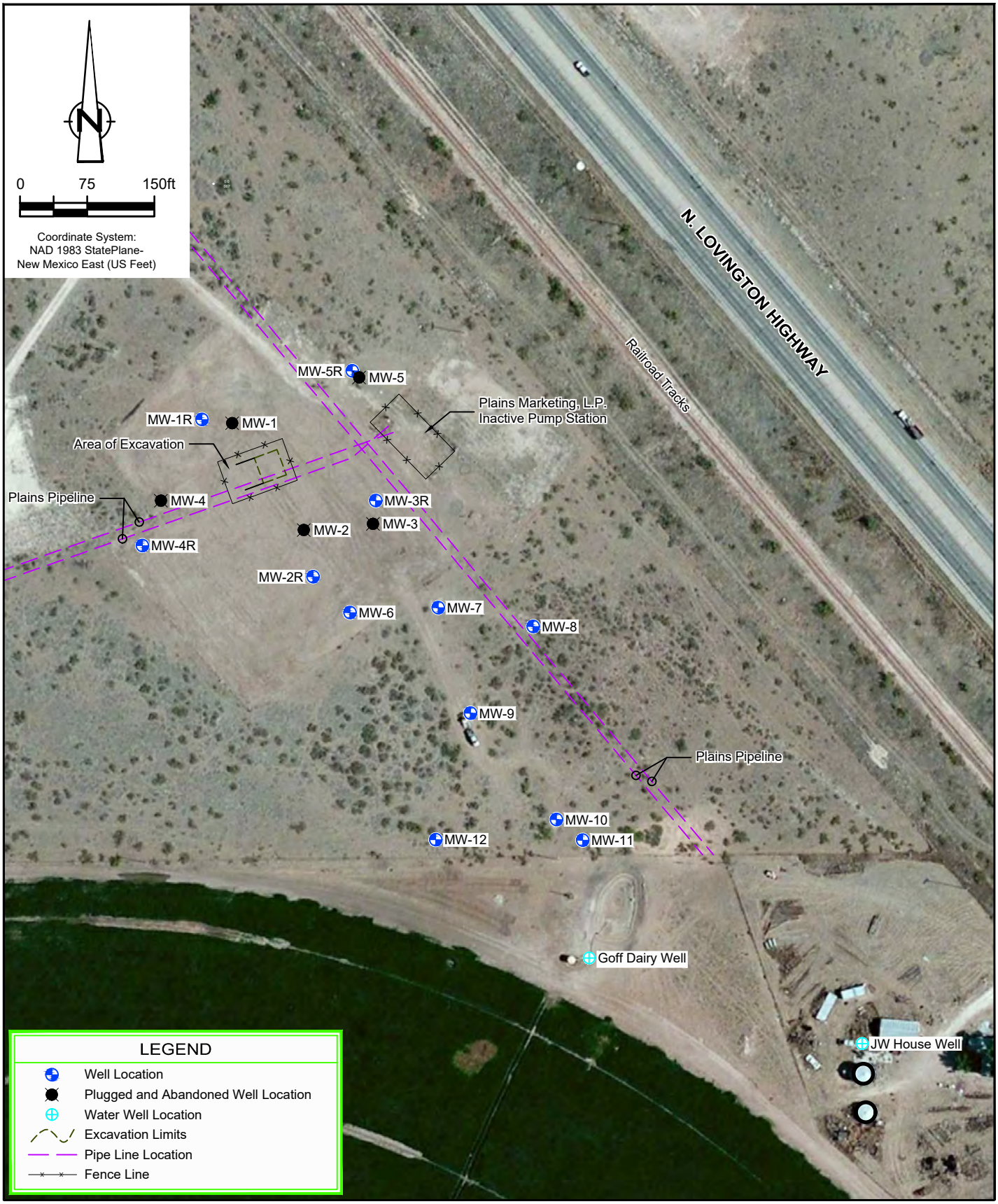

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PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

11209905-00

Oct 29, 2020

SITE DETAILS MAP

FIGURE 2

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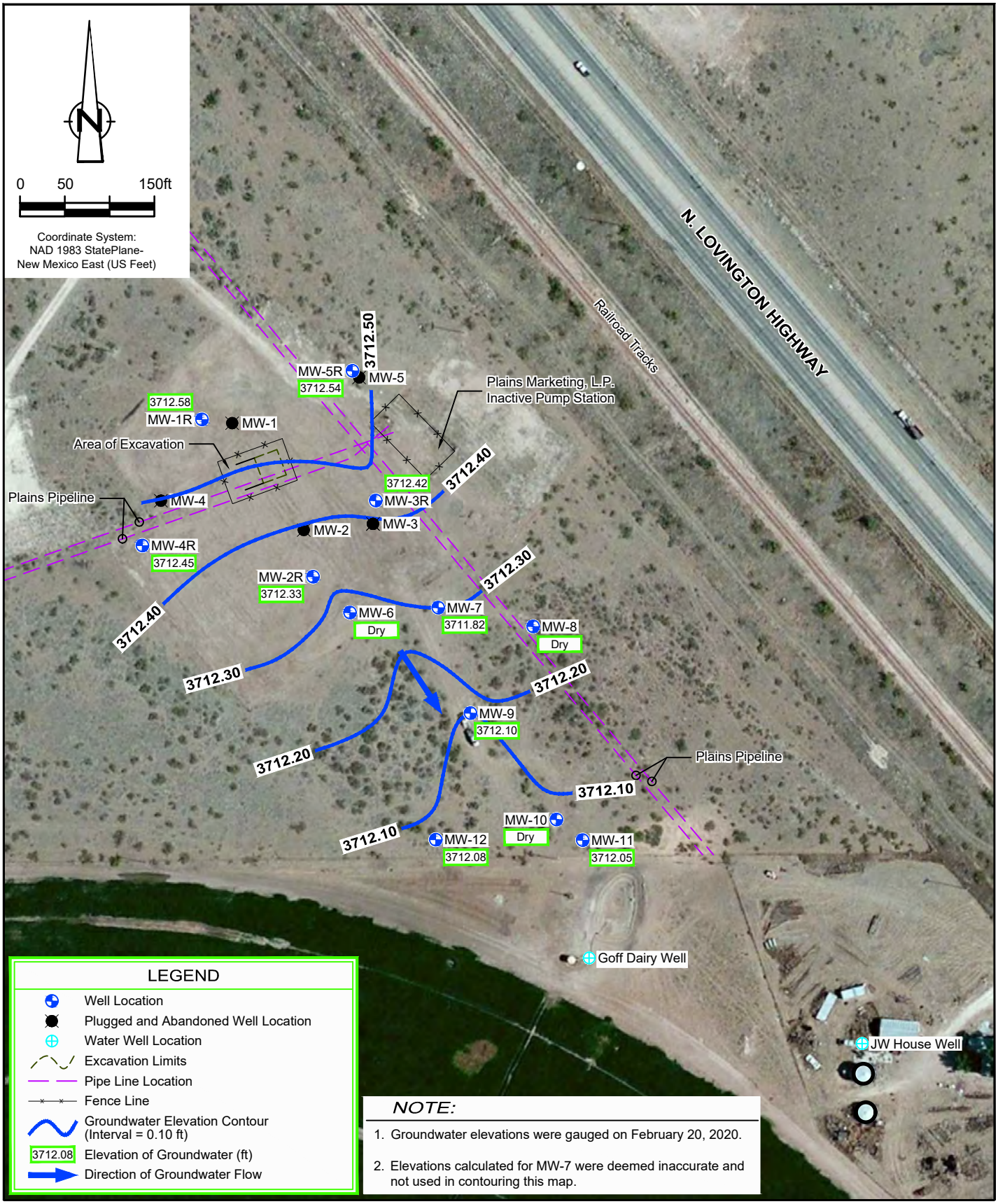

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PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

11209905-00
Jan 12, 2021

GROUNDWATER GRADIENT MAP - FEBRUARY 2020

FIGURE 3

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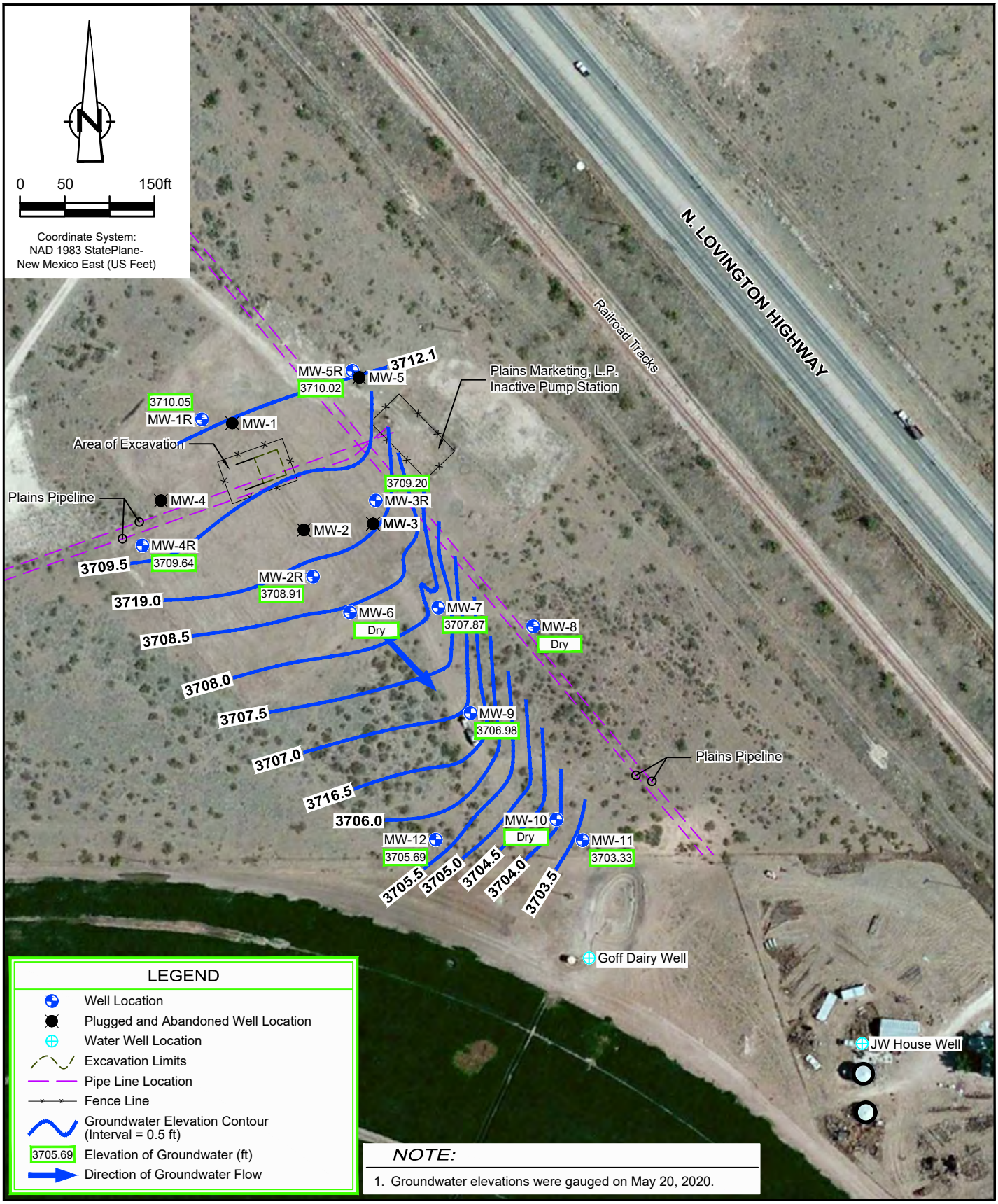

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PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

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Oct 29, 2020

GROUNDWATER GRADIENT MAP - MAY 20, 2020

FIGURE 4

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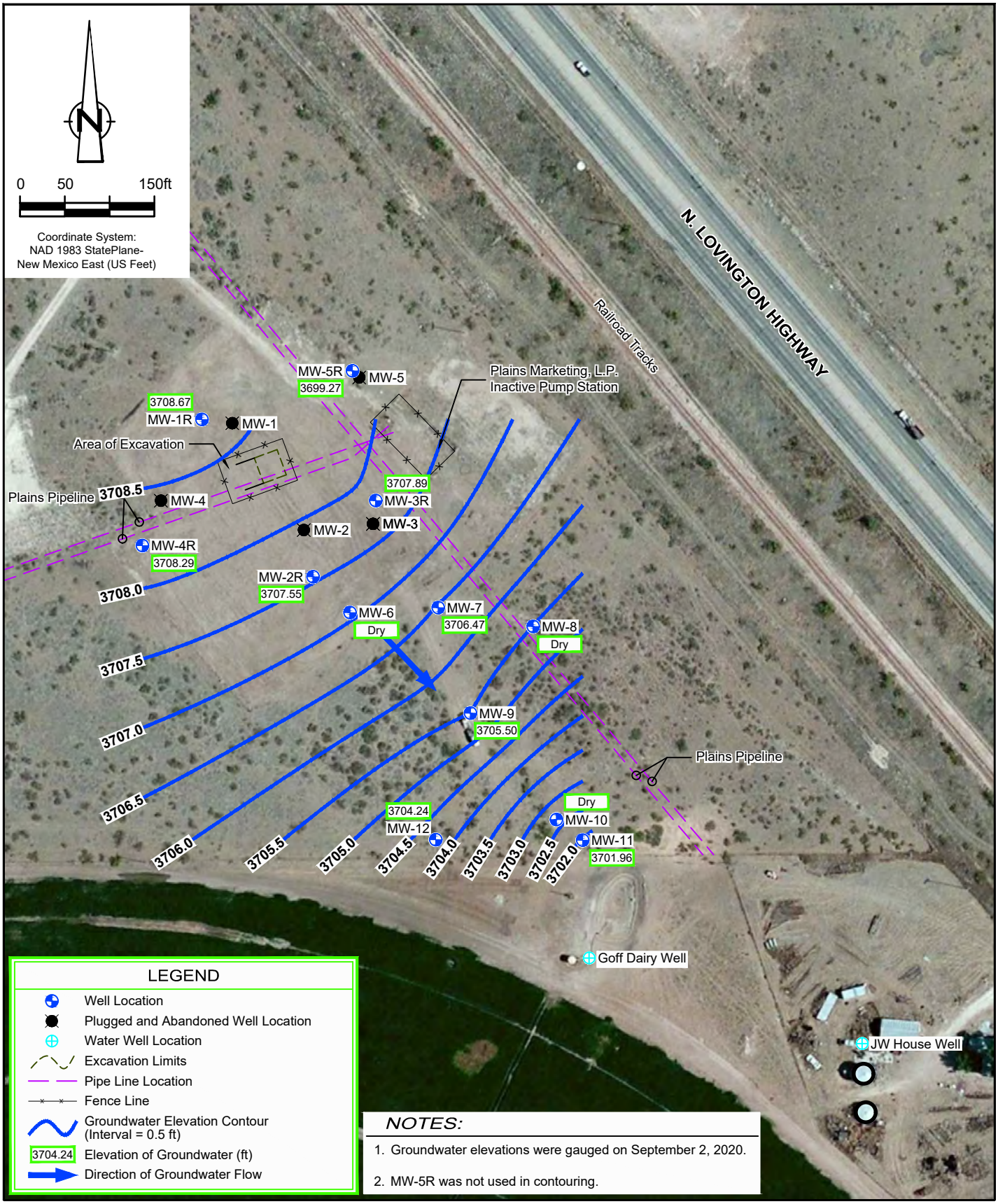

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LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

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GROUNDWATER GRADIENT MAP - SEPTEMBER 2, 2020 FIGURE 5

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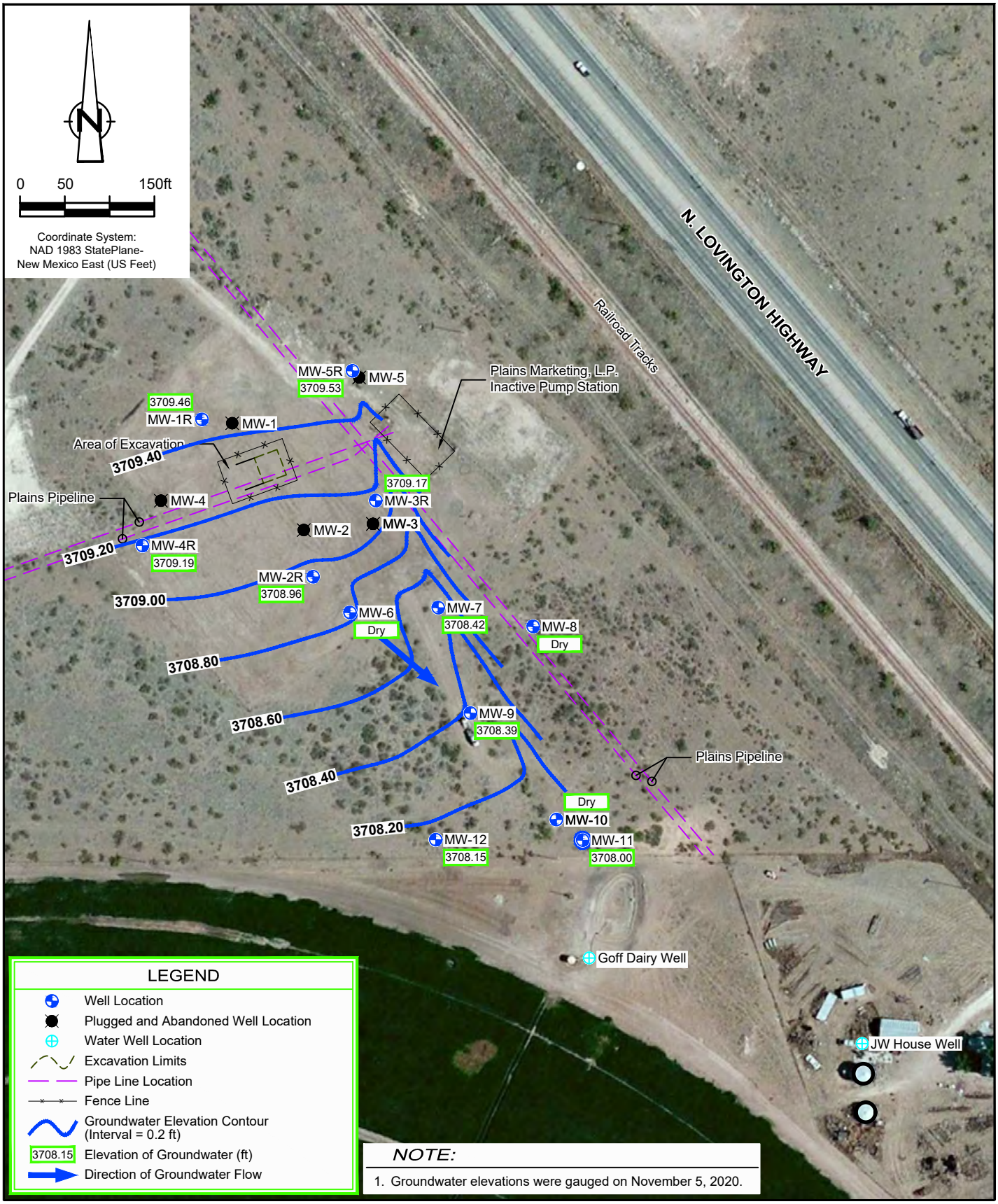

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LOVINGTON GATHERING WTI

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GROUNDWATER GRADIENT MAP - NOVEMBER 5, 2020

FIGURE 6

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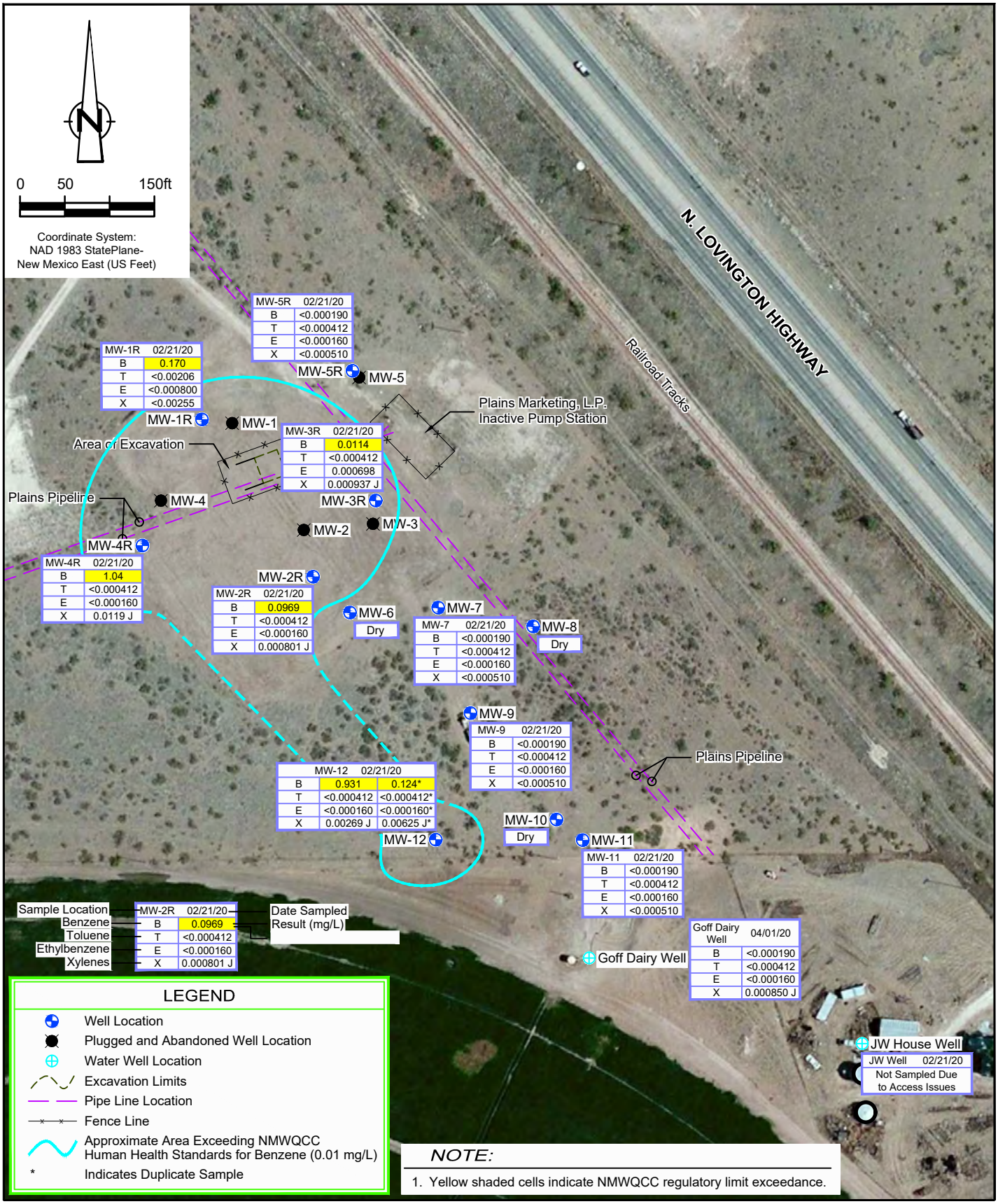

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BTEX CONCENTRATIONS IN GROUNDWATER MAP - FEBRUARY 2020

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FIGURE 7

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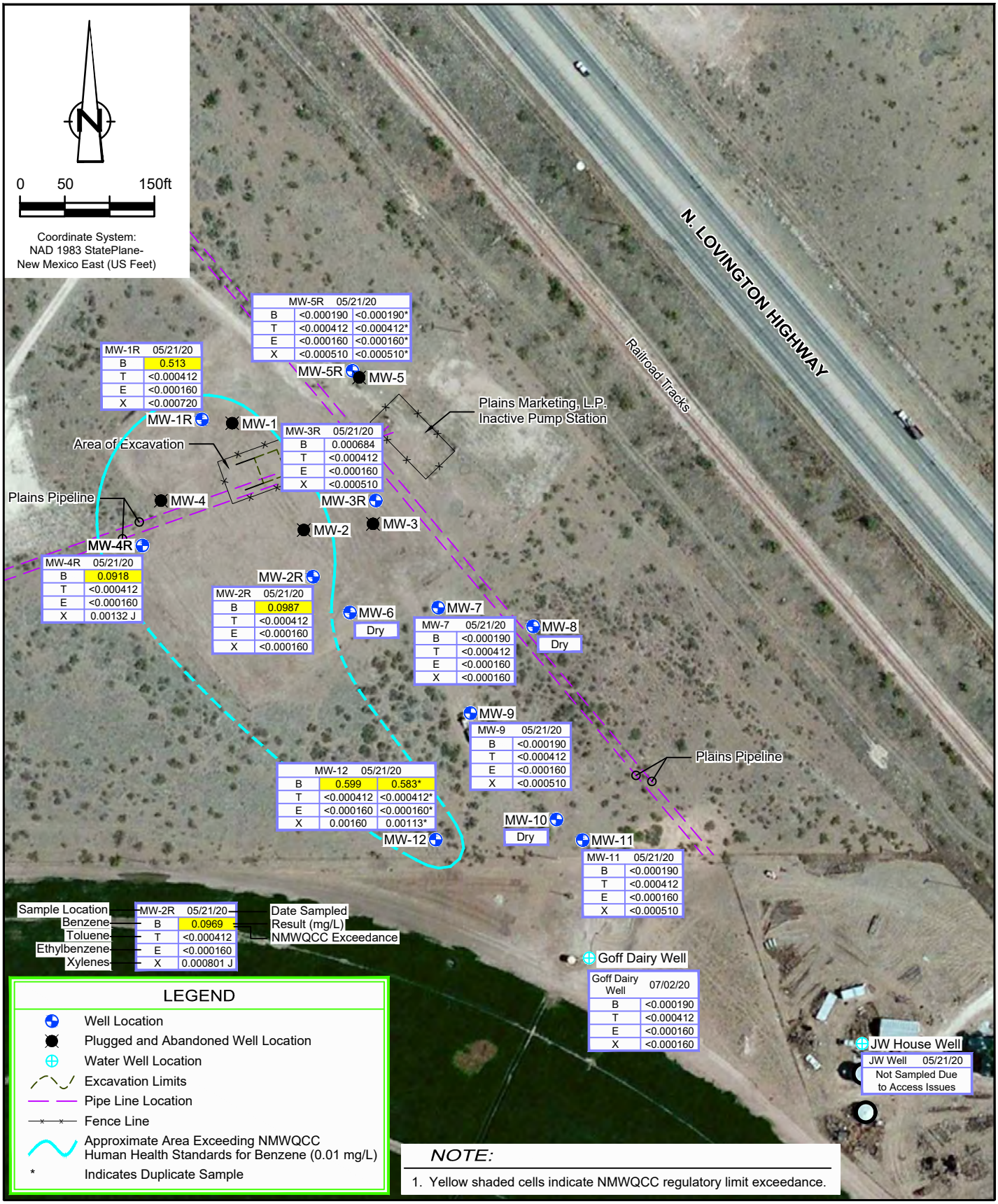

