APPROVED
By Nelson Velez at 3:34 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 annual sampling for PAHs during the fourth quarterly event according to directives of NMOCD. This will include RW-11, RW-12 and all wells installed during 2020 which are not impacted by LNAPL
3. Continue remediation of the soil profile and groundwater by operating the trailer mounted soil vapor extraction system. Gaseous hydrocarbon emissions will be sampled quarterly to calculate emission rates and total emissions
Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.

2020 Annual Groundwater Monitoring Report

Darr Angell #2 SRS #: LF 1999-62
SW1/4, SE1/4, Section 11, T15S, R37E and
NW1/4, NE1/4, Section, 14 T15S, R37E,
Lea County, New Mexico
NMOCD AP-007
Incident ID #: nAPP2108852096

Plains All American Pipeline LP

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1. Introduction

This 2020 Annual Groundwater Monitoring Report presents data collected at the Darr Angell No. 2 site (Site) by GHD Services Inc. (GHD), on behalf of Plains All American Pipeline, L.P. (Plains), in compliance with the New Mexico Oil Conservation Division (NMOCD) correspondence dated May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This Site is part of NMOCD Abatement Plan number AP-007. This report presents results of quarterly gauging and sampling of monitor and recovery wells in February, May, September, and October 2020. Remedial activities included recovery of Light Non-aqueous Phase Liquid (LNAPL) and impacted groundwater by total fluid pumps, soil vapor extraction, and hand bailing, and enhanced fluid recovery (EFR).

The location of the Site is SW1/4, SE1/4, Section 11, Township 15 South, Range 37 East and NW1/4, NE1/4, Section 14, Township 15 South, Range 37 East, Lea County, New Mexico. Latitude and longitude of the Site are 33.0242° North and 103.1667° West. Location of the Site is shown on a topographic map in Figure 1.

1.1 Site History

The Site was formerly the responsibility of Enron Oil Trading and Transportation (EOTT); however, the Site is currently the responsibility of Plains. A pipeline release was discovered by EOTT employees and details were submitted on a Release Notification and Corrective Action Form (C-141) to the NMOCD on July 29, 1999. The C-141 reported the release as 60 barrels (bbl.) of crude oil with no recovery. The release occurred from an 8 inch EOTT pipeline and was attributed to external pipeline corrosion.

Initial remediation activities began in August 1999 and consisted of 40 soil borings installed within and around the area of surface staining. In April and May 2000, a contractor for EOTT excavated the impacted area to approximately 4.5 feet below ground surface (bgs). Impacted soils were stockpiled on Site. Excavation resumed in April and May 2001 with the additional removal of approximately 3,000 cubic yards of impacted soil. This material was added to soil previously stockpiled on Site. Monitor wells MW-1 through MW-10 and recovery wells RW-1 through RW-7 were installed between April 2000 and December 2002. Partial backfilling of the open excavation was conducted subsequent to NMOCD approval of a backfill request, submitted on March 11, 2002. Backfill materials consisted of previously excavated caliche which had been separated from other excavated material by mechanical screening.

Approximately 3,100 cubic yards of excavated soils were placed into a treatment area, which was 2-3 feet deep, in October 2003. Quarterly mechanical tilling of the stockpile occurred throughout 2004. Analytical results detailed in the Site Restoration Work Plan and Proposed Soil Closure Strategy of January 2006 indicated concentrations of total petroleum hydrocarbons (TPH) within the soil treatment cell were below NMOCD regulatory standards. In a letter from the NMOCD dated April 5, 2006 Plains received approval to backfill the excavation at the Site. The excavation was backfilled with remediated soils contained in the soil treatment cell and contoured to grade in June 2006. A Soil Closure Request was submitted to the NMOCD. Plains received an email approving the soil closure request for the Darr No. 2 location on February 19, 2010.

Nova began managing activities at the Site on May 29, 2004. GHD began monitoring, operation, maintenance, and reporting at the Site on May 2, 2011.

Monitor well MW-5 was plugged and abandoned on September 14, 2005. Wells MW-4 and RW-7 were plugged and abandoned on October 7 and October 8, 2014, respectively. Monitor well MW-4R and recovery well RW-9 were installed on October 7, 2014. Recovery wells RW-7R, RW-8 and RW-10 were installed on October 8, 2014. Monitor well MW-12 and recovery wells RW-11 and RW-12 were installed on February 8, 2017. New wells were professionally surveyed on November 11, 2014 and June 28, 2017.

In July 2019, a Work Plan for Installation of Additional Wells and Plugging Dry wells was submitted to the NMOCD. The work plan proposed to plug and abandon nine monitor wells and one recovery well and installing seven new monitor wells and three new recovery wells. The work plan was proposed because fluid levels in several wells had declined making LNAPL recovery no longer feasible and delineation of the contaminant plume could no longer be demonstrated using the existing wells. On February 19, 2020, monitor wells MW-1, MW-2, MW-3, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11 and one recovery well RW-4 were plugged and abandoned. From February 20 through 25, monitor wells MW-3R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, and MW-13 and recovery wells RW-4R, RW-13, and RW-14 were installed at the site. Currently at the site there are nine (9) monitor wells, MW-3R, MW-4R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, MW-12, and MW-13, and fourteen (14) recovery wells, RW-1, RW-2, RW-3, RW-4R, RW-5, RW-6, RW-7R, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, and RW-14. A Site Details Map is presented as Figure 2.

2. Regulatory Framework

NMOCD guidelines require groundwater to be analyzed for potential contaminants as defined by the New Mexico Administrative Code 20.6.2.3103 Section A, which provides the New Mexico Water Quality Control Commission (NMWQCC) Human Health Standards and Toxic Pollutant Standards for groundwater. The constituents of concern (COCs) in impacted groundwater at the Site are LNAPL, and benzene, toluene, ethylbenzene, total xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAH). NMWQCC Human Health and Toxic Pollutant Standards shown in the Table 2.1 are used to guide assessment and remediation at the Site.

Table 2.1 NMWQCC Human Health and Toxic Pollutant Standards

Analyte	NMWQCC Human Health or Toxic Pollutant Standard
Benzene	0.01 mg/L
Toluene	0.75 mg/L
Ethylbenzene	0.75 mg/L
Total Xylenes	0.62 mg/L
Benzo(a)pyrene	0.0002 mg/L
Combined Naphthalene and Monomethylnaphthalenes	0.03

The Site sampling schedule approved by the NMOCD in a correspondence dated April 28, 2004 and amended in NMOCD correspondence dated June 20, 2005, has the following recovery wells being sampled on a quarterly basis: RW-1, RW-2, RW-3, RW-5, and RW-6. All other wells included on the

NMOCD approved schedule have been plugged and abandoned. Monitor and recovery wells MW-3R, MW-4R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, MW-12, MW-13, RW-4R, RW-7R, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, and RW-14 are monitored on a quarterly basis to establish consistent historical data regarding dissolved-phase COCs and LNAPL thicknesses.

3. Groundwater Monitoring

Quarterly groundwater monitoring was conducted by GHD on February 10 and 14, March 25 (newly installed wells), May 11 and 18, September 15-16, and October 28 and 30, 2020. Wells were sampled in accordance with the sampling schedule described above. Wells containing measureable thicknesses of LNAPL (>0.01 feet) were not sampled. All wells were gauged during each quarterly event.

3.1 Groundwater Monitoring Methodology

All well caps were removed to allow groundwater levels to stabilize prior to gauging. Static fluid levels were measured with an oil-water interface probe to the nearest hundredth of a foot. After recording fluid levels, wells not containing LNAPL were purged of three casing volumes of groundwater. Samples of groundwater were collected using clean, disposable polyvinyl chloride (PVC) bailers. Laboratory-supplied sample containers were filled directly from the bailers. Duplicate samples were collected from one to two wells during most of the quarterly sampling events. Samples were placed on ice immediately after collection and chilled to a temperature of approximately 4°C (39°F). Proper chain-of-custody documentation accompanied samples to Pace Analytical in Mt. Juliet, Tennessee. Samples were analyzed for BTEX according to method EPA 8021B. Selected samples collected in October were analyzed for PAH compounds according to method EPA 8270C-SIM. Volumes of groundwater purged from wells monitored during the first, second, third, and fourth quarters of 2020 were 158 gallons, 156.5 gallons, 152.3 gallons, and 155.5 gallons, respectively. The total volume of groundwater purged from wells during quarterly monitoring events in 2020 was 622.30 gallons.

3.2 Groundwater Elevations and Gradient

All fluid level measurements were recorded from professionally surveyed tops of casings. Groundwater elevations were calculated using a specific gravity of 0.81 for LNAPL where it was present. Fluid levels and calculated groundwater elevations for 2019 and 2020 are presented in Table 1. Groundwater gradient maps for the quarterly monitoring events in February, May, September, and October are provided as Figures 3, 4, 5, and 6, respectively.

The bottoms of LNAPL columns were gauged at the bottoms of casings in recovery wells RW-1, RW-2, RW-5, and RW-6 during some quarterly monitoring events; therefore, the groundwater elevations in those wells could not be accurately calculated in those instances.

The groundwater flow direction is toward the southeast and is consistent with previous quarterly monitoring results. The average gradient determined from the four groundwater monitoring events was approximately 0.0027 feet/foot (ft./ft.). Groundwater elevations declined an average of 1.35 feet across the Site between October 22, 2019 and October 28, 2020.

3.3 Presence of Light Non-aqueous Phase Liquids (LNAPL)

LNAPL was observed in recovery wells RW-1, RW-2, RW-3, RW-4R, RW-5, RW-6, RW-7R, RW-8, RW-9, RW-10, RW-13, and RW-14 during 2020. LNAPL thicknesses in 2020 ranged from 0.08 feet in recovery well RW-14 on February 26, 2020 (shortly after installation) to 7.10 feet in recovery well RW-14 on September 15, 2020.

Charts of thicknesses of LNAPL versus time in recovery wells RW-1, RW-2, RW-3, RW-4R, RW-5, RW-6, RW-7R, RW-8, RW-9, RW-10, RW-13, and RW-14 are in Appendix A. Recovery wells RW-1, RW-2, RW-3, RW-5, and RW-6 show a decline in LNAPL thickness over time while recovery wells RW-7 and RW-8 show an increase during 2020. Recovery wells RW-4R, RW-10, RW-13, and RW-14 increased throughout 2020 but showed a decrease during the fourth quarter 2020 due to having total fluids recovery pumps installed.

3.4 Dissolved-phase Hydrocarbons in Groundwater

BTEX Analytical results, for monitoring conducted during 2019 and 2020, are included in Table 2. Results of analyses of BTEX during the first, second, third, and fourth quarterly monitoring events are shown on Figures 7 through 10, respectively. Concentrations of PAH compounds that exceed NMWQCC Human Health or Toxic Pollutant Standards are also included on Figure 10.

During the February and March 2020, first quarter monitoring events, analytical results indicated recovery wells RW-11 and RW-12 exhibited benzene concentrations above the Human Health Standard, ranging from 0.207 mg/L in RW-11 to 0.859 mg/L in RW-12. Benzene concentrations were detected in monitor wells MW-3R and MW-12 at concentrations below the Human Health Standard of 0.01 mg/L. Recovery wells RW-11 and RW-12 exhibited concentration of toluene, ethylbenzene and total xylenes below the Human Health Standard of 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively.

The second quarter sampling event was conducted on May 11 and 18, 2020. Analytical results for samples collected in second quarter indicated benzene concentrations above the Human Health Standard for recovery wells RW-11 and RW-12, ranging from 0.0609 mg/L in RW-11 to 0.987 mg/L in RW-12. Recovery wells RW-11 and RW-12 exhibited concentrations of toluene, ethylbenzene and total xylenes below the Human Health Standard of 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively.

During the September 15 and 16, 2020, quarterly monitoring event, analytical results indicated monitor well MW-12 and recovery wells RW-11 and RW-12 exhibited benzene concentrations above the Human Health Standard, ranging from 0.0135 mg/L in RW-11 (DUP-1) to 0.561 mg/L in RW-12. Benzene concentrations were detected in monitor well MW-3R at concentrations below the Human Health Standard of 0.01 mg/L. Monitor well MW-3R and recovery wells RW-11 and RW-12 exhibited concentration of toluene, ethylbenzene and total xylenes below the Human Health Standard of 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively.

The fourth quarterly sampling event was conducted on October 28 and 30, 2020. Analytical results indicated benzene concentrations above the NMWQCC Human Health Standard (0.01 mg/L) in recovery well RW-12 with a concentration of 0.562 mg/L. Benzene concentrations below the Human Health Standard of 0.01 mg/L were detected in Monitor wells MW-3R and MW-12 and recovery well

RW-11. Toluene concentrations below the Human Health Standard of 0.75 mg/L were detected in monitor well MW-3R and recovery well RW-11. Ethylbenzene concentrations were detected in recovery wells RW-11 and RW-12 at concentrations below the Human Health Standard of 0.75 mg/L. Total xylenes were detected in monitor well MW-4R and recovery wells RW-11 and RW-12; however, these concentrations were all below the Human Health Standard of 0.62 mg/L.

Maps showing analytical results during the first, second, third, and fourth quarterly monitoring events are in Figures 7, 8, 9, and 10, respectively. Charts of concentrations of dissolved benzene versus time for MW-3/3R, MW-12, RW-11 and RW-12 are provided in Appendix B. These charts indicate that benzene concentrations in monitor well MW-3/3R have declined to concentrations below the Human Health Standard of 0.1 mg/L and have remained stable. Benzene concentrations in recovery wells RW-11 and RW-12 are declining over time, while concentrations of benzene in monitor well MW-12 exhibited a large spike and decline. Certified laboratory reports are in Appendix C.

During the October groundwater monitoring event, samples for analyses of polycyclic aromatic hydrocarbons (PAHs) were collected from monitor wells MW-3R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, and MW-13 and recovery wells RW-11, and RW-12. These wells were sampled in accordance with the NMOCD's email correspondence to Plains, dated December 12, 2012, regarding PAHs which provided the following directive:

> *"Annual sampling of wells that have BTEX concentrations above the respective NMWQCC standard; wells where LNAPL has been removed and is no longer present; and continued sampling of each well for at least two consecutive years until each of the PAHs are at a concentration of 0.001 mg/L or less (for PAHs that do not have a NMWQCC standard) and at or below NMWQCC standard for PAHs that have a standard (if applicable)."*

Results indicated that concentrations of dibenzofuran in RW-12 exceeded the standard of 0.001 mg/L required by correspondence from NMOCD in 2012 referenced above. Monitor wells MW-3R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, and MW-13 and recovery wells RW-11, and RW-12 will need PAH sampling again in 2021. A cumulative summary of analytical results of PAH is in Table 3. Certified laboratory reports including results for PAH compounds are in Appendix C.

4. Corrective Action

Remediation at the Site consists of recovery of LNAPL, impacted groundwater, hand bailing, and soil vapor utilizing a trailer-mounted, automated system which operates total-fluid pumps in a number of wells. Recovered fluids are transferred to an above-ground storage tank (AST). The AST is periodically emptied, and the recovered fluids are disposed of at a licensed facility per directives of Plains. Fluid levels in the AST are gauged periodically to calculate total volumes of fluids recovered at the site. Total volume of LNAPL recovered was approximately 374.93 gallons during 2020 by operation of the remediation system and hand bailing. Approximately 6,571.74 gallons of groundwater were recovered by the remediation system and hand bailing. The total volume of liquids recovered by the remediation system at the Site during 2020 was approximately 6,946.67 gallons.

Wells RW-1, RW-2, RW-3, RW-5, RW-7R, and RW-9 were targeted for periodic abatement of LNAPL by hand from January to March 2020. In The total volume of LNAPL recovered in this

manner during the year was 12 gallons. The LNAPL recovery events by hand bailing were cancelled in April through the rest of the year due to COVID 19.

BTEX abatement by hand bailing was conducted on various wells periodically during the first quarter of 2020 to reduce concentrations of dissolved-phase contaminants. The total volume of groundwater recovered during BTEX abatement during the first quarter of 2020 was 16.3 gallons. The BTEX abatement events by hand bailing were cancelled in April through the rest of the year due to COVID 19.

A trailer mounted automated groundwater remediation system was operated at the Site for a total of 211 days during 2020. Four total-fluids pumps are deployed at the Site and are moved to different wells periodically. Pumps remain in the locations shown on Figures 3 through10 until the following quarterly monitoring event. Pumps were deployed at various times in recovery wells RW-3, RW-4R, RW-5, RW-6, RW-8, RW-10, RW-13 and RW-14. GHD personnel conducted operation and maintenance (O&M) activities twice weekly to maintain efficient soil vapor and fluid recovery. O&M activities included inspections of well-heads and flow lines, servicing total fluid pumps, adjustments of depths of total-fluids pumps, and gauging of recovered fluids in the storage tank, and general housekeeping tasks. Approximately 362.93 gallons of LNAPL and 5,133.34 gallons of groundwater were recovered by the automated trailer mounted remediation system during 2020. Samples of emissions from the remediation system were collected on March 18, June 23, October 6, and November 23, 2020 and used to calculate emission rates and total emissions from the remediation system. Using the designed effluent flow rate of 40 cubic feet per minute, the maximum rate of emissions during 2020 was 6.616 lb. TPH/hour. Total mass of emissions during 2020 was 8.2745 tons TPH.

An Enhanced Fluid Recovery (EFR) event was conducted on RW-7R (1/29/2020) in 2020. A vacuum truck and drop hose capable of sealing the wellhead and reaching beyond the static water table were used to remove LNAPL and impacted groundwater to reduce concentrations of dissolved BTEX. This event resulted in the recovery of 462 gallons of groundwater. The quarterly EFR events were cancelled in April through the rest of the year due to COVID 19. Fluids recovered by EFR are transported and disposed of at a licensed disposal facility as directed by Plains.

An approximate total of 374.93 gallons of LNAPL were recovered from the Site during 2020 by the remediation system and hand-bailing events. Approximately 7,033.74 gallons of groundwater were recovered from the Site during the year by the remediation system, hand-bailing, and EFR events. Approximately 28,888.93 gallons of LNAPL have been recovered from the start of the LNAPL abatement program in December 2005.

All fluids recovered from purging, remediation system operation, and BTEX and LNAPL abatement via hand bailing were transferred to the AST and later disposed of at a licensed disposal facility, as directed by Plains.

5. Summary of Findings

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

- On February 19, 2020, monitor wells MW-1, MW-2, MW-3, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11 and one recovery well RW-4 were plugged and abandoned. From February 20 through 25, monitor wells MW-3R, MW-6R, MW-7R, MW-8R, MW-9R, MW-10R, and MW-13 and recovery wells RW-4R, RW-13, and RW-14 were installed at the Site.
- Bottoms of the LNAPL columns were gauged at the bottoms of the casings in recovery wells RW-1, RW-2, RW-5, and RW-6; therefore, thicknesses of LNAPL in those wells could not be accurately measured.
- Flow of groundwater is toward the southeast and is consistent with previous quarterly monitoring events. The average gradient determined from the four groundwater monitoring events was approximately 0.0027 ft./f.
- Groundwater elevations declined an average of 1.35 feet across the site between October 22, 2019 and October 28, 2020.
- Dissolved benzene was detected at concentrations exceeding the NMWQCC Human Health Standard of 0.01 mg/L in monitor well MW-12 and recovery wells RW-11 and RW-12 during 2020. All other detections of BTEX constituents were below their respective NMWQCC Human Health Standards.
- Concentrations of dibenzofuran in RW-12 exceeded the standard of 0.001 mg/L required by correspondence from NMOCD in 2012. All other detections of PAH compounds in groundwater were below applicable regulatory standards.
- Wells RW-1, RW-2, RW-3, RW-5, RW-7R, and RW-9 were targeted for periodic abatement of LNAPL by hand from January to March 2020. In The total volume of LNAPL recovered in this manner during the year was 12 gallons. The LNAPL recovery events by hand bailing were cancelled in April through the rest of the year due to COVID 19.
- BTEX abatement by hand bailing was conducted on various wells periodically during the first quarter of 2020 to reduce concentrations of dissolved-phase contaminants. The total volume of groundwater recovered during BTEX abatement during the first quarter of 2020 was 16.3 gallons. The BTEX abatement events by hand bailing were cancelled in April through the rest of the year due to COVID 19.
- The trailer mounted automated remediation system operated for 211 days during 2020 and recovered 362.93 gallons of LNAPL and 5,133.34 gallons of groundwater. The maximum emission rate during 2020 was 6.616 lb. TPH/hour. Total gaseous hydrocarbon emissions for 2020 were 8.2745 tons.
- An Enhanced Fluid Recovery (EFR) event was conducted on RW-7R (1/29/2020) in 2020. This event resuted in the recovery of 462 gallons of groundwater. The quarterly EFR events were cancelled in April through the rest of the year due to COVID 19.
- Approximately 374.93 gallons of LNAPL were recovered by the trailer-mounted remediation system and by hand-bailing during 2020. Total volume of LNAPL recovered by all methods since the start of the LNAPL abatement program in December 2005 is 28,888.93 gallons.

6. Recommendations

Based upon the data and conclusions presented in this report, the following are recommended for 2020:

- Continue quarterly groundwater monitoring events with annual reporting to the NMOCD.
- Continue annual sampling for PAHs during the fourth quarterly event according to directives of NMOCD. This will include RW-11, RW-12 and all wells installed during 2020 which are not impacted by LNAPL.
- Continue remediation of the soil profile and groundwater by operating the trailer mounted soil vapor extraction system. Gaseous hydrocarbon emissions will be sampled quarterly to calculate emission rates and total emissions.

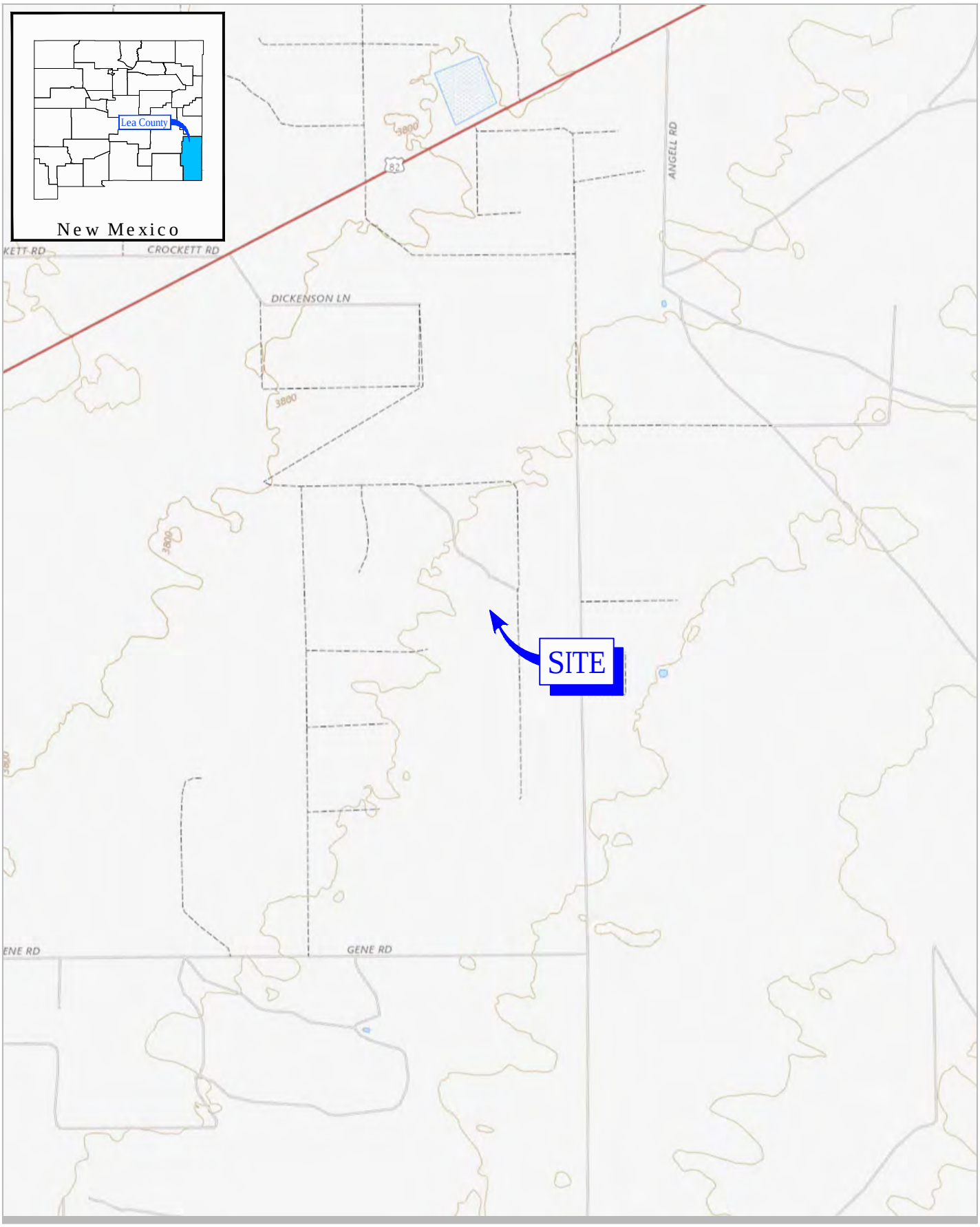
All of Which is Respectfully Submitted,

GHD

Rebecca Haskell
Senior Project Manager

Tom Larson
Midland Operations Manager

Figures



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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

Project No. 11209891
Date January 2021

SITE LOCATION MAP

FIGURE 1

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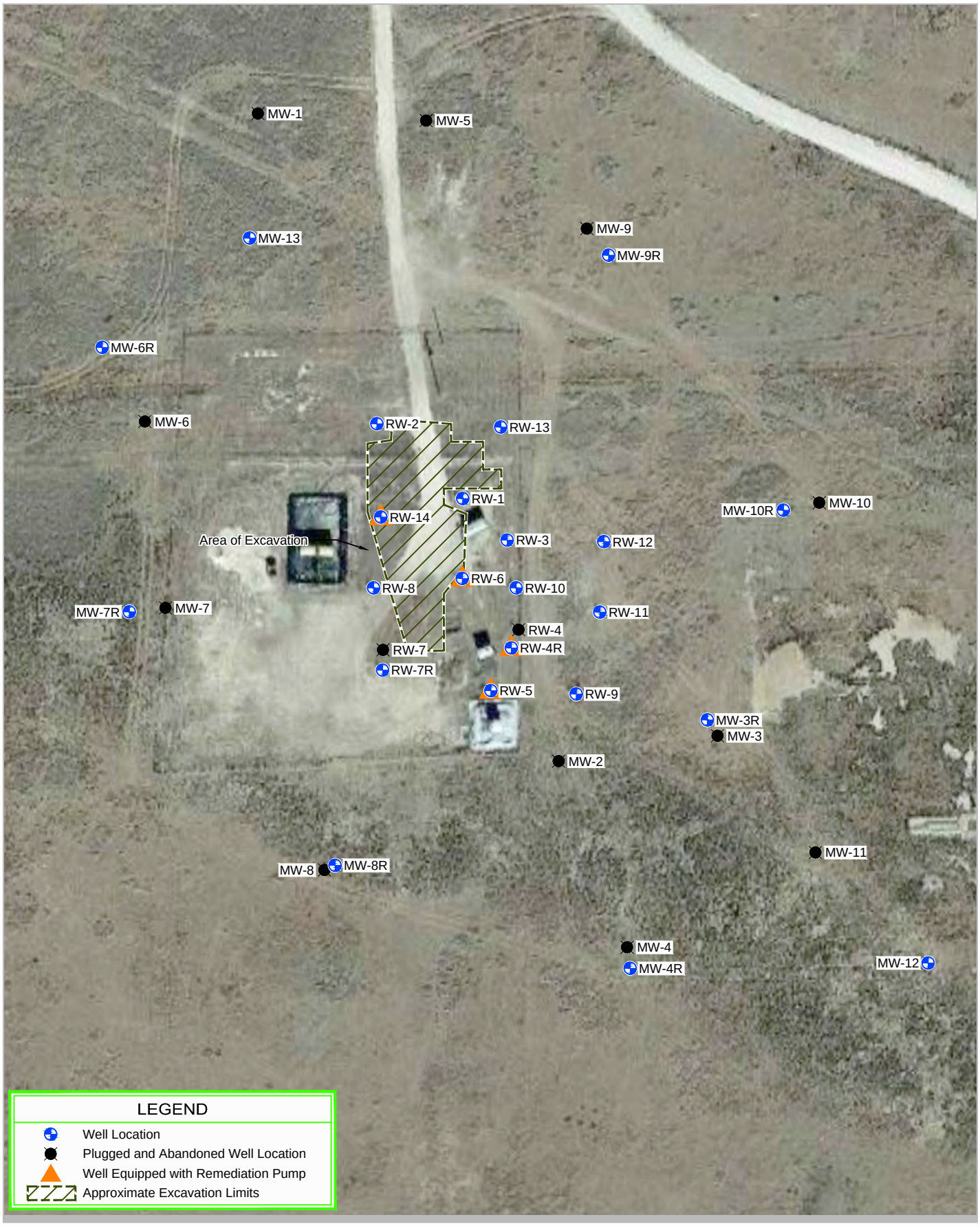

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NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

Project No. 11209891
Date January 2021

SITE DETAILS MAP

FIGURE 2

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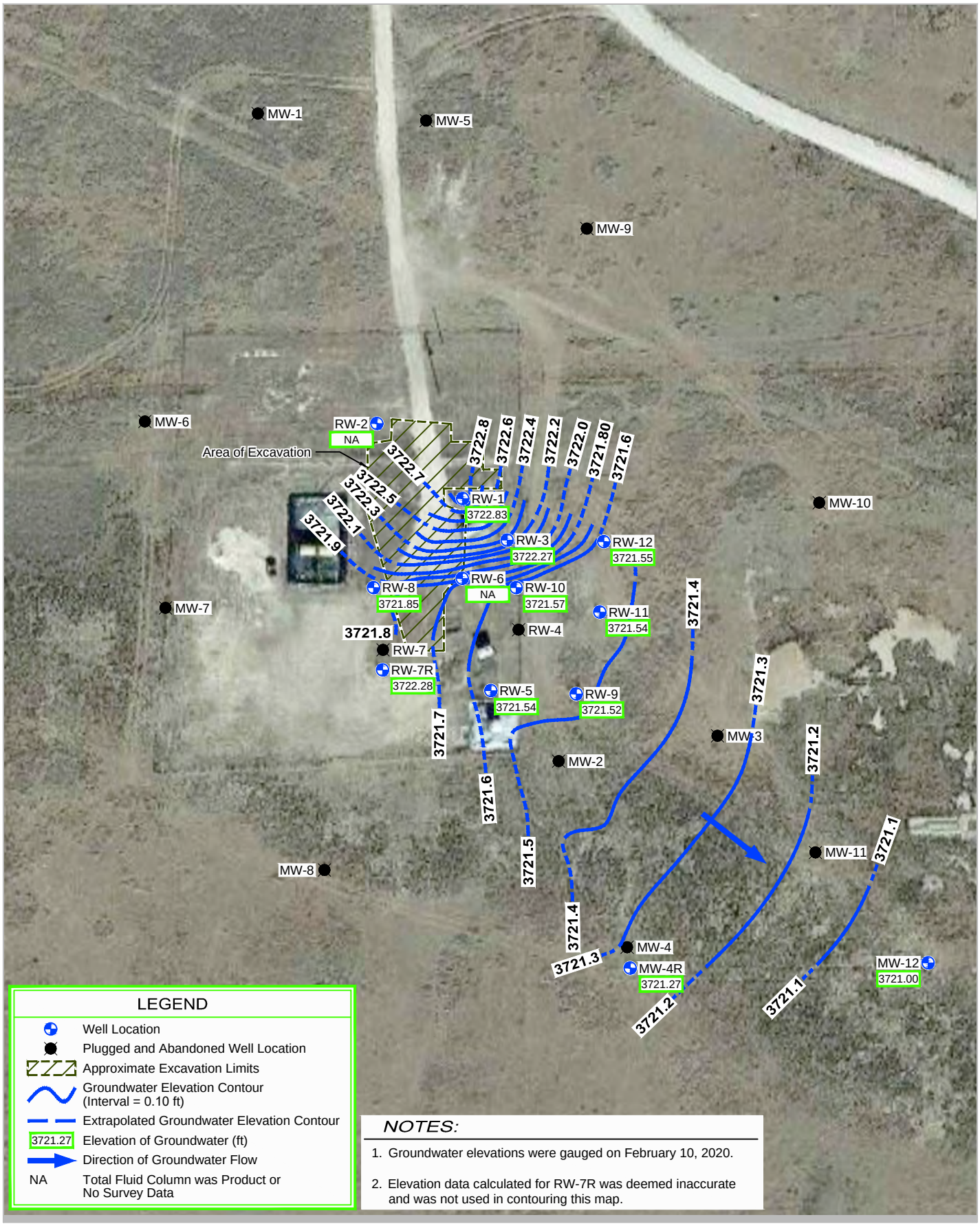

LEGEND

- Well Location
- Plugged and Abandoned Well Location
- Approximate Excavation Limits
- Groundwater Elevation Contour (Interval = 0.10 ft)
- Extrapolated Groundwater Elevation Contour
- 3721.27 — Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA — Total Fluid Column was Product or No Survey Data

NOTES:

1. Groundwater elevations were gauged on February 10, 2020.
2. Elevation data calculated for RW-7R was deemed inaccurate and was not used in contouring this map.

0 50 100 ft

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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

Project No. 11209891
Report No. 001
Date July 2020

GROUNDWATER GRADIENT MAP - FEBRUARY 10, 2020

FIGURE 3

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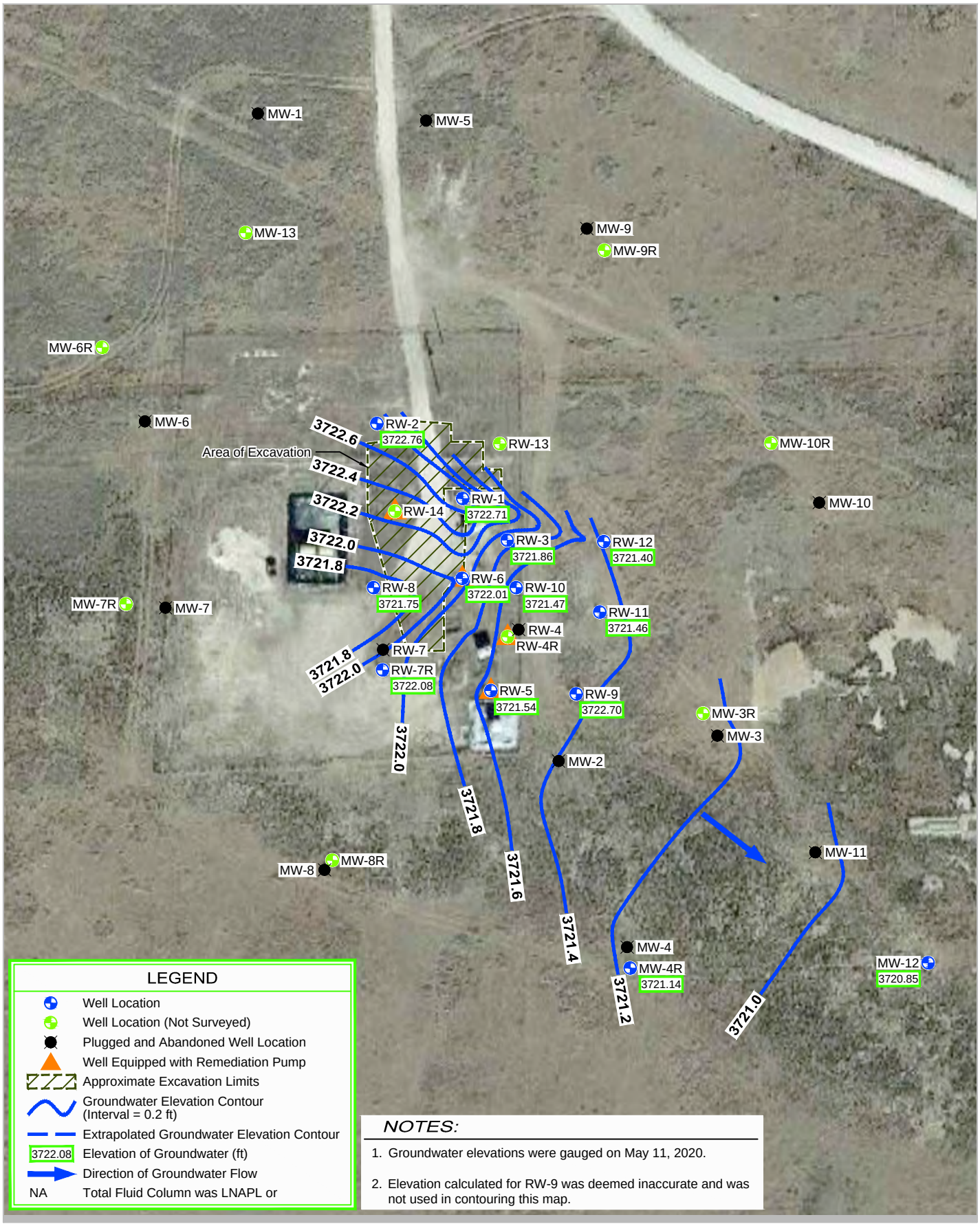

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Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

Project No. 11209891
Date February 2021

GROUNDWATER GRADIENT MAP - MAY 11, 2020

FIGURE 4

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL001.dwg
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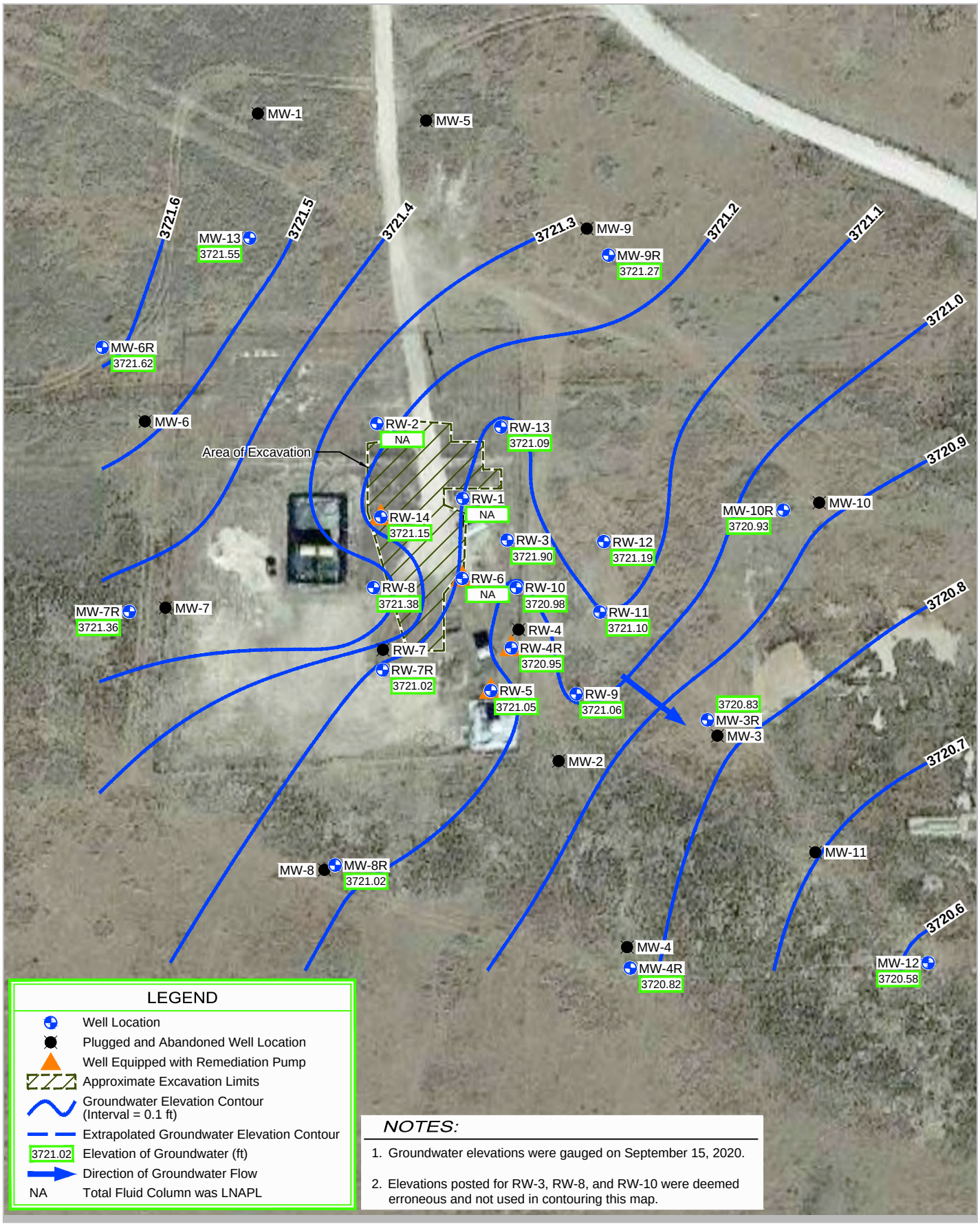

LEGEND

- Well Location
- Plugged and Abandoned Well Location
- Well Equipped with Remediation Pump
- Approximate Excavation Limits
- Groundwater Elevation Contour (Interval = 0.1 ft)
- Extrapolated Groundwater Elevation Contour
- 3721.02 Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA Total Fluid Column was LNAPL

NOTES:

1. Groundwater elevations were gauged on September 15, 2020.
2. Elevations posted for RW-3, RW-8, and RW-10 were deemed erroneous and not used in contouring this map.

0 50 100 ft

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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

Project No. 11209891
Date February 2021

GROUNDWATER GRADIENT MAP - SEPTEMBER 15, 2020

FIGURE 5

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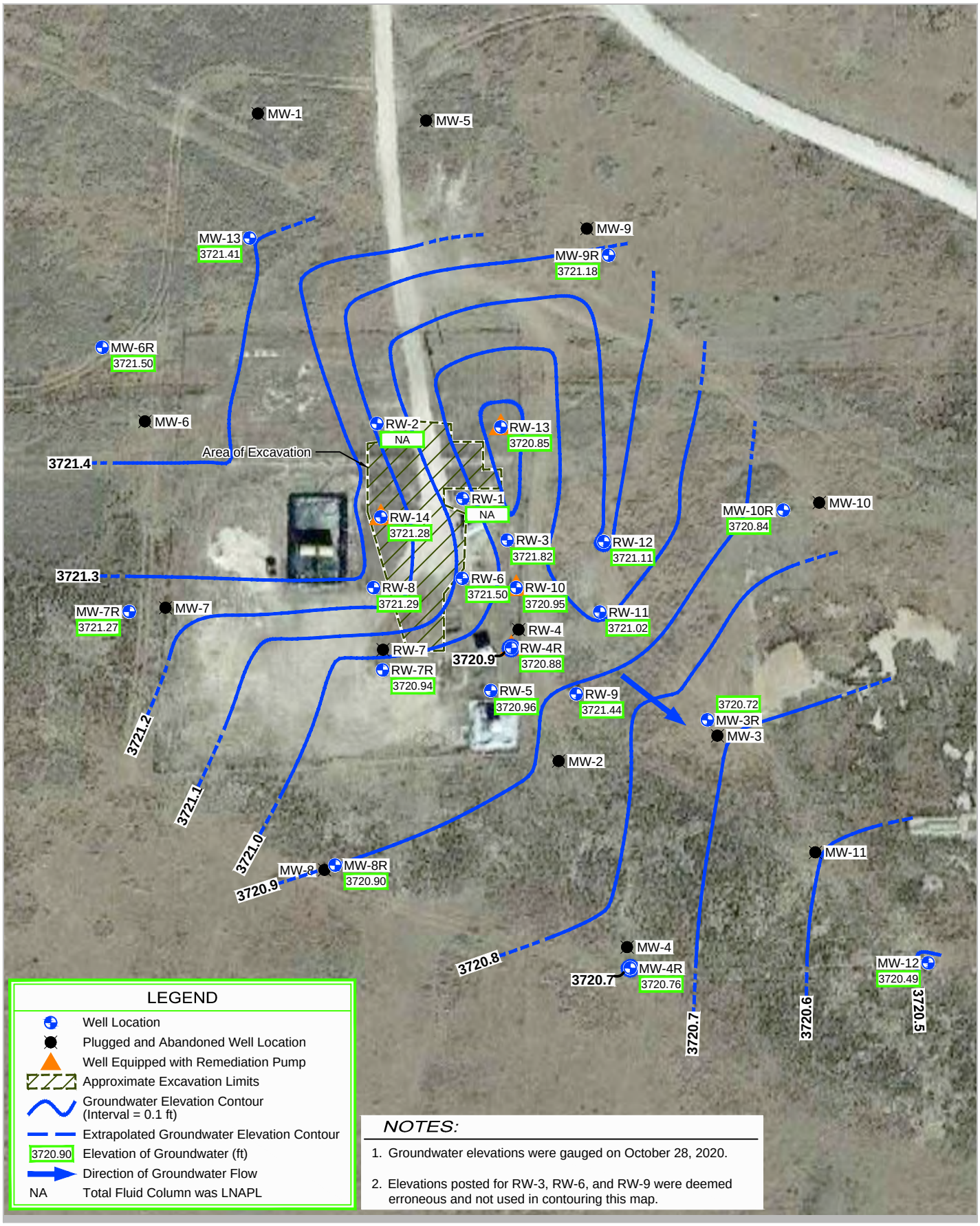


LEGEND

- Well Location
- Plugged and Abandoned Well Location
- Well Equipped with Remediation Pump
- Approximate Excavation Limits
- Groundwater Elevation Contour (Interval = 0.1 ft)
- Extrapolated Groundwater Elevation Contour
- 3720.90 Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA Total Fluid Column was LNAPL

NOTES:

1. Groundwater elevations were gauged on October 28, 2020.
2. Elevations posted for RW-3, RW-6, and RW-9 were deemed erroneous and not used in contouring this map.

0 50 100 ft

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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

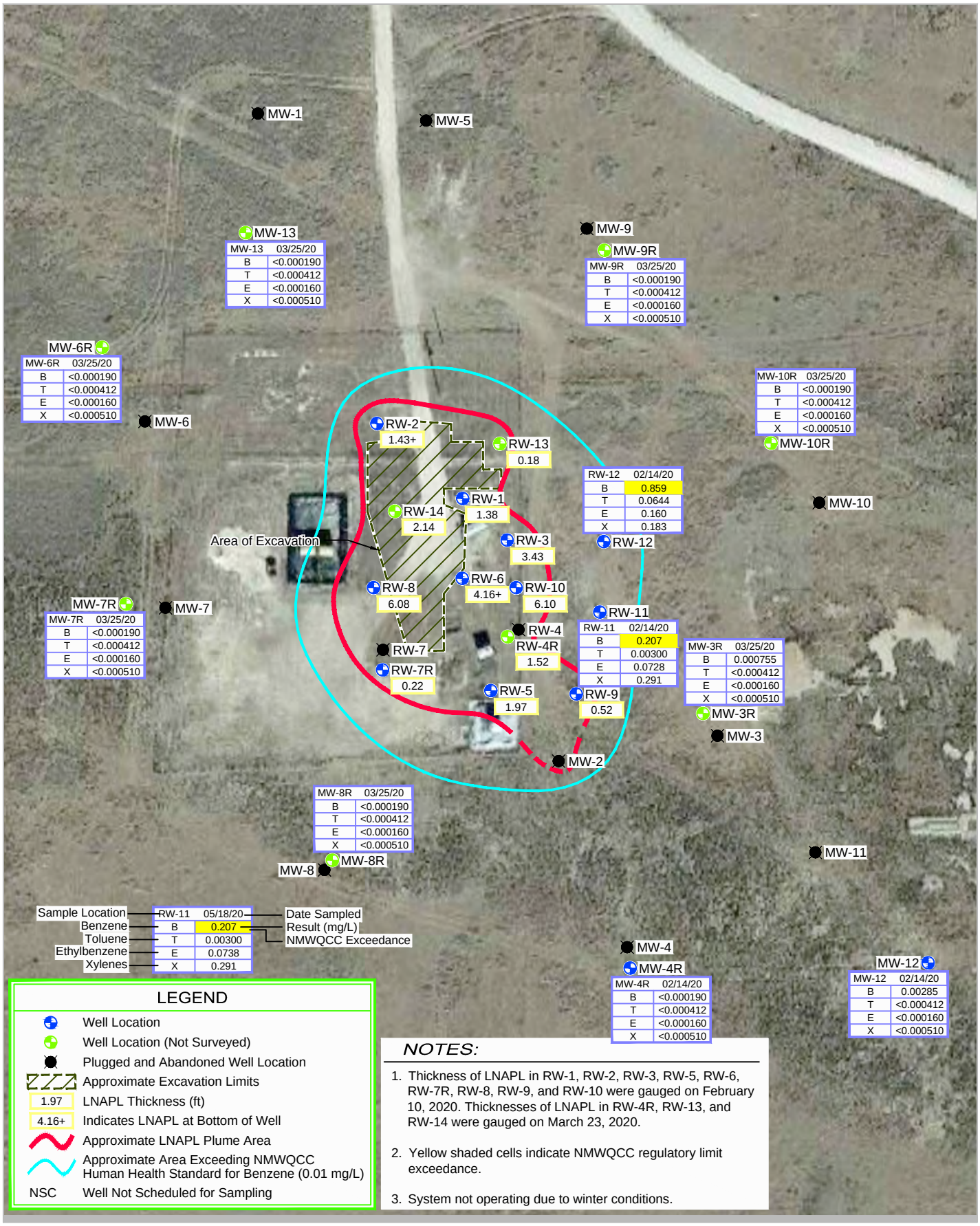
Project No. 11209891
Date January 2021

GROUNDWATER GRADIENT MAP - OCTOBER 28, 2020

FIGURE 6

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL002.dwg
Plot Date: 12 January 2021 9:10 AM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0242° North, 103.1668° West



LEGEND

- Well Location
- Well Location (Not Surveyed)
- Plugged and Abandoned Well Location
- Approximate Excavation Limits
- 1.97 — LNAPL Thickness (ft)
- 4.16+ — Indicates LNAPL at Bottom of Well
- Approximate LNAPL Plume Area
- Approximate Area Exceeding NMWQCC Human Health Standard for Benzene (0.01 mg/L)
- NSC — Well Not Scheduled for Sampling

NOTES:

1. Thickness of LNAPL in RW-1, RW-2, RW-3, RW-5, RW-6, RW-7R, RW-8, RW-9, and RW-10 were gauged on February 10, 2020. Thicknesses of LNAPL in RW-4R, RW-13, and RW-14 were gauged on March 23, 2020.
2. Yellow shaded cells indicate NMWQCC regulatory limit exceedance.
3. System not operating due to winter conditions.

0 50 100 ft

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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

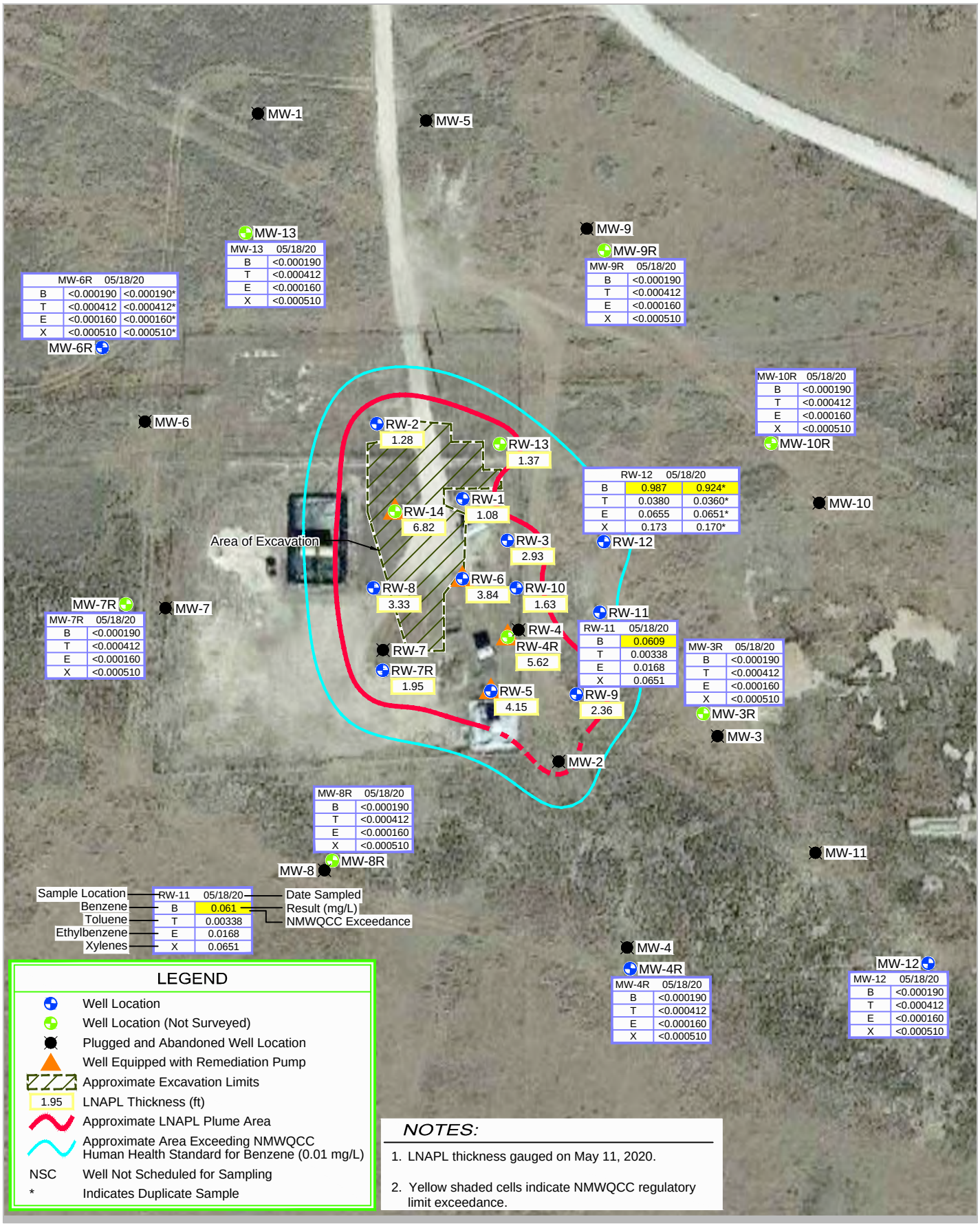
LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP
FEBRUARY 14, 2020 AND MARCH 25, 2020

Project No. 11209891
Date January 2021

FIGURE 7

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL001.dwg
Plot Date: 07 January 2021 12:38 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0242° North, 103.1668° West



PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

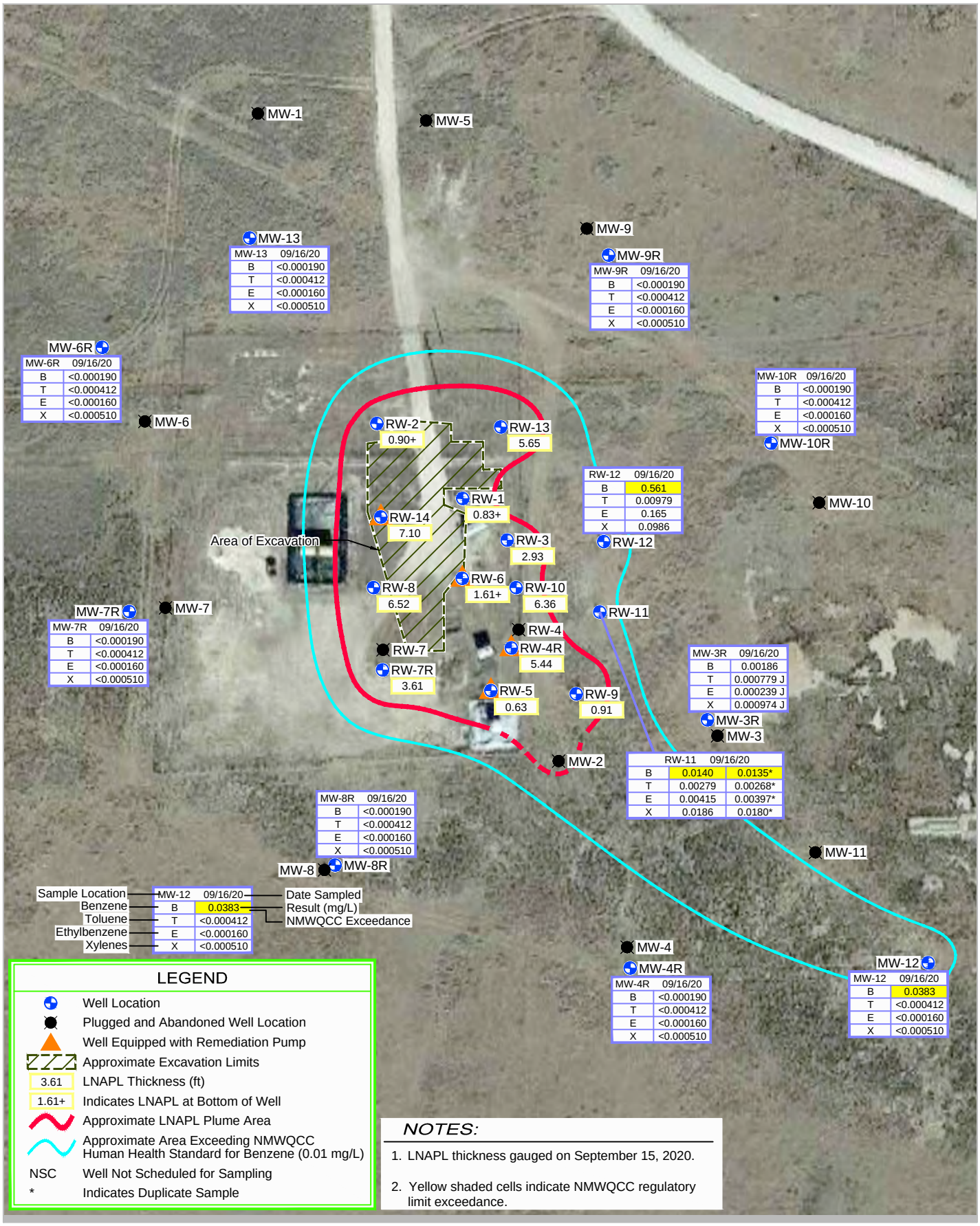
LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP
MAY 18, 2020