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LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

BTEX CONCENTRATIONS IN GROUNDWATER MAP - MAY 2020

11209905-00

Jan 12, 2021

FIGURE 8

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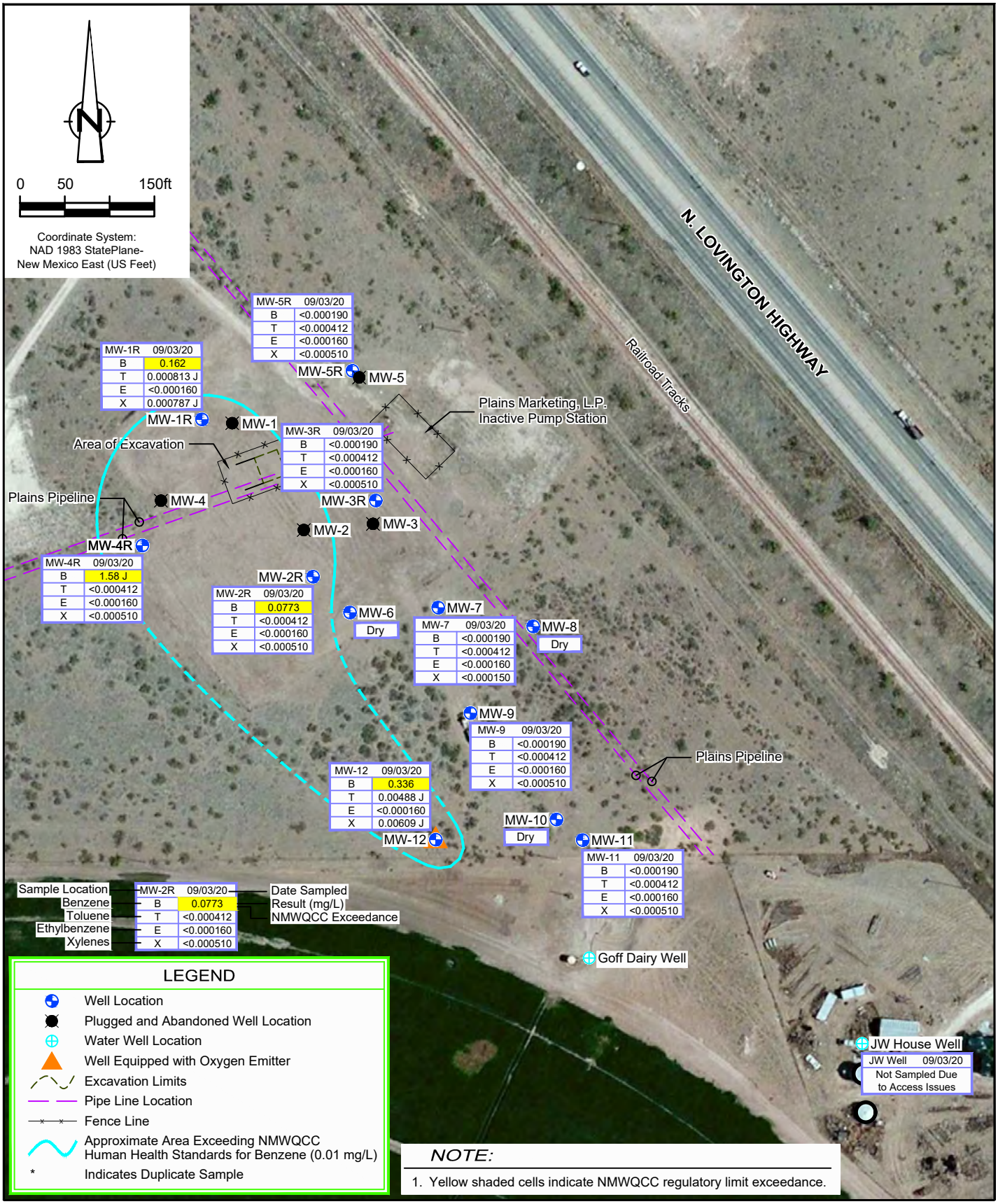

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PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
LOVINGTON GATHERING WTI

BTEX CONCENTRATIONS IN GROUNDWATER MAP - SEPTEMBER 2020

11209905-00

Jan 12, 2021

FIGURE 9

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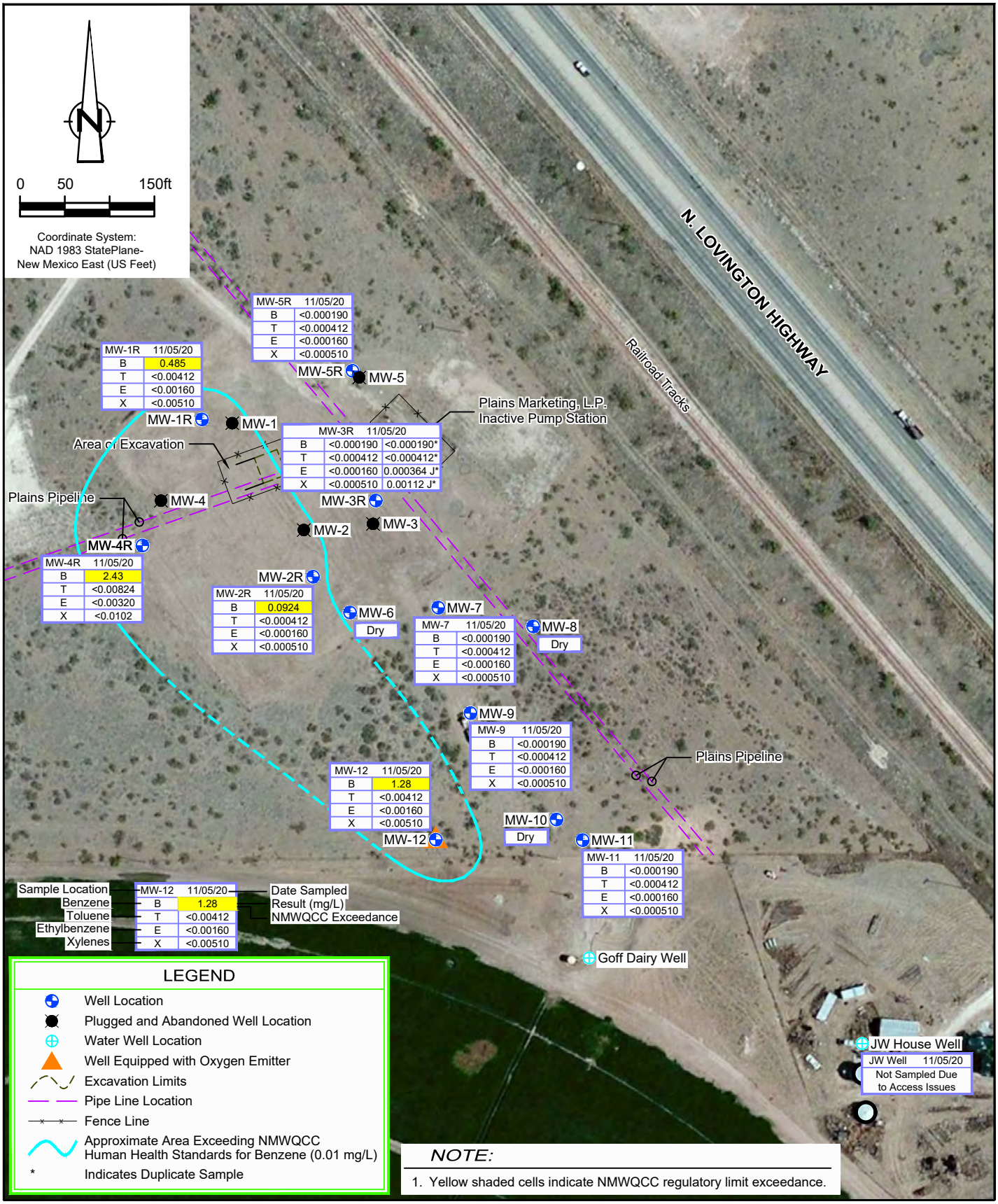

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PLAINS PIPELINE L.P.
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LOVINGTON GATHERING WTI

BTEX CONCENTRATIONS IN GROUNDWATER MAP - NOVEMBER 2020

11209905-00

Jan 12, 2021

FIGURE 10

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Tables

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-1R	3806.62	2/18/19	94.06	--	0.00	3712.56	108.69			5
MW-1R	3806.62	5/21/19	94.69	--	0.00	3711.93				6
MW-1R	3806.62	8/23/19	96.34	--	0.00	3710.28				5
MW-1R	3806.62	10/17/19	95.49	--	0.00	3711.13				6.5
MW-1R	3806.62	2/20/20	94.04	--	0.00	3712.58	108.36	85-105 (2in)		7
MW-1R	3806.62	3/26/20	93.90	--	0.00	3712.72	108.37			3
MW-1R	3806.62	4/2/20	94.59	--	0.00	3712.03				4
MW-1R	3806.62	4/10/20	95.02	--	0.00	3711.60				3
MW-1R	3806.62	4/17/20	95.33	--	0.00	3711.29				5.5
MW-1R	3806.62	4/20/20	95.48	--	0.00	3711.14				3
MW-1R	3806.62	4/30/20	95.87	--	0.00	3710.75				3
MW-1R	3806.62	5/6/20	96.12	--	0.00	3710.50				3
MW-1R	3806.62	5/12/20	96.31	--	0.00	3710.31				5
MW-1R	3806.62	5/20/20	96.57	--	0.00	3710.05				6
MW-1R	3806.62	6/3/20	96.04	--	0.00	3710.58				3
MW-1R	3806.62	6/10/20	95.84	--	0.00	3710.78				3
MW-1R	3806.62	6/17/20	95.75	--	0.00	3710.87				3
MW-1R	3806.62	6/25/20	95.82	--	0.00	3710.80				3
MW-1R	3806.62	7/1/20	96.33	--	0.00	3710.29				3
MW-1R	3806.62	7/8/20	96.58	--	0.00	3710.04				5
MW-1R	3806.62	7/15/20	96.84	--	0.00	3709.78				5
MW-1R	3806.62	7/22/20	97.02	--	0.00	3709.60				5
MW-1R	3806.62	7/28/20	97.17	--	0.00	3709.45				5
MW-1R	3806.62	8/5/20	97.27	--	0.00	3709.35				5
MW-1R	3806.62	8/11/20	97.42	--	0.00	3709.20				3
MW-1R	3806.62	8/20/20	97.55	--	0.00	3709.07				5
MW-1R	3806.62	8/26/20	97.69	--	0.00	3708.93				5
MW-1R	3806.62	9/2/20	97.95	--	0.00	3708.67	108.36			5
MW-1R	3806.62	9/8/20	97.94	--	0.00	3708.68				3
MW-1R	3806.62	9/24/20	98.26	--	0.00	3708.36				3
MW-1R	3806.62	9/30/20	98.40	--	0.00	3708.22				3
MW-1R	3806.62	10/14/20	97.73	--	0.00	3708.89				3

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-1R	3806.62	10/21/20	97.48	--	0.00	3709.14				3
MW-1R	3806.62	10/26/20	97.30	--	0.00	3709.32				3
MW-1R	3806.62	11/5/20	97.16	--	0.00	3709.46	108.36			6
MW-1R	3806.62	11/17/20	96.94	--	0.00	3709.68				3
MW-1R	3806.62	11/24/20	97.39	--	0.00	3709.23				3
MW-1R	3806.62	12/1/20	97.79	--	0.00	3708.83				3
MW-1R	3806.62	12/8/20	97.55	--	0.00	3709.07				3
MW-1R	3806.62	12/16/20	97.52	--	0.00	3709.10				3
MW-1R	3806.62	12/23/20	97.29	--	0.00	3709.33				3
MW-2R	3806.38	2/18/19	94.38	--	0.00	3712.00	109.74			5
MW-2R	3806.38	5/21/19	95.05	--	0.00	3711.33				4
MW-2R	3806.38	8/23/19	97.30	--	0.00	3709.08				5
MW-2R	3806.38	10/17/19	95.61	--	0.00	3710.77				7
MW-2R	3806.38	2/20/20	94.05	--	0.00	3712.33	109.79	85-105 (2in)		8
MW-2R	3806.38	3/26/20	94.02	--	0.00	3712.36	109.86			3
MW-2R	3806.38	4/2/20	94.95	--	0.00	3711.43				4
MW-2R	3806.38	4/10/20	95.55	--	0.00	3710.83				3
MW-2R	3806.38	4/17/20	96.09	--	0.00	3710.29				5
MW-2R	3806.38	4/20/20	96.20	--	0.00	3710.18				3
MW-2R	3806.38	4/30/20	96.68	--	0.00	3709.70				3
MW-2R	3806.38	5/6/20	97.06	--	0.00	3709.32				3
MW-2R	3806.38	5/12/20	97.21	--	0.00	3709.17				5
MW-2R	3806.38	5/20/20	97.47	--	0.00	3708.91				6
MW-2R	3806.38	6/3/20	96.40	--	0.00	3709.98				3
MW-2R	3806.38	6/10/20	96.30	--	0.00	3710.08				3
MW-2R	3806.38	6/17/20	96.08	--	0.00	3710.30				3
MW-2R	3806.38	6/25/20	96.25	--	0.00	3710.13				3
MW-2R	3806.38	7/1/20	96.87	--	0.00	3709.51				3
MW-2R	3806.38	7/8/20	97.29	--	0.00	3709.09				5
MW-2R	3806.38	7/15/20	97.67	--	0.00	3708.71				5
MW-2R	3806.38	7/22/20	97.93	--	0.00	3708.45				5
MW-2R	3806.38	7/28/20	98.10	--	0.00	3708.28				5

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-2R	3806.38	8/5/20	98.02	--	0.00	3708.36				5
MW-2R	3806.38	8/11/20	97.89	--	0.00	3708.49				5
MW-2R	3806.38	8/20/20	98.48	--	0.00	3707.90				5
MW-2R	3806.38	8/26/20	98.65	--	0.00	3707.73				5
MW-2R	3806.38	9/2/20	98.83	--	0.00	3707.55	109.79			5
MW-2R	3806.38	9/8/20	98.94	--	0.00	3707.44				3
MW-2R	3806.38	9/24/20	99.28	--	0.00	3707.10				2.5
MW-2R	3806.38	9/30/20	99.45	--	0.00	3706.93				3
MW-2R	3806.38	10/14/20	98.26	--	0.00	3708.12				3
MW-2R	3806.38	10/21/20	92.86	--	0.00	3713.52				3
MW-2R	3806.38	10/26/20	97.60	--	0.00	3708.78				3
MW-2R	3806.38	11/5/20	97.42	--	0.00	3708.96	109.79			7
MW-2R	3806.38	11/17/20	97.20	--	0.00	3709.18				3
MW-2R	3806.38	11/24/20	97.96	--	0.00	3708.42				3
MW-2R	3806.38	12/1/20	98.43	--	0.00	3707.95				3
MW-2R	3806.38	12/8/20	98.02	--	0.00	3708.36				3
MW-2R	3806.38	12/16/20	97.94	--	0.00	3708.44				3
MW-2R	3806.38	12/23/20	97.59	--	0.00	3708.79				3
MW-3R	3806.15	2/18/19	94.03	--	0.00	3712.12	109.82			5
MW-3R	3806.15	5/21/19	94.67	--	0.00	3711.48		85-105 (2in)		6
MW-3R	3806.15	8/23/19	96.79	--	0.00	3709.36				5
MW-3R	3806.15	10/17/19	95.23	--	0.00	3710.92				7
MW-3R	3806.15	2/20/20	93.73	--	0.00	3712.42	110.05	85-105 (2in)		8
MW-3R	3806.15	3/26/20	93.70	--	0.00	3712.45	109.91			3
MW-3R	3806.15	4/2/20	94.58	--	0.00	3711.57				4
MW-3R	3806.15	4/10/20	95.15	--	0.00	3711.00				3
MW-3R	3806.15	4/17/20	95.58	--	0.00	3710.57				5
MW-3R	3806.15	4/20/20	95.75	--	0.00	3710.40				3
MW-3R	3806.15	4/30/20	96.20	--	0.00	3709.95				3
MW-3R	3806.15	5/6/20	97.48	--	0.00	3708.67				3
MW-3R	3806.15	5/12/20	96.70	--	0.00	3709.45				5
MW-3R	3806.15	5/20/20	96.95	--	0.00	3709.20				7

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-3R	3806.15	6/3/20	95.95	--	0.00	3710.20				3
MW-3R	3806.15	6/10/20	95.67	--	0.00	3710.48				3
MW-3R	3806.15	6/17/20	95.68	--	0.00	3710.47				3
MW-3R	3806.15	6/25/20	95.84	--	0.00	3710.31				3
MW-3R	3806.15	7/1/20	96.43	--	0.00	3709.72				3
MW-3R	3806.15	7/8/20	96.82	--	0.00	3709.33				5
MW-3R	3806.15	7/15/20	97.16	--	0.00	3708.99				5
MW-3R	3806.15	7/22/20	97.41	--	0.00	3708.74				5
MW-3R	3806.15	7/28/20	97.55	--	0.00	3708.60				5
MW-3R	3806.15	8/5/20	97.51	--	0.00	3708.64				5
MW-3R	3806.15	8/11/20	97.79	--	0.00	3708.36				3
MW-3R	3806.15	8/20/20	97.96	--	0.00	3708.19				5
MW-3R	3806.15	8/26/20	98.09	--	0.00	3708.06				5
MW-3R	3806.15	9/2/20	98.26	--	0.00	3707.89	110.05			6
MW-3R	3806.15	9/8/20	98.36	--	0.00	3707.79				3
MW-3R	3806.15	9/24/20	98.69	--	0.00	3707.46				2.5
MW-3R	3806.15	9/30/20	98.88	--	0.00	3707.27				3
MW-3R	3806.15	10/14/20	97.77	--	0.00	3708.38				3
MW-3R	3806.15	10/21/20	97.38	--	0.00	3708.77				3
MW-3R	3806.15	10/26/20	97.17	--	0.00	3708.98				3
MW-3R	3806.15	11/5/20	96.98	--	0.00	3709.17	110.05			7
MW-3R	3806.15	11/17/20	96.79	--	0.00	3709.36				3
MW-3R	3806.15	11/24/20	97.53	--	0.00	3708.62				3
MW-3R	3806.15	12/1/20	98.01	--	0.00	3708.14				3
MW-3R	3806.15	12/8/20	97.55	--	0.00	3708.60				3
MW-3R	3806.15	12/16/20	97.48	--	0.00	3708.67				3
MW-3R	3806.15	12/23/20	97.17	--	0.00	3708.98				3
MW-4R	3806.67	2/18/19	94.30	--	0.00	3712.37	110.00			5
MW-4R	3806.67	5/21/19	94.99	--	0.00	3711.68		85-105 (2in)		6
MW-4R	3806.67	8/23/19	96.99	--	0.00	3709.68				5
MW-4R	3806.67	10/17/19	95.75	--	0.00	3710.92				7.5
MW-4R	3806.67	2/20/20	94.22	--	0.00	3712.45	110.00	85-105 (2in)		8

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-4R	3806.67	3/26/20	94.10	--	0.00	3712.57	110.03			3
MW-4R	3806.67	4/2/20	94.84	--	0.00	3711.83				20
MW-4R	3806.67	4/10/20	95.31	--	0.00	3711.36				10
MW-4R	3806.67	4/17/20	95.67	--	0.00	3711.00				10
MW-4R	3806.67	4/20/20	95.84	--	0.00	3710.83				
MW-4R	3806.67	4/30/20	96.27	--	0.00	3710.40				15
MW-4R	3806.67	5/6/20	96.54	--	0.00	3710.13				5
MW-4R	3806.67	5/20/20	97.03	--	0.00	3709.64				7
MW-4R	3806.67	6/3/20	96.38	--	0.00	3710.29				10
MW-4R	3806.67	6/10/20	96.13	--	0.00	3710.54				10
MW-4R	3806.67	6/17/20	96.06	--	0.00	3710.61				10
MW-4R	3806.67	6/25/20	96.14	--	0.00	3710.53				10
MW-4R	3806.67	7/1/20	96.67	--	0.00	3710.00				6
MW-4R	3806.67	7/8/20	96.97	--	0.00	3709.70				10
MW-4R	3806.67	7/15/20	96.97	--	0.00	3709.70				10
MW-4R	3806.67	7/22/20	97.49	--	0.00	3709.18				10
MW-4R	3806.67	7/28/20	97.65	--	0.00	3709.02				10
MW-4R	3806.67	8/5/20	97.73	--	0.00	3708.94				10
MW-4R	3806.67	8/11/20	98.31	--	0.00	3708.36				3
MW-4R	3806.67	8/20/20	98.06	--	0.00	3708.61				10
MW-4R	3806.67	8/26/20	98.20	--	0.00	3708.47				10
MW-4R	3806.67	9/2/20	98.38	--	0.00	3708.29	110.00			6
MW-4R	3806.67	9/8/20	98.47	--	0.00	3708.20				5
MW-4R	3806.67	9/24/20	98.81	--	0.00	3707.86				3
MW-4R	3806.67	9/30/20	98.95	--	0.00	3707.72				3
MW-4R	3806.67	10/14/20	98.18	--	0.00	3708.49				3
MW-4R	3806.67	10/21/20	97.81	--	0.00	3708.86				3
MW-4R	3806.67	10/26/20	97.69	--	0.00	3708.98				5
MW-4R	3806.67	11/5/20	97.48	--	0.00	3709.19	110.00			7
MW-4R	3806.67	11/17/20	97.27	--	0.00	3709.40				5
MW-4R	3806.67	11/24/20	97.78	--	0.00	3708.89				5
MW-4R	3806.67	12/1/20	98.20	--	0.00	3708.47				5
MW-4R	3806.67	12/8/20	97.93	--	0.00	3708.74				3

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-4R	3806.67	12/16/20	97.87	--	0.00	3708.80				3
MW-4R	3806.67	12/23/20	97.62	--	0.00	3709.05				3
MW-5R	3806.46	2/18/19	93.96	--	0.00	3712.50	107.42			5
MW-5R	3806.46	5/21/19	94.57	--	0.00	3711.89				6
MW-5R	3806.46	8/23/19	96.40	--	0.00	3710.06				4
MW-5R	3806.46	10/17/19	95.26	--	0.00	3711.20				6
MW-5R	3806.46	2/20/20	93.92	--	0.00	3712.54	107.40	85-105 (2in)		6.5
MW-5R	3806.46	4/30/20	95.79	--	0.00	3710.67				
MW-5R	3806.46	5/20/20	96.44	--	0.00	3710.02				6
MW-5R	3806.46	6/17/20	95.60	--	0.00	3710.86				
MW-5R	3806.46	7/28/20	97.05	--	0.00	3709.41				
MW-5R	3806.46	8/26/20	97.56	--	0.00	3708.90				
MW-5R	3806.46	9/2/20	107.19	--	0.00	3699.27	107.40			
MW-5R	3806.46	9/16/20	97.97	--	0.00	3708.49	107.59			
MW-5R	3806.46	10/21/20	97.25	--	0.00	3709.21				
MW-5R	3806.46	11/5/20	96.93	--	0.00	3709.53	107.40			6
MW-5R	3806.46	12/8/20	97.43	--	0.00	3709.03	107.40			
MW-6	3806.08	2/18/19	Dry	--	0.00	Dry	92.64			
MW-6	3806.08	5/21/19	Dry	--	0.00	Dry				
MW-6	3806.08	8/23/19	Dry	--	0.00	Dry				
MW-6	3806.08	10/17/19	Dry	--	0.00	Dry	92.78			
MW-6	3806.08	2/20/20	Dry	--	0.00	Dry	92.72			
MW-6	3806.08	4/30/20	Dry	--	0.00	Dry	92.72			
MW-6	3806.08	5/20/20	Dry	--	0.00	Dry	92.72			
MW-6	3806.08	6/17/20	Dry	--	0.00	Dry	92.76			
MW-6	3806.08	7/28/20	Dry	--	0.00	Dry	92.76			
MW-6	3806.08	8/26/20	Dry	--	0.00	Dry	92.75			
MW-6	3806.08	9/2/20	Dry	--	0.00	Dry	92.69			
MW-6	3806.08	10/21/20	Dry	--	0.00	Dry				
MW-6	3806.08	11/5/20	Dry	--	0.00	Dry	92.75			
MW-6	3806.08	12/8/20	Dry	--	0.00	Dry	97.78			

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Lea County, New Mexico
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-7	3806.05	2/18/19	94.85	--	0.00	3711.20	109.22			21
MW-7	3806.05	5/21/19	95.48	--	0.00	3710.57				6
MW-7	3806.05	8/23/19	97.90	--	0.00	3708.15				17
MW-7	3806.05	10/17/19	95.81	--	0.00	3710.24				28
MW-7	3806.05	2/20/20	94.23	--	0.00	3711.82	109.35	65 - 90 ft bgs (4 in.)		29
MW-7	3806.05	4/30/20	97.41	--	0.00	3708.64				
MW-7	3806.05	5/20/20	98.18	--	0.00	3707.87				22
MW-7	3806.05	6/17/20	96.46	--	0.00	3709.59				
MW-7	3806.05	7/28/20	98.84	--	0.00	3707.21				
MW-7	3806.05	8/26/20	99.37	--	0.00	3706.68				
MW-7	3806.05	9/2/20	99.58	--	0.00	3706.47	110.44			21
MW-7	3806.05	10/21/20	98.08	--	0.00	3707.97				
MW-7	3806.05	11/5/20	97.63	--	0.00	3708.42	110.44			26
MW-7	3806.05	12/8/20	98.42	--	0.00	3707.63				
MW-8	3805.89	2/18/19	Dry	--	--	Dry	94.87			
MW-8	3805.89	5/21/19	Dry	--	--	Dry				
MW-8	3805.89	8/23/19	Dry	--	--	Dry				
MW-8	3805.89	10/17/19	Dry	--	--	Dry	94.86			
MW-8	3805.89	2/20/20	Dry	--	--	Dry	93.71	61 - 91 ft bgs (2 in.)		
MW-8	3805.89	4/30/20	Dry	--	--	Dry	94.95			
MW-8	3805.89	5/20/20	Dry	--	--	Dry	94.95			
MW-8	3805.89	6/17/20	Dry	--	--	Dry	94.93			
MW-8	3805.89	7/28/20	Dry	--	--	Dry	94.94			
MW-8	3805.89	8/26/20	Dry	--	--	Dry	94.94			
MW-8	3805.89	9/2/20	Dry	--	--	Dry	94.88			
MW-8	3805.89	10/21/20	Dry	--	--	Dry				
MW-8	3805.89	11/5/20	Dry	--	--	Dry	94.94			
MW-8	3805.89	12/8/20	Dry	--	--	Dry	94.96			
MW-9	3806.02	2/18/19	95.13	--	0.00	3710.89	108.45			23
MW-9	3806.02	5/21/19	95.70	--	0.00	3710.32				6