Project No. 11209891
Date January 2021

FIGURE 8

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL001.dwg
Plot Date: 07 January 2021 12:38 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0242° North, 103.1668° West



0 50 100 ft

N

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

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.2

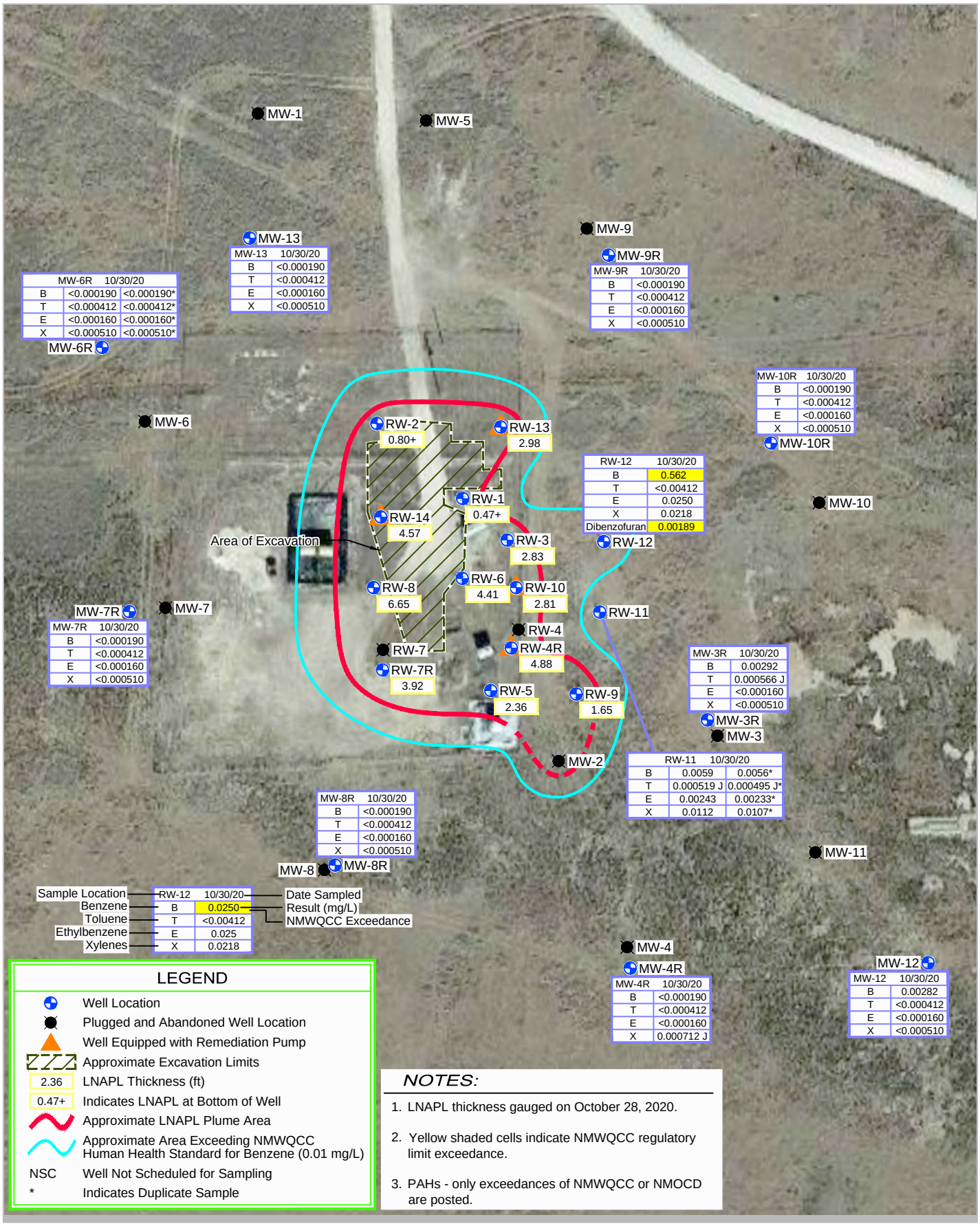
LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP
SEPTEMBER 16, 2020

Project No. 11209891
Date January 2021

FIGURE 9

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL002.dwg
Plot Date: 07 January 2021 12:14 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0242° North, 103.1668° West



Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209891-Darr 2\11209891(2020 GWR)\11209891(2020 GWR)GN-DL002.dwg
Plot Date: 12 January 2021 9:54 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0242° North, 103.1668° West

Tables

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-01	3790.48	2/25/19	67.48	-	0.00	3723.00	68.10				
MW-01	3790.48	5/20/19	67.67	-	0.00	3722.81	68.10				
MW-01	3790.48	7/23/19	-	-		Dry	68.01				
MW-01	3790.48	10/22/19	-	-		Dry					
MW-01	P&A	2/19/20									
MW-02	3790.80	2/25/19	-	-		Dry					
MW-02	3790.80	5/20/19	-	-		Dry					
MW-02	3790.80	7/23/19	-	-		Dry					
MW-02	3790.80	10/22/19	-	-		Dry					
MW-02	P&A	2/19/20	-	-							
MW-03	3790.29	2/25/19	67.93	-	0.00	3722.36					
MW-03	3790.29	5/18/19								3.0	
MW-03	3790.29	5/20/19	-	-		Dry					
MW-03	3790.29	7/23/19	-	-		Dry	68.10				
MW-03	3790.29	10/22/19	-	-		Dry					
MW-03	P&A	2/19/20									
MW-3R		2/20/20								20	
MW-3R	3789.51	2/26/20	68.19	-	0.00	3721.32	90.26	63-88 (2 in.)			
MW-3R	3789.51	3/23/20	68.34	-	0.00	3721.17	90.32	2 in.		11	
MW-3R	3789.51	5/1/20	68.41	-	0.00	3721.10					
MW-3R	3789.51	5/11/20	68.42	-	0.00	3721.09				10.5	
MW-3R	3789.51	6/18/20	68.48	-	0.00	3721.03					
MW-3R	3789.51	7/27/20	68.57	-	0.00	3720.94					
MW-3R	3789.51	8/27/20	68.66	-	0.00	3720.85					
MW-3R	3789.51	9/15/20	68.68	-	0.00	3720.83	90.32			10.6	
MW-3R	3789.51	10/28/20	68.79	-	0.00	3720.72				11.0	
MW-3R	3789.51	12/7/20	68.88	-	0.00	3720.63					
MW-04R	3789.17	2/25/19	67.19	-	0.00	3721.98					
MW-04R	3789.17	2/27/19	-	-	-	-			0.0	8.5	
MW-04R	3789.17	5/20/19	67.37	-	0.00	3721.80					
MW-04R	3789.17	5/21/19	-	-	-	-			0.0	9.5	
MW-04R	3789.17	7/23/19	67.60	-	0.00	3721.57			0.0	7.0	
MW-04R	3789.17	10/22/19	67.64	-	0.00	3721.53				8.0	
MW-04R	3789.17	2/10/20	67.90	-	0.00	3721.27	85.97	59.5-89.5 (2 in.)		9.0	
MW-04R	3789.17	5/1/20	68.09	-	0.00	3721.08					
MW-04R	3789.17	5/11/20	68.03	-	0.00	3721.14				9.0	
MW-04R	3789.17	6/18/20	68.11	-	0.00	3721.06					
MW-04R	3789.17	7/27/20	68.20	-	0.00	3720.97					
MW-04R	3789.17	8/27/20	68.28	-	0.00	3720.89					
MW-04R	3789.17	9/15/20	68.35	-	0.00	3720.82	85.97			8.6	
MW-04R	3789.17	10/28/20	68.41	-	0.00	3720.76				8.5	

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-04R	3789.17	12/7/20	68.52	-	0.00	3720.65				8.5	
MW-06	3790.75	2/25/19	67.99	-	0.00	3722.76					
MW-06	3790.75	5/20/19	-	-	-	Dry					
MW-06	3790.75	7/3/19	-	-	-	-			2.89		336
MW-06	3790.75	7/23/19	-	-	-	Dry	68.01				
MW-06	3790.75	10/22/19	-	-	-	Dry					
MW-06	P&A	2/19/20	-	-	-	-					
MW-6R		2/24/20								15	
MW-6R	3789.79	2/26/20	67.65	-	0.00	3722.14	90.05	58-88 (2 in.)			
MW-6R	3789.79	3/23/20	67.80	-	0.00	3721.99	90.05	2 in.		11	
MW-6R	3789.79	5/1/20	67.87	-	0.00	3721.92					
MW-6R	3789.79	5/11/20	67.86	-	0.00	3721.93				11	
MW-6R	3789.79	6/18/20	67.94	-	0.00	3721.85					
MW-6R	3789.79	7/27/20	68.04	-	0.00	3721.75					
MW-6R	3789.79	8/27/20	68.12	-	0.00	3721.67					
MW-6R	3789.79	9/15/20	68.17	-	0.00	3721.62	90.05			10.6	
MW-6R	3789.79	10/28/20	68.29	-	0.00	3721.50				10	
MW-6R	3789.79	12/7/20	68.35	-	0.00	3721.44					
MW-07	3791.09	2/25/19	68.49	-	0.00	3722.60					
MW-07	3791.09	5/20/19	68.70	-	0.00	3722.39					
MW-07	3791.09	7/23/19	68.85	-	0.00	3722.24					
MW-07	3791.09	10/22/19	68.99	-	0.00	3722.10					
MW-07	P&A	2/19/20									
MW-7R		2/21/20								15	
MW-7R	3790.51	2/26/20	68.61	-	0.00	3721.90	90.00	58-88 (2 in.)			
MW-7R	3790.51	3/23/20	68.79	-	0.00	3721.72	90.00			11	
MW-7R	3790.51	5/1/20	68.84	-	0.00	3721.67					
MW-7R	3790.51	5/11/20	68.81	-	0.00	3721.70				10.5	
MW-7R	3790.51	6/18/20	68.91	-	0.00	3721.60					
MW-7R	3790.51	7/27/20	69.00	-	0.00	3721.51					
MW-7R	3790.51	8/27/20	69.10	-	0.00	3721.41					
MW-7R	3790.51	9/15/20	69.15	-	0.00	3721.36	90.00			10	
MW-7R	3790.51	10/28/20	69.24	-	0.00	3721.27				11	
MW-7R	3790.51	12/7/20	69.32	-	0.00	3721.19					
MW-08	3790.04	2/25/19	67.70	-	0.00	3722.34					
MW-08	3790.04	5/20/19	67.90	-	0.00	3722.14					
MW-08	3790.04	7/23/19	68.00	-	0.00	3722.04					
MW-08	3790.04	10/22/19	68.16	-	0.00	3721.88				0.25	
MW-08	P&A	2/19/20									

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-8R		2/19/20								15	
MW-8R	3788.75	2/26/20	67.22	-	0.00	3721.53	90.64	63-88 (2 in.)			
MW-8R	3788.75	3/23/20	67.39	-	0.00	3721.36	90.54	2 in.		11	
MW-8R	3788.75	5/1/20	67.45	-	0.00	3721.30					
MW-8R	3788.75	5/11/20	67.41	-	0.00	3721.34				11.5	
MW-8R	3788.75	6/18/20	67.51	-	0.00	3721.24					
MW-8R	3788.75	7/27/20	67.61	-	0.00	3721.14					
MW-8R	3788.75	8/27/20	67.68	-	0.00	3721.07					
MW-8R	3788.75	9/15/20	67.73		0.00	3721.02	90.54			11	
MW-8R	3788.75	10/28/20	67.85	-	0.00	3720.90				11	
MW-8R	3788.75	12/7/20	67.92	-	0.00	3720.83					
MW-09	3789.79	2/25/19	67.16	-	0.00	3722.63					
MW-09	3789.79	5/20/19	67.32	-	0.00	3722.47					
MW-09	3789.79	7/23/19	67.45	-	0.00	3722.34					
MW-09	3789.79	10/22/19	67.61	-	0.00	3722.18				0	
MW-09	P&A	2/19/20									
MW-9R		2/20/20								15	
MW-9R	3789.02	2/26/20	67.23	-	0.00	3721.79	89.85	58-88 (2 in.)			
MW-9R	3789.02	3/23/20	67.39	-	0.00	3721.63	90.50	2 in.		11	
MW-9R	3789.02	5/1/20	67.46	-	0.00	3721.56					
MW-9R	3789.02	5/11/20	67.48	-	0.00	3721.54				11.5	
MW-9R	3789.02	6/18/20	67.54	-	0.00	3721.48					
MW-9R	3789.02	7/27/20	67.61	-	0.00	3721.41					
MW-9R	3789.02	8/27/20	67.71	-	0.00	3721.31					
MW-9R	3789.02	9/15/20	67.75	-	0.00	3721.27	90.50			11	
MW-9R	3789.02	10/28/20	67.84	-	0.00	3721.18				11	
MW-9R	3789.02	12/7/20	67.94	-	0.00	3721.08					
MW-10	3789.88	2/25/19	-	-		Dry					
MW-10	3789.88	5/20/19	-	-		Dry					
MW-10	3789.88	7/23/19	-	-		Dry					
MW-10	3789.88	10/22/19	-	-		Dry					
MW-10	P&A	2/19/20									
MW-10R	3788.90	2/26/20	67.47	-	0.00	3721.43	90.20	58-88 (2 in.)			
MW-10R	3788.90	3/23/20	67.62	-	0.00	3721.28	90.25	2 in.		11	
MW-10R	3788.90	5/1/20	67.70	-	0.00	3721.20					
MW-10R	3788.90	5/11/20	67.70	-	0.00	3721.20				11	
MW-10R	3788.90	6/18/20	67.77	-	0.00	3721.13					
MW-10R	3788.90	7/27/20	67.84	-	0.00	3721.06					
MW-10R	3788.90	8/27/20	67.94	-	0.00	3720.96					
MW-10R	3788.90	9/15/20	67.97	-	0.00	3720.93	90.25			10.9	
MW-10R	3788.90	10/28/20	68.06	-	0.00	3720.84				11.0	

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-10R	3788.90	12/7/20	68.17	-	0.00	3720.73					
MW-11	3790.65	2/25/19	68.78	-	0.00	3721.87					
MW-11	3790.65	2/27/19							0.0	0.0	
MW-11	3790.65	5/20/19	68.97	-	0.00	3721.68					
MW-11	3790.65	7/23/19	-	-		Dry	69.11				
MW-11	3790.65	10/22/19	-	-		Dry					
MW-11	P&A	2/19/20									
MW-12	3789.64	2/25/19	67.94	-	0.00	3721.70					
MW-12	3789.64	2/27/19	-	-	-	-			0.0	9.5	
MW-12	3789.64	5/20/19	68.12	-	0.00	3721.52					
MW-12	3789.64	5/21/19	-	-	-	-			0.0	9.0	
MW-12	3789.64	7/23/19	68.30	-	0.00	3721.34					
MW-12	3789.64	7/23/19	-	-	-	-			0.0	7.0	
MW-12	3789.64	10/22/19	68.40	-	0.00	3721.24				7.0	
MW-12	3789.64	2/10/20	68.64	-	0.00	3721.00	85.76	45-65 (2 in.)		9.0	
MW-12	3789.64	5/1/20	68.80	-	0.00	3720.84					
MW-12	3789.64	5/11/20	68.79	-	0.00	3720.85				8.5	
MW-12	3789.64	6/18/20	68.86	-	0.00	3720.78					
MW-12	3789.64	7/27/20	68.94	-	0.00	3720.70					
MW-12	3789.64	8/27/20	69.04	-	0.00	3720.60					
MW-12	3789.64	9/15/20	69.06	-	0.00	3720.58	85.76			8.0	
MW-12	3789.64	10/28/20	69.15	-	0.00	3720.49				8.0	
MW-12	3789.64	12/7/20	69.25	-	0.00	3720.39					
MW-13		2/20/20								15.0	
MW-13	3789.70	2/26/20	67.65	-		3722.05	90.00	58-88 (2 in.)			
MW-13	3789.70	3/23/20	67.80	-	0.00	3721.90	90.05	2 in.		11.0	
MW-13	3789.70	5/1/20	67.88	-	0.00	3721.82					
MW-13	3789.70	5/11/20	67.89	-	0.00	3721.81				11.0	
MW-13	3789.70	6/18/20	67.94	-	0.00	3721.76					
MW-13	3789.70	7/27/20	68.02	-	0.00	3721.68					
MW-13	3789.70	8/27/20	68.12	-	0.00	3721.58					
MW-13	3789.70	9/15/20	68.15	-	0.00	3721.55	90.05			10.6	
MW-13	3789.70	10/28/20	68.29	-	0.00	3721.41				11.0	
MW-13	3789.70	12/7/20	68.45	-	0.00	3721.25					
RW-01	3789.85	1/29/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	2/25/19	68.04	66.09	1.95	3723.39					
RW-01	3789.85	4/24/19	68.11	66.17	1.94	3723.31			1.0	1.0	
RW-01	3789.85	5/20/19	68.04	66.24	1.80	3723.27					
RW-01	3789.85	6/11/19	-	-	-	-			2.0	0.0	
RW-01	3789.85	6/18/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	6/25/19	-	-	-	-			1.3	0.0	

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-01	3789.85	7/3/19	-	-	-	-			3.0	0.0	
RW-01	3789.85	7/8/19	-	-	-	-			1.2	0.0	
RW-01	3789.85	7/23/19	-	66.42	1.66+	LNAPL at TD	68.01				
RW-01	3789.85	8/7/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	8/13/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	8/20/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	8/28/19	-	-	-	-			0.5	0.0	
RW-01	3789.85	9/3/19	-	-	-	-			1.5	0.0	
RW-01	3789.85	9/10/19	-	-	-	-			1.0	0.0	
RW-01	3789.85	10/2/19	-	-	-	-			1.5		
RW-01	3789.85	10/22/19	-	66.55	1.37+	LNAPL at TD					
RW-01	3789.85	11/20/19	-	-	-	-			0.8		
RW-01	3789.85	12/10/19	-	-	-	-			1.0		
RW-01	3789.85	12/24/19	-	-	-	-			0.5	0.5	
RW-01	3789.85	1/8/20	-	-	-	-			1.0	0.0	
RW-01	3789.85	1/14/20	-	-	-	-			1.5	0.2	
RW-01	3789.85	2/10/20	68.14	66.76	1.38	3722.83	68.18	40-65 (4 in.)			
RW-01	3789.85	2/25/20	-	-	-	-			0.1	0.2	
RW-01	3789.85	5/1/20	-	66.92	1.13+	LNAPL at TD	68.05				
RW-01	3789.85	5/11/20	68.01	66.93	1.08	3722.71					
RW-01	3789.85	6/18/20	68.04	67.02	1.02	3722.64					
RW-01	3789.85	7/27/20	-	67.06	0.79+	LNAPL at TD	67.85				
RW-01	3789.85	8/27/20	-	67.13	0.73+	LNAPL at TD	67.86				
RW-01	3789.85	9/15/20	-	67.21	0.83+	LNAPL at TD	68.04				
RW-01	3789.85	10/28/20	-	67.29	0.47+	LNAPL at TD	67.76				
RW-01	3789.85	12/7/20	-	67.36	0.53+	LNAPL at TD	67.89				
RW-02	3790.24	1/29/19	-	-	-	-			1.4	0.0	
RW-02	3790.24	2/25/19	68.51	66.46	2.05	3723.39	68.30				
RW-02	3790.24	4/24/19	68.54	66.48	2.06	3723.37					
RW-02	3790.24	5/20/19	-	66.53	1.77+	LNAPL at TD	68.30				
RW-02	3790.24	6/11/19	-	-	-	-			2.0	0.0	
RW-02	3790.24	6/18/19	-	-	-	-			1.0	0.0	
RW-02	3790.24	6/25/19	-	-	-	-			1.2	0.0	
RW-02	3790.24	7/3/19	-	-	-	-			2.0	0.0	
RW-02	3790.24	7/8/19	-	-	-	-			0.7	0.0	
RW-02	3790.24	7/23/19	-	66.73	1.57+	LNAPL at TD	68.40				
RW-02	3790.24	8/7/19	-	-	-	-			0.5	0.0	
RW-02	3790.24	8/20/19	-	-	-	-			1.0	0.0	
RW-02	3790.24	8/13/19	-	-	-	-			1.0	0.0	
RW-02	3790.24	8/28/19	-	-	-	-			1.1	0.0	
RW-02	3790.24	9/3/19	-	-	-	-			1.0	0.0	
RW-02	3790.24	9/10/19	-	-	-	-			0.5	0.0	
RW-02	3790.24	10/2/19	-	-	-	-			0.9	0.1	
RW-02	3790.24	10/22/19	-	66.89	1.65+	LNAPL at TD					

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-02	3790.24	11/20/19	-	-	-	-			1.0		
RW-02	3790.24	12/10/19	-	-	-	-			1.5		
RW-02	3790.24	12/23/19	-	-	-	-			0.5	0.5	
RW-02	3790.24	1/8/20	-	-	-	-			1.0	0.0	
RW-02	3790.24	1/14/20	-	-	-	-			0.0	1.0	
RW-02	3790.24	2/10/20	-	67.09	1.43+	LNAPL at TD	68.52				
RW-02	3790.24	5/1/20	-	67.21	1.19+	LNAPL at TD	68.40				
RW-02	3790.24	5/11/20	68.52	67.24	1.28	3722.76					
RW-02	3790.24	6/18/20	68.40	67.33	1.07	3722.71					
RW-02	3790.24	7/27/20	-	67.37	0.83+	LNAPL at TD	68.20				
RW-02	3790.24	8/27/20	-	67.42	0.82+	LNAPL at TD	68.24				
RW-02	3790.24	9/15/20	-	67.52	0.90+	LNAPL at TD	68.42				
RW-02	3790.24	10/28/20	-	67.61	0.80+	LNAPL at TD	68.41				
RW-02	3790.24	12/7/20	68.43	67.69	0.74	3722.41					
RW-03	3790.24	1/29/19	-	-	-	-			6.0	0.0	
RW-03	3790.24	2/6/19	-	-	-	-			0.5		315.0
RW-03	3790.24	2/25/19	70.76	66.63	4.13	3722.83					
RW-03	3790.24	5/20/19	70.49	67.29	3.20	3722.34					
RW-03	3790.24	7/16/19	71.34	67.77	3.57	3721.79					
RW-03	3790.24	7/23/19	71.33	67.52	3.81	3722.00					
RW-03	3790.24	10/22/19	69.80	67.20	2.60	3722.55					
RW-03	3790.24	2/10/20	70.75	67.32	3.43	3722.27	71.30	48-68 (4 in.)			
RW-03	3790.24	5/1/20	Pump	-	-	-					
RW-03	3790.24	5/11/20	70.75	67.82	2.93	3721.86					
RW-03	3790.24	6/18/20	70.73	67.61	3.12	3722.04					
RW-03	3790.24	7/27/20	70.71	67.65	3.06	3722.01					
RW-03	3790.24	8/27/20	70.71	67.70	3.01	3721.97					
RW-03	3790.24	9/15/20	70.71	67.78	2.93	3721.90					
RW-03	3790.24	10/28/20	70.71	67.88	2.83	3721.82					
RW-03	3790.24	12/7/20	70.71	67.88	2.83	3721.82					
RW-04	3790.20	2/25/19	-	-		Dry	Dry				
RW-04	3790.20	5/20/19	67.10	66.98	0.12	3723.20					
RW-04	3790.20	7/23/19	-	-		Dry	66.95				
RW-04	3790.20	10/22/19	-	-		Dry					
RW-04	P&A	2/19/20									
RW-4R		2/24/20								45	
RW-4R	3789.19	2/26/20	67.69	67.60	0.09	3721.57	90.11	58-88 (4 in.)			
RW-4R	3789.19	3/23/20	69.05	67.53	1.52	3721.37	90.05	4 in.			
RW-4R	3789.19	5/1/20	72.04	66.96	5.08	3721.26					
RW-4R	3789.19	5/11/20	72.51	66.89	5.62	3721.23					
RW-4R	3789.19	6/18/20	Pump	-	-	-					
RW-4R	3789.19	7/27/20	Pump	-	-	-					

Table 1

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Plains Pipeline LP
Darr Angell No. 2
Lea County, 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 Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-4R	3789.19	8/27/20	Pump	-	-	-					
RW-4R	3789.19	9/15/20	72.65	67.21	5.44	3720.95					
RW-4R	3789.19	10/28/20	72.26	67.38	4.88	3720.88					
RW-4R	3789.19	12/7/20	Pump	-	-	-					
RW-05	3789.81	2/25/19	71.22	66.84	4.38	3722.14					
RW-05	3789.81	5/20/19	68.38	67.58	0.80	3722.08					
RW-05	3789.81	6/10/19	68.85	67.50	1.35	3722.05					
RW-05	3789.81	7/16/19	68.17	67.79	0.38	3721.95					
RW-05	3789.81	7/23/19	68.37	67.80	0.57	3721.90					
RW-05	3789.81	8/20/19	-	-	-	-			2.0	1.0	
RW-05	3789.81	8/13/19	-	-	-	-			0.5	0.5	
RW-05	3789.81	8/28/19	-	-	-	-			1.5	1.0	
RW-05	3789.81	9/3/19	-	-	-	-			0.4	2.3	
RW-05	3789.81	9/10/19	-	-	-	-			0.2	0.8	
RW-05	3789.81	10/2/19	-	-	-	-			0.8	0.8	
RW-05	3789.81	10/22/19	69.26	67.78	1.48	3721.75					
RW-05	3789.81	11/13/19	70.14	67.68	2.46	3721.66					504
RW-05	3789.81	11/20/19	-	-	-	-			0.2	0.8	
RW-05	3789.81	12/10/19	-	-	-	-			0.4	2.6	
RW-05	3789.81	12/23/19	-	-	-	-			0.6	0.6	
RW-05	3789.81	1/8/20	-	-	-	-			1.5	0.5	
RW-05	3789.81	1/14/20	-	-	-	-			0.0	1.0	
RW-05	3789.81	2/10/20	69.87	67.90	1.97	3721.54	71.70				
RW-05	3789.81	2/25/20	-	-	-	-			2.4	0.1	
RW-05	3789.81	5/1/20	-	67.48	4.16+	LNAPL at TD	71.64				
RW-05	3789.81	5/11/20	71.63	67.48	4.15	3721.54					
RW-05	3789.81	6/18/20	Pump	-	-	-					
RW-05	3789.81	7/27/20	Pump	-	-	-					
RW-05	3789.81	8/27/20	Pump	-	-	-					
RW-05	3789.81	9/15/20	69.27	68.64	0.63	3721.05					
RW-05	3789.81	10/28/20	70.76	68.40	2.36	3720.96					
RW-05	3789.81	12/7/20	-	68.18	3.47+	LNAPL at TD	71.65				
RW-06	3789.56	1/29/19	-	-	-	-			3.5	0.0	
RW-06	3789.56	2/25/19	-	66.20	2.66+	LNAPL at TD	68.86				
RW-06	3789.56	5/8/19	-	-	-	-			1.9		546.0
RW-06	3789.56	5/20/19	-	66.80	2.06+	LNAPL at TD	68.86				
RW-06	3789.56	6/11/19	-	-	-	-			4.0	0.0	
RW-06	3789.56	6/18/19	-	-	-	-			2.0	0.0	
RW-06	3789.56	6/25/19	-	-	-	-			2.2	0.0	
RW-06	3789.56	7/8/19	-	-	-	-			1.0	0.0	
RW-06	3789.56	7/16/19	-	66.77	1.95+	LNAPL at TD	68.86				
RW-06	3789.56	7/23/19	-	66.35	2.51+	LNAPL at TD	68.70				
RW-06	3789.56	8/7/19	-	-	-	-					336.0

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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 Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-06	3789.56	8/13/19	-	-	-	-			1.2	0.0	
RW-06	3789.56	8/20/19	-	-	-	-			2.5	0.0	
RW-06	3789.56	8/28/19	-	-	-	-			2.5	0.0	
RW-06	3789.56	9/3/19	-	-	-	-			4.0	0.0	
RW-06	3789.56	9/10/19	-	-	-	-			3.0	0.0	
RW-06	3789.56	10/2/19	-	-	-	-			1.3	0.0	
RW-06	3789.56	10/22/19	-	66.49	2.37+	LNAPL at TD					
RW-06	3789.56	12/10/19	-	-	-	-			0.7	2.3	
RW-06	3789.56	1/14/20	-	-	-	-					
RW-06	3789.56	2/10/20	-	66.63	4.16+	LNAPL at TD	70.79	49-69 (4 in.)			
RW-06	3789.56	5/1/20	-	-	-	-					
RW-06	3789.56	5/11/20	70.66	66.82	3.84	3722.01					
RW-06	3789.56	6/18/20	Pump	-	-	-					
RW-06	3789.56	7/27/20	Pump	-	-	-					
RW-06	3789.56	8/27/20	Pump	-	-	-					
RW-06	3789.56	9/15/20	-	67.13	1.61+	LNAPL at TD	68.74				
RW-06	3789.56	10/28/20	71.63	67.22	4.41	3721.50					
RW-06	3789.56	12/7/20	-	67.29	3.75+	LNAPL at TD	71.04				
RW-07R	3790.58	2/25/19	68.39	67.50	0.89	3722.91					
RW-07R	3790.58	4/24/19	68.05	67.68	0.37	3722.83					
RW-07R	3790.58	5/20/19	68.62	67.61	1.01	3722.78					
RW-07R	3790.58	6/11/19	-	-	-	-			1.0	1.0	
RW-07R	3790.58	6/18/19	-	-	-	-			0.5	1.5	
RW-07R	3790.58	6/25/19	-	-	-	-			0.3	1.0	
RW-07R	3790.58	7/3/19	-	-	-	-			0.6	0.7	
RW-07R	3790.58	7/8/19	-	-	-	-			0.5	2.0	
RW-07R	3790.58	7/16/19	68.44	67.80	0.64	3722.66					
RW-07R	3790.58	7/23/19	68.60	67.80	0.80	3722.63					
RW-07R	3790.58	8/7/19	-	-	-	-			0.5	0.5	
RW-07R	3790.58	8/20/19	-	-	-	-			0.4	0.9	
RW-07R	3790.58	8/28/19	-	-	-	-			0.3	1.2	
RW-07R	3790.58	9/3/19	-	-	-	-			0.1	1.4	
RW-07R	3790.58	9/10/19	-	-	-	-			0.3	0.2	
RW-07R	3790.58	10/2/19	-	-	-	-			0.5	0.4	
RW-07R	3790.58	10/22/19	69.12	67.90	1.22	3722.45					
RW-07R	3790.58	11/20/19	-	-	-	-			1.3	1.7	
RW-07R	3790.58	12/24/19	-	-	-	-			0.4	0.6	
RW-07R	3790.58	1/14/20	-	-	-	-			1.0	0.2	
RW-07R	3790.58	1/29/20	69.10	68.15	0.95	3722.25					462
RW-07R	3790.58	2/10/20	68.48	68.26	0.22	3722.28	81.23	59.5-79.5 (4 in.)			
RW-07R	3790.58	2/25/20	-	-	-	-			0.2	0.1	
RW-07R	3790.58	5/1/20	69.93	68.18	1.75	3722.07					
RW-07R	3790.58	5/11/20	70.08	68.13	1.95	3722.08					
RW-07R	3790.58	6/18/20	70.69	68.18	2.51	3721.92					

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Plains Pipeline LP
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Lea County, 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 Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-07R	3790.58	7/27/20	71.20	68.14	3.06	3721.86					
RW-07R	3790.58	8/27/20	71.51	68.10	3.41	3721.83					
RW-07R	3789.90	9/15/20	71.80	68.19	3.61	3721.02					
RW-07R	3789.90	10/28/20	72.14	68.22	3.92	3720.94					
RW-07R	3789.90	12/7/20	72.35	68.23	4.12	3720.89					
RW-08	3790.01	2/25/19	72.29	66.64	5.65	3722.30					
RW-08	3790.01	5/20/19	72.75	66.41	6.34	3722.40					
RW-08	3790.01	7/16/19	72.31	66.68	5.63	3722.26					
RW-08	3790.01	7/23/19	72.67	66.65	6.02	3722.22					
RW-08	3790.01	8/13/19	-	-	-	-			0.7	0.4	
RW-08	3790.01	10/22/19	71.54	67.04	4.50	3722.12					
RW-08	3790.01	2/10/20	73.08	67.00	6.08	3721.85	82.82	59.5-79.5 (4 in.)			
RW-08	3790.01	5/1/20	Pump	-	-	-					
RW-08	3790.01	5/11/20	70.96	67.63	3.33	3721.75					
RW-08	3790.01	6/18/20	72.93	67.34	5.59	3721.61					
RW-08	3790.01	7/27/20	73.53	67.28	6.25	3721.54					
RW-08	3790.01	8/27/20	73.74	67.31	6.43	3721.48					
RW-08	3790.01	9/15/20	73.91	67.39	6.52	3721.38					
RW-08	3790.01	10/28/20	74.11	67.46	6.65	3721.29					
RW-08	3790.01	12/7/20	74.24	67.52	6.72	3721.21					
RW-09	3790.00	2/6/19	-	-	-	-			0.5		315.0
RW-09	3790.00	2/25/19	68.67	67.55	1.12	3722.24					
RW-09	3790.00	4/24/19	70.79	66.04	4.75	3723.06					
RW-09	3790.00	5/20/19	69.18	67.69	1.49	3722.03					
RW-09	3790.00	7/23/19	69.36	67.82	1.54	3721.89					
RW-09	3790.00	10/22/19	68.51	68.16	0.35	3721.77					
RW-09	3790.00	1/8/20	-	-	-	-			1.5	0	
RW-09	3790.00	2/10/20	68.90	68.38	0.52	3721.52	82.85	59.5-79.5 (4 in.)			
RW-09	3790.00	2/25/20	-	-	-	-			1.8	1	
RW-09	3790.00	5/1/20	69.20	68.52	0.68	3721.35					
RW-09	3790.00	5/11/20	69.21	66.85	2.36	3722.70					
RW-09	3790.00	6/18/20	69.39	68.56	0.83	3721.28					
RW-09	3790.00	7/27/20	69.50	68.64	0.86	3721.20					
RW-09	3790.00	8/27/20	69.58	68.68	0.90	3721.15					
RW-09	3790.00	9/15/20	69.68	68.77	0.91	3721.06					
RW-09	3790.00	10/28/20	69.90	68.25	1.65	3721.44					
RW-09	3790.00	2/7/20	70.04	68.90	1.14	3720.88					
RW-10	3789.69	1/29/19	-	-	-	-			8.0	1.0	
RW-10	3789.69	2/25/19	72.53	66.27	6.26	3722.23					
RW-10	3789.69	5/20/19	70.30	68.90	1.40	3720.52					
RW-10	3789.69	7/16/19	69.55	67.43	2.12	3721.86					
RW-10	3789.69	7/23/19	70.63	67.23	3.40	3721.81					

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-10	3789.69	10/22/19	69.89	67.60	2.29	3721.65					
RW-10	3789.69	2/10/20	73.06	66.96	6.10	3721.57	82.60	59.5-79.5 (4 in.)			
RW-10	3789.69	5/1/20	Pump	-	-	-					
RW-10	3789.69	5/11/20	69.54	67.91	1.63	3721.47					
RW-10	3789.69	6/18/20	73.30	67.22	6.08	3721.31					
RW-10	3789.69	7/27/20	73.53	67.25	6.28	3721.25					
RW-10	3789.69	8/27/20	73.61	67.30	6.31	3721.19					
RW-10	3789.56	9/15/20	73.73	67.37	6.36	3720.98					
RW-10	3789.56	10/28/20	70.89	68.08	2.81	3720.95					
RW-10	3789.56	12/7/20	Pump	-	-	-					
RW-11	3789.77	2/25/19	67.54	67.50	0.04	3722.26					
RW-11	3789.77	4/30/19	67.63	67.61	0.02	3722.16			0.1	2.9	
RW-11	3789.77	5/20/19	67.62	-	0.00	3722.15					
RW-11	3789.77	5/21/19	-	-	-	-			0.0	36.0	
RW-11	3789.77	6/11/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	6/25/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	7/23/19	67.83	-	0.00	3721.94					
RW-11	3789.77	7/23/19	-	-	-	-			0.0	28.0	
RW-11	3789.77	8/13/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	8/20/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	8/28/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	9/3/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	9/10/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	9/24/19	-	-	-	-			0.0	3.0	
RW-11	3789.77	10/2/19	-	-	-	-				3.0	
RW-11	3789.77	10/22/19	67.97	-	0.00	3721.80				28.0	
RW-11	3789.77	11/20/19	-	-	-	-				3.0	
RW-11	3789.77	12/10/19	-	-	-	-				3.0	
RW-11	3789.77	12/24/19	-	-	-	-				3.0	
RW-11	3789.77	1/14/20	-	-	-	-			0.0	3.0	
RW-11	3789.77	2/10/20	68.23	-	0.00	3721.54	85.40	(4 in.)	0.0	34.0	
RW-11	3789.77	3/17/20	-	-	-	-				3.0	
RW-11	3789.77	5/1/20	68.38	-	0.00	3721.39					
RW-11	3789.77	5/11/20	68.31	-	0.00	3721.46				34.0	
RW-11	3789.77	7/27/20	68.53	-	0.00	3721.24					
RW-11	3789.77	8/27/20	68.62	-	0.00	3721.15					
RW-11	3789.77	9/15/20	68.67	-	0.00	3721.10	85.40			33.0	
RW-11	3789.77	10/28/20	68.75	-	0.00	3721.02				35.0	
RW-11	3789.77	12/7/20	68.85	-	0.00	3720.92					
RW-12	3789.78	2/25/19	67.46	-	0.00	3722.32					
RW-12	3789.78	2/27/19	-	-	-	-			0.0	33.0	
RW-12	3789.78	4/30/19	67.54	67.53	0.01	3722.25					
RW-12	3789.78	4/30/19	-	-	-	-			0.0	3.0	

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-12	3789.78	5/20/19	67.69	67.68	0.01	3722.10					
RW-12	3789.78	6/11/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	6/25/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	7/23/19	67.74	-	0.00	3722.04			0.0	26.0	
RW-12	3789.78	8/13/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	8/20/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	8/28/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	9/3/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	9/10/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	9/24/19	-	-	-	-			0.0	3.0	
RW-12	3789.78	10/2/19	-	-	-	-				3.0	
RW-12	3789.78	10/22/19	67.91	-	0.00	3721.87				24.0	
RW-12	3789.78	11/20/19	-	-	-	-				3.0	
RW-12	3789.78	12/10/19	-	-	-	-				3.0	
RW-12	3789.78	12/24/19	-	-	-	-				3.0	
RW-12	3789.78	1/14/20	-	-	-	-			0.0	3.0	
RW-12	3789.78	2/10/20	68.23	-	0.00	3721.55	82.82	(4 in.)		29.0	
RW-12	3789.78	3/17/20	-	-	-	-				3.0	
RW-12	3789.78	5/1/20	68.30	-	0.00	3721.48					
RW-12	3789.78	5/11/20	68.38	-	0.00	3721.40				28.0	
RW-12	3789.78	6/18/20	68.57	-	0.00	3721.21					
RW-12	3789.78	7/27/20	68.45	-	0.00	3721.33					
RW-12	3789.78	8/27/20	68.55	-	0.00	3721.23					
RW-12	3789.78	9/15/20	68.59	-	0.00	3721.19	82.82			22.0	
RW-12	3789.78	10/28/20	68.67	-	0.00	3721.11				28.0	
RW-12	3789.78	12/7/20	68.76	-	0.00	3721.02					
RW-13		2/25/20	-	-	-	-				45.0	
RW-13	3788.61	2/26/20	66.87	-	0.00	3721.74	90.13	58-88 (4 in.)			
RW-13	3788.61	3/23/20	67.23	67.05	0.18	3721.53	90.19	4 in.			
RW-13	3788.61	5/1/20	67.98	66.95	1.03	3721.46					
RW-13	3788.61	5/11/20	68.28	66.91	1.37	3721.44					
RW-13	3788.61	6/18/20	69.53	66.75	2.78	3721.33					
RW-13	3788.61	7/27/20	70.76	66.56	4.20	3721.25					
RW-13	3788.61	8/27/20	71.55	66.46	5.09	3721.18					
RW-13	3788.61	9/15/20	72.10	66.45	5.65	3721.09					
RW-13	3788.61	10/28/20	70.17	67.19	2.98	3720.85					
RW-13	3788.61	12/7/20	Pump	-	-	-					

Table 1

Summary of Fluid Level Measurements and Fluids Removed 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	LNAPL Thickness (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Depth of Well (fbtoc)	Well Screen Interval (ft bgs) Well Diameter (in)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-14		2/25/20	-	-	-	-				45.0	
RW-14	3788.59	2/26/20	66.68	66.60	0.08	3721.97	90.10	58-88 (4 in.)			
RW-14	3788.59	3/23/20	68.59	66.45	2.14	3721.73	90.32	4 in.			
RW-14	3788.59	5/1/20	72.00	65.75	6.25	3721.65					
RW-14	3788.59	5/11/20	72.47	65.65	6.82	3721.64					
RW-14	3788.59	6/18/20	Pump	-	-	-					
RW-14	3788.59	7/27/20	Pump	-	-	-					
RW-14	3788.59	8/27/20	Pump	-	-	-					
RW-14	3788.59	9/15/20	73.19	66.09	7.10	3721.15					
RW-14	3788.59	10/28/20	71.01	66.44	4.57	3721.28					
RW-14	3788.59	12/7/20	Pump	-	-	-					

Notes:
1. famsl - feet above mean sea level
2. fbtoc - feet below top of casing
3. LNAPL - Light non-aqueous phase liquid.
4. fbgs -feet below ground surface.
5. MW-11 was not surveyed until 6/28/17. The surveyed elevation has been entered for prior monitoring events only of for the purpose of determining the relateive trend in elevation of the groundwater gradient.
6. + indicates LNAPL thickness is at the bottom of the well (feet).

Table 2

Summary of Analytical Results of BTEX in Ground Water 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

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-1	2/19/20	P&A			
MW-3	2/19/20	P&A			
MW-3R	3/25/20	**0.000755**	<0.000412	<0.000160	<0.000510
MW-3R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-3R	9/16/20	**0.00186**	**0.000779 J**	**0.000239 J**	**0.000974 J**
MW-3R	10/30/20	**0.00292**	**0.000566 J**	<0.000160	<0.000510
MW-4R	2/27/19	**0.000190 J**	<0.000412	**0.000404 J**	**0.000721 B J**
MW-4R	5/21/19	**0.000265 J**	**0.000544 J**	**0.000225 J**	**0.000846 B J**
MW-4R	7/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-4R	10/22/19	**0.000301 J**	**0.000535 J**	**0.000380 J**	**0.00172**
MW-4R	2/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-4R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-4R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-4R	10/30/20	<0.000190	<0.000412	<0.000160	**0.000712 J**
MW-6	2/19/20	P&A			
MW-6R	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6R (DUP-1)	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6R	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6R (DUP-1)	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	10/22/19	Insufficant Water			
MW-7	2/19/20	P&A			
MW-7R	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-7R	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-8	10/22/19	**0.000773**	**0.000654 J**	**0.000780**	**0.00239**
MW-8	2/19/20	P&A			
MW-8R	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-8R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-8R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-8R	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9	10/22/19	**0.000344 J**	**0.000609 J**	**0.000289 J**	**0.00114 J**

Table 2

Summary of Analytical Results of BTEX in Ground Water 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

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-9	2/19/20	P&A			
MW-9R	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-9R	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-10	2/19/20	P&A			
MW-10R	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-10R	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-10R	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-10R	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11	2/27/19	<0.000190	<0.000412	<0.000160	**0.00278 B**
MW-11	5/21/19	<0.000190	<0.000412	**0.000175 B J**	<0.000510
MW-11	7/23/19		Dry		
MW-11	10/22/19		Dry		
MW-11	2/19/20	P&A			
MW-12	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-12 DUP-1	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	5/21/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	7/23/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	10/22/19	**0.000319 J**	**0.000583 J**	**0.000321 J**	**0.00138 J**
MW-12	2/14/20	**0.00285**	<0.000412	<0.000160	<0.000510
MW-12	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	9/16/20	**0.0383**	<0.000412	<0.000160	<0.000510
MW-12	10/30/20	**0.00282**	<0.000412	<0.000160	<0.000510
MW-13	3/25/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-13	5/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-13	9/16/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-13	10/30/20	<0.000190	<0.000412	<0.000160	<0.000510
RW-11	2/25/19	LNAPL Present			
RW-11	5/21/19	**0.142**	**0.00981**	**0.0276**	**0.104**
RW-11 (DUP-1)	5/21/19	**0.149**	**0.00822**	**0.0248**	**0.0847**
RW-11	7/23/19	**0.115**	**0.00220**	**0.0212**	**0.0620**
RW-11	10/22/19	**0.167**	**0.00805**	**0.0287**	**0.0937**
RW-11	2/14/20	**0.207**	**0.00300**	**0.0728**	**0.291**
RW-11	5/18/20	**0.0609**	**0.00338**	**0.0168**	**0.0651**
RW-11	9/16/20	**0.0140**	**0.00279**	**0.00415**	**0.0186**
RW-11 (DUP-1)	9/16/20	**0.0135**	**0.00268**	**0.00397**	**0.0180**

Table 2

Summary of Analytical Results of BTEX in Ground Water 2019 and 2020
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

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
RW-11	10/30/20	**0.0059**	**0.000519 J**	**0.00243**	**0.0112**
RW-11 (DUP-2)	10/30/20	**0.0056**	**0.000495 J**	**0.00233**	**0.0107**
RW-12	2/27/19	**1.16**	**0.140**	**0.212**	**0.315**
RW-12	5/20/19	LNAPL Present			
RW-12	7/23/19	**1.58**	**0.159**	**0.0746**	**0.492**
RW-12(DUP-1)	7/23/19	**1.13**	**0.230**	**0.219**	**0.437**
RW-12	10/22/19	**1.12**	**0.186**	**0.353**	**0.389**
RW-12 (Dup1)	10/22/19	**0.950**	**0.112**	**0.186**	**0.256**
RW-12	2/14/20	**0.859**	**0.064**	**0.160**	**0.183**
RW-12	5/18/20	**0.987**	**0.0380**	**0.0655**	**0.173**
RW-12 (DUP-2)	5/18/20	**0.924**	**0.0360**	**0.0651**	**0.170**
RW-12	9/16/20	**0.561**	**0.00979**	**0.165**	**0.0986**
RW-12	10/30/20	**0.562**	<0.00412	**0.0250**	**0.0218**
Trip Blank	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
Trip Blank	2/14/20	<0.000190	<0.000412	<0.000160	<0.000510

Notes:

1. Shaded cells indicate exceedance of LNAPL New Mexico Oil Conservation Division Regulatory Limit.
2. Bold indicates detection.
3. BTEX analyses by EPA Method 8021B.
4. Samples collected during March 2011 were collected by Nova Training and Environmental.

Table 3

Summary of Analytical Results for PAH Compounds in Groundwater
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

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 Human Health 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	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-1	11/30/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-1	2/19/20	P&A																		
MW-2	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.130**	<0.000183	**0.178**	<0.000183	**0.704**	**0.230**	<0.000183	**1.68**	**2.31**
MW-2	11/30/09	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	**0.524**	<0.0229	**0.755**	<0.0229	**2.89**	**1.04**	<0.0229	**7.25**	**9.78**
MW-2	2/19/20	P&A																		
MW-3	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0014**	<0.000183	**0.00126**	<0.000183	**0.0426**	**0.00103**	<0.000183	**0.0260**	<0.000183
MW-3	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00145**	<0.000184	**0.00155**	<0.000184	**0.0238**	**0.00134**	<0.000184	**0.0306**	<0.000184
MW-3	11/24/10	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00133**	<0.000184	**0.00132**	<0.000184	<0.000184	**0.00112**	<0.000184	0.0234	<0.000184
MW-3	12/1/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00163**	<0.000183	**0.00140**	<0.000183	**0.00893**	**0.00135**	<0.000183	**0.0191**	<0.000183
MW-3	12/6/12	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	**0.00080**	<0.000191	**0.00066**	<0.000191	<0.000191	**0.00063**	<0.000191	**0.0016**	<0.000191
MW-3	12/3/15	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199
MW-3	11/3/16	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	<0.000229	**0.000321**	<0.000229	<0.000229	<0.000229	**0.00184**	<0.000229	**0.000370**	**0.00230**	<0.000229
MW-3	2/19/20	P&A																		
MW-3R	10/30/20	<0.0000190	**0.0000230 J**	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	**0.000308**	<0.0000270	<0.0000169	<0.0000158	<0.0000917	**0.0000352 J**	<0.0000169	**0.000284**	<0.0000674
MW-4	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00118**	<0.000184	<0.000184	<0.000184	<0.000184
MW-4	10/7/14	P&A																		
MW-4R	11/19/14	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198
MW-4R	12/3/15	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-6	12/1/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
MW-6	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
MW-6	2/19/20	P&A																		
MW-6R	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-6R (DUP-1)	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-7	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-7	11/30/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-7	2/19/20	P&A																		
MW-7R	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-8	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-8	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
MW-8	2/19/20	P&A																		
MW-8R	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-9	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-9	11/30/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-9	2/19/20	P&A																		
MW-9R	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-10	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-10	11/30/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-10	2/19/20	P&A																		
MW-10R	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
MW-11	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-11	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
MW-11	12/3/15	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	**0.000336**	<0.000199
MW-11	11/3/16	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	**0.000303**	<0.000185	<0.000185
MW-11	12/1/17	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000368	<0.000184	<0.000184	---	---

GHD 11209891

Table 3

Summary of Analytical Results for PAH Compounds in Groundwater
Plains Pipeline LP
Darr Angell No. 2
Lea County, Mexico
NMOCD AP-007

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 Human Health 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-11	2/19/20	P&A																		
MW-12	12/1/17	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000369	<0.000185	<0.000185	---	---
MW-12	11/27/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000254 J**	<0.0000157	<0.00000850	<0.0000148	**0.0000280 J**	<0.00000820	<0.0000117	<0.00000821	<0.00000902
MW-12	10/22/19	<0.000014	<0.00001	<0.000012	<0.0000041	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	0.0000235 B J	<0.0000157	0.0000217 J	<0.0000148	0.000197 J	0.0000231 J	<0.0000117	0.000123 B J	0.000101 B J
MW-13	10/30/20	<0.0000190	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	<0.0000191	<0.0000270	<0.0000169	<0.0000158	<0.0000917	<0.0000169	<0.0000169	<0.0000687	<0.0000674
RW-1	12/1/08	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	**0.208**	<0.00459	**0.274**	<0.00459	**1.01**	**0.346**	<0.00459	**2.42**	**3.20**
RW-1	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.00842**	<0.000922	**0.0117**	<0.000922	**0.102**	**0.0134**	<0.000922	**0.118**	**0.154**
LNAPL																				
RW-2	12/1/08	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	**0.0350**	<0.00184	**0.0507**	<0.00184	**0.224**	**0.0569**	<0.00184	**0.410**	**0.526**
RW-2	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0178**	<0.000922	**0.0254**	<0.000922	**0.157**	**0.0322**	<0.000922	**0.266**	**0.347**
LNAPL																				
RW-3	12/2/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0309**	<0.000922	**0.0447**	<0.000922	**0.203**	**0.0523**	<0.000922	**0.362**	**0.480**
RW-3	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0101**	<0.000922	**0.0114**	<0.000922	**0.113**	**0.0132**	<0.000922	**0.128**	**0.164**
LNAPL																				
RW-4	12/2/08	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.122**	<0.00183	**0.173**	<0.00183	**0.637**	**0.216**	<0.00183	**1.58**	**2.14**
RW-4	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0184**	<0.000922	**0.0263**	<0.000922	**0.169**	**0.0337**	<0.000922	**0.276**	**0.367**
RW-4	2/19/20	P&A																		
RW-5	12/1/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0654**	<0.000922	**0.0938**	<0.000922	**0.283**	**0.117**	<0.000922	**0.835**	**0.910**
RW-5	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0155**	<0.000922	**0.0201**	<0.000922	**0.147**	**0.0284**	<0.000922	**0.217**	**0.295**
LNAPL																				
RW-6	12/2/08	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.138**	<0.00183	**0.188**	<0.00183	**0.693**	**0.244**	<0.00183	**1.77**	**2.44**
RW-6	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0253**	<0.000922	**0.0352**	<0.000922	**0.20**	**0.0492**	<0.000922	**0.36**	**0.481**
LNAPL																				
RW-11	12/1/17	**0.000374**	**0.00104**	**0.000469**	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.000806**	<0.000183	**0.00281**	**0.000196**	**0.00301**	<0.000183	**0.0270**	**0.00629**	0.000216	**---**	**---**
RW-11	11/12/19	**0.00112**	<0.0000100	<0.00000700	**0.000318**	**0.0000296**	**0.0000490**	**0.0000273**	<0.0000255	**0.000157**	<0.00000454	**0.00159**	**0.000153**	**0.00192**	<0.00000739	**0.00242**	**0.00325**	**0.000402**	**0.00511**	**0.00334**
RW-11	10/30/20	**0.000285**	<0.0000190	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	**0.000144**	<0.0000160	**0.000825**	**0.0000377 J**	**0.000425**	<0.0000158	**0.00102**	**0.000384**	**0.000131**	**0.00181**	**0.00151**
RW-11 (DUP-2)	10/30/20	**0.000250**	**0.0000964**	<0.0000171	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	**0.000145**	<0.0000160	**0.000780**	<0.0000270	**0.000418**	<0.0000158	**0.000970**	**0.000359**	**0.000110**	**0.00174**	**0.00136**
RW-12	12/1/17	<0.000183	**0.000248**	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.000857**	<0.000183	**0.000194**	<0.000183	**0.0183**	**0.000635**	<0.000183	**---**	**---**
RW-12	11/27/18	**0.0000715**	**0.000281**	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00169**	<0.0000157	**0.000354**	<0.0000148	**0.0248**	**0.00118**	<0.0000117	**0.0185**	**0.0217**
RW-12	11/12/19	**0.0000849**	<0.00001	<0.00000700	<0.0000083	<0.0000158	<0.00000212	<0.00000227	<0.0000255	<0.0000144	<0.00000454	**0.00125**	<0.0000165	**0.000319**	<0.00000739	**0.0104**	**0.000714**	<0.0000155	**0.00597**	**0.00660**
RW-12	10/30/20	**0.0001230**	**0.0002120**	**0.000114**	<0.0000203	<0.0000184	<0.0000168	<0.0000184	<0.0000202	<0.0000179	<0.0000160	**0.00189**	<0.0000270	**0.0000461 J**	<0.0000158	**0.00687**	**0.000495**	<0.0000169	**0.00358**	**0.00384**

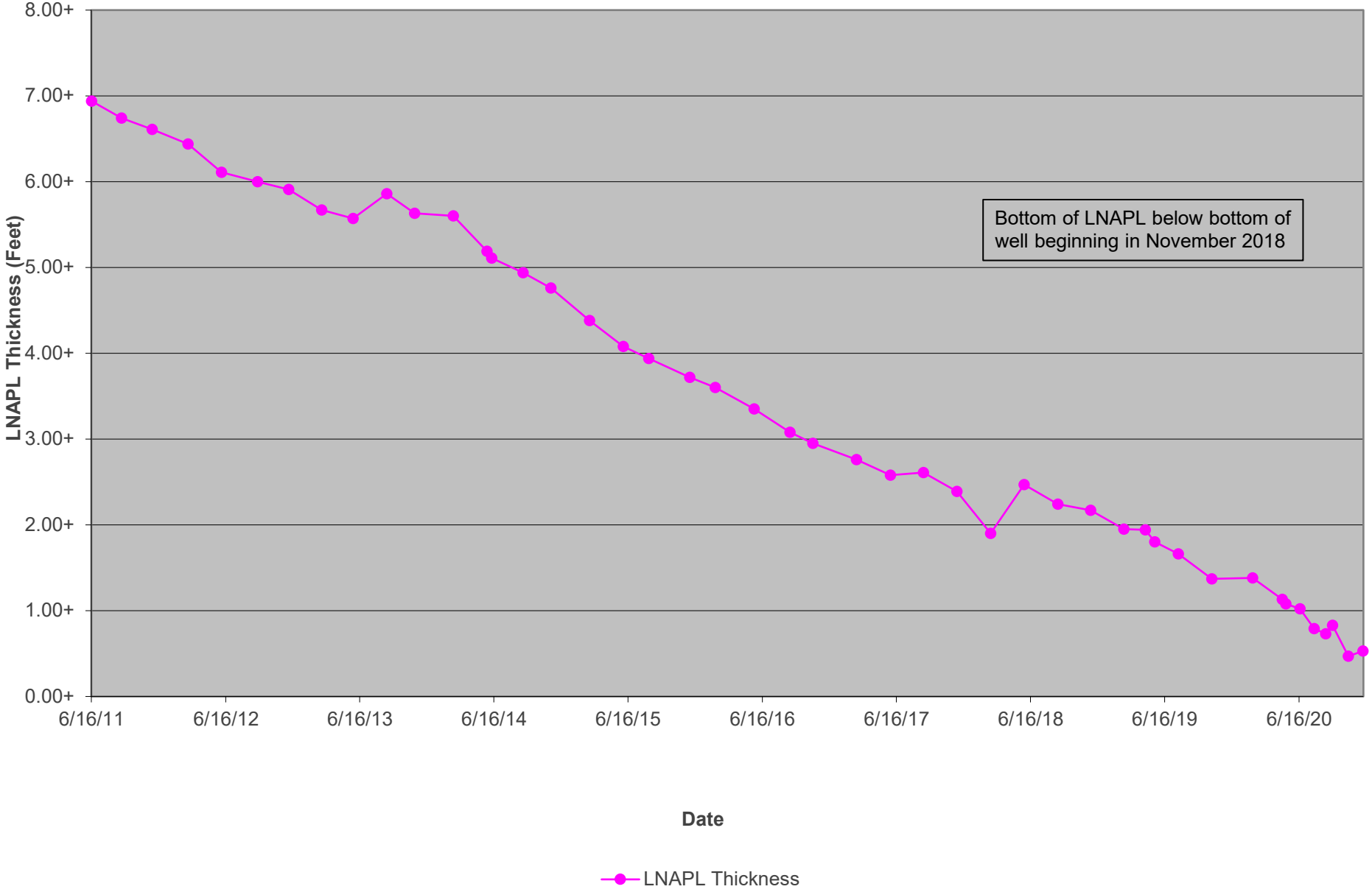
Notes:

1. Shaded cells indicate New Mexico Water Quality Control Commission Limit (NMWQCC) exceedance.
2. PAH analyses by EPA Method 8270.
3. Bold indicates detection.
4. Nova Training and Environmental collected samples dated between 2008 and 2010.
5. --- indicates 1- & 2-Methylnaphthalene was not originally analyzed for and not enough fluid was available to extract for re-run.