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Summary of Fluid Level Measurements
Plains Pipeline LP
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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-9	3806.02	8/23/19	98.50	--	0.00	3707.52				16
MW-9	3806.02	10/17/19	95.59	--	0.00	3710.43				26
MW-9	3806.022	2/20/20	93.92	--	0.00	3712.10	108.55	4 in.		29
MW-9	3806.022	4/30/20	98.25	--	0.00	3707.77				
MW-9	3806.022	5/20/20	99.04	--	0.00	3706.98				20
MW-9	3806.022	6/17/20	96.59	--	0.00	3709.43				
MW-9	3806.022	7/28/20	99.75	--	0.00	3706.27				
MW-9	3806.022	8/26/20	100.28	--	0.00	3705.74				
MW-9	3806.022	9/2/20	100.52	--	0.00	3705.50	110.13			19
MW-9	3806.022	10/21/20	98.05	--	0.00	3707.97				
MW-9	3806.022	11/5/20	97.63	--	0.00	3708.39	110.13			26
MW-9	3806.022	12/8/20	98.62	--	0.00	3707.40				
MW-10	3806.08	2/18/19	Dry	--	--	Dry	95.71			
MW-10	3806.08	5/21/19	Dry	--	--	Dry				
MW-10	3806.08	8/23/19	Dry	--	--	Dry				
MW-10	3806.08	10/17/19	Dry	--	--	Dry	95.70			
MW-10	3806.08	2/20/20	Dry	--	--	Dry	95.80			
MW-10	3806.08	4/30/20	Dry	--	--	Dry	95.76			
MW-10	3806.08	5/20/20	Dry	--	--	Dry	95.80			
MW-10	3806.08	6/17/20	Dry	--	--	Dry	95.76			
MW-10	3806.08	7/28/20	Dry	--	--	Dry	95.76			
MW-10	3806.08	8/26/20	Dry	--	--	Dry	95.76			
MW-10	3806.08	9/2/20	Dry	--	--	Dry	95.72			
MW-10	3806.08	10/21/20	Dry	--	--	Dry				
MW-10	3806.08	11/5/20	Dry	--	--	Dry	95.80			
MW-10	3806.08	12/8/20	Dry	--	--	Dry	95.80			
MW-11	3805.88	2/18/19	97.72	--	0.00	3708.16	110.15			5
MW-11	3805.88	5/21/19	97.20	--	0.00	3708.68				6
MW-11	3805.88	8/23/19	101.02	--	0.00	3704.86				4
MW-11	3805.88	10/17/19	95.53	--	0.00	3710.35				7.5
MW-11	3805.88	2/20/20	93.83	--	0.00	3712.05	109.85			8

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)
MW-11	3805.88	4/30/20	101.61	--	0.00	3704.27				
MW-11	3805.88	5/20/20	102.55	--	0.00	3703.33				5
MW-11	3805.88	6/17/20	97.71	--	0.00	3708.17				
MW-11	3805.88	7/28/20	103.21	--	0.00	3702.67				
MW-11	3805.88	8/26/20	103.67	--	0.00	3702.21				
MW-11	3805.88	9/2/20	103.92	--	0.00	3701.96	110.05			4
MW-11	3805.88	10/21/20	98.05	--	0.00	3707.83				
MW-11	3805.88	11/5/20	97.88	--	0.00	3708.00	110.05			7
MW-11	3805.88	12/8/20	99.00	--	0.00	3706.88				
MW-12	3806.04	2/18/19	95.93	--	0.00	3710.11	110.04			5.00
MW-12	3806.04	5/21/19	96.23	--	0.00	3709.81				7
MW-12	3806.04	8/23/19	99.53	--	0.00	3706.51				5
MW-12	3806.04	10/17/19	95.73	--	0.00	3710.31				7
MW-12	3806.04	2/20/20	93.96	--	0.00	3712.08	110.01			8
MW-12	3806.04	3/26/20	94.67	--	0.00	3711.37	110.07			5
MW-12	3806.04	4/2/20	96.80	--	0.00	3709.24				20
MW-12	3806.04	4/10/20	97.92	--	0.00	3708.12				10
MW-12	3806.04	4/17/20	98.60	--	0.00	3707.44				20
MW-12	3806.04	4/20/20	98.82	--	0.00	3707.22				
MW-12	3806.04	4/30/20	99.46	--	0.00	3706.58				15
MW-12	3806.04	5/6/20	99.80	--	0.00	3706.24				10
MW-12	3806.04	5/12/20	100.10	--	0.00	3705.94				20
MW-12	3806.04	5/20/20	100.35	--	0.00	3705.69				5
MW-12	3806.04	6/17/20	Bubbler	--	--	--				
MW-12	3806.04	7/28/20	Bubbler	--	--	--				
MW-12	3806.04	8/26/20	101.62	--	0.00	3704.42				
MW-12	3806.04	9/2/20	101.80	--	0.00	3704.24	110.01			4
MW-12	3806.04	10/21/20	Bubbler	--	--	--				
MW-12	3806.04	11/5/20	97.89	--	0.00	3708.15	110.01			7
MW-12	3806.04	12/8/20	Bubbler	--	0.00	--	110.01			

Table 1

Summary of Fluid Level Measurements
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of the Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Well Screen Interval (fbgs) Well Diameter (in.)	Volume Product Bailed (gal.)	Volume Groundwater Bailed (gal.)

Notes:

1. famsl - Feet above mean sea level
2. fbgs - Feet below ground surface
3. LNAPL - Light non-aqueous phase liquid
4. MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-8 & MW-10 are 2" Diameter Wells MW-7 & MW-9 are 4" Diameter Wells
5. Data collected before October 2016, when GHD began conducting site activities, were collected by Basin Environmental Service Technologies, LLC.

Table 2

Summary of Analytical Results of BTEX in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-1R	2/19/19	**0.243**	<0.000412	<0.000160	<0.000510
MW-1R	5/22/19	**0.0594**	<0.000412	<0.000160	<0.000510
MW-1R	8/23/19	**0.709**	<0.000412	<0.000160	**0.000640 B J**
MW-1R	10/18/19	**0.530**	<0.00206	<0.000800	<0.00255
MW-1R	2/21/20	**0.170**	<0.00206	<0.000800	<0.00255
MW-1R	5/21/20	**0.513**	<0.000412	<0.000160	<0.000720
MW-1R	9/3/20	**0.162**	**0.000813 J**	<0.000160	**0.000787 J**
MW-1R	11/5/20	**0.458**	<0.00412	<0.00160	<0.00510
MW-2R	2/19/19	**0.0944**	<0.000412	<0.000160	**0.00102 B J**
MW-2R	5/22/19	**0.0124**	<0.000412	<0.000160	**0.00104 B J**
MW-2R	8/23/19	**0.212**	<0.000412	<0.000160	**0.00102 B J**
MW-2R	10/18/19	**0.223**	<0.000412	<0.000160	**0.000602 J**
MW-2R	2/21/20	**0.0969**	<0.000412	<0.000160	**0.000801 J**
MW-2R	5/21/20	**0.0987**	<0.000412	<0.000160	<0.000510
MW-2R	9/3/20	**0.0773**	<0.000412	<0.000160	<0.000510
MW-2R	11/5/20	**0.0924**	<0.000412	<0.000160	<0.000510
MW-3R	2/19/19	**0.00102**	<0.000412	<0.000160	<0.000510
MW-3R	5/22/19	**0.0208**	<0.000412	**0.000553 B**	**0.000713 B J**
MW-3R	8/23/19	**0.0223**	**0.000645 J**	**0.00326**	**0.00295 B**
MW-3R	10/18/19	**0.0303**	**0.00199**	**0.00290 B**	**0.00280**
MW-3R (Dup-1)	10/18/19	**0.0220**	<0.000412	**0.00204 B**	**0.00217**
MW-3R	2/21/20	**0.0114**	<0.000412	**0.000698**	**0.000937 J**
MW-3R	5/21/20	**0.000684**	<0.000412	<0.000160	<0.000510
MW-3R	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-3R	11/5/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-3R (DUP-1)	11/5/20	<0.000190	<0.000412	**0.000364 J**	**0.00112 J**
MW-4R	2/19/19	**1.49**	<0.000412	<0.000160	**0.00903**
MW-4R	5/22/19	**0.537**	<0.00206	<0.000800	**0.00569 B J**
MW-4R	8/23/19	**1.15**	<0.00824	<0.00320	<0.0102
MW-4R (Dup1)	8/23/19	**1.27**	<0.000412	<0.000160	0.00547
MW-4R	10/18/19	**1.29**	<0.00412	<0.00160	<0.00510
MW-4R	2/21/20	**1.04**	<0.00412	<0.00160	**0.0119 J**
MW-4R	5/21/20	**0.918**	<0.000412	<0.000160	**0.00132 J**
MW-4R	9/3/20	**1.58 J6**	<0.000412	<0.000160	<0.000510
MW-4R	11/5/20	**2.43**	<0.00824	<0.00320	<0.0102
MW-5R	2/19/19	**0.000239 J**	<0.000412	<0.000160	<0.000510
MW-5R	5/22/19	**0.000313 J**	<0.000412	<0.000160	<0.000510

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Summary of Analytical Results of BTEX in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-5R	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R	10/18/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R	2/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R (DUP-1)	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-5R	11/5/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6	2/19/19		Dry		
MW-6	5/22/19		Dry		
MW-6	8/23/19		Dry		
MW-6	10/18/19		Dry		
MW-6	2/21/20		Dry		
MW-6	5/21/20		Dry		
MW-6	9/3/20		Dry		
MW-6	11/5/20		Dry		
MW-7	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	10/18/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	2/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	11/5/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-8	2/19/19		Dry		
MW-8	5/22/19		Dry		
MW-8	8/23/19		Dry		
MW-8	10/18/19		Dry		
MW-8	2/21/20		Dry		
MW-8	5/21/20		Dry		
MW-8	9/3/20		Dry		
MW-8	11/5/20		Dry		
MW-9	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	10/18/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	2/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	11/5/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-10	5/22/19		Dry		

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Summary of Analytical Results of BTEX in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-10	8/23/19		Dry		
MW-10	10/18/19		Dry		
MW-10	2/21/20		Dry		
MW-10	5/21/20		Dry		
MW-10	9/3/20		Dry		
MW-10	11/5/20		Dry		
MW-11	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	10/18/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	2/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	11/5/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	2/19/19	**0.0649**	<0.000412	<0.000160	**0.00144 B J**
MW-12	5/22/19	**0.0445**	<0.000412	<0.000160	**0.00350 B**
MW-12 (Dup1)	5/22/19	**0.0374**	<0.000412	<0.000160	**0.00351 B**
MW-12	8/23/19	**0.309**	<0.00206	<0.00800	**0.00727 B J**
MW-12	10/18/19	**0.869**	<0.00206	<0.000800	**0.00445 J**
MW-12 (Dup-2)	10/18/19	**0.714**	<0.000412	<0.000160	**0.00535**
MW-12	2/21/20	**0.931**	<0.000412	<0.000160	**0.00269 J**
MW-12 (Dup1)	2/21/20	**0.124**	<0.000412	<0.000160	**0.000625 J**
MW-12	5/21/20	**0.599**	<0.000412	<0.000160	**0.00160**
MW-12 (DUP-2)	5/21/20	**0.583**	<0.000412	<0.000160	**0.00113**
MW-12	9/3/20	**0.336**	**0.00488 J**	<0.000160	**0.00609 J**
MW-12	11/5/20	**1.28**	<0.00412	<0.00160	<0.00510
Goff Dairy Well	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Well	5/22/19		Off		
Goff Dairy Well	8/23/19	**0.000260 J**	<0.000412	<0.000160	<0.000510
Goff Dairy Well	10/18/19		Off		
Goff Dairy Well	4/1/20	<0.000190	<0.000412	<0.000160	**0.000850 J**
Goff Dairy Well	7/2/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Well	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Well	11/5/20		Off		
Goff Dairy - Ctr. Pivot Well	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well (Dup)	2/19/19	**0.000299 J**	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well	5/22/19		Off		
Goff Dairy - Ctr. Pivot Well	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well	10/18/19		Off		
Goff Dairy - Ctr. Pivot Well	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well	7/2/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well	9/24/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy - Ctr. Pivot Well	11/5/20		Off		

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Summary of Analytical Results of BTEX in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
Goff Dairy Ctr. Pivot Beg.	2/19/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot Beg.	5/22/19		Off		
Goff Dairy Ctr. Pivot Beg.	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot Beg.	10/18/19		Off		
Goff Dairy Ctr. Pivot Beg.	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot Beg.	7/2/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot Beg.	9/24/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot Beg.	11/5/20		Off		
Goff Dairy Ctr. Pivot End	2/19/19	**0.000228 J**	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot End	5/22/19		Off		
Goff Dairy Ctr. Pivot End	8/23/19	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot End	10/18/19		Off		
Goff Dairy Ctr. Pivot End	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot End	7/2/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot End	9/3/20	<0.000190	<0.000412	<0.000160	<0.000510
Goff Dairy Ctr. Pivot End	11/5/20		Off		
JW House Well	2/19/19		No Access		
JW House Well	5/22/19		No Access		
JW House Well	8/23/19	**0.000242 J**	<0.000412	<0.000160	<0.000510
JW House Well	12/3/19	<0.000190	<0.000412	<0.000160	<0.000510
JW House Well	2/21/20	Not sampled - Couldn't get access			
JW House Well	5/21/20	Not sampled - Couldn't get access			
JW House Well	9/3/20	Not sampled - Couldn't get access			
JW House Well	11/5/20	Not sampled - Couldn't get access			
Trip Blank	5/22/19	<0.000190	<0.000412	**0.000286 B J**	**0.000920 B J**
Trip Blank	5/21/20	<0.000190	<0.000412	<0.000160	<0.000510

Notes:

1. Shaded cells indicate NMWQCC Regulatory Limit exceedances.
2. Bold indicates detection.
3. Samples dated before 10/11/16 were collected and their results reported by Basin Environmental Service Technologies, LLC.
4. Monitoring wells MW-1, 2, 3, 6, 7, 9 & 10 & Goff Dairy locations sampled quarterly.
5. Monitoring wells MW-4, 5, and MW-8 were sampled semi-annually.
6. The NMWQCC Human Health Standard for toluene listed at the top of the table is from NMAC 20.6.2.3103 and became effective on December 11, 2018.
7. The identification of the analyte is acceptable; the reported value is an estimate.
8. The sample matrix interfered with the ability to make any accurate determination; spike value is low.

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Table 3

Summary of Analytical Results of PAH Compounds in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Anthracene (mg/L)	Acenaphthene (mg/L)	Acenaphthylene (mg/L)	Benzo(a)anthracene (mg/L)	Benzo(a)pyrene (mg/L)	Benzo(b)fluoranthene (mg/L)	Benzo(g,h,i)perylene (mg/L)	Benzo(k)fluoranthene (mg/L)	Chrysene (mg/L)	Dibenzo (a,h)anthracene (mg/L)	Dibenzofuran (mg/L)	Fluoranthene (mg/L)	Fluorene (mg/L)	Indeno (1,2,3-cd)pyrene (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)
		NMWQCC Regulatory Standards																		
		0.001	0.001	0.001	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.03	0.001	0.001	0.03	0.03
MW-1	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-1	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-1R	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.0000590**	<0.0000157	0.0000101	<0.0000148	**0.00169**	**0.0000203 J**	<0.0000117	**0.000828**	**0.000483**
MW-1R	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.000234**	<0.0000157	**0.0000339 J**	<0.0000148	**0.000829**	**0.0000407 J**	<0.0000117	**0.000471**	**0.000254**
MW-2	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-2	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-2R	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.0000139 B J**	<0.0000157	<0.00000850	<0.0000148	**0.000817**	<0.00000820	<0.0000117	**0.000365**	**0.000131 J**
MW-2R	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.0000332 B J**	<0.0000157	**0.0000120 J**	<0.0000148	**0.000565**	**0.0000250 J**	<0.0000117	**0.000263**	**0.000109 J**
MW-3	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-3	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-3R	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000138 B J**	<0.0000157	<0.00000850	<0.0000148	**0.0000671 B J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-3R	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000499 B J**	<0.0000157	<0.00000850	<0.0000148	**0.000204 J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-3R (Dup-1)	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000392 B J**	<0.0000157	<0.00000850	<0.0000148	<0.0000198	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-4	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-4	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-4R	11/16/18	<0.0000147	<0.0000105	<0.0000126	<0.00000431	<0.0000122	<0.00000223	<0.00000238	<0.0000143	<0.0000113	<0.00000416	**0.0000967**	<0.0000165	**0.0000192 J**	<0.0000155	**0.00506**	**0.0000305 J**	<0.0000123	**0.00254**	**0.00189**
MW-4R	10/18/19	<0.0000140	**0.0000102 J**	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.000226**	<0.0000157	**0.0000407 J**	<0.0000148	<0.0000198	**0.000789**	**0.0000653**	**0.000986**	**0.000308**
MW-5	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-5	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-5R	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	<0.00000105	<0.0000157	<0.00000850	<0.0000148	**0.0000774 B J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-5R	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000523 B J**	<0.0000157	<0.00000850	<0.0000148	**0.0000233 J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-6	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-6	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-7	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-7	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Table 3

Summary of Analytical Results of PAH Compounds in Groundwater
Plains Pipeline LP
Lovington Gathering WTI, SRS #2006-142
Lea County, New Mexico
NMOCD AP-96

Sample ID	Sample Date	Anthracene (mg/L)	Acenaphthene (mg/L)	Acenaphthylene (mg/L)	Benzo(a)anthracene (mg/L)	Benzo(a)pyrene (mg/L)	Benzo(b)fluoranthene (mg/L)	Benzo(g,h,i)perylene (mg/L)	Benzo(k)fluoranthene (mg/L)	Chrysene (mg/L)	Dibenzo (a,h)anthracene (mg/L)	Dibenzofuran (mg/L)	Fluoranthene (mg/L)	Fluorene (mg/L)	Indeno (1,2,3-cd)pyrene (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)
		NMWQCC Regulatory Standards																		
		0.001	*0.001*	*0.001*	*0.001*	*0.0002*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.03*	*0.001*	*0.001*	*0.03*	*0.03*
MW-8	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-8	12/18/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-9	12/2/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-9	9/29/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-10	11/2/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-10	12/15/11	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	NA	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102
MW-10	11/27/12	<0.00017	<0.00038	<0.00035	<0.00025	<0.00020	<0.00039	<0.00052	<0.00029	<0.00024	<0.00020	NA	<0.00026	<0.00031	<0.00034	<0.00032	<0.00033	<0.00050	<0.00028	<0.00029
MW-11	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	<0.00000105	<0.0000157	<0.00000850	<0.0000148	**0.0000424 B J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-11	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000473 B J**	<0.0000157	<0.00000850	<0.0000148	**0.0000237 J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-12	11/16/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000984 B J**	<0.0000157	**0.0000128 J**	<0.0000148	**0.000249 B J**	**0.00000954 J**	<0.0000117	**0.0000983 J**	**0.0000355**
MW-12	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.0000477 B J**	<0.0000157	**0.0000104 J**	<0.0000148	**0.000684**	**0.0000162 J**	<0.0000117	**0.000898**	**0.000278**
MW-12 (Dup-2)	10/18/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.0000399 B J**	<0.0000157	<0.00000850	<0.0000148	**0.000494**	**0.00000998 J**	<0.0000117	**0.000740**	**0.000199 J**

Notes:

1. Shaded cells indicate New Mexico Oil Conservation Division Regulatory Limit exceedance.
2. Bold indicates detection.
3. PAH analyses by EPA Method 8270C.
4. 2008 through 2012 results collected by Basin Environmental Service Technologies, LLC.
5. NMWQCC Human Health Standard for naphthalenes + monmethylnaphthalenes is 0.03 mg/l, as shown in NMAC 20.6.2.3103(A.)(1)(jj).

Appendices

Appendix A
Release Notification and Corrective Action
NMOCD Form C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised 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	Contact Camille Reynolds
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965
Facility Name Lovington Gathering WTI	Facility Type 6"Steel Pipeline

Surface Owner Robert Rice	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	6	17S	37E					Lea

Latitude 32° 51' 56.0" **Longitude** 103° 17' 07.2"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 12 barrels	Volume Recovered 8 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 4-21-2006 @ 13:00	Date and Hour of Discovery 4-21-2006 @ 13:15
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Pat Caperton	
By Whom? Camille Reynolds	Date and Hour 4-21-2006 @ 15:35	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken Internal corrosion while purging the line resulted in release of sweet crude oil. The line has been purged. The line is an idle 6-inch steel gathering line. The pressure on the line was approximately 50 psi and the gravity of the sweet crude oil was 34. The sweet crude has an H_2S content of <10 ppm. The line was approximately 1.5 feet bgs at the release point.

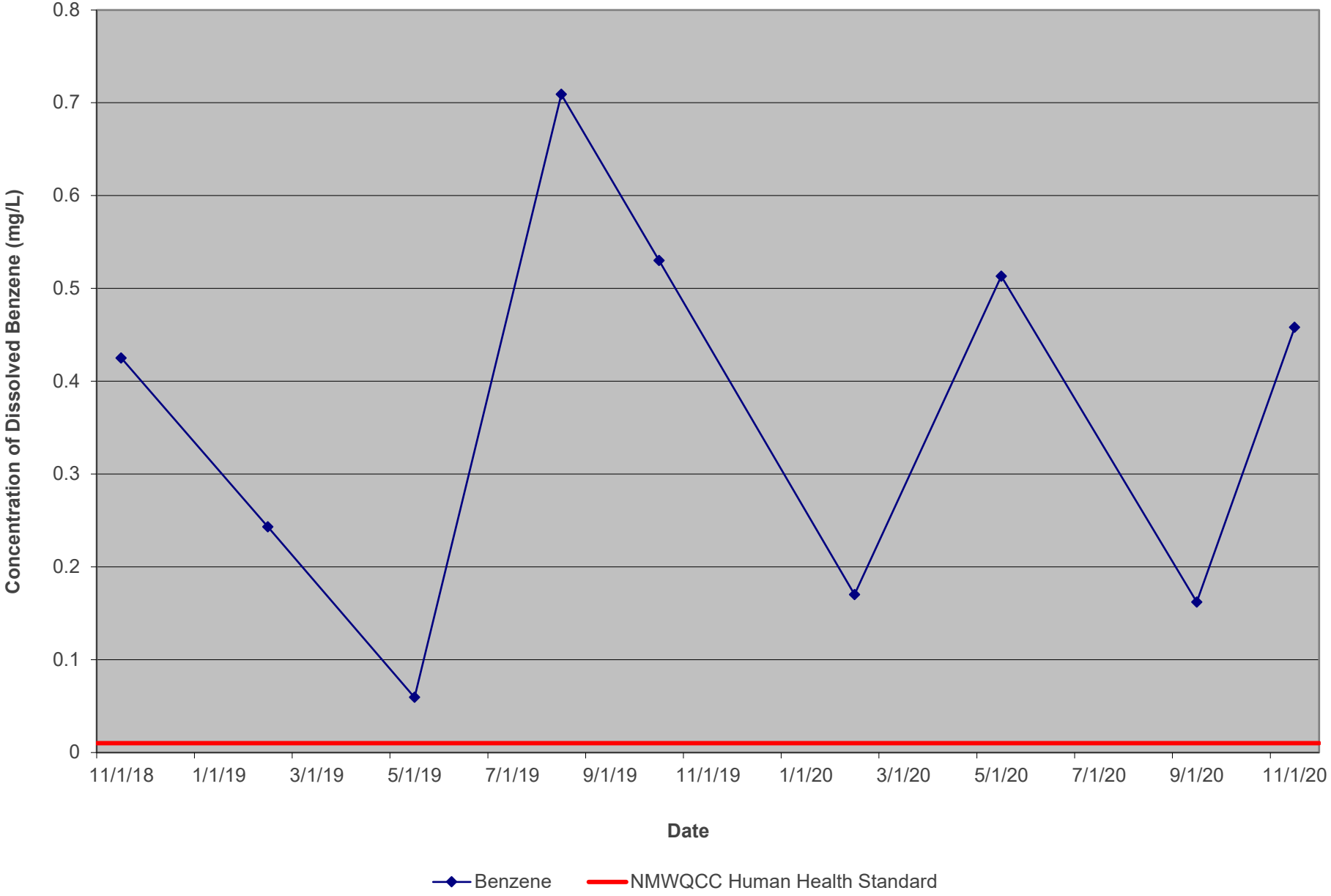
Describe Area Affected and Cleanup Action Taken.* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was approximately 1,500 ft^2.

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.