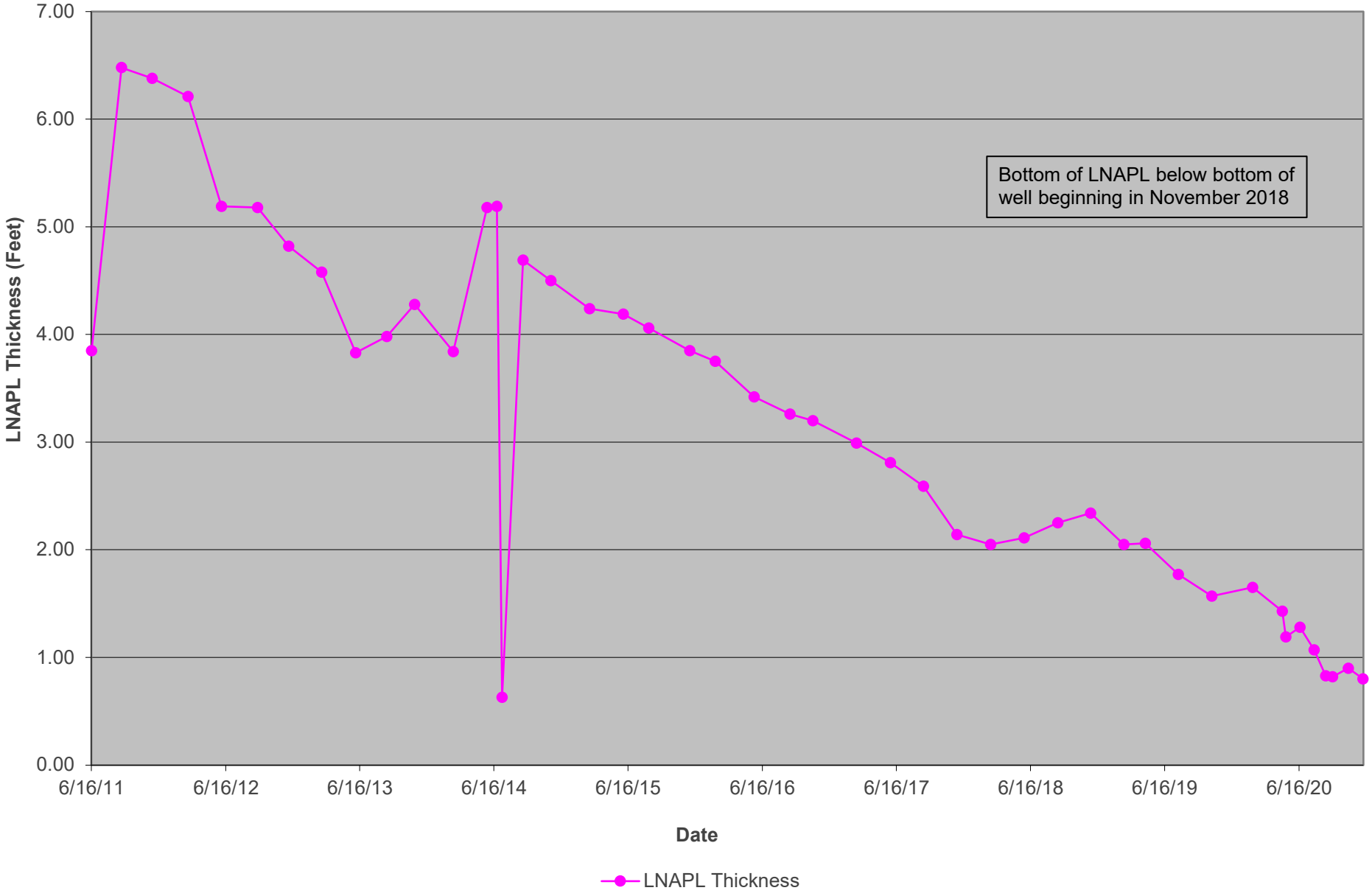
Appendices

Appendix A
Charts of Thicknesses of LNAPL in Monitor and Recovery Wells vs. Time

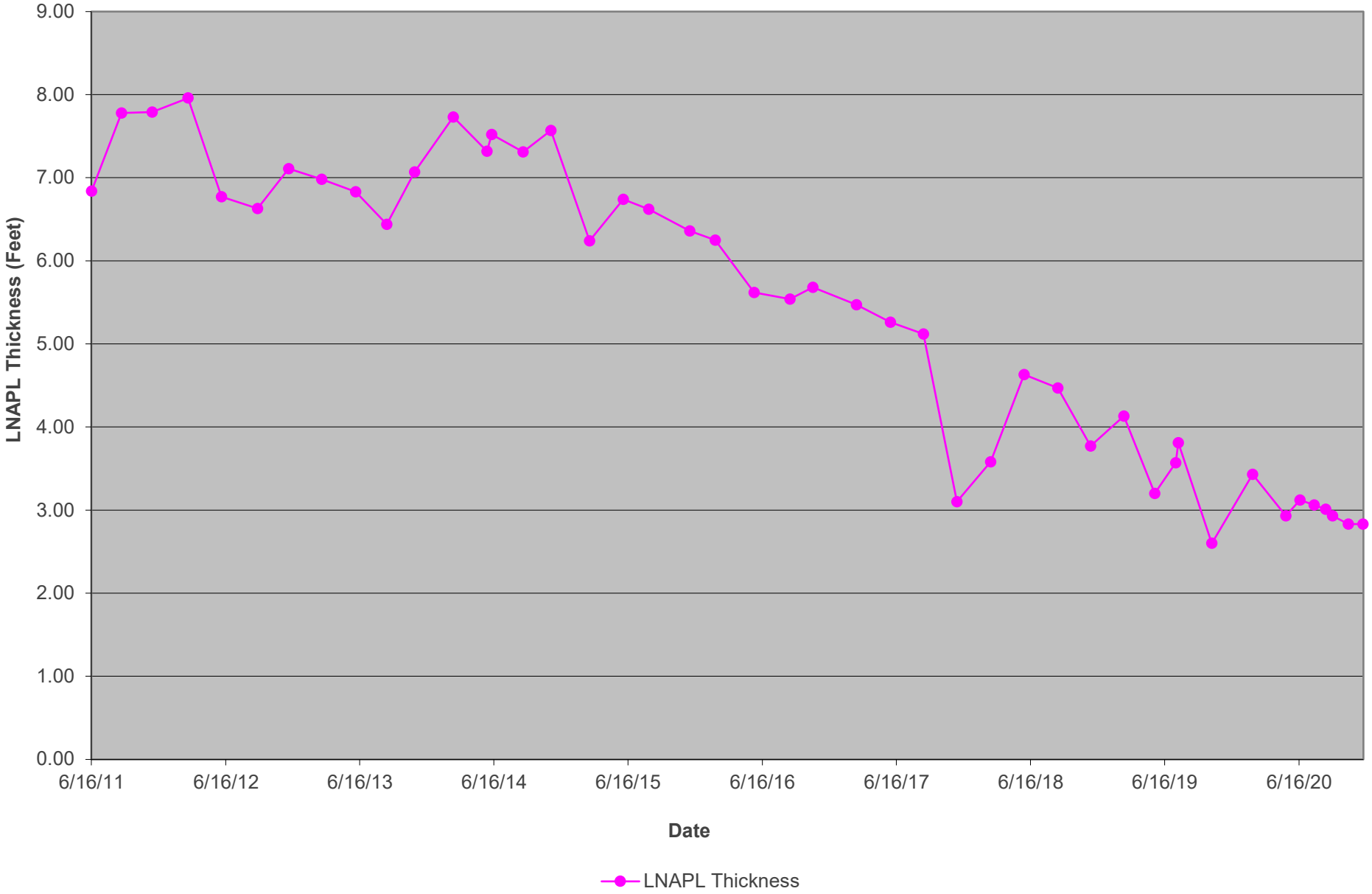
Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-1



Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-2



Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-3



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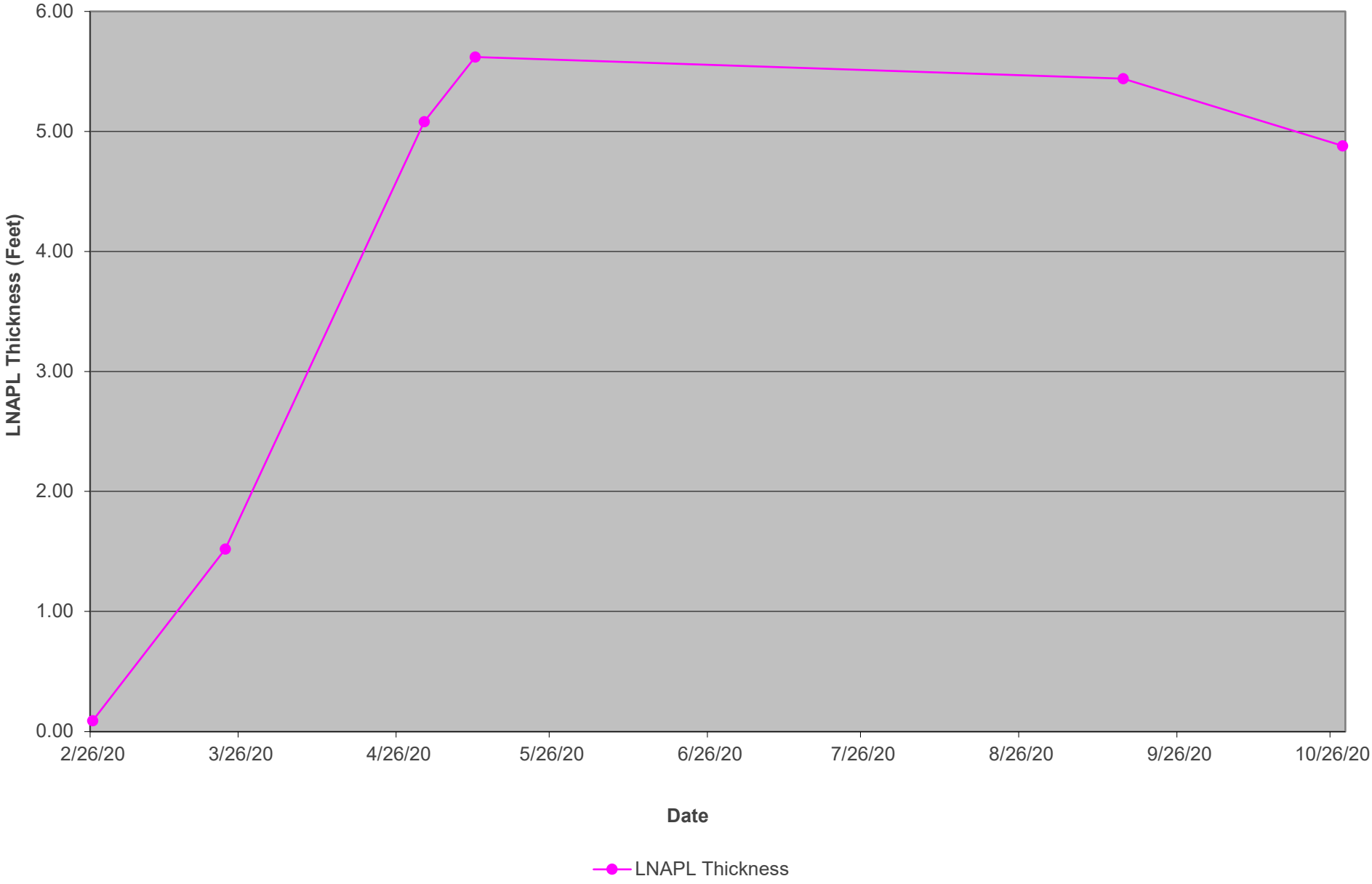
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-4R



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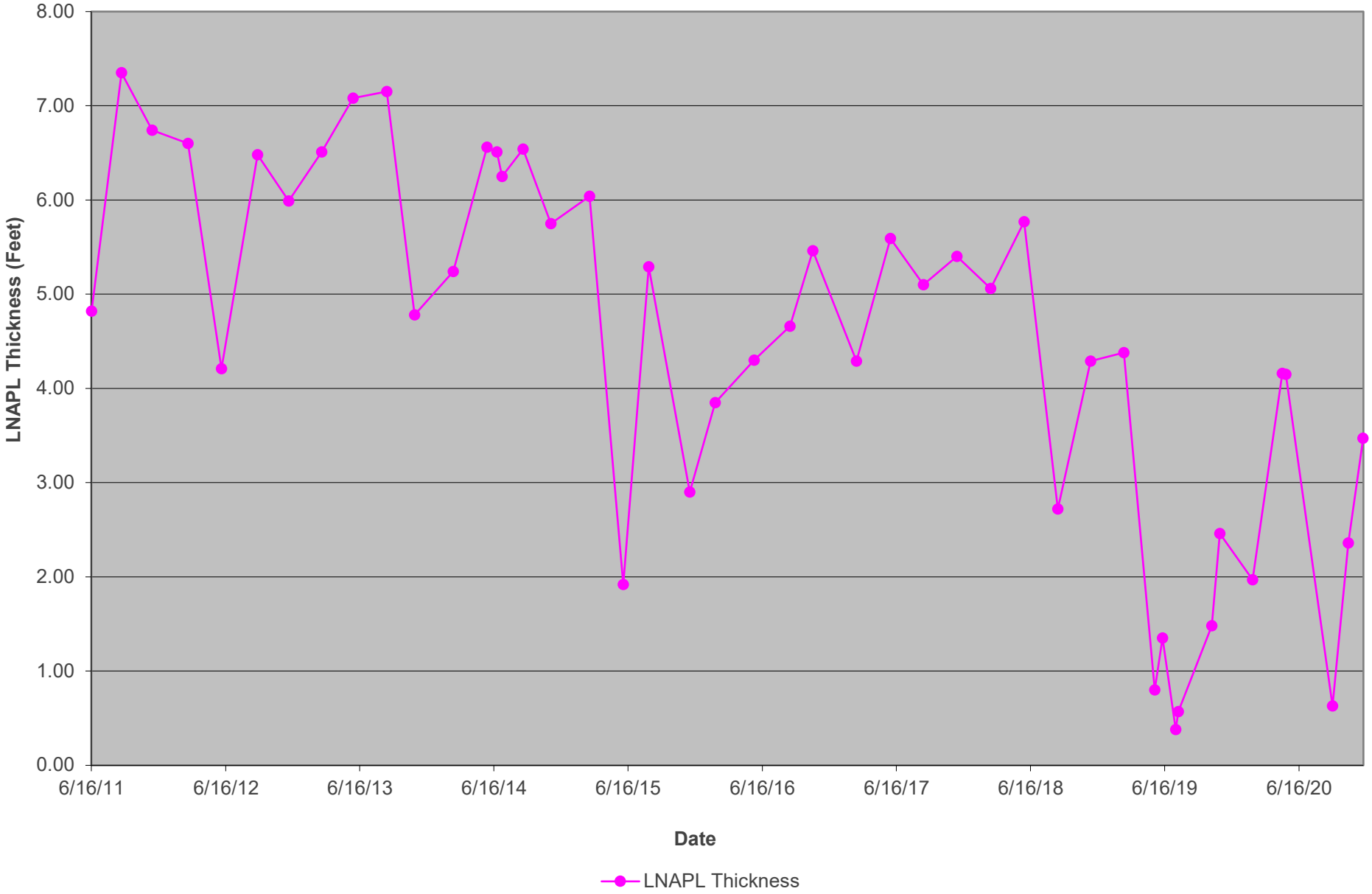
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-5



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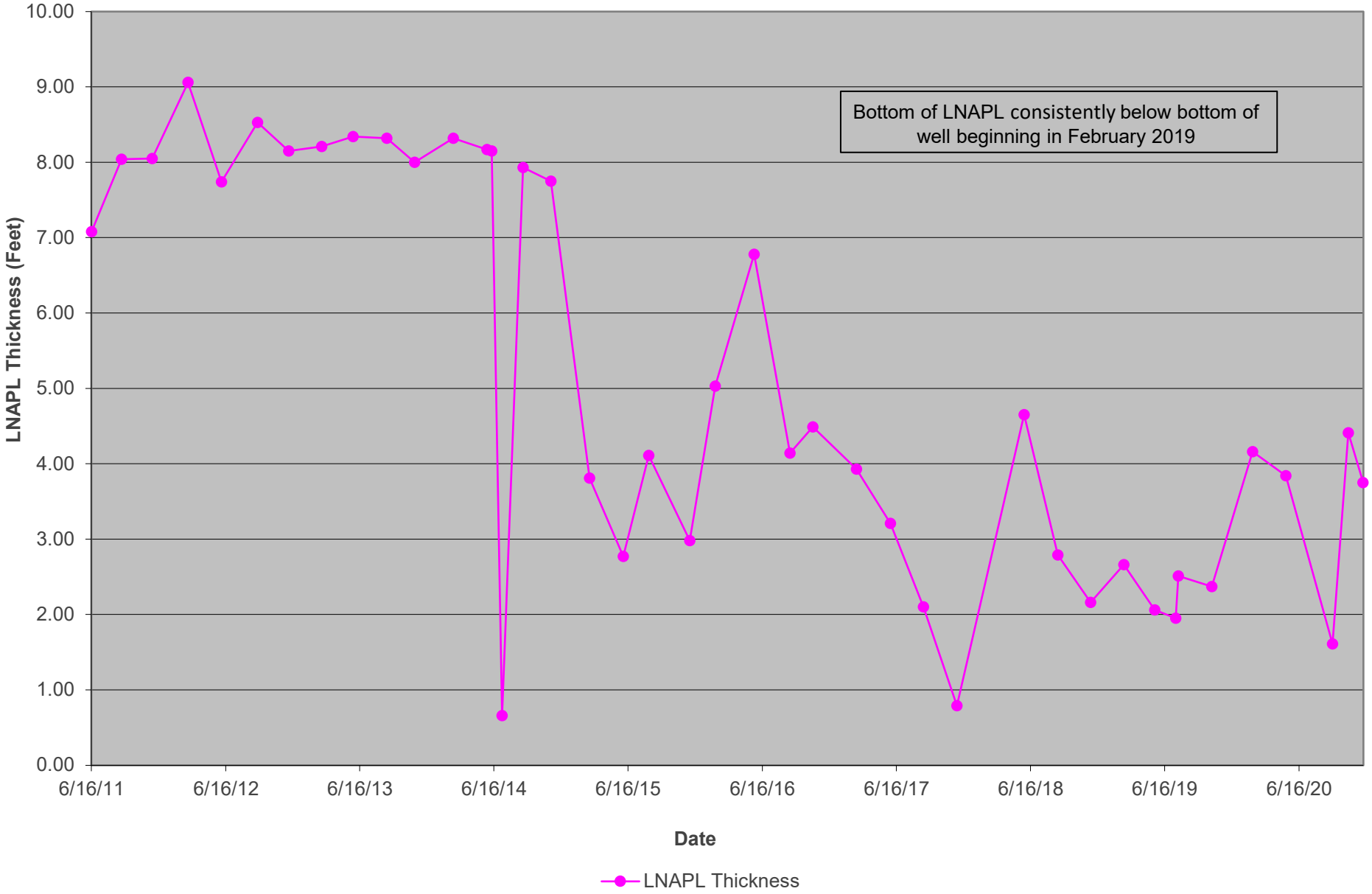
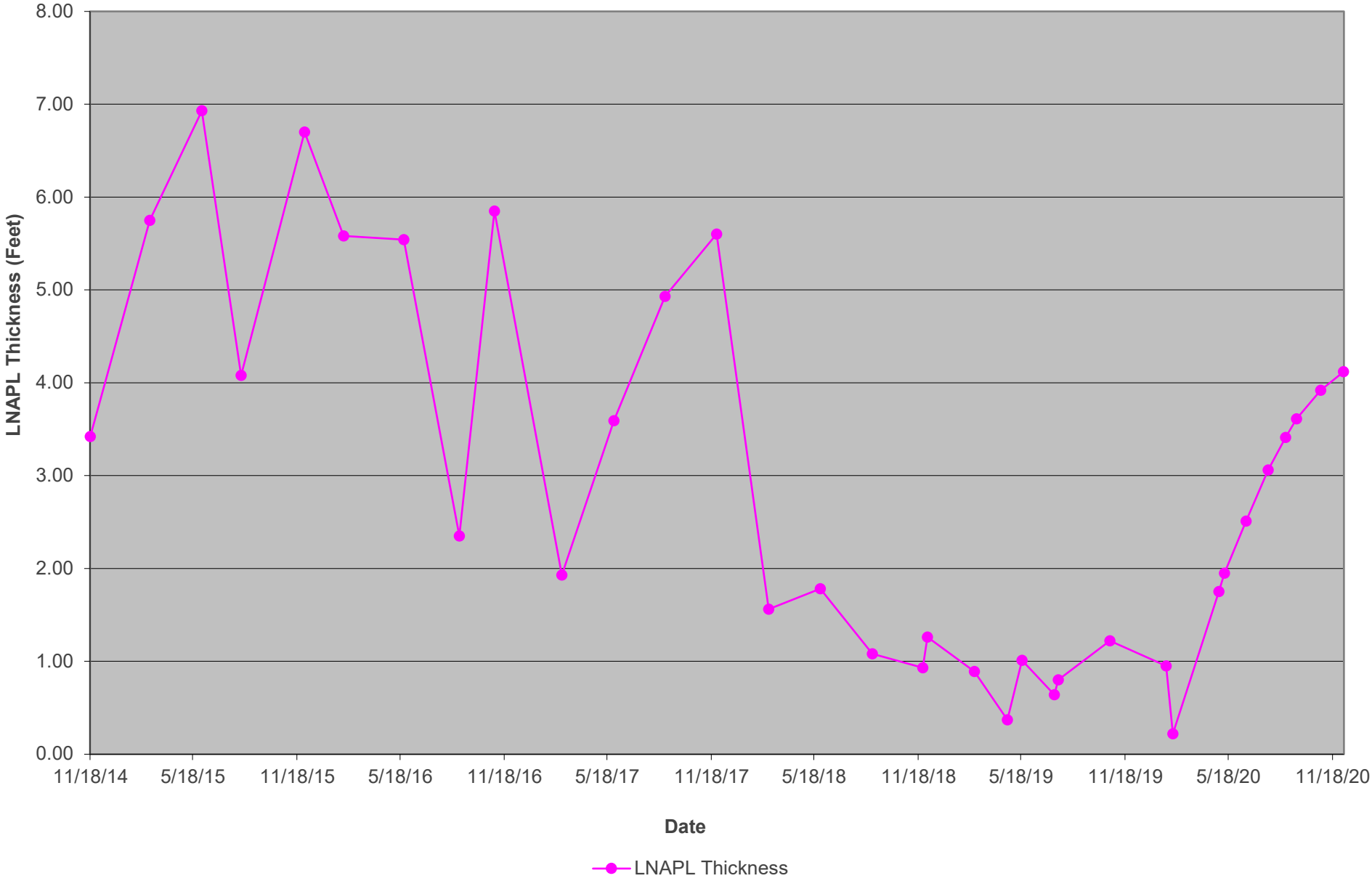
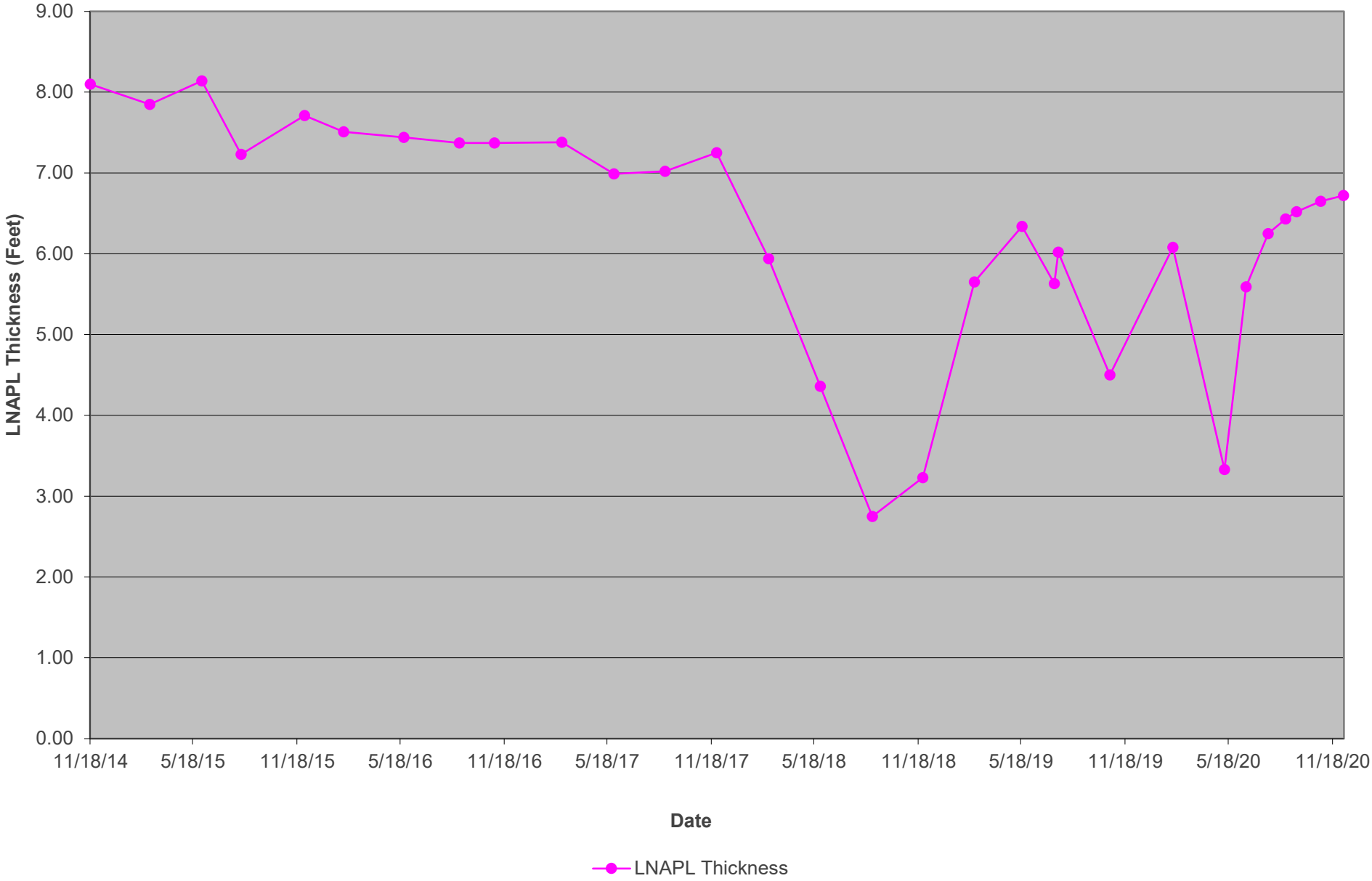
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-6



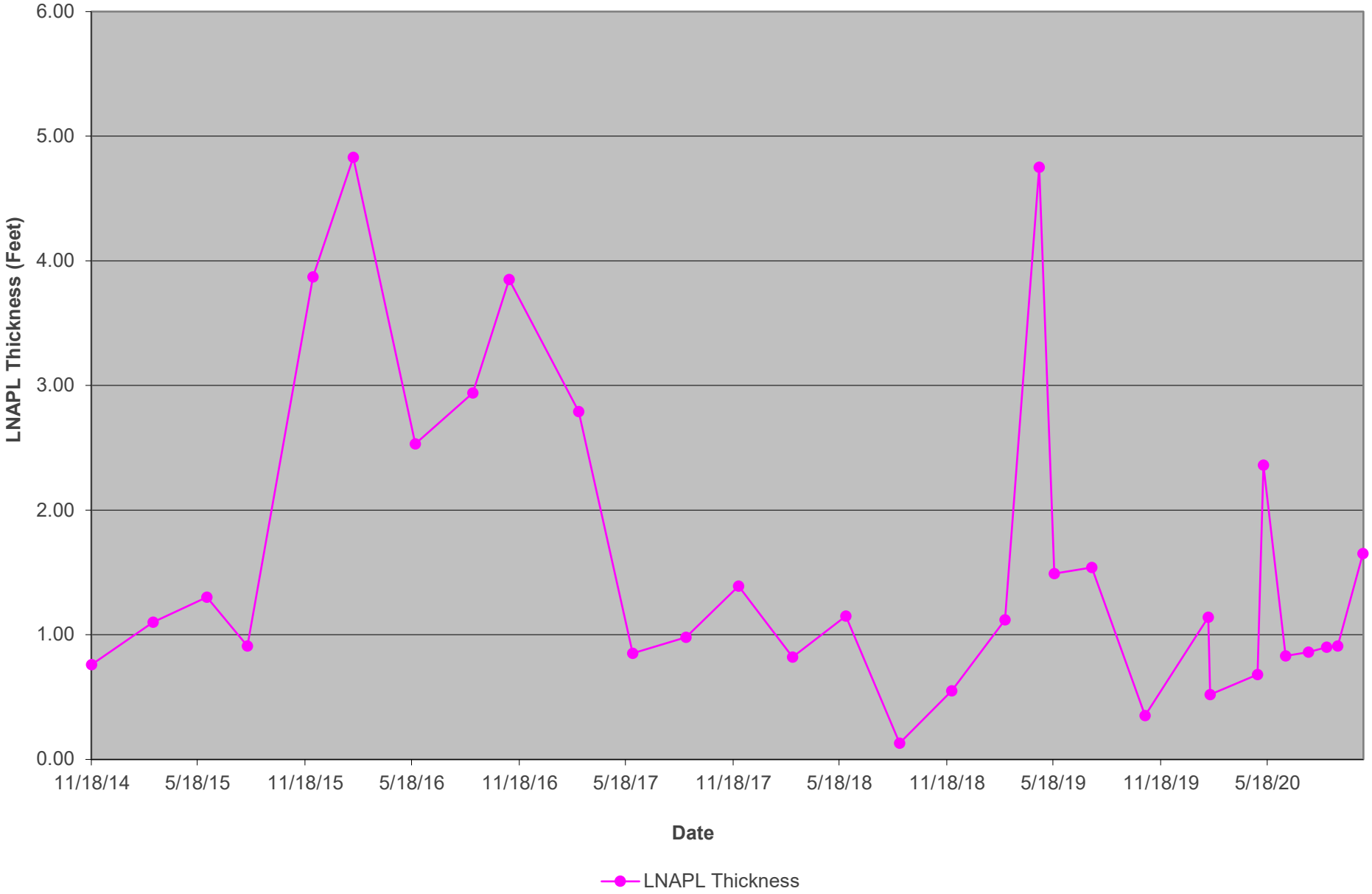
Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-7R



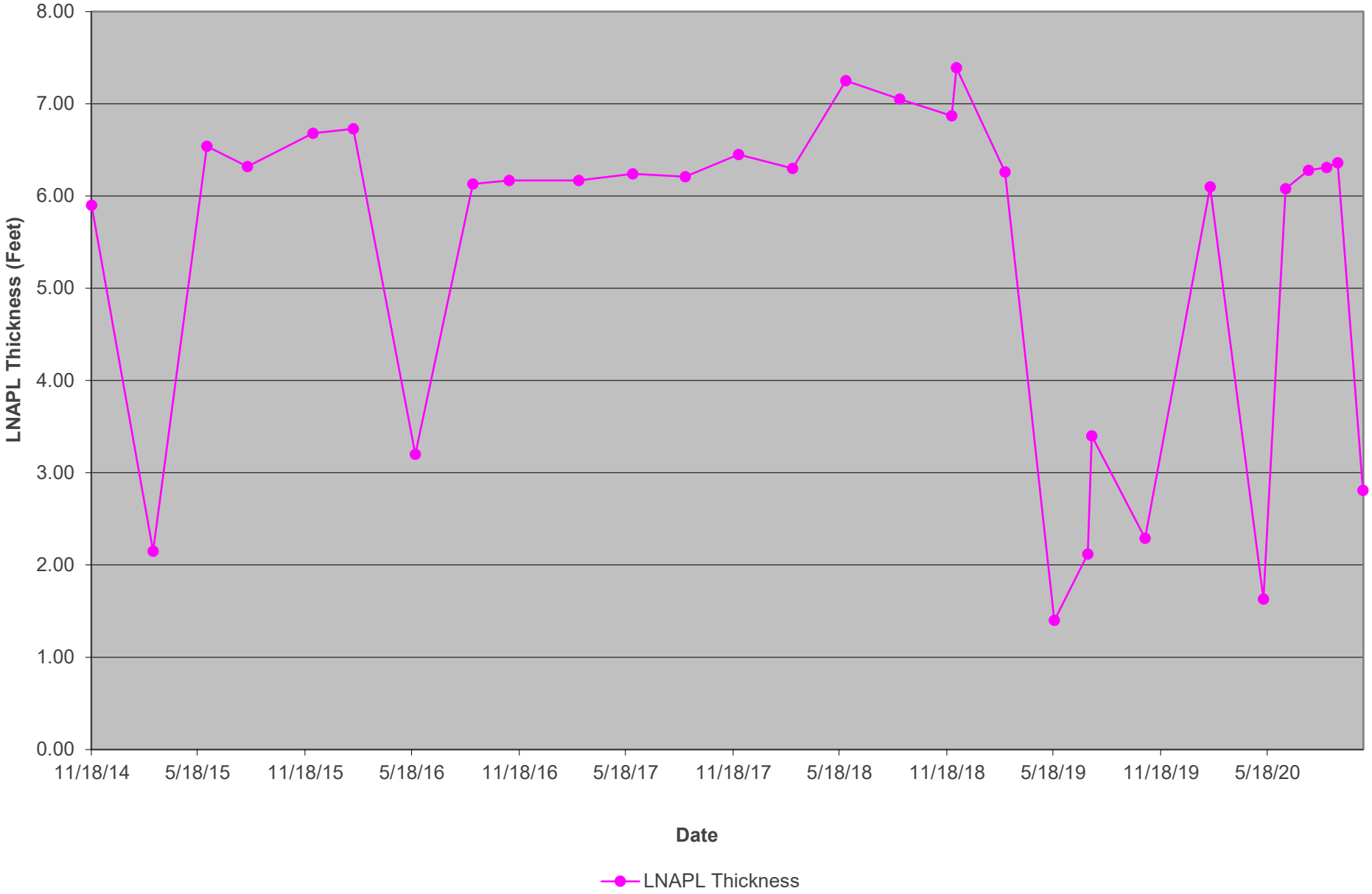
Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-8

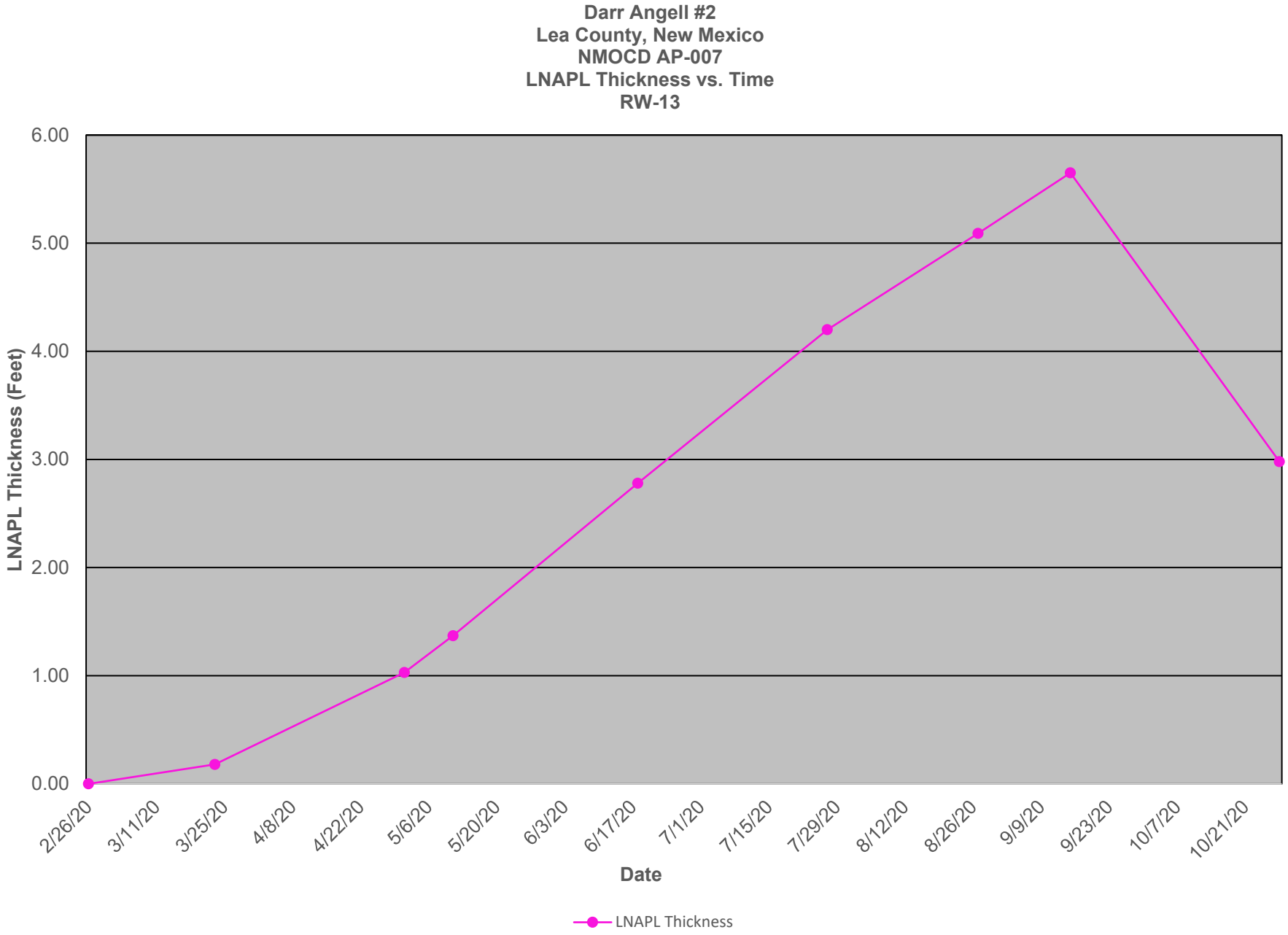


Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-9

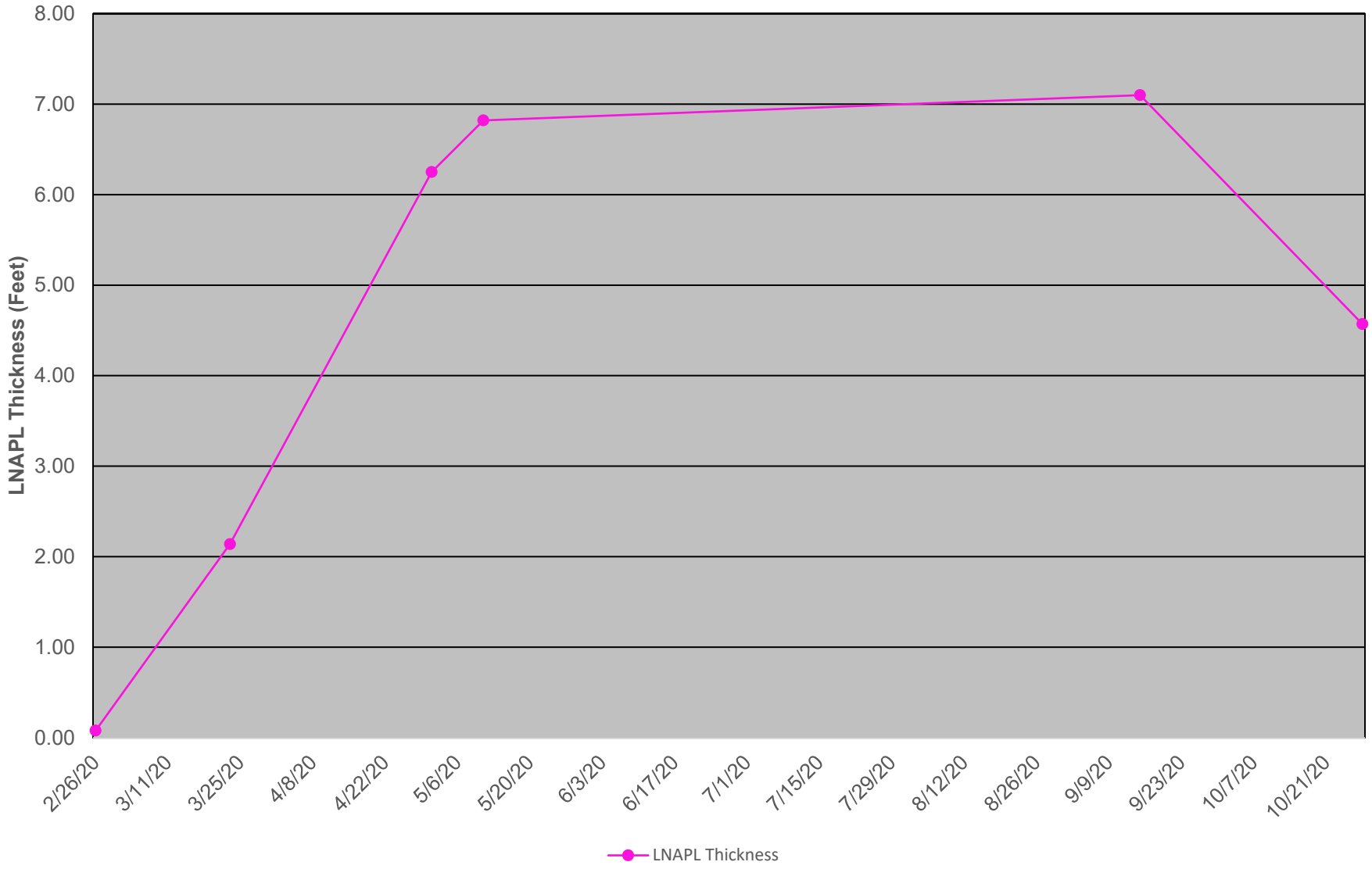


Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-10



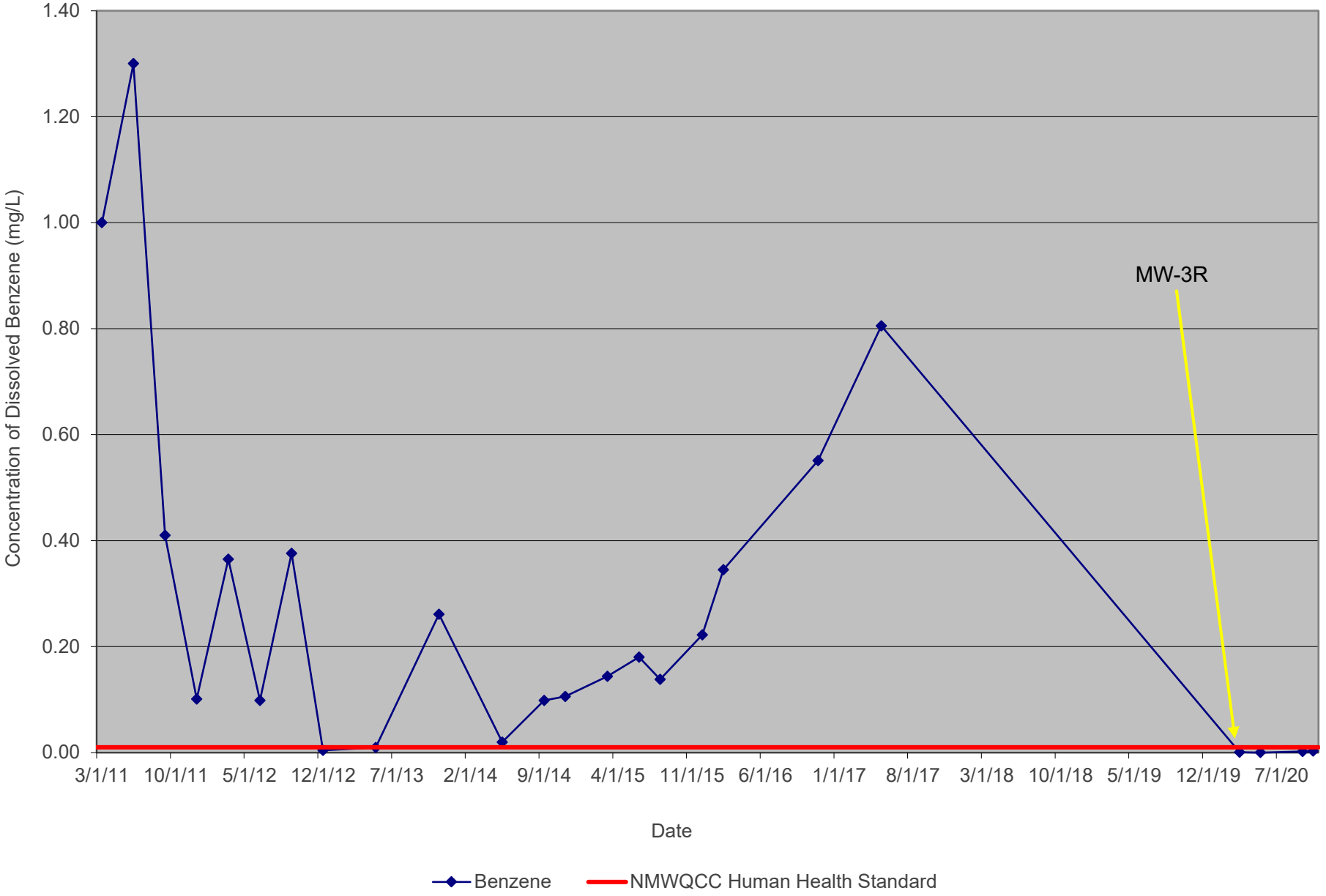


Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
LNAPL Thickness vs. Time
RW-14

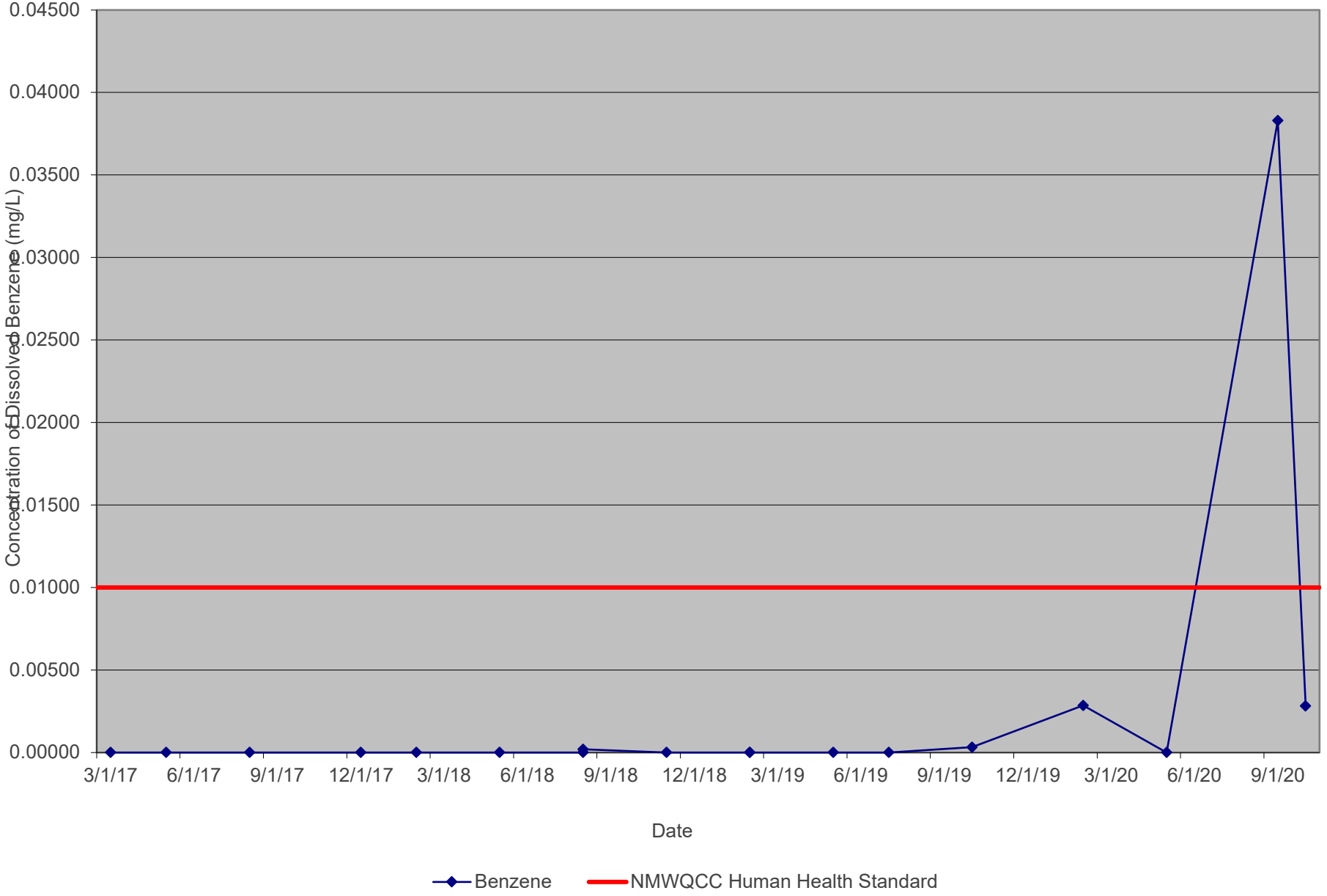


Appendix B
Charts of Concentrations of Dissolved Benzene in Monitor and Recovery Wells vs. Time

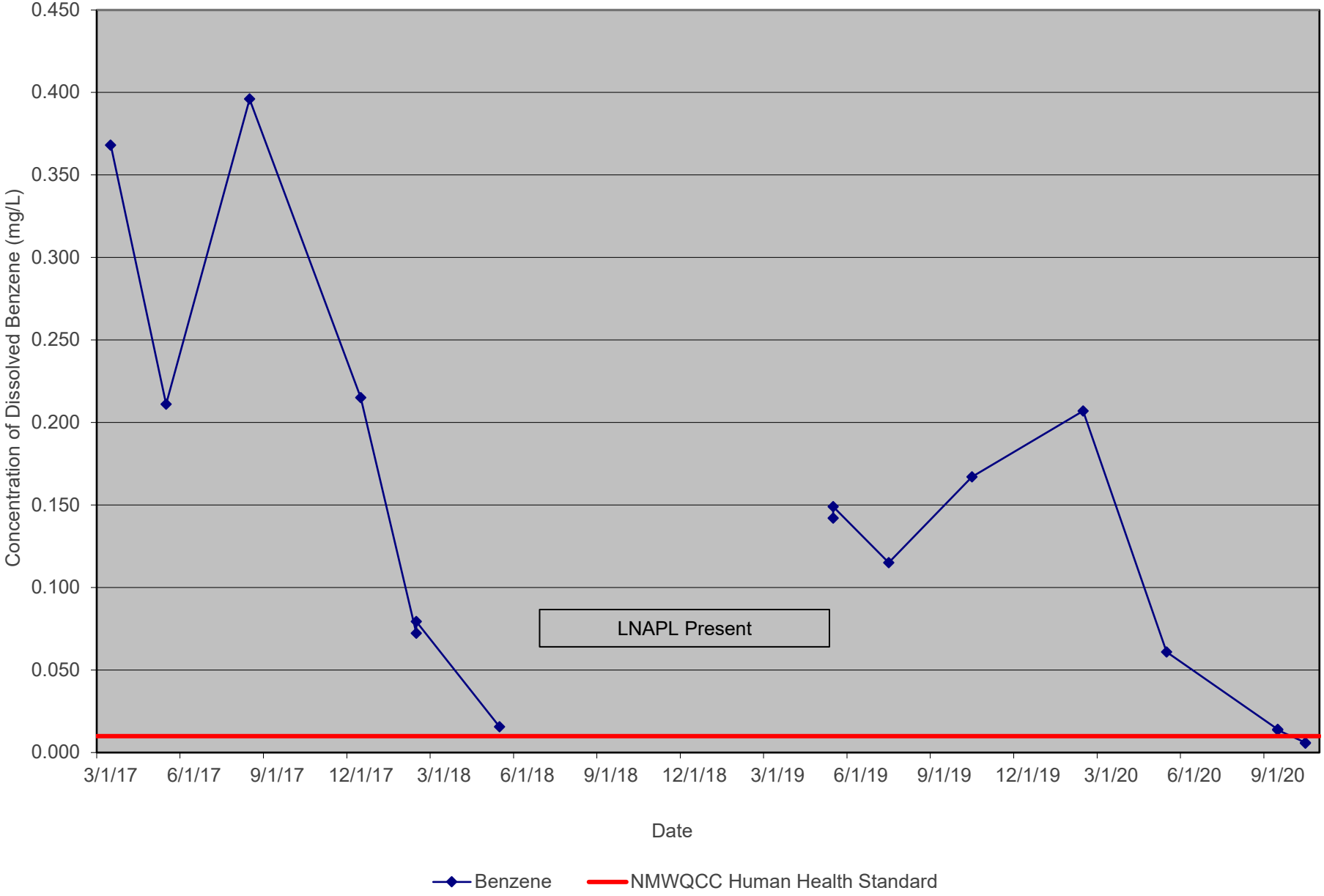
Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
Concentration of Dissolved Benzene vs. Time
MW-3 & MW-3R



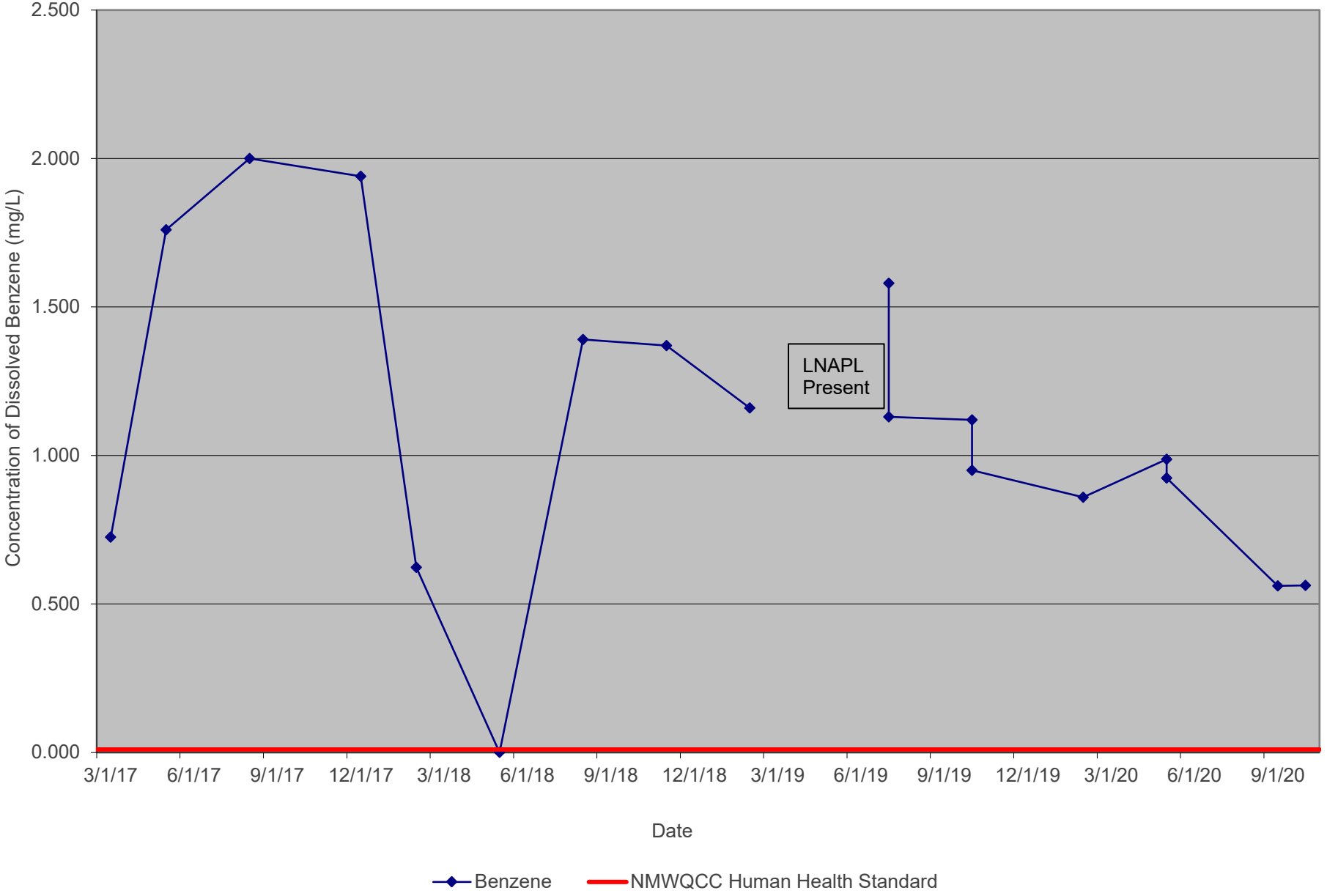
Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
Concentration of Dissolved Benzene vs. Time
MW-12



Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
Concentration of Dissolved Benzene vs. Time
RW-11



Darr Angell #2
Lea County, New Mexico
NMOCD AP-007
Concentration of Dissolved Benzene vs. Time
RW-12



Appendix C
Certified Laboratory Reports
(not included in draft or printed reports)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 21, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1189921
Samples Received:	02/15/2020
Project Number:	074685
Description:	Darr Angell #2- Lea County, New Mexico
Site:	SRS#: LF 1999-62
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.