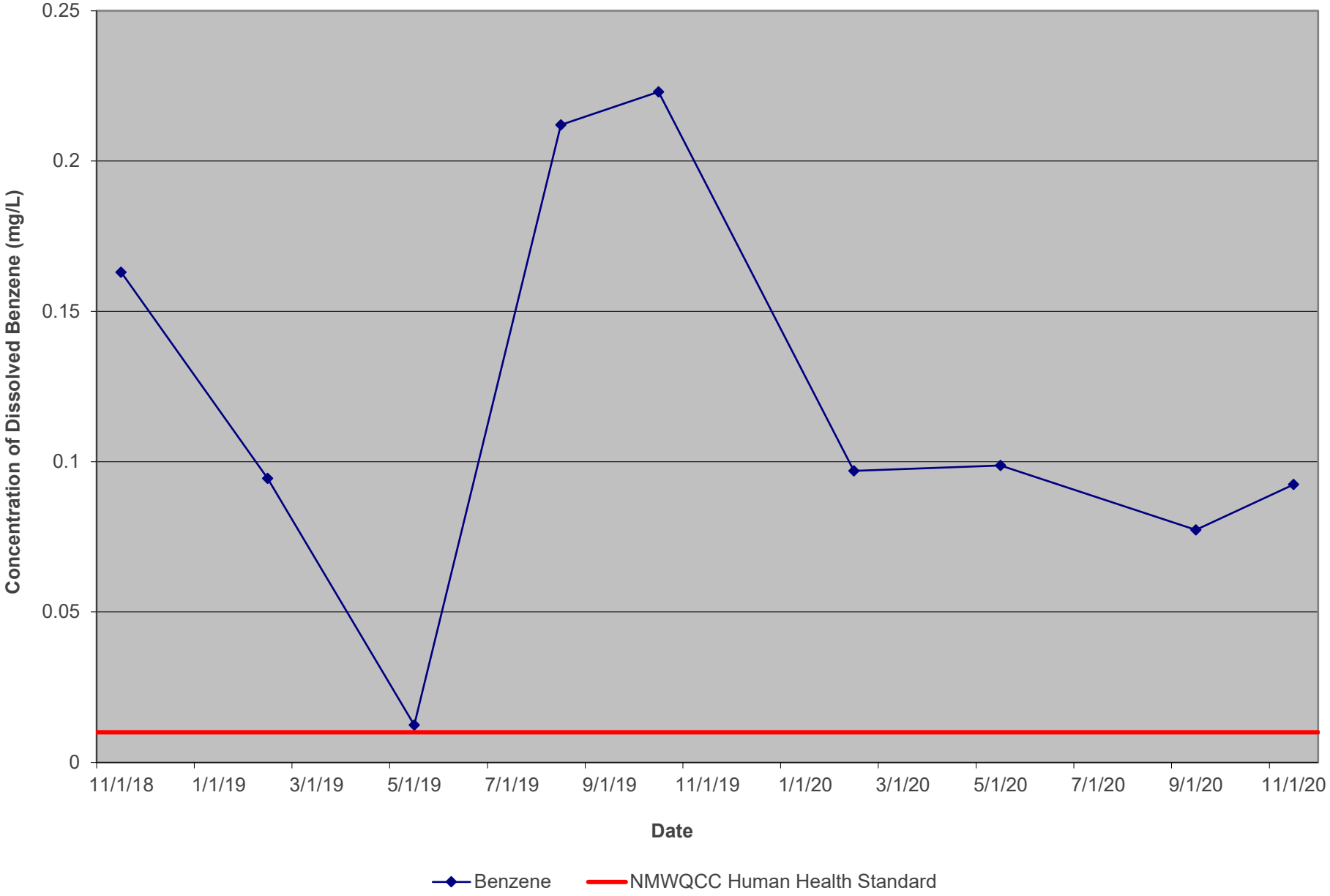
Signature: Camille Reynolds	OIL CONSERVATION DIVISION
Printed Name: Camille Reynolds	Approved by District Supervisor:
Title: Remediation Coordinator	Approval Date: / Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval: / Attached ☐
Date: 4/26/2006 Phone:505-441-0965	

Appendix B
Charts of Concentrations of Dissolved Benzene in Monitor Wells vs. Time

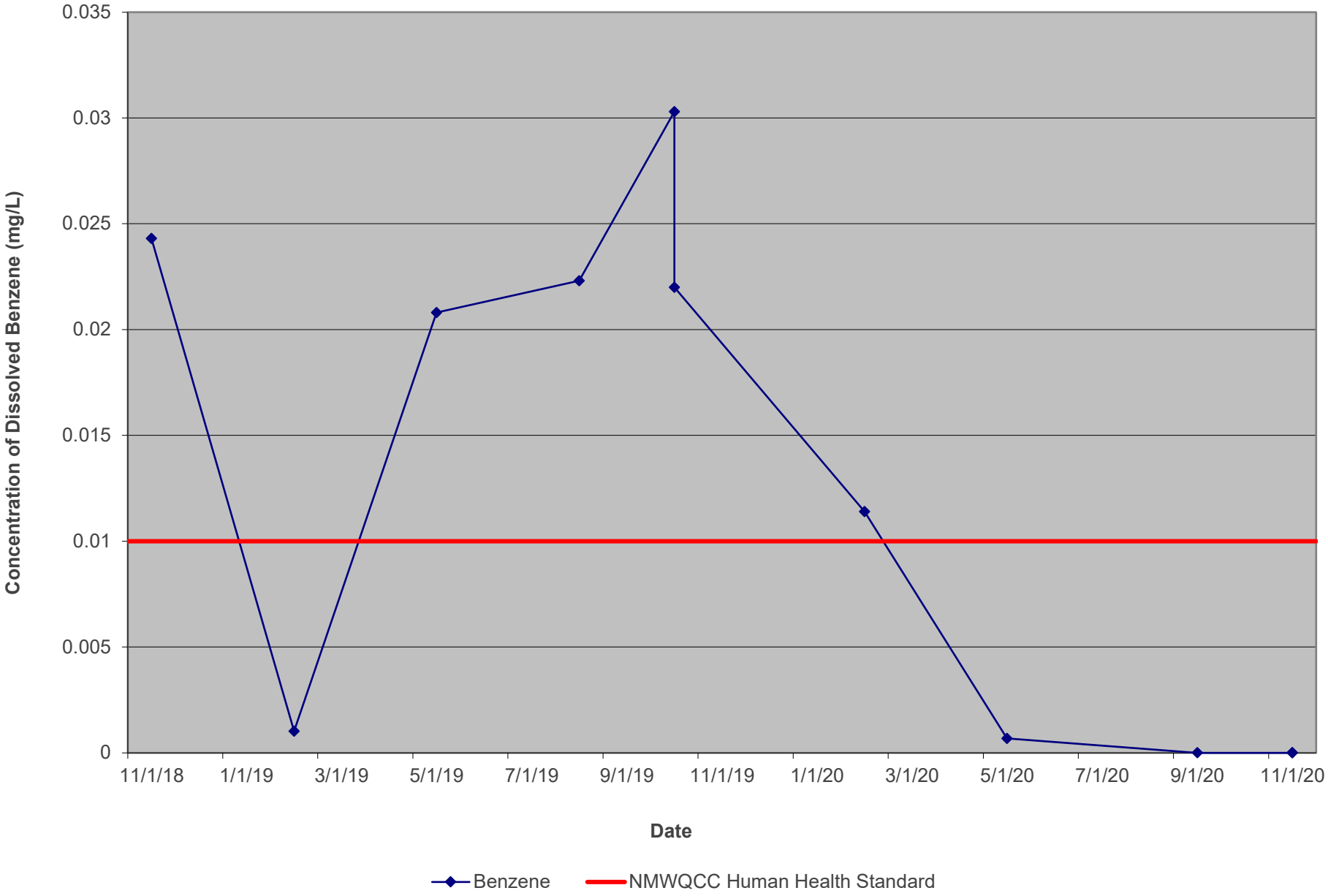
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-1R



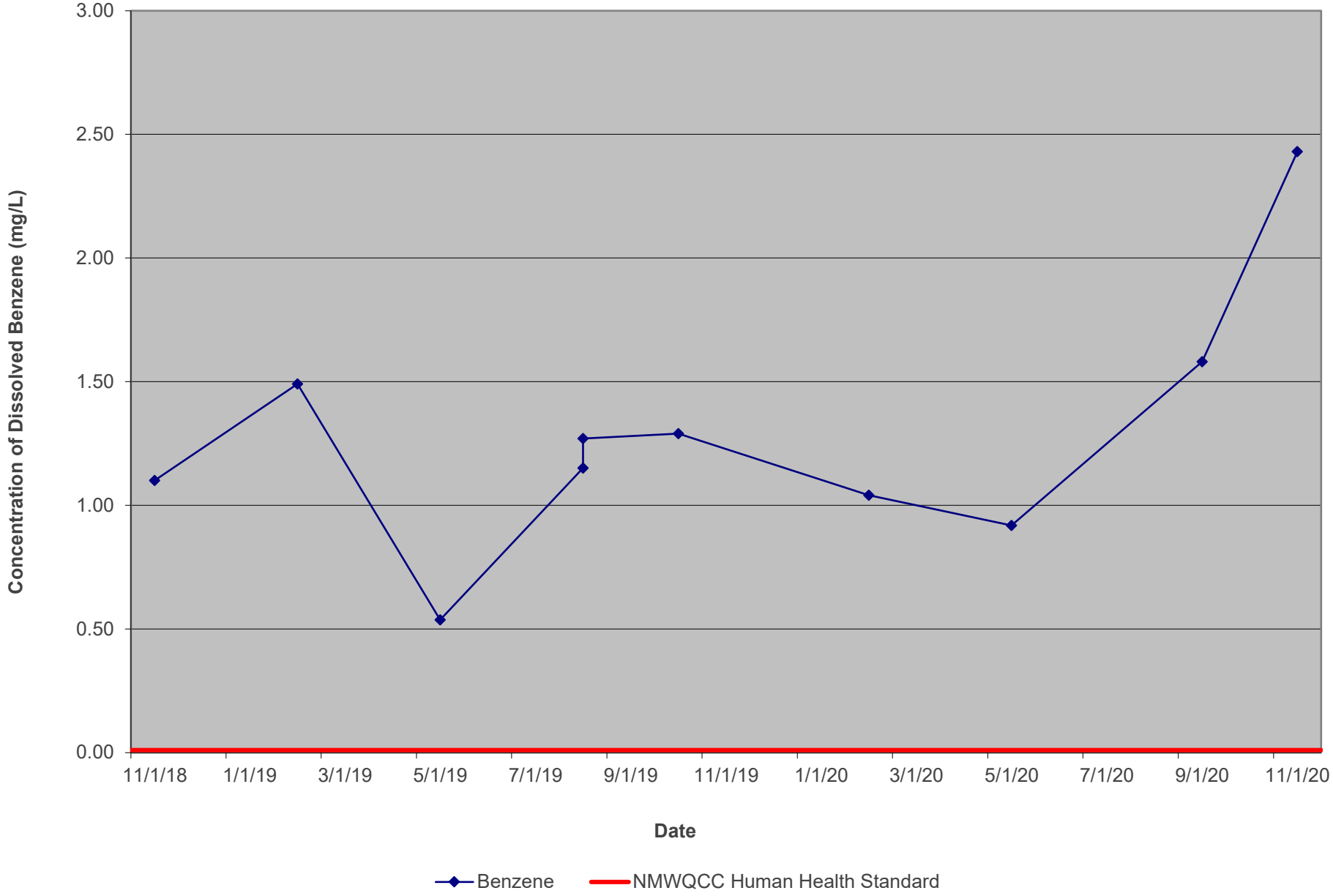
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-2R



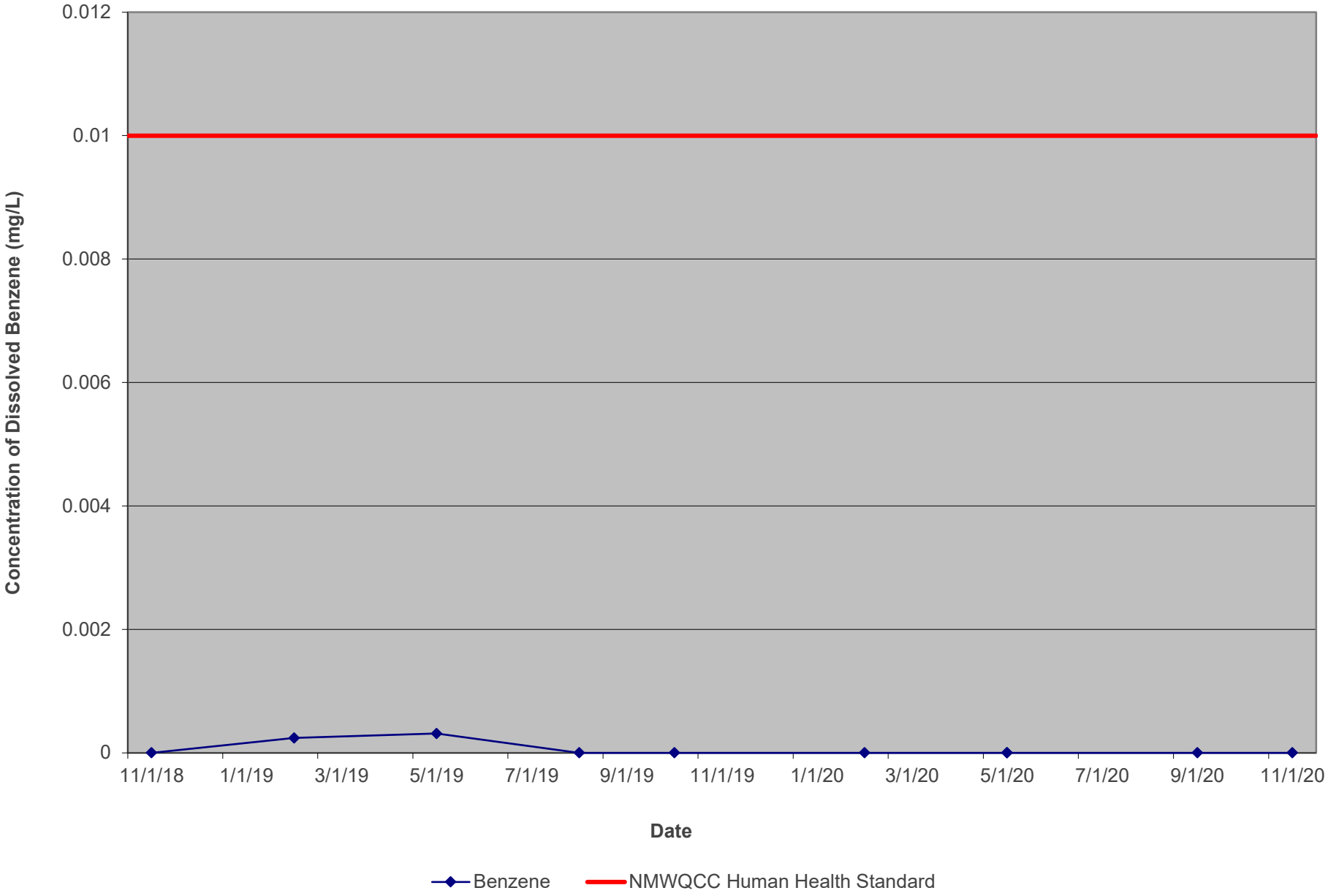
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-3R



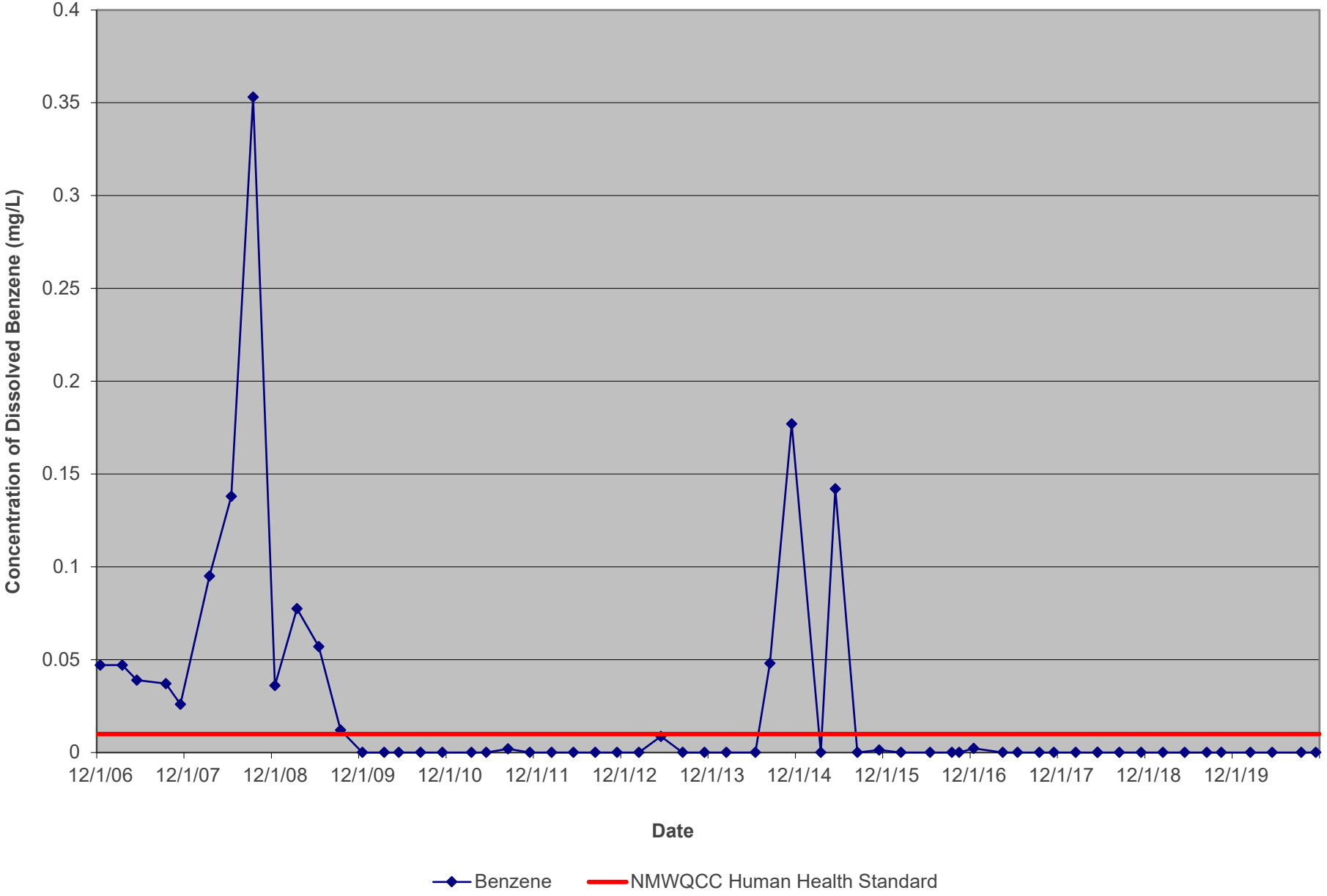
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-4R



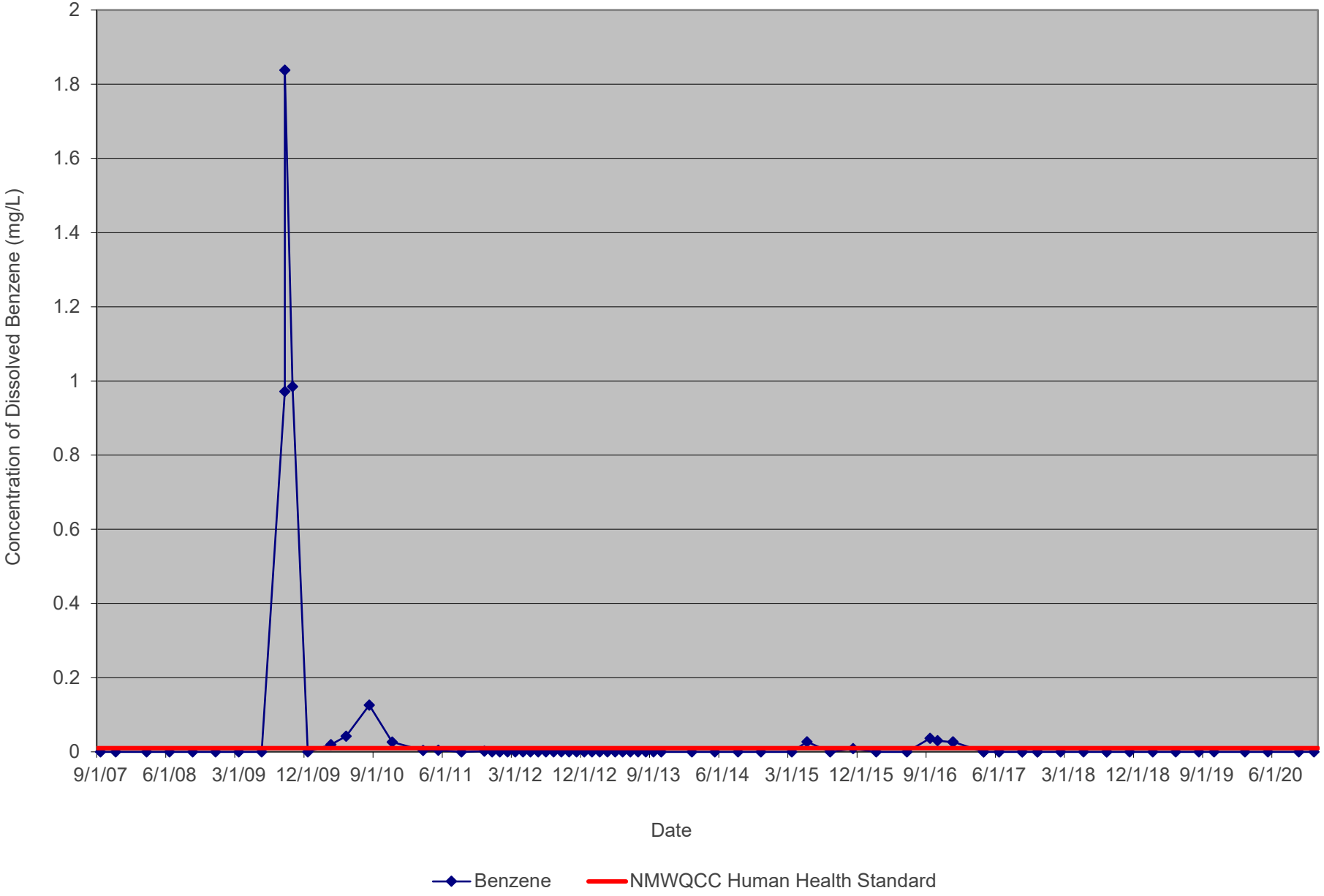
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-5R



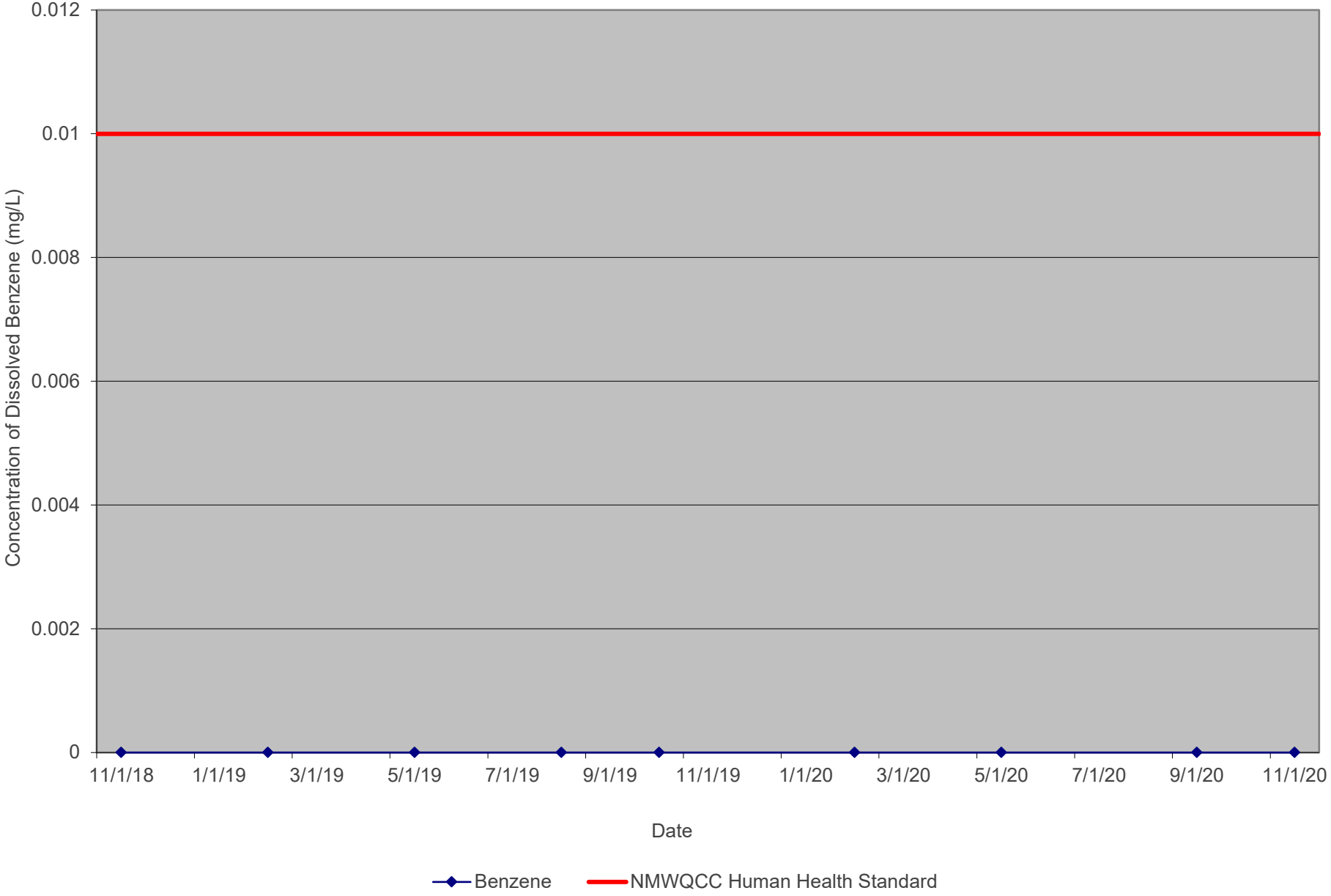
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-7



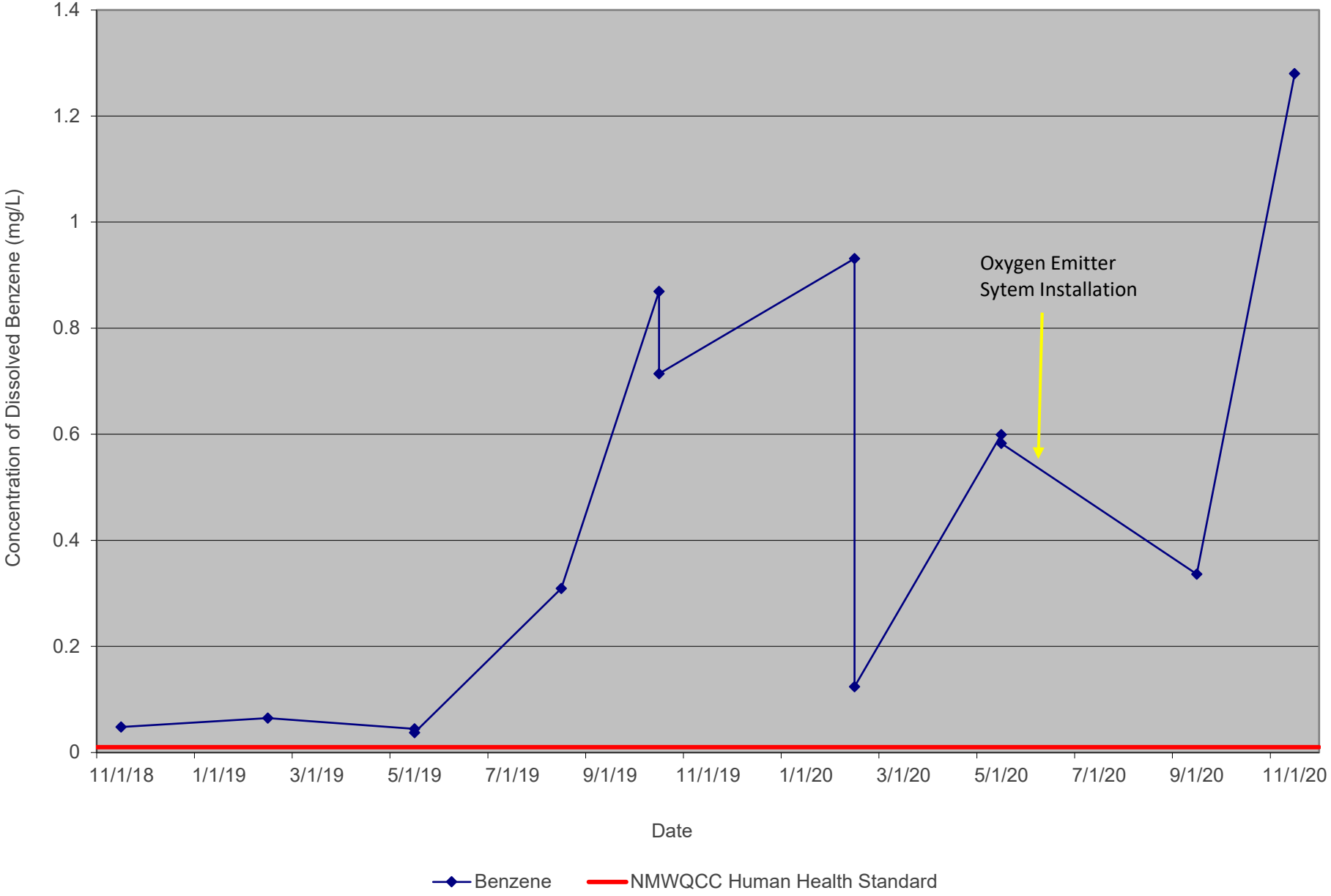
LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-9



LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-11



LOVINGTON GATHERING WTI, SRS 2006-142
LEA COUNTY, NEW MEXICO
NMOCD AP-96
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-12



Appendix C
Certified Laboratory Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 04, 2020

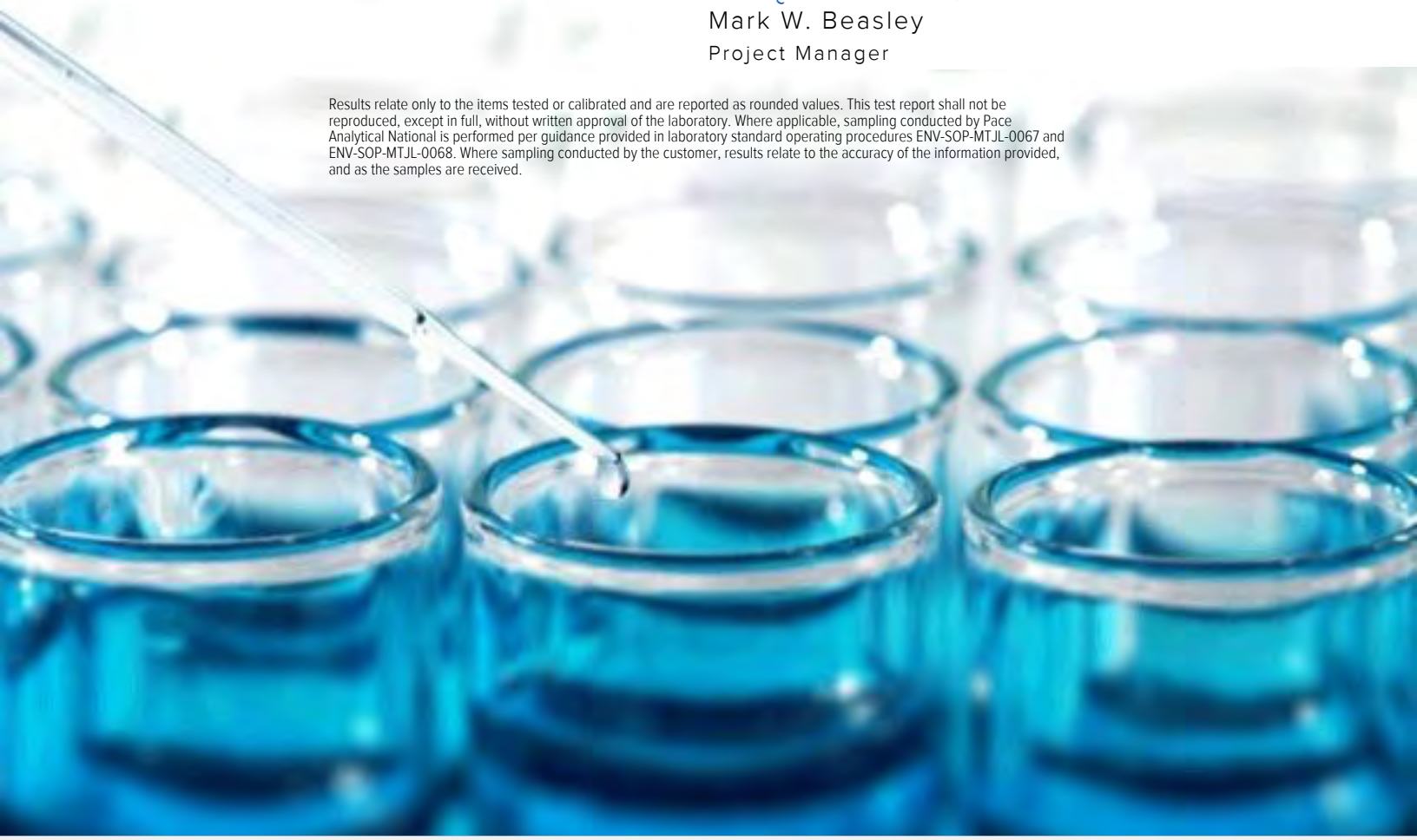
Plains All American, LP - GHD

Sample Delivery Group:	L1192125
Samples Received:	02/22/2020
Project Number:	11135013
Description:	Plains-Lovington Gathering WTI
Site:	SRS #2006-142
Report To:	Christopher Knight 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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



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MW-2R L1192125-01 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 13:30 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 17:52	02/22/20 17:52	BMB	Mt. Juliet, TN

MW-3R L1192125-02 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 13:45 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 18:12	02/22/20 18:12	BMB	Mt. Juliet, TN

MW-4R L1192125-03 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 14:15 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	10	02/22/20 18:33	02/22/20 18:33	BMB	Mt. Juliet, TN

MW-1R L1192125-04 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 14:00 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	5	02/22/20 18:53	02/22/20 18:53	BMB	Mt. Juliet, TN

MW-7 L1192125-05 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 12:15 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 19:14	02/22/20 19:14	BMB	Mt. Juliet, TN

MW-9 L1192125-06 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 12:45 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 19:34	02/22/20 19:34	BMB	Mt. Juliet, TN

MW-5R L1192125-07 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 12:00 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 19:55	02/22/20 19:55	BMB	Mt. Juliet, TN

MW-11 L1192125-08 GW

Collected by: Matthew Laughlin | Collected date/time: 02/21/20 13:00 | Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 20:15	02/22/20 20:15	BMB	Mt. Juliet, TN

MW-12 L1192125-09 GW

Collected by: Matthew Laughlin
Collected date/time: 02/21/20 13:15
Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	5	02/22/20 20:36	02/22/20 20:36	BMB	Mt. Juliet, TN

DUP-1 L1192125-10 GW

Collected by: Matthew Laughlin
Collected date/time: 02/21/20 00:00
Received date/time: 02/22/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1432528	1	02/22/20 20:56	02/22/20 20:56	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1436831	10	03/02/20 15:49	03/02/20 15:49	BMB	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 03/04/2020 08:26
Project Name: Plains-Lovington Gathering WTI	Laboratory Job Number: L1192125-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1432528 and WG1436831

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 03/04/2020 08:26
Project Name: Plains-Lovington Gathering WTI	Laboratory Job Number: L1192125-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1432528 and WG1436831

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DG-365/TRRP-13
Revised May 2010

Laboratory Review Checklist: Exception Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 03/04/2020 08:26
Project Name: Plains-Lovington Gathering WTI	Laboratory Job Number: L1192125-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1432528 and WG1436831

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0969		0.000190	0.000500	0.000500	1	02/22/2020 17:52	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 17:52	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 17:52	WG1432528
Total Xylene	0.000801	J	0.000510	0.00150	0.00150	1	02/22/2020 17:52	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/22/2020 17:52*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0114		0.000190	0.000500	0.000500	1	02/22/2020 18:12	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 18:12	WG1432528
Ethylbenzene	0.000698		0.000160	0.000500	0.000500	1	02/22/2020 18:12	WG1432528
Total Xylene	0.000937	J	0.000510	0.00150	0.00150	1	02/22/2020 18:12	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*122*				*79.0-125*		*02/22/2020 18:12*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	1.04		0.00190	0.000500	0.00500	10	02/22/2020 18:33	WG1432528
Toluene	U		0.00412	0.00100	0.0100	10	02/22/2020 18:33	WG1432528
Ethylbenzene	U		0.00160	0.000500	0.00500	10	02/22/2020 18:33	WG1432528
Total Xylene	0.0119	J	0.00510	0.00150	0.0150	10	02/22/2020 18:33	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/22/2020 18:33*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.170		0.000950	0.000500	0.00250	5	02/22/2020 18:53	WG1432528
Toluene	U		0.00206	0.00100	0.00500	5	02/22/2020 18:53	WG1432528
Ethylbenzene	U		0.000800	0.000500	0.00250	5	02/22/2020 18:53	WG1432528
Total Xylene	U		0.00255	0.00150	0.00750	5	02/22/2020 18:53	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*110*				*79.0-125*		*02/22/2020 18:53*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	02/22/2020 19:14	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 19:14	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 19:14	WG1432528
Total Xylene	U		0.000510	0.00150	0.00150	1	02/22/2020 19:14	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*123*				*79.0-125*		*02/22/2020 19:14*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	02/22/2020 19:34	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 19:34	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 19:34	WG1432528
Total Xylene	U		0.000510	0.00150	0.00150	1	02/22/2020 19:34	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*124*				*79.0-125*		*02/22/2020 19:34*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	02/22/2020 19:55	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 19:55	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 19:55	WG1432528
Total Xylene	U		0.000510	0.00150	0.00150	1	02/22/2020 19:55	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*124*				*79.0-125*		*02/22/2020 19:55*	WG1432528

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	02/22/2020 20:15	WG1432528
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 20:15	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 20:15	WG1432528
Total Xylene	U		0.000510	0.00150	0.00150	1	02/22/2020 20:15	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*124*				*79.0-125*		*02/22/2020 20:15*	WG1432528

MW-12
Collected date/time: 02/21/20 13:15
L1192125

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.931		0.000950	0.000500	0.00250	5	02/22/2020 20:36	WG1432528
Toluene	U		0.00206	0.00100	0.00500	5	02/22/2020 20:36	WG1432528
Ethylbenzene	U		0.000800	0.000500	0.00250	5	02/22/2020 20:36	WG1432528
Total Xylene	0.00269	J	0.00255	0.00150	0.00750	5	02/22/2020 20:36	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*115*				*79.0-125*		*02/22/2020 20:36*	WG1432528

DUP-1
Collected date/time: 02/21/20 00:00
L1192125

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.124		0.00190	0.000500	0.00500	10	03/02/2020 15:49	WG1436831
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2020 20:56	WG1432528
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/22/2020 20:56	WG1432528
Total Xylene	0.000625	J	0.000510	0.00150	0.00150	1	02/22/2020 20:56	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*109*				*79.0-125*		*02/22/2020 20:56*	WG1432528
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/02/2020 15:49*	WG1436831

Method Blank (MB)

(MB) R3504223-2 02/22/20 16:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*123*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3504223-1 02/22/20 14:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0494	98.8	77.0-122	
Toluene	0.0500	0.0476	95.2	80.0-121	
Ethylbenzene	0.0500	0.0492	98.4	80.0-123	
Total Xylene	0.150	0.137	91.3	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*113*	*79.0-125*	

Method Blank (MB)

(MB) R3504661-3 03/02/20 10:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
(S) a,a,a-Trifluorotoluene(PID)	*102*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3504661-1 03/02/20 09:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0480	96.0	77.0-122	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

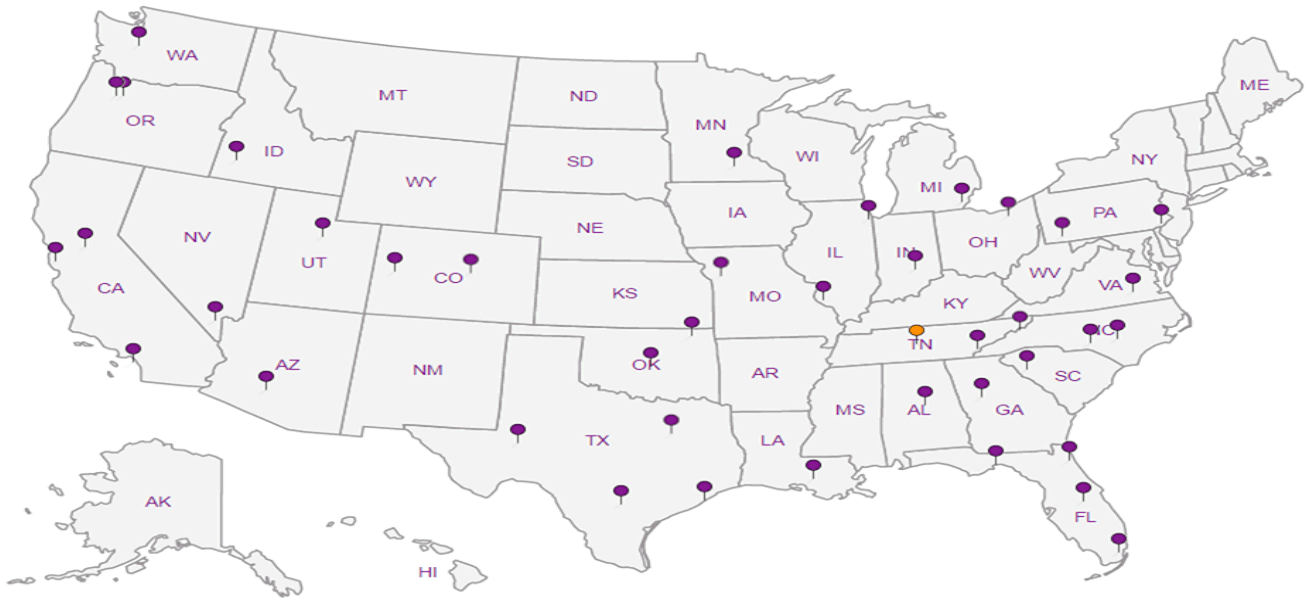
Third Party Federal Accreditations

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

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

Our Locations

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



Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Accounts Payable
505 N. Big Spring, Ste. 600
Midland, TX 79701

Pres Chk

Report to: Christopher Knight

Email To: Christopher.Knight@ghd.com;becky.haskell@ghd.c

Project Description: Plains-Lovington Gathering WT

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 432-686-0086
Fax:

Client Project # 11135013

Lab Project # PLAINSGHD-11135013

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS #2006-142

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40ml Amb-HCl										
MW-2R	Grab	GW	-	2/21	1330	2	2										-01
MW-3R	Grab	GW	-	2/21	1345	3	3										-02
MW-4R	Grab	GW	-	2/21	1415	3	3										-03
MW-1R	Grab	GW	-	2/21	1400	3	3										-04
MW-7	Grab	GW	-	2/21	1215	3	3										-05
MW-9	Grab	GW	-	2/21	1245	3	3										-06
MW-5R	Grab	GW	-	2/21	1200	3	3										-07
MW-11	Grab	GW	-	2/21	1300	3	3										-08
MW-12	Grab	GW	-	2/21	1315	3	3										-09
Dup-1	Grab	GW	-	2/21		3	3										-10

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

SDG # L1192125
A167
Table

Acctnum: PLAINSGHD
Template: T139500
Prelogin: P756005
PM: 134 - Mark W. Beasley
PB:

Shipped Via:

Remarks | Sample # (lab only)

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier _____

Tracking # 390564742051

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
	02/21/20	[illegible]	1600	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 22.3=25 29
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Sandy Yosef	Date: 2/22/20 Time: 8045

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 06, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1203853
Samples Received:	03/28/2020
Project Number:	11209905
Description:	Lovington Gathering WTI

Report To: Becky Haskell
2135 S Loop 250 W
Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

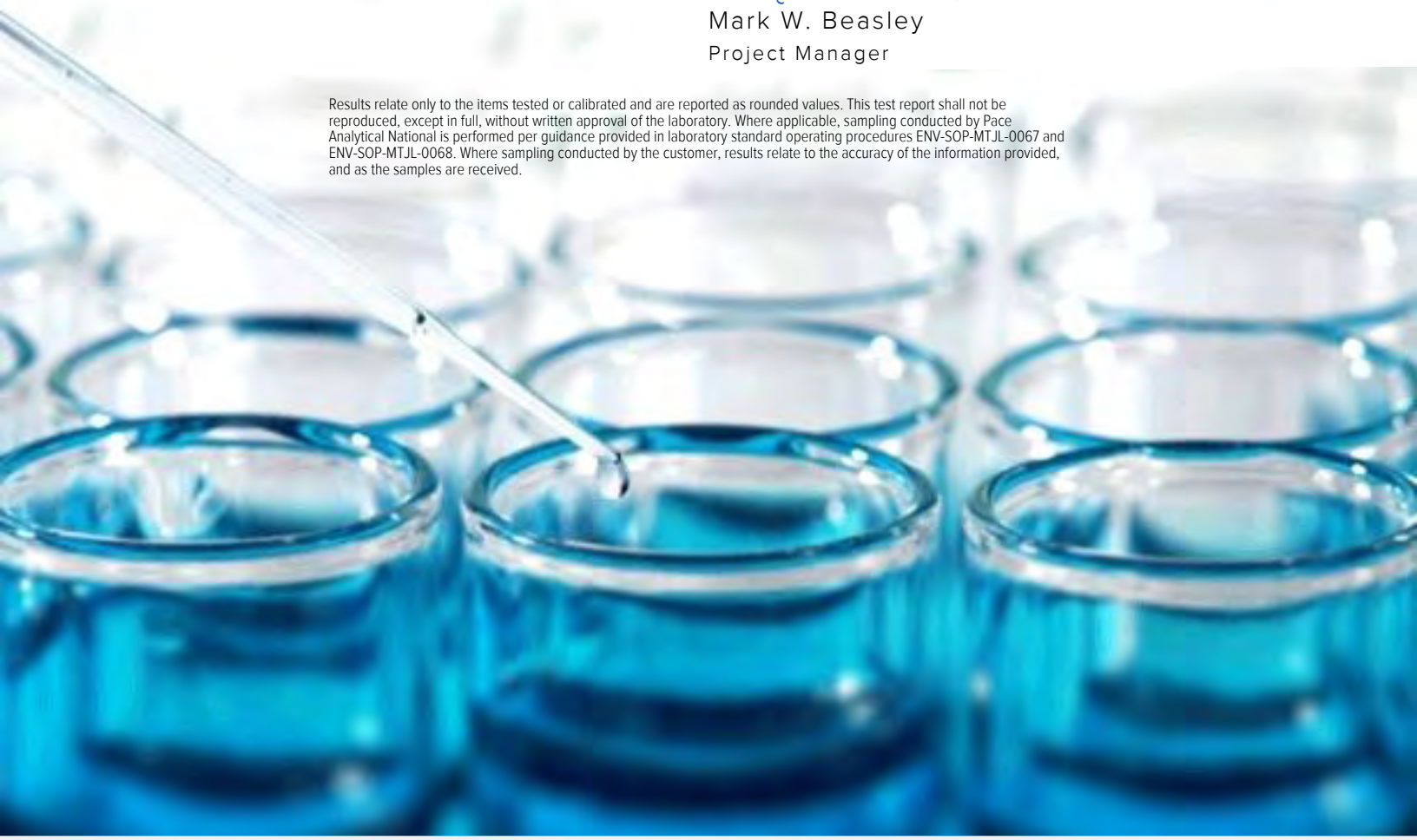


TABLE OF CONTENTS

CENTER PIVOT L1203853-01 GW

Collected by: Matthew Laughlin
Collected date/time: 03/26/20 13:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 12:28	03/31/20 12:28	BMB	Mt. Juliet, TN

MIDDLE PIVOT L1203853-02 GW

Collected by: Matthew Laughlin
Collected date/time: 03/26/20 13:15
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 12:50	03/31/20 12:50	BMB	Mt. Juliet, TN

END PIVOT L1203853-03 GW

Collected by: Matthew Laughlin
Collected date/time: 03/26/20 13:30
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 13:11	03/31/20 13:11	BMB	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 04/06/2020 10:32
Project Name: Lovington Gathering WTI	Laboratory Job Number: L1203853-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1453220

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 04/06/2020 10:32
Project Name: Lovington Gathering WTI	Laboratory Job Number: L1203853-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1453220

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 04/06/2020 10:32
Project Name: Lovington Gathering WTI	Laboratory Job Number: L1203853-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1453220

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	03/31/2020 12:28	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 12:28	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 12:28	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 12:28	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 12:28*	WG1453220

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	03/31/2020 12:50	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 12:50	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 12:50	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 12:50	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 12:50*	WG1453220

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	03/31/2020 13:11	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 13:11	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 13:11	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 13:11	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 13:11*	WG1453220

Method Blank (MB)

(MB) R3515575-3 03/31/20 11:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*101*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3515575-1 03/31/20 09:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0449	89.8	77.0-122	
Toluene	0.0500	0.0474	94.8	80.0-121	
Ethylbenzene	0.0500	0.0503	101	80.0-123	
Total Xylene	0.150	0.143	95.3	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier | Description

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

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

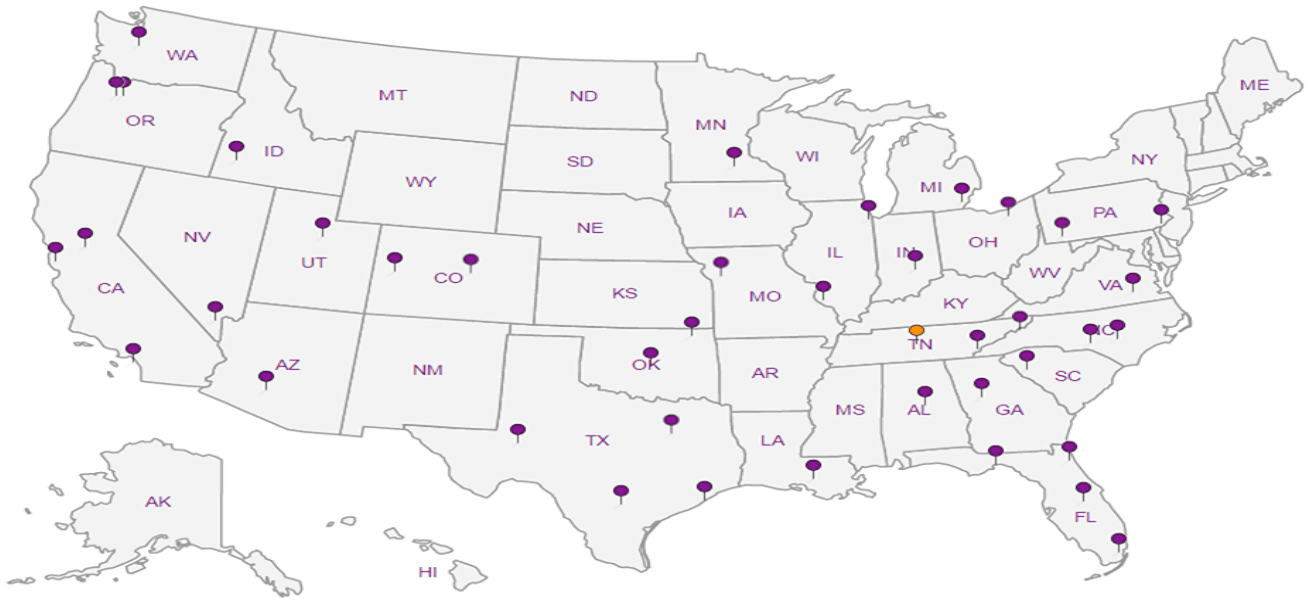
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905	L1203853	04/06/20 10:32	14 of 15

2135 South Loop 250 W
Midland, TX 79703

Billing Information: Plains All American Pipeline Company, 505 N. Big Spring, Ste. 600, Midland, TX 79701

Pres Chk

Analysis / Container / Preservative: BTEX 8021B

Chain of Custody

Pace Analytical®
National Center for Testing & Innovation

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

L# 1203853

D111

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

Report to: GHD Becky.Haskell@ghd.com

Email To: Becky.Haskell@ghd.com

Project Description: Lovington Gathering WTI

City/State Collected: Lovington, NM

Phone: 432-203-8673
Fax:

Client Project # 11209905

Lab Project #

Collected by (print): Matthew Langhlin

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: Standard TAT

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8021B	Remarks	Sample # (lab only)
Center Pivot	Grab	GW	–	3/26/20	1300	3	X		-01
Middle Pivot	Grab	GW	–	3/26/20	1315	3	X		-02
End Pivot	Grab	GW	–	3/26/20	1330	3	X		-03

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

Remarks:

RAD SCREEN: <0.5 mR/hr

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier __ ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP _Y _N
COC Signed/Accurate: ✓Y _N
Bottles arrive intact: ✓Y _N
Correct bottles used: ✓Y _N
Sufficient volume sent: ✓Y _N
If Applicable
VOA Zero Headspace: ✓Y _N
Preservation Correct/Checked: _Y _N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
[signature]	3-27-20	12:00	[signature]	Trip Blank Received: Yes / No (circled No); HCL / MeoH; TBR; TDA?	
[signature]	3-27-20	15:00	[signature]	Temp: 4.2 °C 0.5c 0.7c	Bottles Received: 9
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 28Mar	Time: 0800