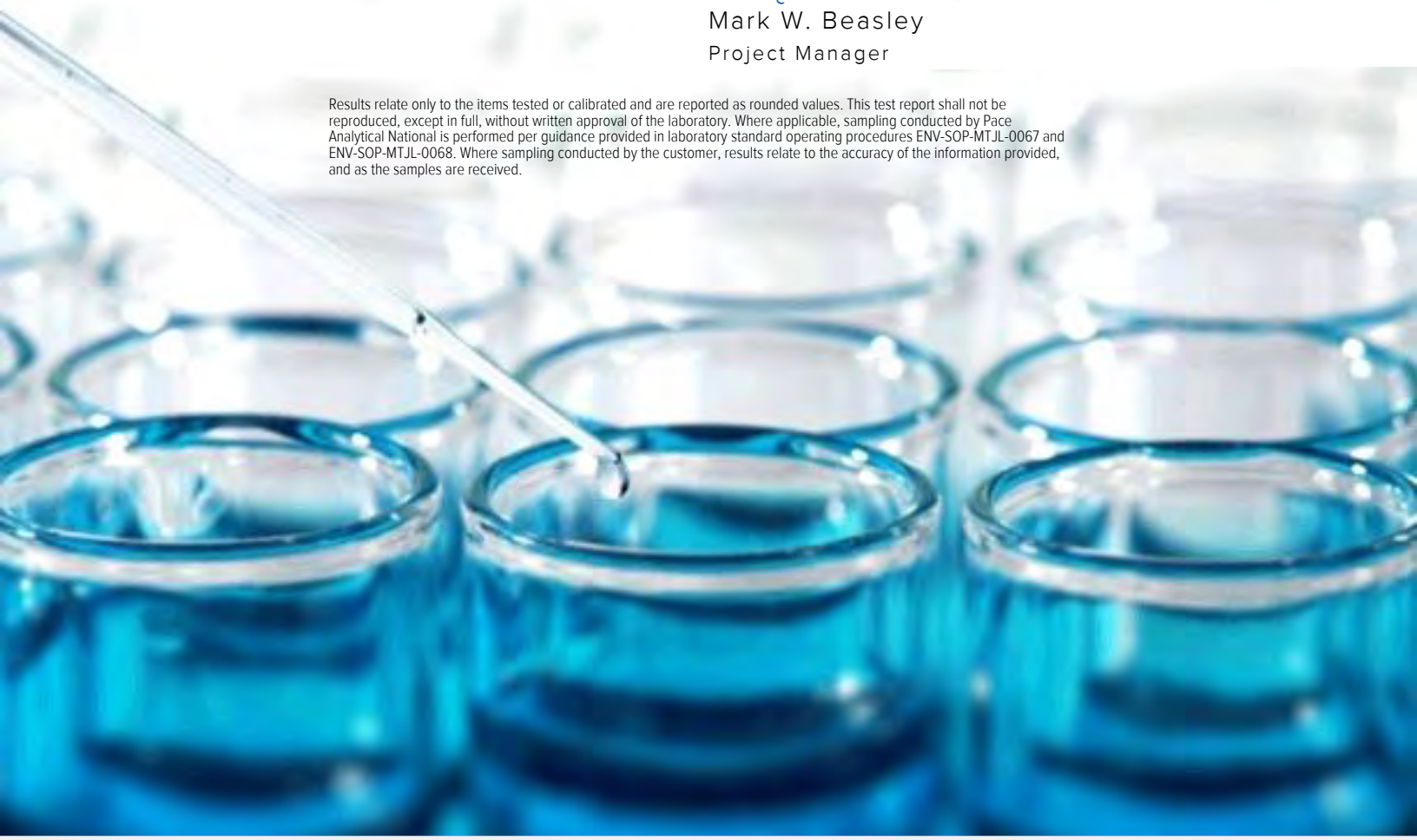


TABLE OF CONTENTS

MW-4R L1189921-01 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:00 | Received date/time: 02/15/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1428932	1	02/16/20 23:19	02/16/20 23:19	BMB	Mt. Juliet, TN

MW-12 L1189921-02 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:00 | Received date/time: 02/15/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1428932	1	02/16/20 23:41	02/16/20 23:41	BMB	Mt. Juliet, TN

RW-11 L1189921-03 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:00 | Received date/time: 02/15/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1428932	1	02/17/20 00:03	02/17/20 00:03	BMB	Mt. Juliet, TN

RW-12 L1189921-04 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:00 | Received date/time: 02/15/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1428932	10	02/17/20 00:26	02/17/20 00:26	BMB	Mt. Juliet, TN

TRIP BLANK L1189921-05 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:00 | Received date/time: 02/15/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1428932	1	02/16/20 17:12	02/16/20 17:12	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

Revised May 2010

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 02/21/2020 14:13
Project Name: Darr Angell #2- Lea County, New Mexico	Laboratory Job Number: L1189921-01, 02, 03, 04 and 05
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932

#[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: 02/21/2020 14:13
Project Name: Darr Angell #2- Lea County, New Mexico	Laboratory Job Number: L1189921-01, 02, 03, 04 and 05
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932

#[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: 02/21/2020 14:13
Project Name: Darr Angell #2- Lea County, New Mexico	Laboratory Job Number: L1189921-01, 02, 03, 04 and 05
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932

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	U		0.000190	0.000500	0.000500	1	02/16/2020 23:19	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 23:19	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 23:19	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 23:19	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*99.6*				*79.0-125*		*02/16/2020 23:19*	WG1428932

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	0.00285		0.000190	0.000500	0.000500	1	02/16/2020 23:41	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 23:41	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 23:41	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 23:41	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/16/2020 23:41*	WG1428932

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	0.207		0.000190	0.000500	0.000500	1	02/17/2020 00:03	WG1428932
Toluene	0.00300		0.000412	0.00100	0.00100	1	02/17/2020 00:03	WG1428932
Ethylbenzene	0.0728		0.000160	0.000500	0.000500	1	02/17/2020 00:03	WG1428932
Total Xylene	0.291		0.000510	0.00150	0.00150	1	02/17/2020 00:03	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*113*				*79.0-125*		*02/17/2020 00:03*	WG1428932

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	0.859		0.00190	0.000500	0.00500	10	02/17/2020 00:26	WG1428932
Toluene	0.0644		0.00412	0.00100	0.0100	10	02/17/2020 00:26	WG1428932
Ethylbenzene	0.160		0.00160	0.000500	0.00500	10	02/17/2020 00:26	WG1428932
Total Xylene	0.183		0.00510	0.00150	0.0150	10	02/17/2020 00:26	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/17/2020 00:26*	WG1428932

TRIP BLANK
Collected date/time: 02/14/20 14:00
L1189921

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	02/16/2020 17:12	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 17:12	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 17:12	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 17:12	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/16/2020 17:12*	WG1428932

Method Blank (MB)

(MB) R3501672-2 02/16/20 15:19

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) R3501672-1 02/16/20 14:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0536	107	77.0-122	
Toluene	0.0500	0.0535	107	80.0-121	
Ethylbenzene	0.0500	0.0508	102	80.0-123	
Total Xylene	0.150	0.147	98.0	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*102*	*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

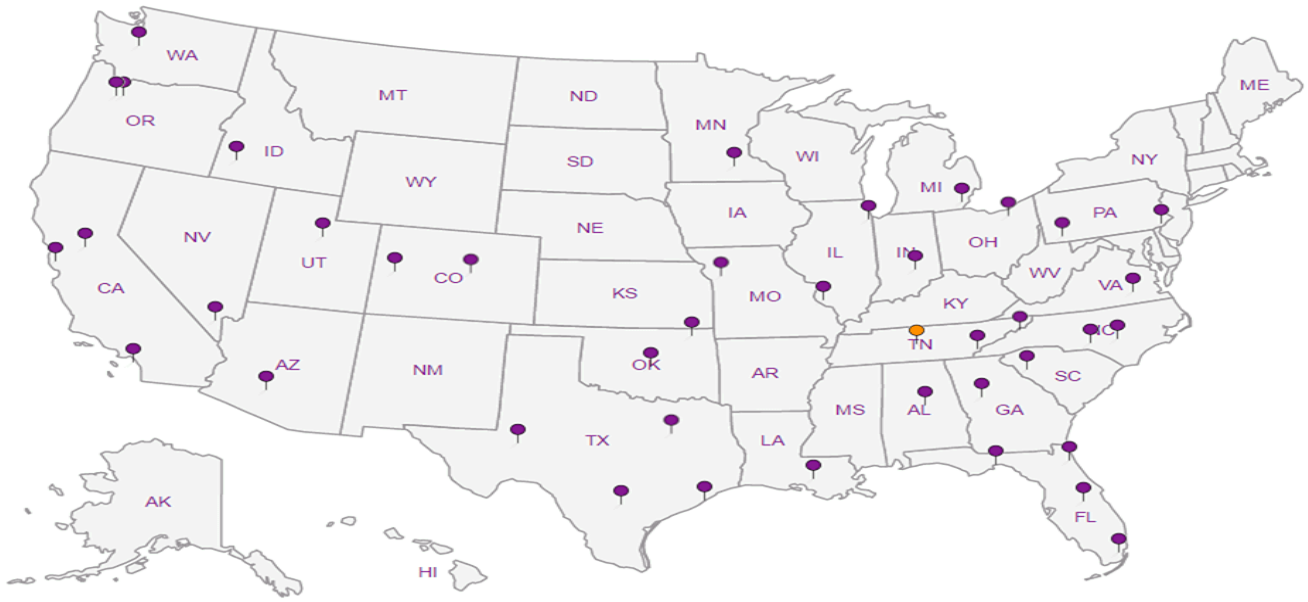
Third Party Federal Accreditations

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	074685	L1189921	02/21/20 14:13	16 of 18

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
505 N. Big Spring, Ste. 600
Midland, TX 79701

Pres Chk

Report to: Becky Haskell

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

Project Description: Darr Angell #2- Lea County, Ne

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET

Phone: 432-686-0086
Fax:

Client Project # 074685

Lab Project # PLAINSGHD-074685

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS#: LF 1999-62

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

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 # L1109921

Table #

Acctnum: PLAINSGHD
Template: T139790
Prelogin: P754942
PM: 134 - Mark W. Beasley
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-4R	Grab	GW	-	02/14	1400	3	3		-01
MW-12	Grab	GW	-	02/14	1445	3	3		-02
RW-11	Grab	GW	-	02/14	1515	3	3		-03
RW-13	Grab	GW	-	02/14	1545	3	3		-04
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							

* 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 # 3904 0333 1210

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
	2/14	1600			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 12 °C Bottles Received: 78	
				Corr. T=.6	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/15/20 Time: 08:30	Hold: Condition: NCF / OK

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Camille Bryant
505 N. Big Spring, Ste. 600
Midland, TX 79701

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; Christopher.Knight@ghd.com;

Project Description: Darr Angell #2- Lea County, Ne

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-686-0086
Fax:

Client Project # 074685

Lab Project # PLAINSGHD-074685

SDG # L1189921

Table #

Collected by (print):

Site/Facility ID # SRS#: LF 1999-62

P.O. #

Acctnum: PLAINSGHD
Template: T139790
Prelogin: P754942
PM: 134 - Mark W. Beasley
PB:
Shipped Via:

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)
		GW																
		GW																
		GW																
		GW																
TRIP BLANK		GW																-05

* 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 1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: A2 °C .5+.1=.6 Bottles Received: 12	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 2/15/20 Time: 0830	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 16, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1201075
Samples Received:	03/20/2020
Project Number:	11209885/02
Description:	Darr Angell #2 SRS Darr Angell #1
Site:	SRS DARR ANGELL #2
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.

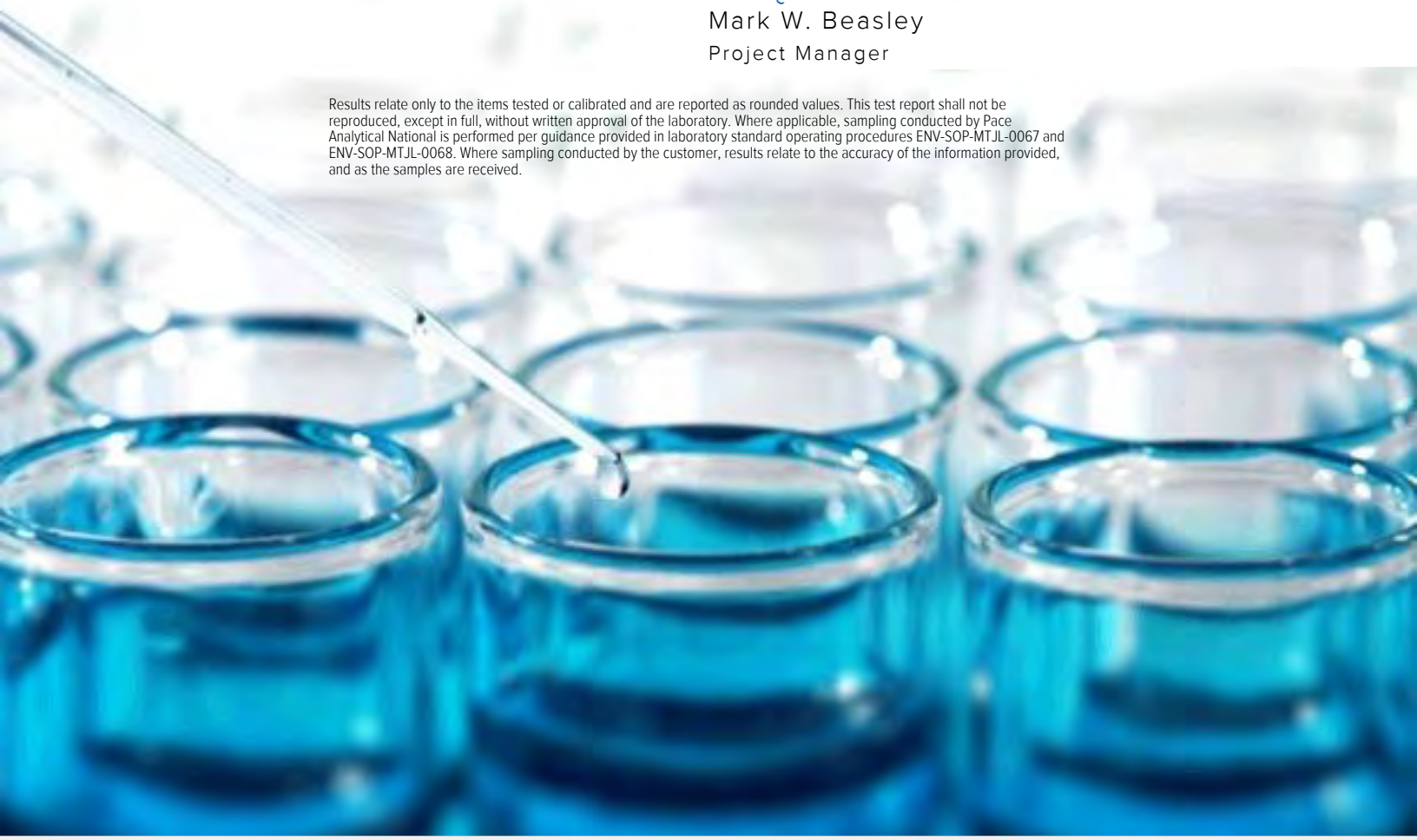


TABLE OF CONTENTS

DARR 2-SYSTEM ON L1201075-01 Air

Collected by: Matthew Laughlin
Collected date/time: 03/18/20 15:00
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1447620	800	03/21/20 05:28	03/21/20 05:28	CAW	Mt. Juliet, TN

DARR-2-SYSTEM OFF L1201075-02 Air

Collected by: Matthew Laughlin
Collected date/time: 03/18/20 15:30
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1447620	400	03/21/20 06:04	03/21/20 06:04	CAW	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: 03/24/20 15:40

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: 04/16/2020 15:36
Project Name: Darr Angell #2 SRS Darr Angell #1	Laboratory Job Number: L1201075-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447620

#[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

Laboratory Name: Pace Analytical National	LRC Date: 04/16/2020 15:36
Project Name: Darr Angell #2 SRS Darr Angell #1	Laboratory Job Number: L1201075-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447620

#[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: 04/16/2020 15:36
Project Name: Darr Angell #2 SRS Darr Angell #1	Laboratory Job Number: L1201075-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447620

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 (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	160	511	4870	15600		800	WG1447620
Toluene	108-88-3	92.10	160	603	3060	11500		800	WG1447620
Ethylbenzene	100-41-4	106	160	694	669	2900		800	WG1447620
m&p-Xylene	1330-20-7	106	320	1390	783	3390		800	WG1447620
o-Xylene	95-47-6	106	160	694	357	1550		800	WG1447620
Methyl tert-butyl ether	1634-04-4	88.10	160	577	ND	ND		800	WG1447620
TPH (GC/MS) Low Fraction	8006-61-9	101	160000	661000	925000	3820000		800	WG1447620
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1447620

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	80.0	256	1940	6200		400	WG1447620
Toluene	108-88-3	92.10	80.0	301	2020	7610		400	WG1447620
Ethylbenzene	100-41-4	106	80.0	347	592	2570		400	WG1447620
m&p-Xylene	1330-20-7	106	160	694	740	3210		400	WG1447620
o-Xylene	95-47-6	106	80.0	347	317	1370		400	WG1447620
Methyl tert-butyl ether	1634-04-4	88.10	80.0	288	ND	ND		400	WG1447620
TPH (GC/MS) Low Fraction	8006-61-9	101	80000	330000	569000	2350000		400	WG1447620
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG1447620

Method Blank (MB)

(MB) R3511078-3 03/20/20 22:41

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	17.4	J	6.91	200
(S) 1,4-Bromofluorobenzene	*95.6*			*60.0-140*

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

(LCS) R3511078-1 03/20/20 21:23 • (LCSD) R3511078-2 03/20/20 22:04

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	3.75	3.83	100	102	70.0-130			2.11	25
Benzene	3.75	3.80	3.77	101	101	70.0-130			0.793	25
Toluene	3.75	3.84	3.95	102	105	70.0-130			2.82	25
Ethylbenzene	3.75	3.85	3.92	103	105	70.0-130			1.80	25
m&p-Xylene	7.50	7.97	7.91	106	105	70.0-130			0.756	25
o-Xylene	3.75	3.77	3.82	101	102	70.0-130			1.32	25
TPH (GC/MS) Low Fraction	203	212	223	104	110	70.0-130			5.06	25
(S) 1,4-Bromofluorobenzene				*103*	*100*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection 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

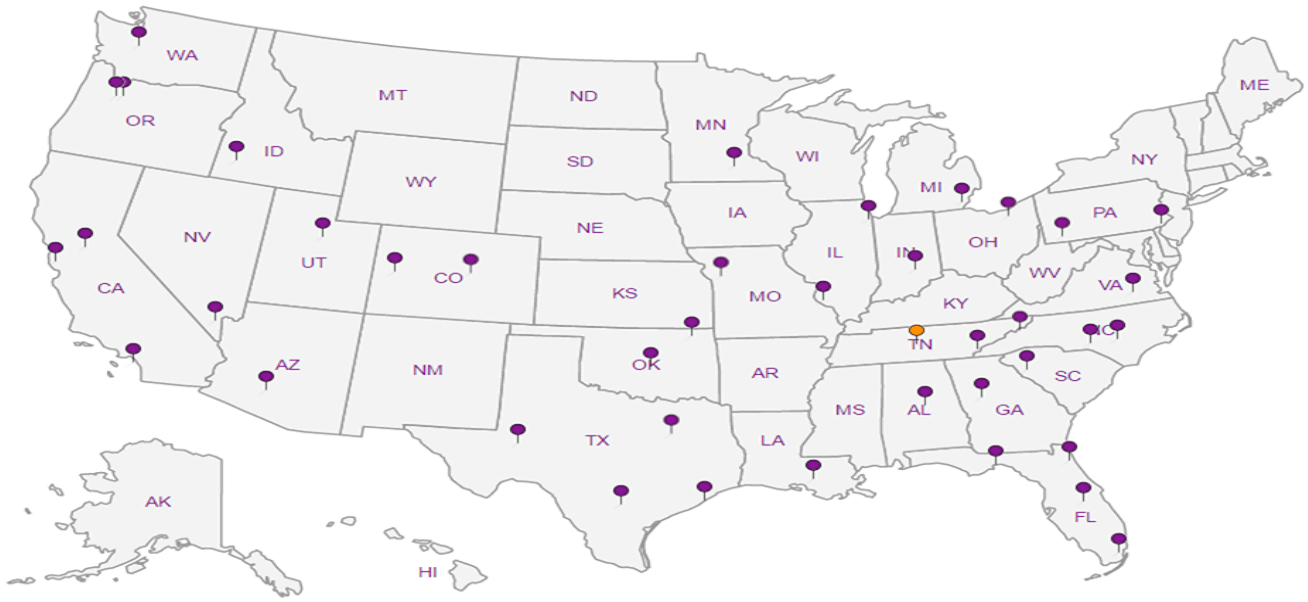
Third Party Federal Accreditations

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	11209885/02	L1201075	04/16/20 15:36	13 of 14

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Attn: 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.com;

Project Description: Darr Angell #1 SRS Darr Angell

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-250-7917
Fax:

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

Collected by (print): Matthew Laughlin

Collected by (signature):

Immediately Packed on Ice N X Y ___

Site/Facility ID # SRS DARR ANGELL #1

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

No. of Cntrs

Analysis / Container / Preservative

M18-MOD Tedlar

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Sample # (lab only)
Darr 2-System ON	Grab	Air	-	3/18/20	1500	1	-01
Darr-2-System OFF	Grab	Air	-	3/19/20	1530	1	-02
Darr 1-System ON	Grab	Air	-	3/18/20	1600	1	
Darr 1-System OFF	Grab	Air	-	3/18/20	1630	1	

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 # 4201015

Table # H135

Acctnum: PLAINSGHD

Template: T163766

Prelogin: P757791

PM: 134 - Mark W. Beasley

PB: 2-25-2020 Gm

Shipped Via: FedEX Ground

Remarks

* 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 # 166357502813

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:		
Relinquished by: (Signature)	3/19/20	14:30	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	3-19-20	16:00	Received by: (Signature) FedEX	Temp: Amb. °C Bottles Received: 4
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/20/20 Time: 900

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:	L1203835
Samples Received:	03/28/2020
Project Number:	11209891
Description:	Plains Darr 2 SRS-LF 1999-62

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

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

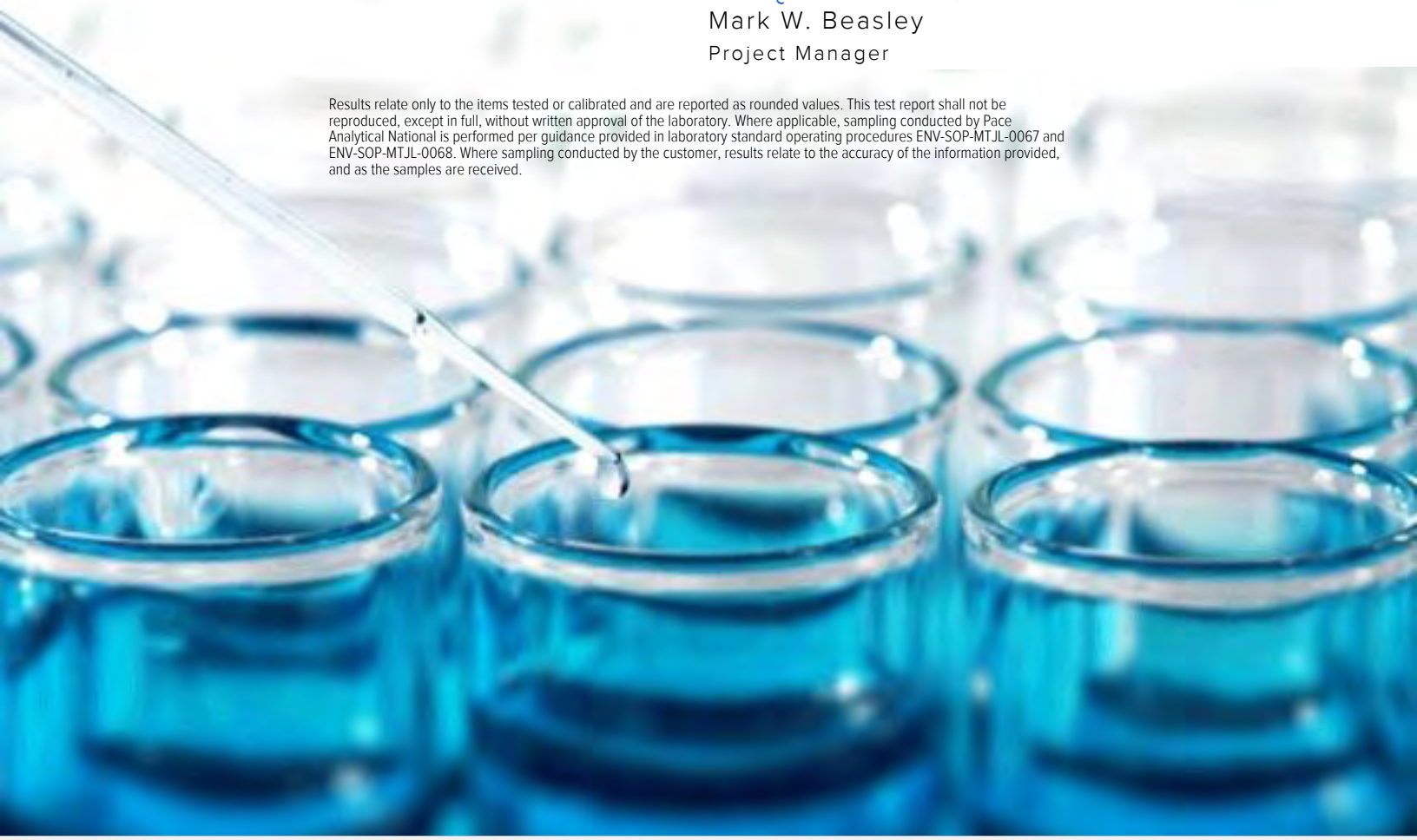


TABLE OF CONTENTS

MW-13 L1203835-01 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 10:30 | 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 13:33	03/31/20 13:33	BMB	Mt. Juliet, TN

MW-6R L1203835-02 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 10:40 | 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 13:55	03/31/20 13:55	BMB	Mt. Juliet, TN

MW-7R L1203835-03 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 11:15 | 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 14:16	03/31/20 14:16	BMB	Mt. Juliet, TN

MW-8R L1203835-04 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 11:30 | 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 14:38	03/31/20 14:38	BMB	Mt. Juliet, TN

MW-3R L1203835-05 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 12:35 | 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 14:59	03/31/20 14:59	BMB	Mt. Juliet, TN

MW-10R L1203835-06 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 12:45 | 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 15:21	03/31/20 15:21	BMB	Mt. Juliet, TN

MW-9R L1203835-07 GW

Collected by: Ryan Livingston | Collected date/time: 03/25/20 13:20 | 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 15:42	03/31/20 15:42	BMB	Mt. Juliet, TN

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

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

Revised May 2010

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 04/06/2020 10:30
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1203835-01, 02, 03, 04, 05, 06 and 07
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 10:30
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1203835-01, 02, 03, 04, 05, 06 and 07
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 10:30
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1203835-01, 02, 03, 04, 05, 06 and 07
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 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	03/31/2020 13:33	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 13:33	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 13:33	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 13:33	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 13:33*	WG1453220

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	03/31/2020 13:55	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 13:55	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 13:55	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 13:55	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 13:55*	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 14:16	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 14:16	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 14:16	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 14:16	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 14:16*	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 14:38	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 14:38	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 14:38	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 14:38	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 14:38*	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	0.000755		0.000190	0.000500	0.000500	1	03/31/2020 14:59	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 14:59	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 14:59	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 14:59	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 14:59*	WG1453220

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	03/31/2020 15:21	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 15:21	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 15:21	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 15:21	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 15:21*	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 15:42	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 15:42	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 15:42	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 15:42	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 15:42*	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