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 07, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1205325
Samples Received:	04/02/2020
Project Number:	11209905
Description:	Lovington Gath. 2006-142
Site:	SRS2006-142
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

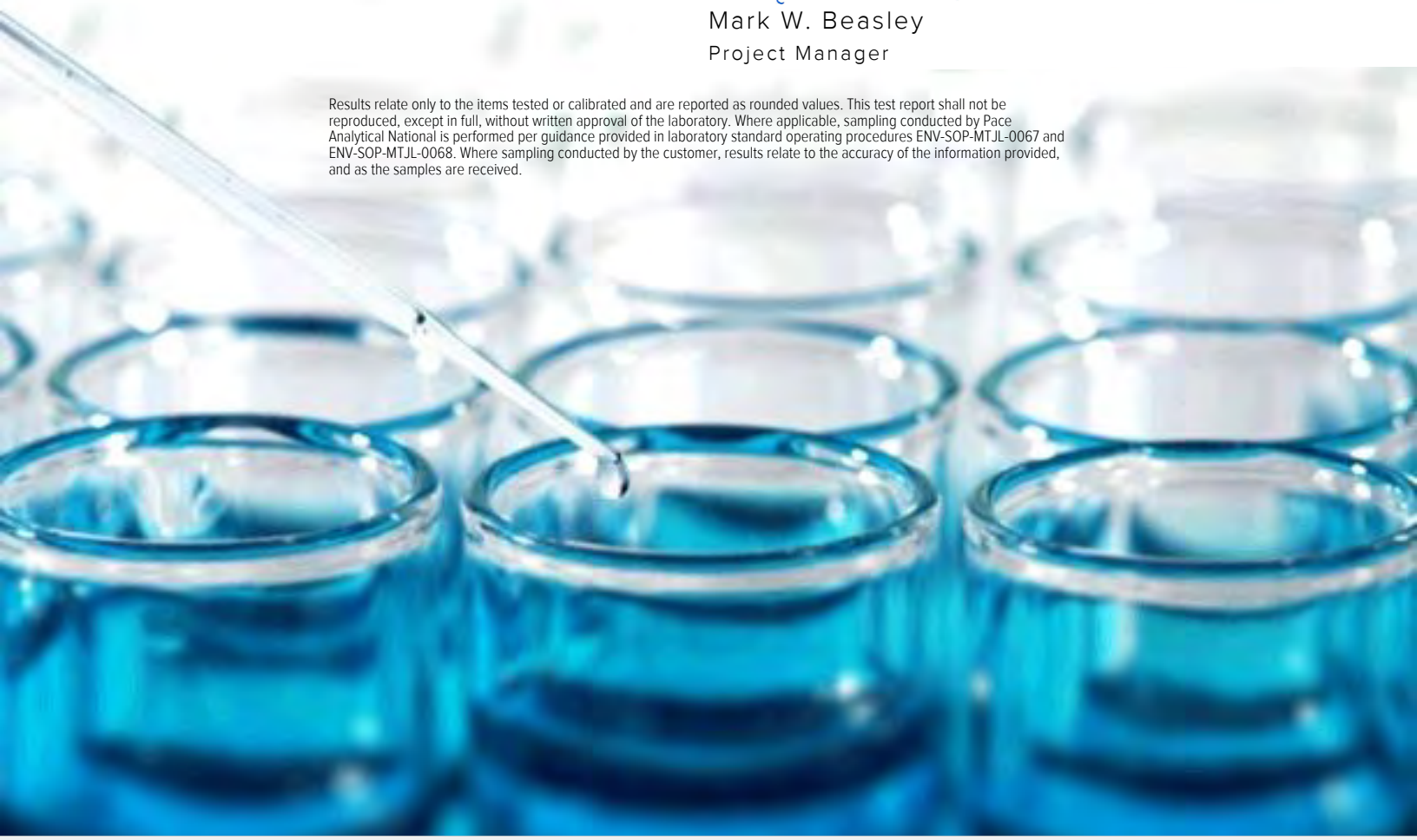


TABLE OF CONTENTS

GOFF DAIRY WELL L1205325-01 GW

	Collected by	Collected date/time	Received date/time
		04/01/20 08:55	04/02/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1455833	1	04/05/20 13:18	04/05/20 13:18	JAH	Mt. Juliet, TN

CASE NARRATIVE

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

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 04/07/2020 13:06
Project Name: Lovington Gath. 2006-142	Laboratory Job Number: L1205325-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1455833

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 04/07/2020 13:06
Project Name: Lovington Gath. 2006-142	Laboratory Job Number: L1205325-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1455833

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
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3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 04/07/2020 13:06
Project Name: Lovington Gath. 2006-142	Laboratory Job Number: L1205325-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1455833

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	04/05/2020 13:18	WG1455833
Toluene	U		0.000412	0.00100	0.00100	1	04/05/2020 13:18	WG1455833
Ethylbenzene	U		0.000160	0.000500	0.000500	1	04/05/2020 13:18	WG1455833
Total Xylene	0.000850	J	0.000510	0.00150	0.00150	1	04/05/2020 13:18	WG1455833
(S) a,a,a-Trifluorotoluene(PID)	*105*				*79.0-125*		*04/05/2020 13:18*	WG1455833

Method Blank (MB)

(MB) R3515856-3 04/05/20 11:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*106*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3515856-1 04/05/20 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0444	88.8	77.0-122	
Toluene	0.0500	0.0470	94.0	80.0-121	
Ethylbenzene	0.0500	0.0494	98.8	80.0-123	
Total Xylene	0.150	0.137	91.3	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*105*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

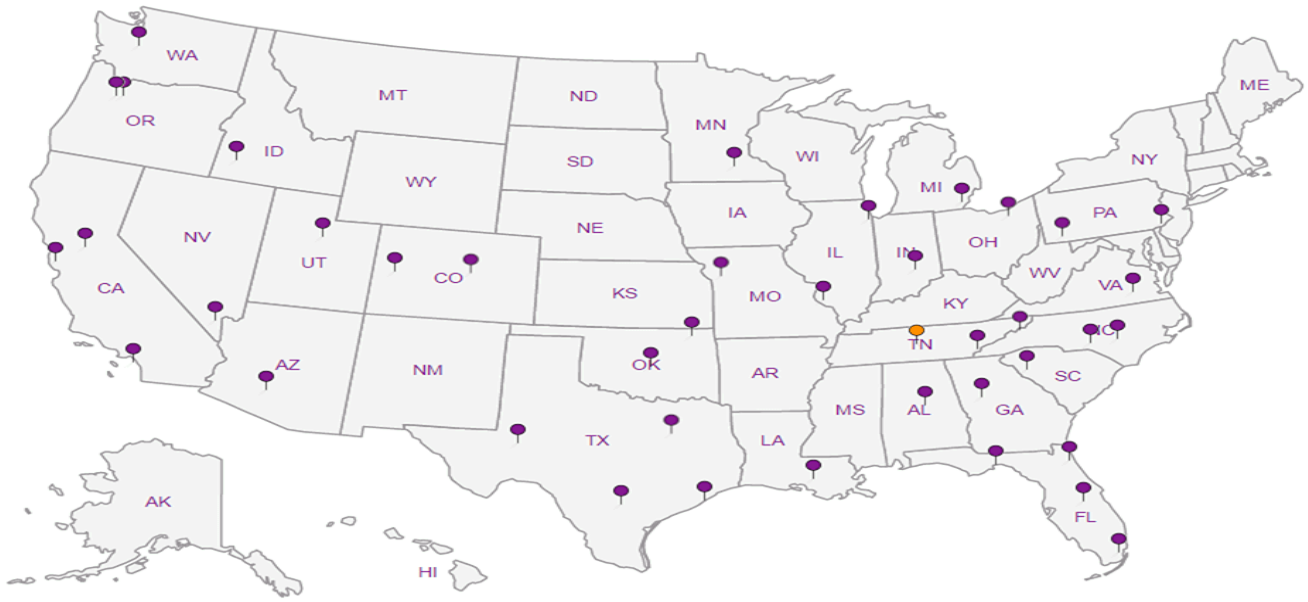
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905	L1205325	04/07/20 13:06	12 of 13

GHD - Houston, TX

11451 Katy Freeway, Ste 400
Houston, TX 77079

Billing Information:
Gina Blair
2055 Niagara Falls Blvd. Ste. 3
Niagara Falls, NY 14304

Report to: Becky Haskell

Email To: Becky.Haskell@ghd.com;Glenn.Quinney@ghd.com;

Project Description: Lovington Gath. 2006-142

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET

Phone: 432-250-7917
Fax:

Client Project # 11209905

Lab Project # CRAHTX-11209905

Collected by (print):

Site/Facility ID # SRS2006-142

P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y ___

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody

Pace Analytical® National Center for Testing & Innovation

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

SDG # 1205325

Tab 1193

Acctnum: CRAHTX
Template: T163966
Prelogin: P758255
PM: 134 - Mark W. Beasley
PB: JG 2-28-20
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Pres Chk	Remarks	Sample # (lab only)
Goff Dairy Well	Grab	GW	N/A	4/1/20	855	3	X			-01
		GW				~~3~~ 2	X			
		GW				~~3~~ 2	X			
		GW				~~3~~ 2	X			
		GW				~~3~~ 2	X			
		GW				~~3~~ 2	X			

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	4/1/20	1530		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.4 °C Bottles Received:
				.3±0=.3 3
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				V-2 0830

If preservation required by Login: Date/Time

Hold: Condition NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 02, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1221909
Samples Received:	05/23/2020
Project Number:	11209905/02
Description:	Lovington Gathering WTI, SRS 2006-142
Site:	SRS 2006-142
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

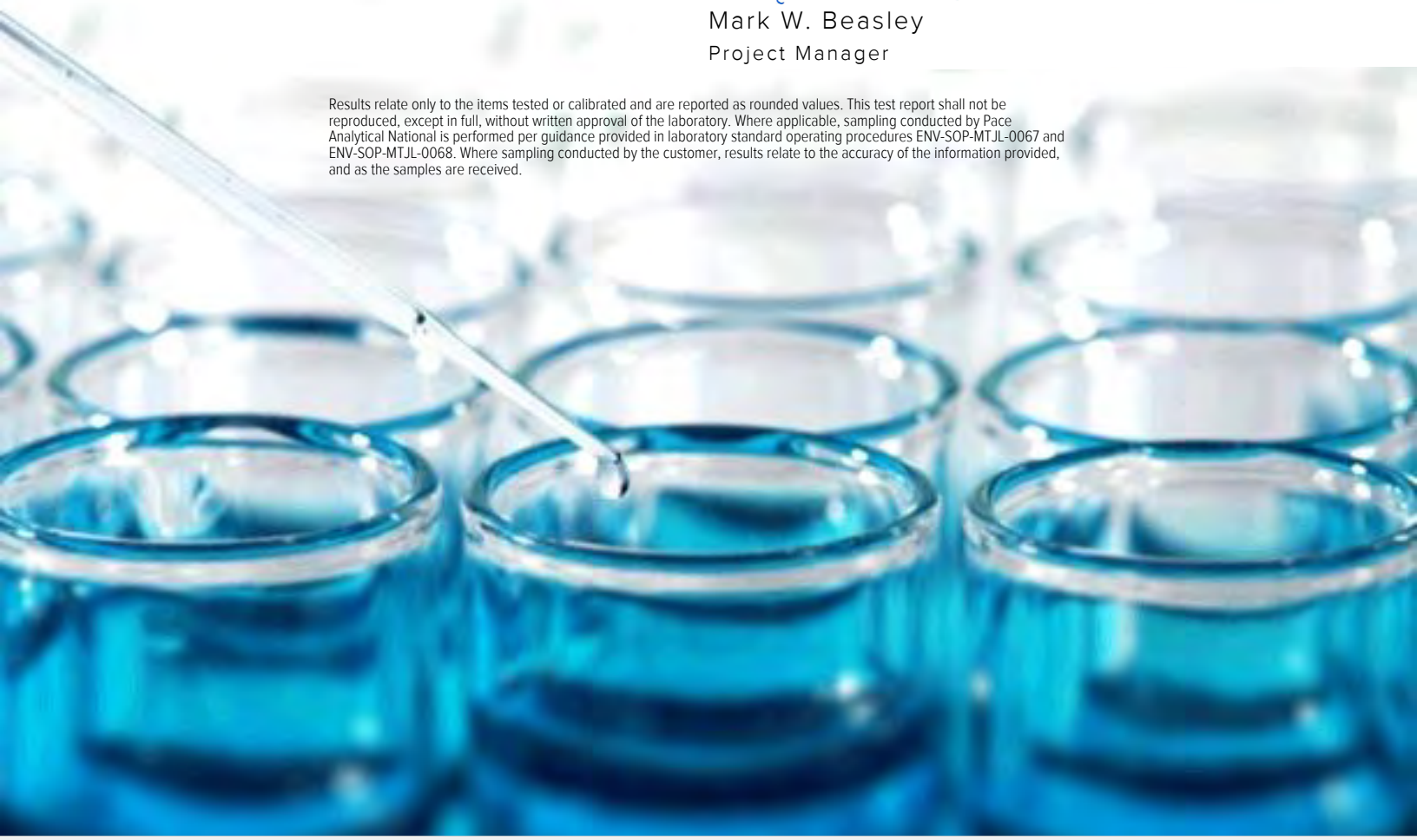


TABLE OF CONTENTS

MW-5R L1221909-01 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 11:00 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 16:35	05/29/20 16:35	JHH	Mt. Juliet, TN

MW-7 L1221909-02 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 11:30 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 16:56	05/29/20 16:56	JHH	Mt. Juliet, TN

MW-9 L1221909-03 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 12:00 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 17:16	05/29/20 17:16	JHH	Mt. Juliet, TN

MW-11 L1221909-04 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 12:30 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 17:37	05/29/20 17:37	JHH	Mt. Juliet, TN

MW-3R L1221909-05 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 13:00 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 17:58	05/29/20 17:58	JHH	Mt. Juliet, TN

MW-2R L1221909-06 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 13:30 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 18:18	05/29/20 18:18	JHH	Mt. Juliet, TN

MW-12 L1221909-07 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 14:00 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 18:39	05/29/20 18:39	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1484993	10	05/31/20 19:29	05/31/20 19:29	JHH	Mt. Juliet, TN

MW-1R L1221909-08 GW

Collected by: Matthew Laughlin | Collected date/time: 05/21/20 14:30 | Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1483724	1	05/29/20 19:00	05/29/20 19:00	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1484993	10	05/31/20 20:22	05/31/20 20:22	JHH	Mt. Juliet, TN

MW-4R L1221909-09 GW

Collected by: Matthew Laughlin
Collected date/time: 05/21/20 15:00
Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1484651	1	05/30/20 15:49	05/30/20 15:49	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1485346	10	06/01/20 15:58	06/01/20 15:58	BMB	Mt. Juliet, TN

DUP-1 L1221909-10 GW

Collected by: Matthew Laughlin
Collected date/time: 05/21/20 00:00
Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1484651	1	05/30/20 16:09	05/30/20 16:09	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1485346	1	06/01/20 16:20	06/01/20 16:20	BMB	Mt. Juliet, TN

DUP-2 L1221909-11 GW

Collected by: Matthew Laughlin
Collected date/time: 05/21/20 00:00
Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1484651	1	05/30/20 16:30	05/30/20 16:30	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1485346	10	06/01/20 16:42	06/01/20 16:42	BMB	Mt. Juliet, TN

TRIP BLANK L1221909-12 GW

Collected by: Matthew Laughlin
Collected date/time: 05/21/20 00:00
Received date/time: 05/23/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1484651	1	05/30/20 14:26	05/30/20 14:26	BMB	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

Sample Delivery Group (SDG) Narrative

VOC pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1221909-09	MW-4R	8021B

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 18:56
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1221909-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1483724, WG1484993, WG1484651 and WG1485346

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			1
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?		X			2
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 18:56
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1221909-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1483724, WG1484993, WG1484651 and WG1485346

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exceptions Reports

Revised May 2010

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Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 18:56
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1221909-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1483724, WG1484993, WG1484651 and WG1485346

ER #[1]	Description
1	8021B WG1484651 R3533751-4 and 5: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
2	8021B WG1484651 L1221909-09: VOC pH outside of method requirement. 8021B WG1485346 L1221909-09: VOC pH outside of method requirement.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	05/29/2020 16:35	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 16:35	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 16:35	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 16:35	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/29/2020 16:35*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	05/29/2020 16:56	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 16:56	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 16:56	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 16:56	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*98.3*				*79.0-125*		*05/29/2020 16:56*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	05/29/2020 17:16	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 17:16	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 17:16	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 17:16	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/29/2020 17:16*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	05/29/2020 17:37	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 17:37	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 17:37	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 17:37	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/29/2020 17:37*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.000684		0.000190	0.000500	0.000500	1	05/29/2020 17:58	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 17:58	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 17:58	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 17:58	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*79.0-125*		*05/29/2020 17:58*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0987		0.000190	0.000500	0.000500	1	05/29/2020 18:18	WG1483724
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 18:18	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 18:18	WG1483724
Total Xylene	U		0.000510	0.00150	0.00150	1	05/29/2020 18:18	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*79.0-125*		*05/29/2020 18:18*	WG1483724

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.599		0.00190	0.000500	0.00500	10	05/31/2020 19:29	WG1484993
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 18:39	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 18:39	WG1483724
Total Xylene	0.00160		0.000510	0.00150	0.00150	1	05/29/2020 18:39	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*98.0*				*79.0-125*		*05/29/2020 18:39*	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*99.5*				*79.0-125*		*05/31/2020 19:29*	WG1484993

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.513		0.00190	0.000500	0.00500	10	05/31/2020 20:22	WG1484993
Toluene	U		0.000412	0.00100	0.00100	1	05/29/2020 19:00	WG1483724
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/29/2020 19:00	WG1483724
Total Xylene	0.000720	J	0.000510	0.00150	0.00150	1	05/29/2020 19:00	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*96.7*				*79.0-125*		*05/29/2020 19:00*	WG1483724
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*05/31/2020 20:22*	WG1484993

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.918		0.00190	0.000500	0.00500	10	06/01/2020 15:58	WG1485346
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 15:49	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 15:49	WG1484651
Total Xylene	0.00132	J	0.000510	0.00150	0.00150	1	05/30/2020 15:49	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*93.2*				*79.0-125*		*05/30/2020 15:49*	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*06/01/2020 15:58*	WG1485346

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	06/01/2020 16:20	WG1485346
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 16:09	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 16:09	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 16:09	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*104*				*79.0-125*		*05/30/2020 16:09*	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*06/01/2020 16:20*	WG1485346

DUP-2
Collected date/time: 05/21/20 00:00
L1221909

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.583		0.00190	0.000500	0.00500	10	06/01/2020 16:42	WG1485346
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 16:30	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 16:30	WG1484651
Total Xylene	0.00113	J	0.000510	0.00150	0.00150	1	05/30/2020 16:30	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*91.6*				*79.0-125*		*05/30/2020 16:30*	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*06/01/2020 16:42*	WG1485346

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SAMPLE RESULTS - 12

Collected date/time: 05/21/20 00:00

L1221909

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Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	05/30/2020 14:26	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 14:26	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 14:26	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 14:26	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/30/2020 14:26*	WG1484651

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Method Blank (MB)

(MB) R3533522-5 05/29/20 11:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*101*			*79.0-125*

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

(LCS) R3533522-1 05/29/20 10:00 • (LCSD) R3533522-2 05/29/20 10:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0527	0.0514	105	103	77.0-122			2.50	20
Toluene	0.0500	0.0528	0.0516	106	103	80.0-121			2.30	20
Ethylbenzene	0.0500	0.0517	0.0507	103	101	80.0-123			1.95	20
Total Xylene	0.150	0.161	0.157	107	105	47.0-154			2.52	20
(S) a,a,a-Trifluorotoluene(PID)				*99.9*	*100*	*79.0-125*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3533522-6 05/29/20 19:20 • (MSD) R3533522-7 05/29/20 19:41

Analyte	Spike Amount mg/l	Original Result	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.250		0.252	0.261	101	104	5	10.0-160			3.51	21
Toluene	0.250		0.252	0.261	101	104	5	12.0-148			3.51	21
Ethylbenzene	0.250		0.244	0.255	97.6	102	5	22.0-149			4.41	21
Total Xylene	0.750		0.752	0.787	100	105	5	13.0-155			4.55	21
(S) a,a,a-Trifluorotoluene(PID)					*101*	*101*		*79.0-125*				

Method Blank (MB)

(MB) R3533751-3 05/30/20 13:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*104*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3533751-1 05/30/20 12:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0500	100	77.0-122	
Toluene	0.0500	0.0479	95.8	80.0-121	
Ethylbenzene	0.0500	0.0450	90.0	80.0-123	
Total Xylene	0.150	0.135	90.0	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*97.7*	*79.0-125*	

L1221939-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1221939-01 05/30/20 18:54 • (MS) R3533751-4 05/30/20 20:37 • (MSD) R3533751-5 05/30/20 20:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.327	0.358	0.356	62.0	58.0	1	10.0-160	E	E	0.560	21
Toluene	0.0500	0.0501	0.100	0.101	99.8	102	1	12.0-148			0.995	21
Ethylbenzene	0.0500	0.0527	0.100	0.0951	94.6	84.8	1	22.0-149			5.02	21
Total Xylene	0.150	0.528	0.618	0.611	60.0	55.3	1	13.0-155			1.14	21
(S) a,a,a-Trifluorotoluene(PID)					*107*	*103*		*79.0-125*				

Method Blank (MB)

(MB) R3533651-3 05/31/20 15:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
(S) a,a,a-Trifluorotoluene(PID)	*100*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3533651-1 05/31/20 13:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0516	103	77.0-122	
(S) a,a,a-Trifluorotoluene(PID)			*100*	*79.0-125*	

Method Blank (MB)

(MB) R3533851-3 06/01/20 13:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
(S) a,a,a-Trifluorotoluene(PID)	*101*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3533851-1 06/01/20 11:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0516	103	77.0-122	
(S) a,a,a-Trifluorotoluene(PID)			*100*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

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Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

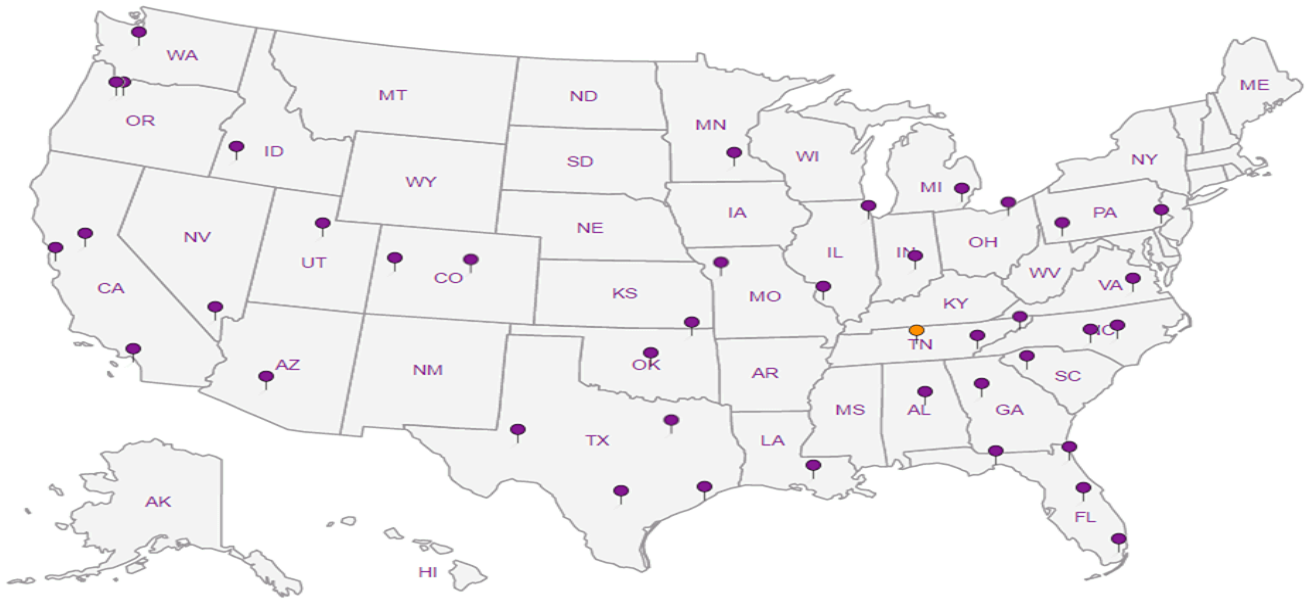
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905/02	L1221909	06/02/20 18:56	27 of 29

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
10 Desta Dr., Ste. 550E
Midland, TX 79705

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;Glenn.Quinney@ghd.c

Project Description: Lovington Gathering WTI, SRS 2006-142

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209905/02

Lab Project # PLAINSGHD-11209905

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS 2006-142

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl
MW-5R	Grab	GW	DTW	5/21/20	1100	3	W
MW-7		GW			1130	3	W
MW-9		GW			1200	3	W
MW-11		GW			1230	3	W
MW-3R		GW			1300	3	W
MW-2R		GW			1330	3	W
MW-12		GW			1400	3	W
MW-1R		GW			1430	3	W
MW-4R		GW			1500	3	W
Dup-1		GW			—	3	W

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

SDG # L1221969
F159

Acctnum: PLAINSGHD
Template: T167394
Prelogin: P772381
PM:
PB:

Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	-01
	02
	03
	04
	05
	06
	07
	08
	09
	10

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 420165972020

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Relinquished by : (Signature)	05/22/20	12:40		1	
Relinquished by : (Signature)	5/22/20	15:00	FedEx	Temp: 4.5 °C Bottles Received: 33	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-22-20 Time: 0800	Hold: Condition: NCF / OK

Plains All American, LP - GHD
2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
10 Desta Dr., Ste. 550E
Midland, TX 79705

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;Glenn.Quinney@ghd.c

Project Description: Lovington Gathering WTI, SRS 2006-142

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET (MT circled)

Phone: 432-250-7917

Client Project #: 11209905/02

Lab Project #: PLAINSGHD-11209905

SDG #: L1221969

Table #:

Collected by (print): Matthew Laughlin

Site/Facility ID #: SRS 2006-142

P.O. #:

Acctnum: PLAINSGHD

Collected by (signature): [signature]

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

Quote #:

Date Results Needed:

Template: T167394

Prelogin: P772381

PM:

PB:

Immediately Packed on Ice N ___ Y ___

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
Dup-2	G	GW	–	05/21/20	–	3	3		-11
Trip Blank	G	–	–	–	–	1	1		12

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

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Samples returned via: __ UPS __ FedEx __ Courier ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP _Y _N
COC Signed/Accurate: ✓Y _N
Bottles arrive intact: ✓Y _N
Correct bottles used: ✓Y _N
Sufficient volume sent: ✓Y _N
If Applicable
VOA Zero Headspace: ✓Y _N
Preservation Correct/Checked: _Y _N
RAD Screen <0.5 mR/hr: ✓Y _N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		
[signature]	05/22/20	12:40	[signature]	Trip Blank Received: Yes / No; HCL / MeoH; TBR	
[signature]	5/22/20	15:00	FedEx	Temp: A3 °C 4.5±0=4.5; Bottles Received: 33	If preservation required by Login: Date/Time
			Received for lab by: (Signature) [signature]	Date: 5-23-20; Time:	Hold: ; Condition: NCF / OK (OK circled)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 15, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1237500
Samples Received:	07/08/2020
Project Number:	11209905/02
Description:	Lovington Gathering WTI, SRS 2006-142
Site:	SRS 2006-142
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

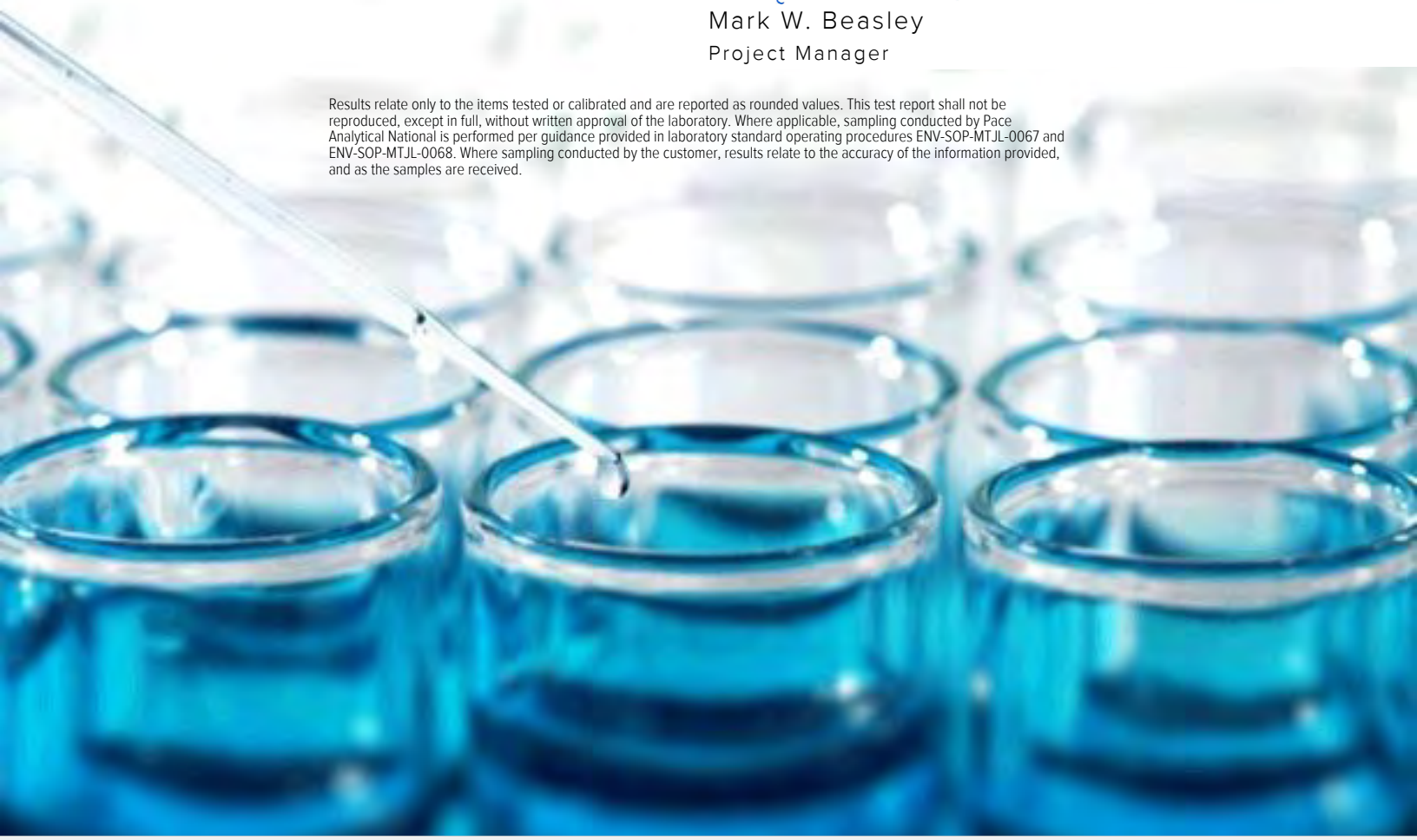


TABLE OF CONTENTS

END PIVOT L1237500-01 GW

Collected by: Matthew Laughlin
Collected date/time: 07/02/20 11:00
Received date/time: 07/08/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1507888	1	07/12/20 18:18	07/12/20 18:18	TPR	Mt. Juliet, TN

MIDDLE PIVOT L1237500-02 GW

Collected by: Matthew Laughlin
Collected date/time: 07/02/20 11:30
Received date/time: 07/08/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1507888	1	07/12/20 18:41	07/12/20 18:41	TPR	Mt. Juliet, TN

CENTER PIVOT L1237500-03 GW

Collected by: Matthew Laughlin
Collected date/time: 07/02/20 12:00
Received date/time: 07/08/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1507888	1	07/12/20 19:04	07/12/20 19:04	TPR	Mt. Juliet, TN

GOFF DAIRY WELL L1237500-04 GW

Collected by: Matthew Laughlin
Collected date/time: 07/02/20 12:30
Received date/time: 07/08/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1507888	1	07/12/20 19:27	07/12/20 19:27	TPR	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

Revised May 2010

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 07/15/2020 15:57
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1237500-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1507888

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 07/15/2020 15:57
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1237500-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1507888

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 07/15/2020 15:57
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1237500-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1507888

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	07/12/2020 18:18	WG1507888
Toluene	U		0.000412	0.00100	0.00100	1	07/12/2020 18:18	WG1507888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	07/12/2020 18:18	WG1507888
Total Xylene	U		0.000510	0.00150	0.00150	1	07/12/2020 18:18	WG1507888
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*07/12/2020 18:18*	WG1507888

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	07/12/2020 18:41	WG1507888
Toluene	U		0.000412	0.00100	0.00100	1	07/12/2020 18:41	WG1507888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	07/12/2020 18:41	WG1507888
Total Xylene	U		0.000510	0.00150	0.00150	1	07/12/2020 18:41	WG1507888
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*07/12/2020 18:41*	WG1507888

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	07/12/2020 19:04	WG1507888
Toluene	U		0.000412	0.00100	0.00100	1	07/12/2020 19:04	WG1507888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	07/12/2020 19:04	WG1507888
Total Xylene	U		0.000510	0.00150	0.00150	1	07/12/2020 19:04	WG1507888
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*07/12/2020 19:04*	WG1507888

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	07/12/2020 19:27	WG1507888
Toluene	U		0.000412	0.00100	0.00100	1	07/12/2020 19:27	WG1507888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	07/12/2020 19:27	WG1507888
Total Xylene	U		0.000510	0.00150	0.00150	1	07/12/2020 19:27	WG1507888
(S) a,a,a-Trifluorotoluene(PID)	*104*				*79.0-125*		*07/12/2020 19:27*	WG1507888

Method Blank (MB)

(MB) R3549335-3 07/12/20 13:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*104*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3549335-1 07/12/20 10:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0441	88.2	77.0-122	
Toluene	0.0500	0.0456	91.2	80.0-121	
Ethylbenzene	0.0500	0.0469	93.8	80.0-123	
Total Xylene	0.150	0.135	90.0	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*104*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier Description

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

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

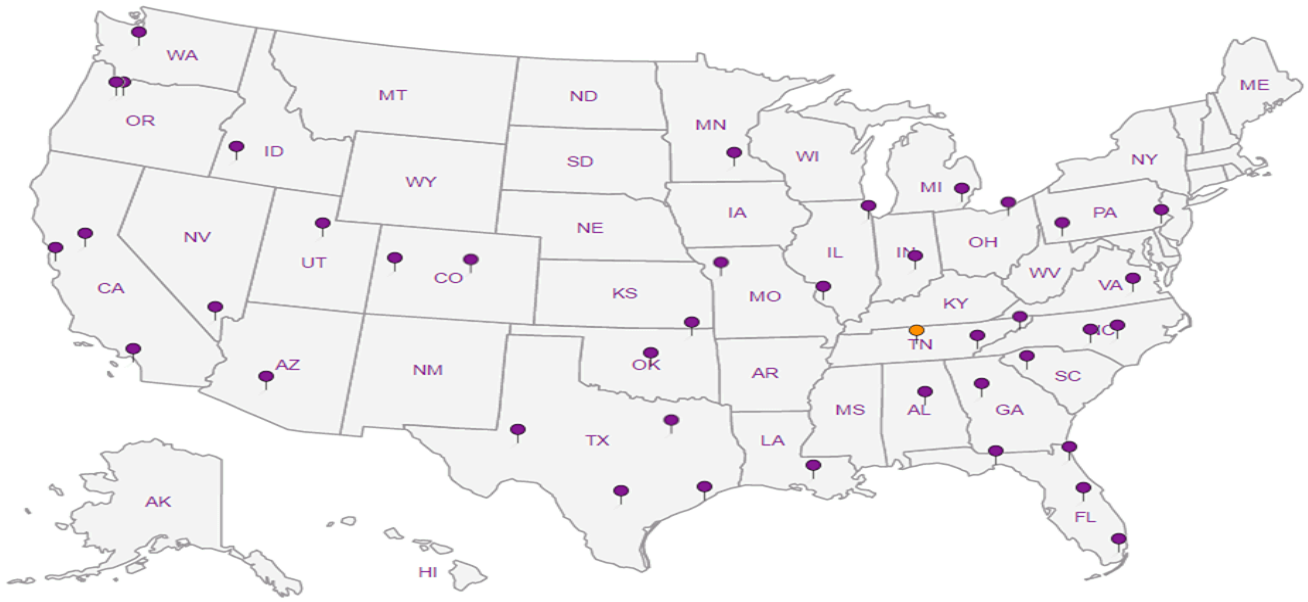
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905/02	L1237500	07/15/20 15:57	15 of 16

2135 S Loop 250 W
Midland, TX 79703

Billing Information: Direct bill to Plains

Report to: Becky Haskell

Email To: Becky.Haskell@ghd.com

Project Description: Lovington Gathering

City/State Collected: Lovington, NM

Phone: 432-250-7917
Fax:

Client Project # 11209905

Lab Project #

Collected by (print): Matthew Laughlin

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8021B	Remarks	Sample # (lab only)
End Pivot	G	GW	-	07/02/20	1100	3	X		-01
Middle Pivot	G	GW	-	07/02/20	1130	3	X		-02
Center Pivot	G	GW	-	07/02/20	1200	3	X		-03
Goff Dairy Well	G	GW	-	07/02/20	1230	3	X		-04

Chain of Custody

Pace Analytical®
National Center for Testing & Innovation

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

L# 1237500
1160

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

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 179030502490

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	07/06/20	1410	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7/6/20	1700	Fedex
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 4.0 °C Bottles Received: 12

Date: 7/8/20 Time: 0830

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 17, 2020

Revised Report

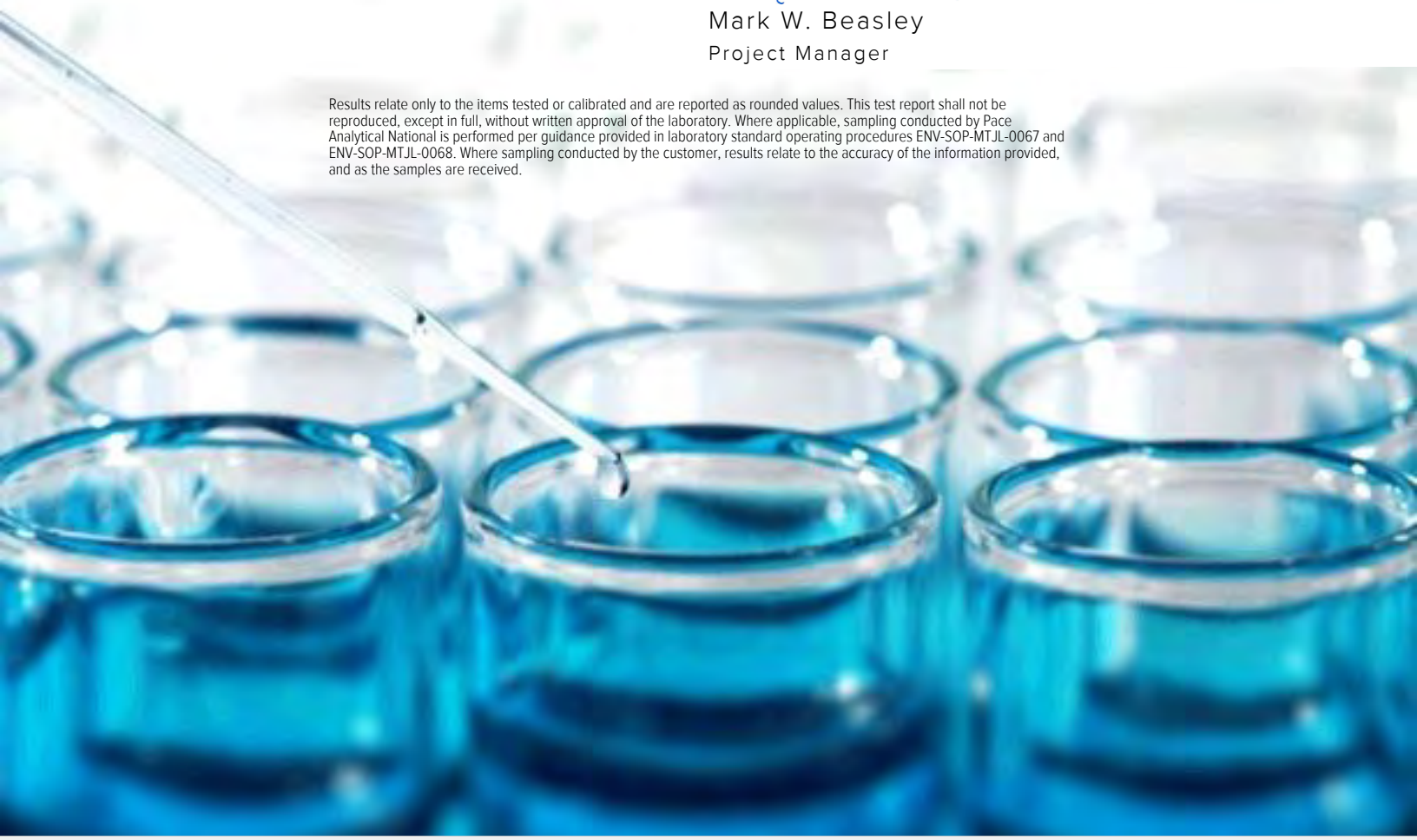
Plains All American, LP - GHD

Sample Delivery Group:	L1258770
Samples Received:	09/04/2020
Project Number:	11209905/02
Description:	Lovington Gathering WTI, SRS 2006-142
Site:	SRS 2006-142
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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



1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

TABLE OF CONTENTS

MW-1R L1258770-01 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 09:15 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1541581	1	09/12/20 01:16	09/12/20 01:16	ADM	Mt. Juliet, TN

MW-2R L1258770-02 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 11:20 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540119	1	09/09/20 21:44	09/09/20 21:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1541581	1	09/12/20 01:41	09/12/20 01:41	ADM	Mt. Juliet, TN

MW-3R L1258770-03 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 09:30 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540119	1	09/09/20 22:04	09/09/20 22:04	ACG	Mt. Juliet, TN

MW-4R L1258770-04 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 10:50 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540119	10	09/10/20 00:08	09/10/20 00:08	ACG	Mt. Juliet, TN

MW-5R L1258770-05 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 10:30 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 08:12	09/10/20 08:12	DWR	Mt. Juliet, TN

MW-7 L1258770-06 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 09:00 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 08:32	09/10/20 08:32	DWR	Mt. Juliet, TN

MW-9 L1258770-07 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 09:50 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 08:53	09/10/20 08:53	DWR	Mt. Juliet, TN

MW-11 L1258770-08 GW

Collected by: Charles Neligh | Collected date/time: 09/03/20 10:10 | Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 09:14	09/10/20 09:14	DWR	Mt. Juliet, TN

MW-12 L1258770-09 GW

Collected by: Charles Neligh
Collected date/time: 09/03/20 08:50
Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	10	09/10/20 12:41	09/10/20 12:41	DWR	Mt. Juliet, TN

PIVOT L1258770-10 GW

Collected by: Charles Neligh
Collected date/time: 09/03/20 11:40
Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 09:35	09/10/20 09:35	DWR	Mt. Juliet, TN

GOFF DAIRY WELL L1258770-11 GW

Collected by: Charles Neligh
Collected date/time: 09/03/20 12:00
Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 09:56	09/10/20 09:56	DWR	Mt. Juliet, TN

DUP L1258770-12 GW

Collected by: Charles Neligh
Collected date/time: 09/03/20 00:00
Received date/time: 09/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1540406	1	09/10/20 10:16	09/10/20 10:16	DWR	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

Report Revision History

Level II Report - Version 1: 09/16/20 18:56

Sample Delivery Group (SDG) Narrative

VOC pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1258770-01	MW-1R	8021B

Revised May 2010

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 09/17/2020 19:46
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1258770-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1540119, WG1541581 and WG1540406

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			1
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?		X			2
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 09/17/2020 19:46
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1258770-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1540119, WG1541581 and WG1540406

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exceptions Reports

Laboratory Name: Pace Analytical National	LRC Date: 09/17/2020 19:46
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1258770-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1540119, WG1541581 and WG1540406

ER #[1]	Description
1	8021B WG1540119 Benzene: Percent Recovery is outside of established control limits.
2	8021B WG1541581 L1258770-01: VOC pH outside of method requirement.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.162		0.000190	0.000500	0.000500	1	09/12/2020 01:16	WG1541581
Toluene	0.000813	J	0.000412	0.00100	0.00100	1	09/12/2020 01:16	WG1541581
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/12/2020 01:16	WG1541581
Total Xylene	0.000787	J	0.000510	0.00150	0.00150	1	09/12/2020 01:16	WG1541581
(S) a,a,a-Trifluorotoluene(PID)	*98.8*				*79.0-125*		*09/12/2020 01:16*	WG1541581

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.0773		0.000190	0.000500	0.000500	1	09/09/2020 21:44	WG1540119
Toluene	U		0.000412	0.00100	0.00100	1	09/09/2020 21:44	WG1540119
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/09/2020 21:44	WG1540119
Total Xylene	U		0.000510	0.00150	0.00150	1	09/12/2020 01:41	WG1541581
(S) a,a,a-Trifluorotoluene(PID)	*98.3*				*79.0-125*		*09/09/2020 21:44*	WG1540119
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*09/12/2020 01:41*	WG1541581

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	09/09/2020 22:04	WG1540119
Toluene	U		0.000412	0.00100	0.00100	1	09/09/2020 22:04	WG1540119
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/09/2020 22:04	WG1540119
Total Xylene	U		0.000510	0.00150	0.00150	1	09/09/2020 22:04	WG1540119
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/09/2020 22:04*	WG1540119

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	1.58	J6	0.00190	0.000500	0.00500	10	09/10/2020 00:08	WG1540119
Toluene	U		0.00412	0.00100	0.0100	10	09/10/2020 00:08	WG1540119
Ethylbenzene	U		0.00160	0.000500	0.00500	10	09/10/2020 00:08	WG1540119
Total Xylene	U		0.00510	0.00150	0.0150	10	09/10/2020 00:08	WG1540119
(S) a,a,a-Trifluorotoluene(PID)	*97.5*				*79.0-125*		*09/10/2020 00:08*	WG1540119

Sample Narrative:

L1258770-04 WG1540119: Target compounds too high to run at a lower dilution.

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 08:12	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 08:12	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 08:12	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 08:12	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/10/2020 08:12*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 08:32	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 08:32	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 08:32	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 08:32	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/10/2020 08:32*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 08:53	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 08:53	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 08:53	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 08:53	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*09/10/2020 08:53*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 09:14	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 09:14	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 09:14	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 09:14	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*99.5*				*79.0-125*		*09/10/2020 09:14*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.336		0.00190	0.000500	0.00500	10	09/10/2020 12:41	WG1540406
Toluene	0.00488	J	0.00412	0.00100	0.0100	10	09/10/2020 12:41	WG1540406
Ethylbenzene	U		0.00160	0.000500	0.00500	10	09/10/2020 12:41	WG1540406
Total Xylene	0.00609	J	0.00510	0.00150	0.0150	10	09/10/2020 12:41	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/10/2020 12:41*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 09:35	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 09:35	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 09:35	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 09:35	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/10/2020 09:35*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	09/10/2020 09:56	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 09:56	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 09:56	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 09:56	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*99.9*				*79.0-125*		*09/10/2020 09:56*	WG1540406

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.0612		0.000190	0.000500	0.000500	1	09/10/2020 10:16	WG1540406
Toluene	U		0.000412	0.00100	0.00100	1	09/10/2020 10:16	WG1540406
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/10/2020 10:16	WG1540406
Total Xylene	U		0.000510	0.00150	0.00150	1	09/10/2020 10:16	WG1540406
(S) a,a,a-Trifluorotoluene(PID)	*98.4*				*79.0-125*		*09/10/2020 10:16*	WG1540406

Method Blank (MB)

(MB) R3569415-3 09/09/20 17:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*99.0*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3569415-1 09/09/20 16:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0484	96.8	77.0-122	
Toluene	0.0500	0.0488	97.6	80.0-121	
Ethylbenzene	0.0500	0.0495	99.0	80.0-123	
Total Xylene	0.150	0.157	105	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*99.0*	*79.0-125*	

L1258770-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1258770-04 09/10/20 00:08 • (MS) R3569415-4 09/10/20 01:31 • (MSD) R3569415-5 09/10/20 01:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.500	1.58	1.74	1.49	32.0	0.000	10	10.0-160		J6	15.5	21
Toluene	0.500	U	0.452	0.389	90.4	77.8	10	12.0-148			15.0	21
Ethylbenzene	0.500	U	0.465	0.402	93.0	80.4	10	22.0-149			14.5	21
Total Xylene	1.50	U	1.49	1.27	99.3	84.7	10	13.0-155			15.9	21
(S) a,a,a-Trifluorotoluene(PID)					*97.0*	*98.7*		*79.0-125*				

Sample Narrative:

OS: Target compounds too high to run at a lower dilution.

Method Blank (MB)

(MB) R3570699-3 09/10/20 06:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*99.7*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3570699-1 09/10/20 04:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0551	110	77.0-122	
Toluene	0.0500	0.0552	110	80.0-121	
Ethylbenzene	0.0500	0.0561	112	80.0-123	
Total Xylene	0.150	0.179	119	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*99.7*	*79.0-125*	

L1258789-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1258789-04 09/10/20 14:04 • (MS) R3570699-4 09/10/20 14:45 • (MSD) R3570699-5 09/10/20 15:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	10.0	0.958	8.88	7.68	79.2	67.2	200	10.0-160			14.5	21
Toluene	10.0	1.53	9.15	7.96	76.2	64.3	200	12.0-148			13.9	21
Ethylbenzene	10.0	0.821	9.12	7.96	83.0	71.4	200	22.0-149			13.6	21
Total Xylene	30.0	6.32	31.3	27.7	83.3	71.3	200	13.0-155			12.2	21
(S) a,a,a-Trifluorotoluene(PID)					*97.6*	*97.5*		*79.0-125*				

Method Blank (MB)

(MB) R3569697-3 09/11/20 22:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*104*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3569697-1 09/11/20 21:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0543	109	77.0-122	
Toluene	0.0500	0.0541	108	80.0-121	
Ethylbenzene	0.0500	0.0568	114	80.0-123	
Total Xylene	0.150	0.167	111	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

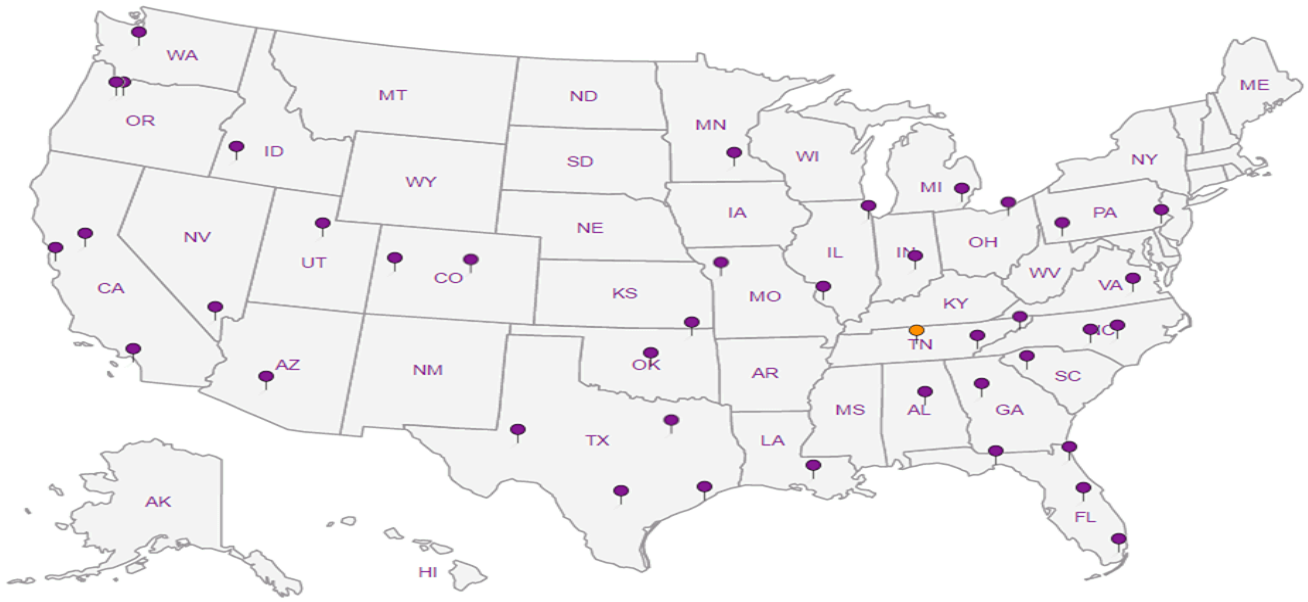
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905/02	L1258770	09/17/20 19:46	26 of 28

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
10 Desta Dr., Ste. 550E
Midland, TX 79705

Pres Chk

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;Glenn.Quinney@ghd.c

Project Description: Lovington Gathering WTI, SRS 2006-142

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209905/02

Lab Project # PLAINSGHD-11209905

Collected by (print): Charles Dellgh

Site/Facility ID # SRS 2006-142

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl										Remarks	Sample # (lab only)
MW-1R	Grab	GW		9-3-20	0915		X											-01
MW-2R		GW			1120		X											-02
MW-3R		GW			0930		X											-03
MW-4R		GW			1050		X											-04
MW-5R		GW			1030		X											-05
MW-7		GW			0900		X											-06
MW-9		GW			0950		X											-07
MW-11		GW			1010		X											-08
MW-12		GW			0950		X											-09
Pivot		GW			1140		X											-10

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

SDG # L1258770

H081

Acctnum: PLAINSGHD

Template: T167394

Prelogin: P792132

PM: 134 - Mark W. Beasley

PB:

Shipped Via: FedEX Ground

Analysis / Container / Preservative

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

Remarks: ~~Blank~~ Invoice to Plains All American Pipeline, Attn: Camille Bryant
use: SRS2006-142 (GHD 11209905) as Project Number.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 1422 0813 2030

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	9-3-20	1300		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.6 Bottles Received: 30
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/4/20 Time: 9:31
			Leticia Cook	Hold: Condition: NCF / OK

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
10 Desta Dr., Ste. 550E
Midland, TX 79705

Pres Chk

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;Glenn.Quinney@ghd.c

Project Description: Lovington Gathering WTI, SRS 2006-142

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209905/02

Lab Project # PLAINSGHD-11209905

Collected by (print): Charles Nelich

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID # SRS 2006-142

P.O. #

Quote #

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

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
Goff Dairy well DJD	Grab	GW		9-3-20	1200		X		-11
	Grab	GW		9-3-20	—		X		-12
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

SDG # L1258770

Table #

Acctnum: PLAINSGHD
Template: T167394
Prelogin: P792132
PM: 134 - Mark W. Beasley
PB:

Shipped Via: FedEX Ground

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

Remarks: Invoice: Plains All American Pipeline, Attn: Camille Bryant
Use: SRS2006-142 (GHD 11209905) for project number.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Charles Nelich	9-3-20	1300			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.6+1=4.7 °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/4/20 Time: 9:30	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 07, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1266685
Samples Received:	09/25/2020
Project Number:	11209905
Description:	Lovington Gathering WTI, SRS 2006-142
Site:	LOVINGTON GATHERING
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

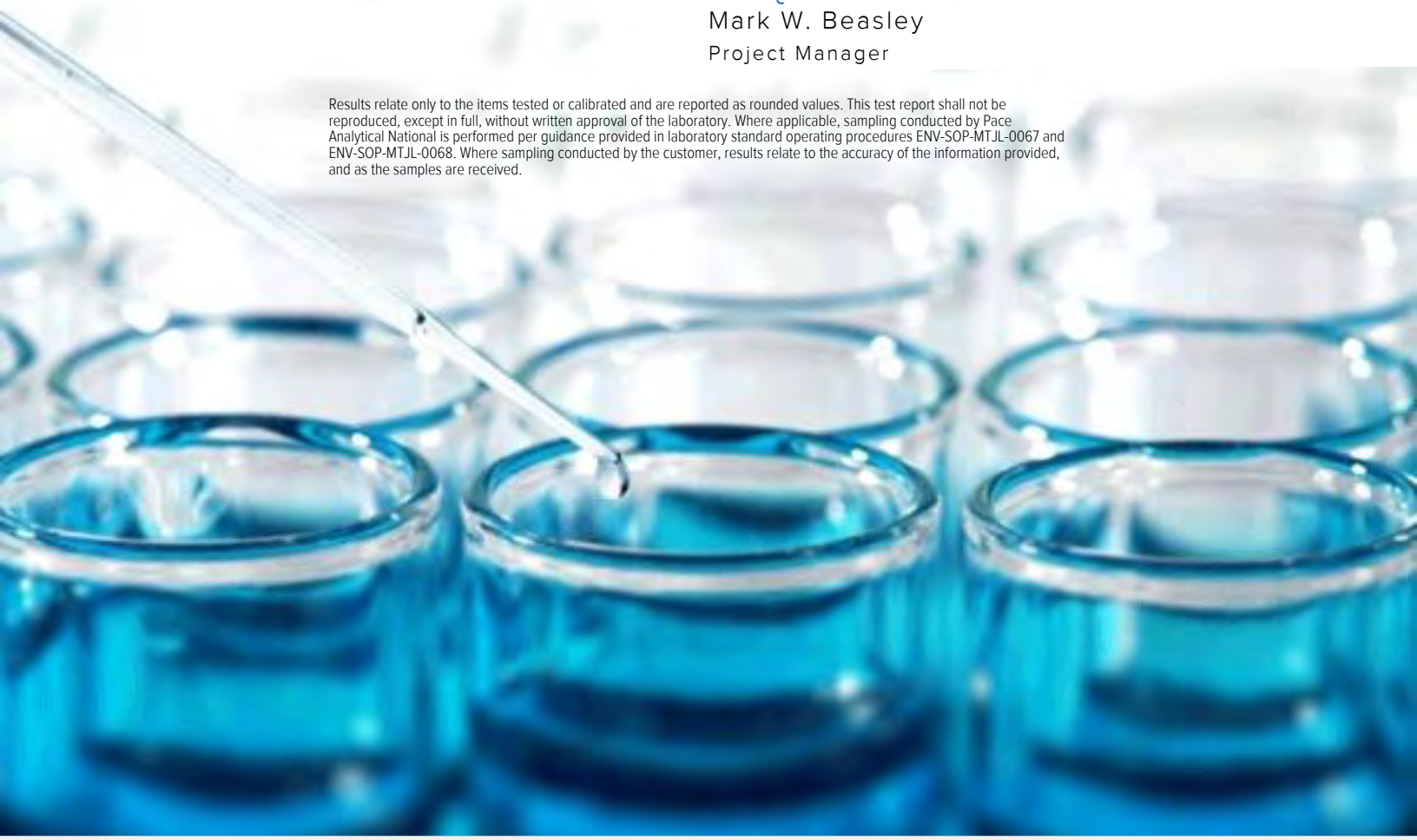


TABLE OF CONTENTS

BEGINNING L1266685-01 GW

Collected by: Heath Boyd
Collected date/time: 09/24/20 08:20
Received date/time: 09/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1553323	1	10/03/20 14:52	10/03/20 14:52	AV	Mt. Juliet, TN

MIDDLE L1266685-02 GW

Collected by: Heath Boyd
Collected date/time: 09/24/20 08:50
Received date/time: 09/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1553323	1	10/03/20 15:17	10/03/20 15:17	AV	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/07/2020 16:44
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1266685-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1553323

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/07/2020 16:44
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1266685-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1553323

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/07/2020 16:44
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1266685-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1553323

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	10/03/2020 14:52	WG1553323
Toluene	U		0.000412	0.00100	0.00100	1	10/03/2020 14:52	WG1553323
Ethylbenzene	U		0.000160	0.000500	0.000500	1	10/03/2020 14:52	WG1553323
Total Xylene	U		0.000510	0.00150	0.00150	1	10/03/2020 14:52	WG1553323
(S) a,a,a-Trifluorotoluene(PID)	*106*				*79.0-125*		*10/03/2020 14:52*	WG1553323

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	10/03/2020 15:17	WG1553323
Toluene	U		0.000412	0.00100	0.00100	1	10/03/2020 15:17	WG1553323
Ethylbenzene	U		0.000160	0.000500	0.000500	1	10/03/2020 15:17	WG1553323
Total Xylene	U		0.000510	0.00150	0.00150	1	10/03/2020 15:17	WG1553323
(S) a,a,a-Trifluorotoluene(PID)	*105*				*79.0-125*		*10/03/2020 15:17*	WG1553323

Method Blank (MB)

(MB) R3578727-3 10/03/20 12:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*105*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3578727-1 10/03/20 10:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0574	115	77.0-122	
Toluene	0.0500	0.0559	112	80.0-121	
Ethylbenzene	0.0500	0.0571	114	80.0-123	
Total Xylene	0.150	0.171	114	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description

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

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

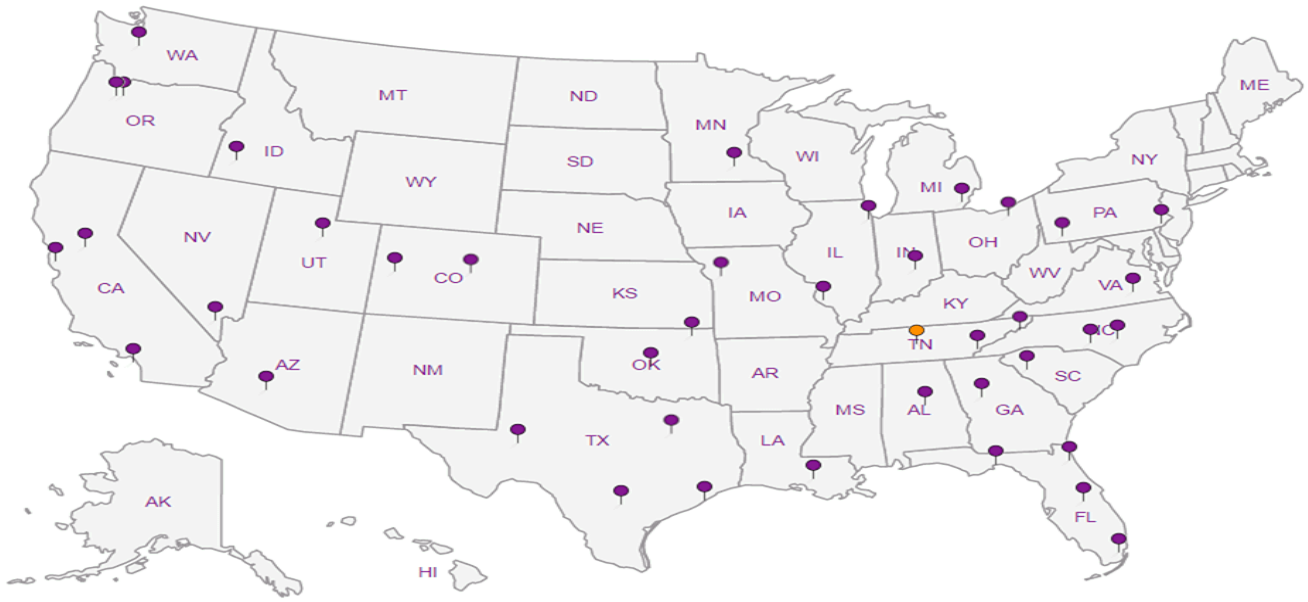
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905	L1266685	10/07/20 16:44	13 of 14

Billing Information:

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

Report to: Becky Haskell

Email To: Becky.Haskell@GHD.com

Project Description: Lovington Gathering WTI SRS 2006-142

City/State Collected: Lovington, NM

Phone:

Fax:

Client Project # 11209905

Lab Project # PlainsGHD-11209905

Collected by (print): Heath Boyd

Site/Facility ID # Lovington Gathering

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

L # 1266685

G087

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	40mlAmb-HCl BTEX	Remarks	Sample # (lab only)
Beginning	Grab	GW	-	9/24/20	820	3		X		-01
Middle	Grab	GW	-	9/24/20	850	3		X		-02

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 3971 7829 0071

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	9/24/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7+0=3.7 °C Bottles Received: 6
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09/25/20 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 17, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1282811
Samples Received:	11/06/2020
Project Number:	11209905/02
Description:	Lovington Gathering WTI, SRS 2006-142
Site:	SRS 2006-142
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

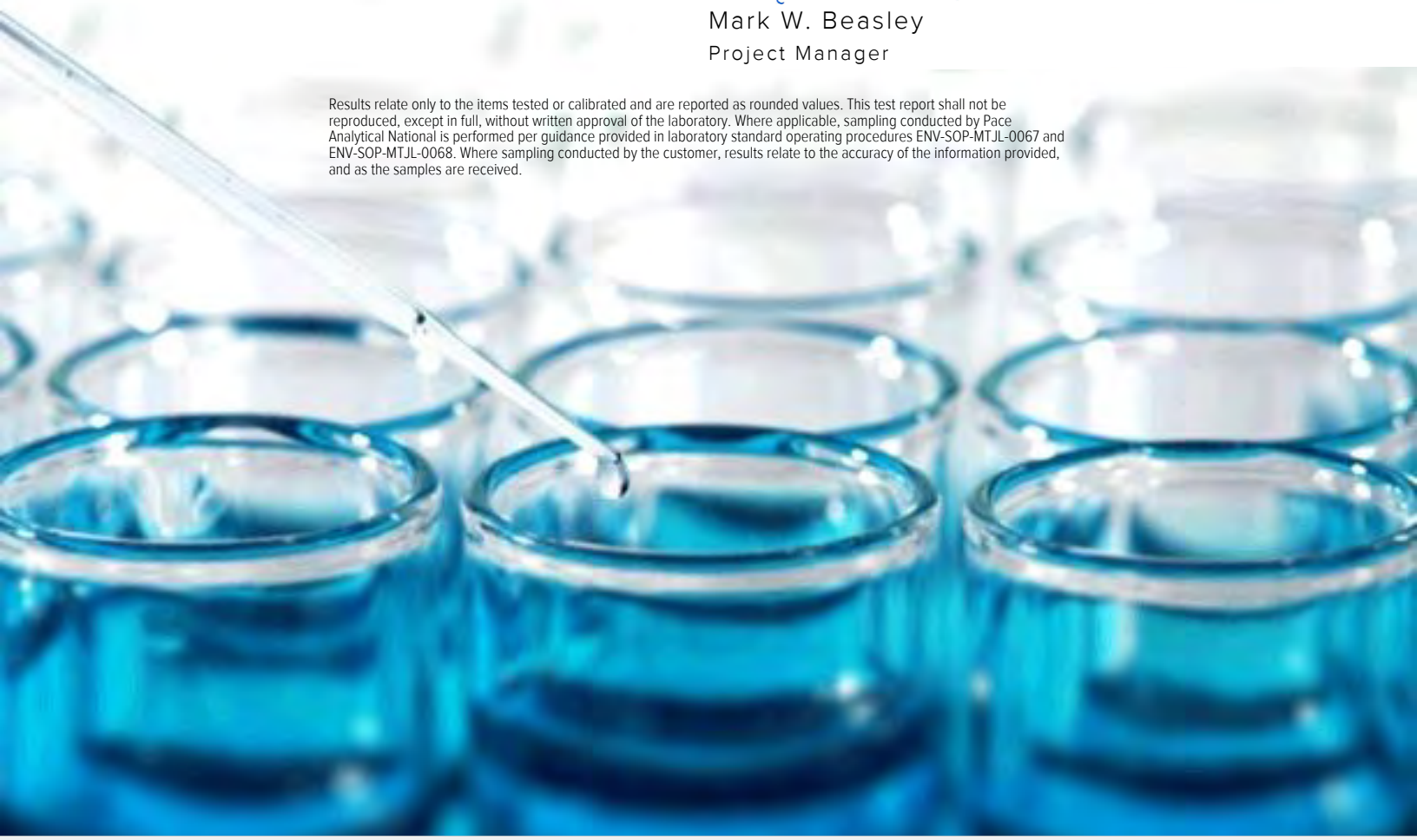


TABLE OF CONTENTS

MW-5R L1282811-01 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 10:30 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 18:52	11/10/20 18:52	ADM	Mt. Juliet, TN

MW-7 L1282811-02 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 10:55 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 19:13	11/10/20 19:13	ADM	Mt. Juliet, TN

MW-9 L1282811-03 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 11:20 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 19:34	11/10/20 19:34	ADM	Mt. Juliet, TN

MW-11 L1282811-04 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 11:45 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 19:55	11/10/20 19:55	ADM	Mt. Juliet, TN

MW-3R L1282811-05 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 12:10 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 20:16	11/10/20 20:16	ADM	Mt. Juliet, TN

MW-2R L1282811-06 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 12:35 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1573895	1	11/10/20 20:37	11/10/20 20:37	ADM	Mt. Juliet, TN

MW-1R L1282811-07 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 13:00 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1576664	10	11/16/20 02:50	11/16/20 02:50	BMB	Mt. Juliet, TN

MW-12 L1282811-08 GW

Collected by: Zach Comino | Collected date/time: 11/05/20 13:25 | Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1576664	10	11/16/20 03:13	11/16/20 03:13	BMB	Mt. Juliet, TN

MW-4 L1282811-09 GW

Collected by: Zach Comino
Collected date/time: 11/05/20 13:50
Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1576664	20	11/16/20 03:35	11/16/20 03:35	BMB	Mt. Juliet, TN

DUP-1 L1282811-10 GW

Collected by: Zach Comino
Collected date/time: 11/05/20 00:00
Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1574584	1	11/11/20 19:01	11/11/20 19:01	DWR	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 11/17/2020 13:43
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1282811-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1573895, WG1574584 and WG1576664

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Revised May 2010

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 11/17/2020 13:43
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1282811-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1573895, WG1574584 and WG1576664

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
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Laboratory Name: Pace Analytical National	LRC Date: 11/17/2020 13:43
Project Name: Lovington Gathering WTI, SRS 2006-142	Laboratory Job Number: L1282811-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1573895, WG1574584 and WG1576664

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
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Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	11/10/2020 18:52	WG1573895
Toluene	U		0.000412	0.00100	0.00100	1	11/10/2020 18:52	WG1573895
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/10/2020 18:52	WG1573895
Total Xylene	U		0.000510	0.00150	0.00150	1	11/10/2020 18:52	WG1573895
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*11/10/2020 18:52*	WG1573895

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
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Total Xylene	U		0.000510	0.00150	0.00150	1	11/10/2020 19:13	WG1573895
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Volatile Organic Compounds (GC) by Method 8021B

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Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
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Toluene	U		0.000412	0.00100	0.00100	1	11/10/2020 19:55	WG1573895
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Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	11/10/2020 20:16	WG1573895
Toluene	U		0.000412	0.00100	0.00100	1	11/10/2020 20:16	WG1573895
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/10/2020 20:16	WG1573895
Total Xylene	U		0.000510	0.00150	0.00150	1	11/10/2020 20:16	WG1573895
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/10/2020 20:16*	WG1573895

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0924		0.000190	0.000500	0.000500	1	11/10/2020 20:37	WG1573895
Toluene	U		0.000412	0.00100	0.00100	1	11/10/2020 20:37	WG1573895
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/10/2020 20:37	WG1573895
Total Xylene	U		0.000510	0.00150	0.00150	1	11/10/2020 20:37	WG1573895
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*11/10/2020 20:37*	WG1573895

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	0.458		0.00190	0.000500	0.00500	10	11/16/2020 02:50	WG1576664
Toluene	U		0.00412	0.00100	0.0100	10	11/16/2020 02:50	WG1576664
Ethylbenzene	U		0.00160	0.000500	0.00500	10	11/16/2020 02:50	WG1576664
Total Xylene	U		0.00510	0.00150	0.0150	10	11/16/2020 02:50	WG1576664
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/16/2020 02:50*	WG1576664

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	1.28		0.00190	0.000500	0.00500	10	11/16/2020 03:13	WG1576664
Toluene	U		0.00412	0.00100	0.0100	10	11/16/2020 03:13	WG1576664
Ethylbenzene	U		0.00160	0.000500	0.00500	10	11/16/2020 03:13	WG1576664
Total Xylene	U		0.00510	0.00150	0.0150	10	11/16/2020 03:13	WG1576664
(S) a,a,a-Trifluorotoluene(PID)	*104*				*79.0-125*		*11/16/2020 03:13*	WG1576664

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	2.43		0.00380	0.000500	0.0100	20	11/16/2020 03:35	WG1576664
Toluene	U		0.00824	0.00100	0.0200	20	11/16/2020 03:35	WG1576664
Ethylbenzene	U		0.00320	0.000500	0.0100	20	11/16/2020 03:35	WG1576664
Total Xylene	U		0.0102	0.00150	0.0300	20	11/16/2020 03:35	WG1576664
(S) a,a,a-Trifluorotoluene(PID)	*104*				*79.0-125*		*11/16/2020 03:35*	WG1576664

DUP-1
Collected date/time: 11/05/20 00:00
L1282811

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	0.000500	1	11/11/2020 19:01	WG1574584
Toluene	U		0.000412	0.00100	0.00100	1	11/11/2020 19:01	WG1574584
Ethylbenzene	0.000364	J	0.000160	0.000500	0.000500	1	11/11/2020 19:01	WG1574584
Total Xylene	0.00112	J	0.000510	0.00150	0.00150	1	11/11/2020 19:01	WG1574584
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/11/2020 19:01*	WG1574584

Method Blank (MB)

(MB) R3591942-3 11/10/20 12:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*103*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3591942-1 11/10/20 09:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0490	98.0	77.0-122	
Toluene	0.0500	0.0488	97.6	80.0-121	
Ethylbenzene	0.0500	0.0498	99.6	80.0-123	
Total Xylene	0.150	0.158	105	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*79.0-125*	

Method Blank (MB)

(MB) R3592049-3 11/11/20 12:40

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*101*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3592049-2 11/11/20 11:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0435	87.0	77.0-122	
Toluene	0.0500	0.0465	93.0	80.0-121	
Ethylbenzene	0.0500	0.0500	100	80.0-123	
Total Xylene	0.150	0.151	101	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*79.0-125*	

Method Blank (MB)

(MB) R3593668-3 11/16/20 01:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*102*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3593668-1 11/15/20 23:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0504	101	77.0-122	
Toluene	0.0500	0.0544	109	80.0-121	
Ethylbenzene	0.0500	0.0566	113	80.0-123	
Total Xylene	0.150	0.170	113	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*79.0-125*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

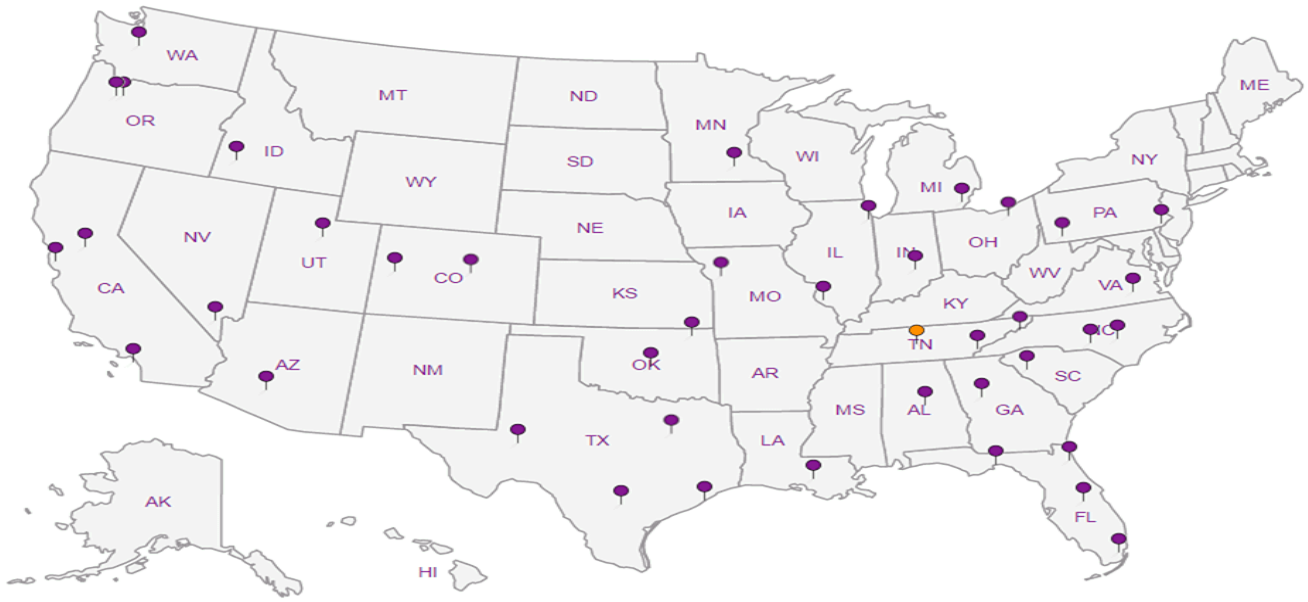
Third Party Federal Accreditations

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

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

Our Locations

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



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American, LP - GHD	11209905/02	L1282811	11/17/20 13:43	24 of 25

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
10 Desta Dr., Ste. 550E
Midland, TX 79705

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;Glenn.Quinney@ghd.c

Project Description: Lovington Gathering WTI, SRS 2006-142

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

SDG # L1282811
J126

Phone: 432-250-7917

Client Project # 11209905/02

Lab Project # PLAINSGHD-11209905

Table #

Acctnum: PLAINSGHD
Template: T167394
Prelogin: P805681

Collected by (print): Zach Lomino

Site/Facility ID # SRS 2006-142

P.O. #

Collected by (signature): [signature]

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEX 40mlAmb-HCl		Sample # (lab only)
MW-5R	Grab	GW		11/5/20	1030	3	X		-01
MW-7	Grab	GW		11/5/20	1055	3	X		-02
MW-9	↓	GW		↓	1120	3	X		-03
MW-11		GW			1145	3	X		-04
MW-3R		GW			1210	↓	X		-05
MW-2R		GW			1235		X		-06
MW-1R		GW			1300		X		-07
MW-12		GW			1325		X		-08
MW-4R		GW			1350		X		-09
Dup-1		GW					X		-10

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

Remarks:
9050 0894 0808

pH ___ Temp ___

Samples returned via: ___ UPS ___ FedEx ___ Courier

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓
COC Signed/Accurate: ✓
Bottles arrive intact: ✓
Correct bottles used: ✓
Sufficient volume sent: ✓
If Applicable
VOA Zero Headspace: ✓
Preservation Correct/Checked: ✓
RAD Screen <0.5 mR/hr: ✓

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Zach Lomino / [signature]	11/5/20	1530		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.4-.2=2.2 °C Bottles Received: 30
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) R. Holsinba	Date: 11/6/20 Time: 9:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 22886

CONDITIONS

Operator:	OGRID:
PLAINS MARKETING L.P. 333 Clay St, Ste 1600 Houston, TX 77002	34053
	Action Number: 22886
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2020 Annual Groundwater Monitoring Report: Content satisfactory Contractor recommendations approved by OCD and are as follows; 1. Continue NMOCD-approved quarterly and semi-annual groundwater monitoring events 2. Continue weekly BTEX abatement events and operation of the oxygen emitter installed in MW-12 3. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.	1/11/2022