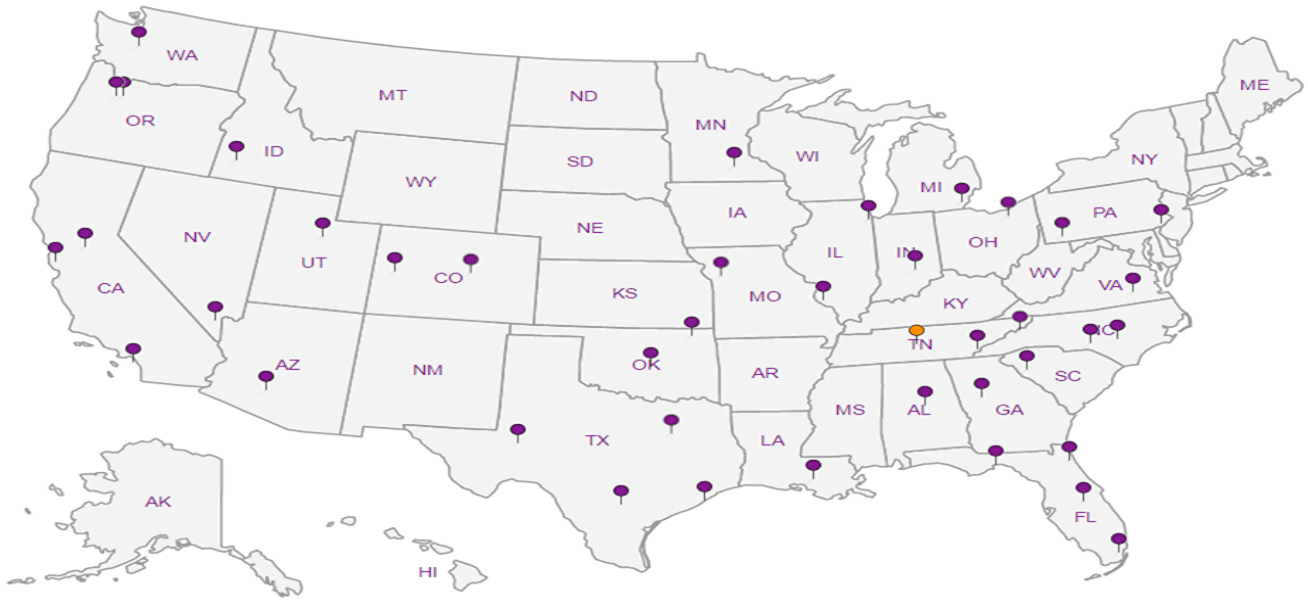
Third Party Federal Accreditations

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	11209891	L1203835	04/06/20 10:30	18 of 19

GHD Services
2135 S. Loop 250 W.
Midland, Texas 79703

Billing Information:
Plains All American
#10 Desta Drive
Suite 550E
MIdland, Texas 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**

Project Description: **Plains Darr 2** SRS-LF 1999-62

City/State Collected: **Lovington, New Mexico**

Phone: **432-686-0086**
Fax: **432-686-0186**

Client Project # **11209891**

Lab Project #

L# 120 3835

D115

Collected by (print): **Ryan Livingston**

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

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8021B	Remarks	Sample # (lab only)
mw-13	Grab	GW		3-25-20	1030	3	X		-01
mw-6r	Grab	GW		3-25-20	1040	3	X		-02
pmw-7r	Grab	GW		3-25-20	1115	3	X		-03
mw-8r	Grab	GW		3-25-20	1130	3	X		-04
pmw-3r	Grab	GW		3-25-20	1235	3	X		-05
mw-10r	Grab	GW		3-25-20	1245	3	X		-06
mw-9r	Grab	GW		3-25-20	1320	3	X		-07

* 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: V 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)
	3-27-20	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	3-27-20	1500	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR
TDAT

Temp: +.2 °C Bottles Received:
0.5° 0.7° 21

Date: 03/28/20 Time: 0800

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:	L1221929
Samples Received:	05/23/2020
Project Number:	11209891/02
Description:	Plains Darr 2 SRS-LF 1999-62

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

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

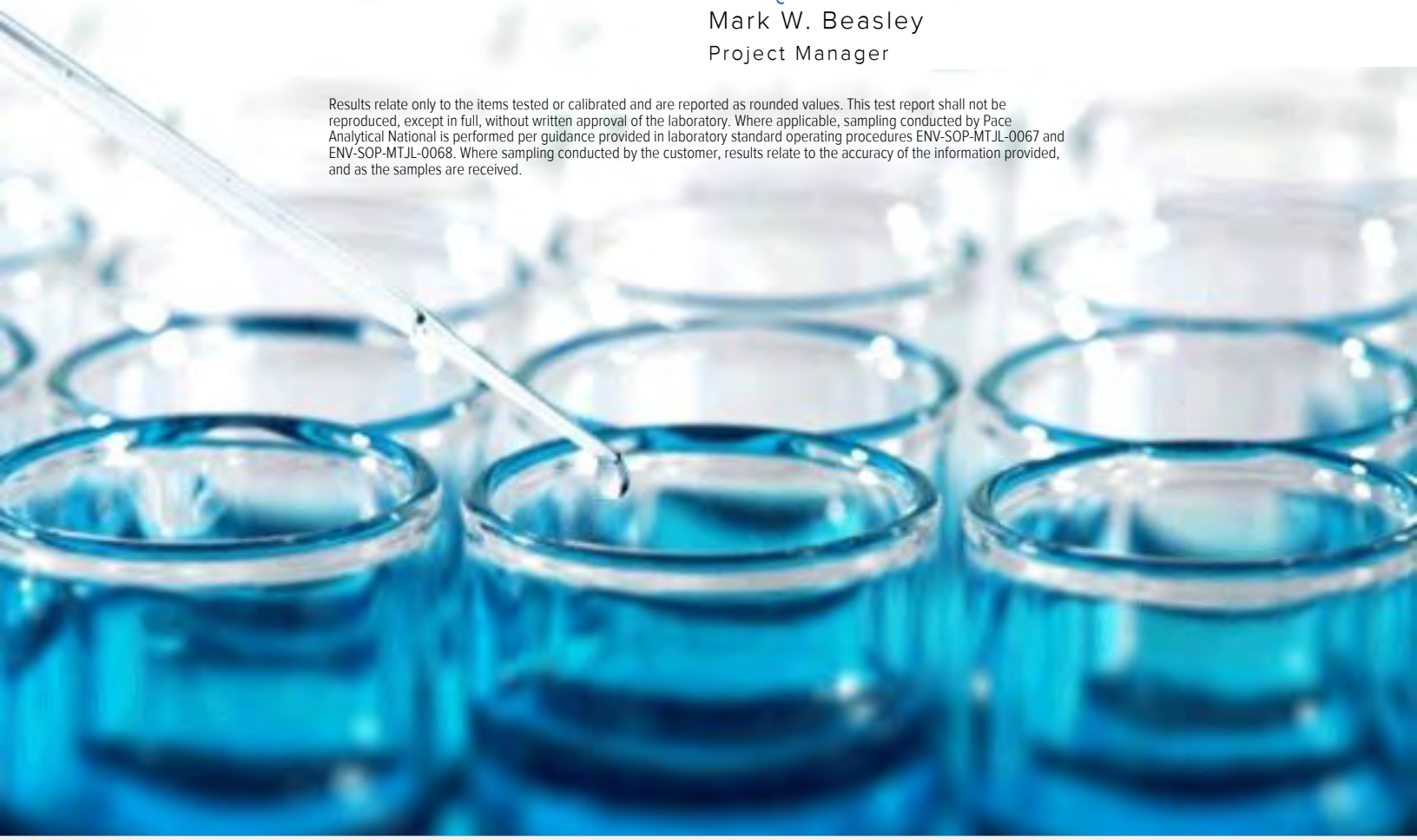


TABLE OF CONTENTS

MW-4R L1221929-01 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 16:55 | 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 16:50	05/30/20 16:50	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1485346	1	06/01/20 17:04	06/01/20 17:04	BMB	Mt. Juliet, TN

MW-6R L1221929-02 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 16:40 | 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 17:11	05/30/20 17:11	BMB	Mt. Juliet, TN

MW-7R L1221929-03 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 17:00 | 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 17:32	05/30/20 17:32	BMB	Mt. Juliet, TN

MW-8R L1221929-04 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 17:20 | 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 17:52	05/30/20 17:52	BMB	Mt. Juliet, TN

MW-9R L1221929-05 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 16:15 | 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 18:13	05/30/20 18:13	BMB	Mt. Juliet, TN

MW-10R L1221929-06 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 16:35 | 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 18:33	05/30/20 18:33	BMB	Mt. Juliet, TN

MW-13 L1221929-07 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 16:20 | 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	WG1484722	1	05/30/20 15:26	05/30/20 15:26	DWR	Mt. Juliet, TN

MW-3R L1221929-08 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 17:45 | 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	WG1484722	1	05/30/20 15:48	05/30/20 15:48	DWR	Mt. Juliet, TN

MW-12 L1221929-09 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 17:25 | 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	WG1484722	1	05/30/20 16:10	05/30/20 16:10	DWR	Mt. Juliet, TN

RW-11 L1221929-10 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 17:50 | 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	WG1484957	1	05/31/20 16:06	05/31/20 16:06	JHH	Mt. Juliet, TN

RW-12 L1221929-11 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 18:10 | 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	WG1484722	1	05/30/20 16:32	05/30/20 16:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1484957	20	05/31/20 16:27	05/31/20 16:27	JHH	Mt. Juliet, TN

DUP-1 L1221929-12 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 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	WG1484722	1	05/30/20 16:54	05/30/20 16:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1484957	1	05/31/20 16:49	05/31/20 16:49	JHH	Mt. Juliet, TN

DUP-2 L1221929-13 GW

Collected by: Heath Boyd | Collected date/time: 05/18/20 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	WG1484722	1	05/30/20 17:17	05/30/20 17:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1484957	20	05/31/20 17:11	05/31/20 17:11	JHH	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

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 18:57
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1221929-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1484722, WG1484957, 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				
		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: 06/02/2020 18:57
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1221929-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1484722, WG1484957, 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).

Revised May 2010

Laboratory Review Checklist: Exception Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 18:57
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1221929-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1484722, WG1484957, 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).

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	U		0.000190	0.000500	0.000500	1	06/01/2020 17:04	WG1485346
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 16:50	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 16:50	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 16:50	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*05/30/2020 16:50*	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*06/01/2020 17:04*	WG1485346

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	05/30/2020 17:11	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 17:11	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 17:11	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 17:11	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*05/30/2020 17:11*	WG1484651

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	05/30/2020 17:32	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 17:32	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 17:32	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 17:32	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*05/30/2020 17:32*	WG1484651

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	05/30/2020 17:52	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 17:52	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 17:52	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 17:52	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/30/2020 17:52*	WG1484651

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	05/30/2020 18:13	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 18:13	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 18:13	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 18:13	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*05/30/2020 18:13*	WG1484651

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	05/30/2020 18:33	WG1484651
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 18:33	WG1484651
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 18:33	WG1484651
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 18:33	WG1484651
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*05/30/2020 18:33*	WG1484651

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	05/30/2020 15:26	WG1484722
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 15:26	WG1484722
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 15:26	WG1484722
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 15:26	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/30/2020 15:26*	WG1484722

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 15:48	WG1484722
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 15:48	WG1484722
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 15:48	WG1484722
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 15:48	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*99.2*				*79.0-125*		*05/30/2020 15:48*	WG1484722

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	05/30/2020 16:10	WG1484722
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 16:10	WG1484722
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 16:10	WG1484722
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 16:10	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*05/30/2020 16:10*	WG1484722

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	0.0609		0.000190	0.000500	0.000500	1	05/31/2020 16:06	WG1484957
Toluene	0.00338		0.000412	0.00100	0.00100	1	05/31/2020 16:06	WG1484957
Ethylbenzene	0.0168		0.000160	0.000500	0.000500	1	05/31/2020 16:06	WG1484957
Total Xylene	0.0651		0.000510	0.00150	0.00150	1	05/31/2020 16:06	WG1484957
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/31/2020 16:06*	WG1484957

RW-12
Collected date/time: 05/18/20 18:10

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	0.987		0.00380	0.000500	0.0100	20	05/31/2020 16:27	WG1484957
Toluene	0.0380		0.000412	0.00100	0.00100	1	05/30/2020 16:32	WG1484722
Ethylbenzene	0.0655		0.000160	0.000500	0.000500	1	05/30/2020 16:32	WG1484722
Total Xylene	0.173		0.000510	0.00150	0.00150	1	05/30/2020 16:32	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*106*				*79.0-125*		*05/30/2020 16:32*	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*99.9*				*79.0-125*		*05/31/2020 16:27*	WG1484957

DUP-1
Collected date/time: 05/18/20 00:00
L1221929

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	05/31/2020 16:49	WG1484957
Toluene	U		0.000412	0.00100	0.00100	1	05/30/2020 16:54	WG1484722
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/30/2020 16:54	WG1484722
Total Xylene	U		0.000510	0.00150	0.00150	1	05/30/2020 16:54	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*05/30/2020 16:54*	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/31/2020 16:49*	WG1484957

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	0.924		0.00380	0.000500	0.0100	20	05/31/2020 17:11	WG1484957
Toluene	0.0360		0.000412	0.00100	0.00100	1	05/30/2020 17:17	WG1484722
Ethylbenzene	0.0651		0.000160	0.000500	0.000500	1	05/30/2020 17:17	WG1484722
Total Xylene	0.170		0.000510	0.00150	0.00150	1	05/30/2020 17:17	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*106*				*79.0-125*		*05/30/2020 17:17*	WG1484722
(S) a,a,a-Trifluorotoluene(PID)	*99.9*				*79.0-125*		*05/31/2020 17:11*	WG1484957

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) R3533470-2 05/30/20 14:39

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)	*97.5*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3533470-1 05/30/20 13:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0468	93.6	77.0-122	
Toluene	0.0500	0.0429	85.8	80.0-121	
Ethylbenzene	0.0500	0.0446	89.2	80.0-123	
Total Xylene	0.150	0.138	92.0	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*99.1*	*79.0-125*	

L1221929-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1221929-07 05/30/20 15:26 • (MS) R3533470-3 05/30/20 23:14 • (MSD) R3533470-4 05/30/20 23:37

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	U	0.0407	0.0441	81.4	88.2	1	10.0-160			8.02	21
Toluene	0.0500	U	0.0378	0.0405	75.6	81.0	1	12.0-148			6.90	21
Ethylbenzene	0.0500	U	0.0397	0.0420	79.4	84.0	1	22.0-149			5.63	21
Total Xylene	0.150	U	0.122	0.129	81.3	86.0	1	13.0-155			5.58	21
(S) a,a,a-Trifluorotoluene(PID)					*100*	*100*		*79.0-125*				

Method Blank (MB)

(MB) R3533650-3 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
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)	*100*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3533650-1 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	
Toluene	0.0500	0.0528	106	80.0-121	
Ethylbenzene	0.0500	0.0549	110	80.0-123	
Total Xylene	0.150	0.167	111	47.0-154	
(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).

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

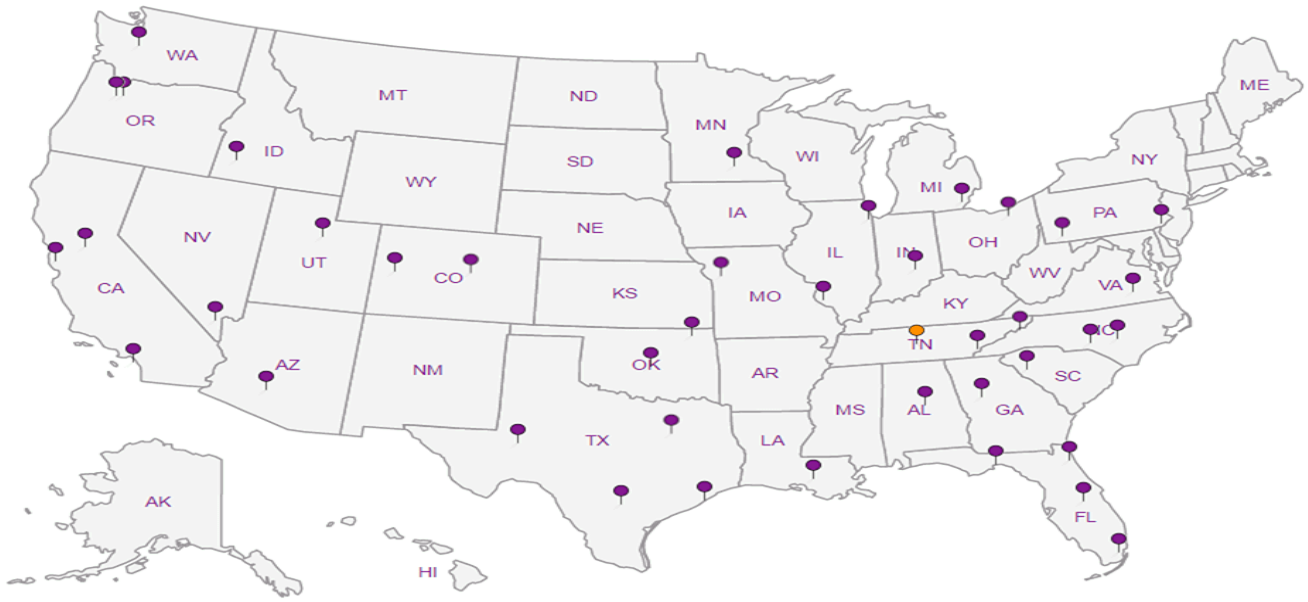
Third Party Federal Accreditations

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	11209891/02	L1221929	06/02/20 18:57	28 of 31

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington New Mexico

Please Circle: PT (MT) CT ET

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

Collected by (print): Heath Boyd

Site/Facility ID #

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 # L1221929

F161

Acctnum: PLAINSGHD

Template: T167386

Prelogin: P774142

PM: 134 - Mark W. Beasley

PB: TB 5-15-20

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-4R	Grab	GW	DTW	5/18/20	1655	3	X		-01
MW-6R		GW			1640		X		02
MW-7R		GW			1700		X		03
MW-8R		GW			1720		X		04
MW-9R		GW			1615		X		05
MW-10R		GW			1635		X		06
MW-13		GW			1620		X		07
MW-3R		GW			1745	2	X		08
MW-12		GW			1725	3	X		09
RW-11		GW			1750	3	X		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 # 749030778

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:		
Relinquished by : (Signature)	5/22/20	830	Received by: (Signature)	Trip Blank Received: Yes / No (No) HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.4 °C Bottles Received: 14
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-27-20 Time: 0845

If preservation required by Login: Date/Time

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington, New Mexico

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

Collected by (print): Heath Boyd

Site/Facility ID #

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)
RW-12	Grab	GW	DTW	5/18/20	1810	3	X		-11
Dup-1	↓	GW	↓	↓	—	↓	X		12
Dup-2	↓	GW	↓	↓	—	↓	X		13
		GW							
		GW							

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 # L1221429

Table #

Acctnum: PLAINSGHD
Template: T167386
Prelogin: P774142
PM: 134 - Mark W. Beasley
PB: TB 5-15-20

Shipped Via: FedEX Ground

* 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

	Date:	Time:		
Relinquished by : (Signature)	5/22/20	830	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.3 °C 2.2-0=2.2 Bottles Received: 39
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-23-20 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Katie Ingram

Pace Analytical®
National Center for Testing & Innovation

Login #: L1221929	Client: PLAINSGHD	Date: 5/23/20	Evaluated by: Jeremy

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
x	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received 2 vials broken for MW-3R. 1 remaining

Client informed by:		Call		Email		Voice Mail		Date: 5/26/20	Time: 0850
TSR Initials: MB	Client Contact:								

Run from unbroken vial

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 26, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1231477
Samples Received:	06/20/2020
Project Number:	11209891-01
Description:	Darr Angell #2 SRS LF 1999-62
Site:	SRS LF 1999-62
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.

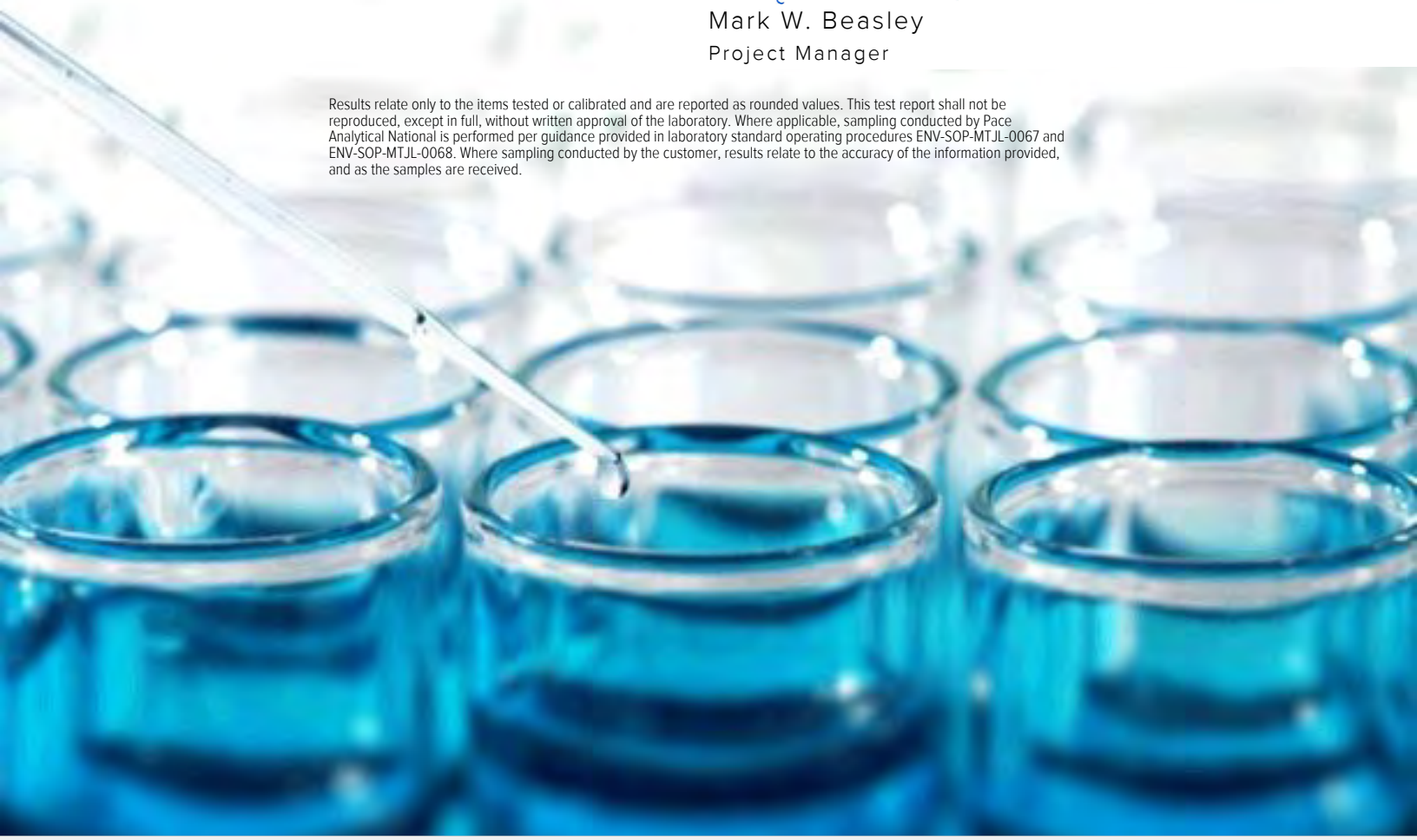


TABLE OF CONTENTS

SAMPLE SUMMARY

SYSTEM OFF L1231477-01 Air

Collected by: Matthew Laughlin
Collected date/time: 06/18/20 13:30
Received date/time: 06/20/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1497132	4000	06/23/20 08:27	06/23/20 08:27	CAW	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

Revised May 2010

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 06/26/2020 14:57
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1231477-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1497132

#[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

Laboratory Name: Pace Analytical National	LRC Date: 06/26/2020 14:57
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1231477-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1497132

#[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: 06/26/2020 14:57
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1231477-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1497132

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 (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	800	2560	26100	83400		4000	WG1497132
Toluene	108-88-3	92.10	800	3010	25500	96100		4000	WG1497132
Ethylbenzene	100-41-4	106	800	3470	5100	22100		4000	WG1497132
m&p-Xylene	1330-20-7	106	1600	6940	6710	29100		4000	WG1497132
o-Xylene	95-47-6	106	800	3470	2690	11700		4000	WG1497132
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	ND	ND		4000	WG1497132
TPH (GC/MS) Low Fraction	8006-61-9	101	800000	3300000	5250000	21700000		4000	WG1497132
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG1497132

Method Blank (MB)

(MB) R3541670-3 06/23/20 03:35

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
MTBE	U		0.0647	0.200
Toluene	U		0.0870	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*98.0*			*60.0-140*

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

(LCS) R3541670-1 06/23/20 02:13 • (LCSD) R3541670-2 06/23/20 02:54

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.27	4.24	114	113	70.0-130			0.705	25
Benzene	3.75	3.87	3.82	103	102	70.0-130			1.30	25
Toluene	3.75	4.11	4.09	110	109	70.0-130			0.488	25
Ethylbenzene	3.75	3.91	3.86	104	103	70.0-130			1.29	25
m&p-Xylene	7.50	8.37	8.22	112	110	70.0-130			1.81	25
o-Xylene	3.75	4.28	4.20	114	112	70.0-130			1.89	25
TPH (GC/MS) Low Fraction	203	217	214	107	105	70.0-130			1.39	25
(S) 1,4-Bromofluorobenzene				*103*	*102*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection 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

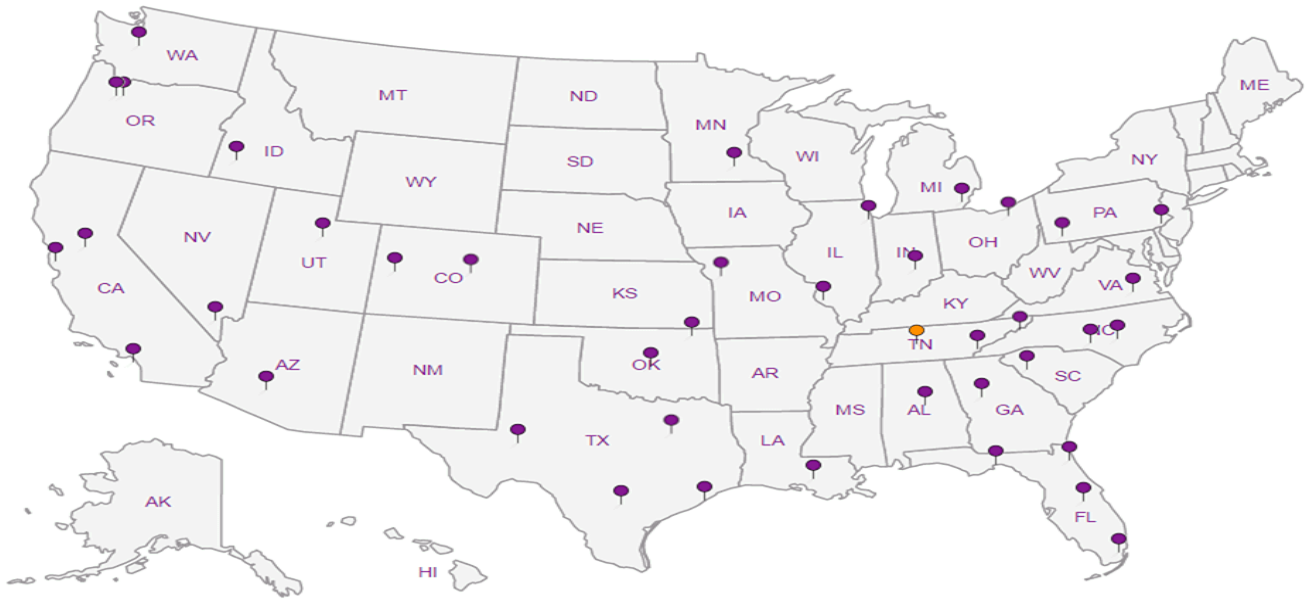
Third Party Federal Accreditations

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	11209891-01	L1231477	06/26/20 14:57	12 of 14

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Attn: 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.co

Project Description: Darr Angell #2 SRS LF 1999-62

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # ~~11209897/01~~ 11209891-01

Lab Project # PLAINSGHD-11209897

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS LF 1999-62

P.O. #

Collected by (signature):

Immediately Packed on Ice N X 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

No. of Cntrs

Analysis / Container / Preservative

M18-MOD Tedlar

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	M18-MOD Tedlar	Remarks	Sample # (lab only)
System ON	G	Air	-	06/18/20	1330	1	X		61
System OFF	G	Air	-	06/18/20	1400	1	X		
		Air							
		Air							

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 # 123477

Table # A011

Acctnum:

Template: T163764

Prelogin: P779275

PM: 134 - Mark W. Beasley

PB: LC 6/18

Shipped Via: FedEX Ground

* 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 # 1380 3971 3380

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	
	06/19/20	12:30			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	6/19/20	16:30	FedEx	Amb	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
				6/19/20 8:45	

Matt Shacklock

Pace Analytical®
National Center for Testing & Innovation

Login #:1231477	Client:PLAINSGHD	Date:6/20	Evaluated by:Monica

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received ID SYSTEM ON deflated

Client informed by:		Call		Email		Voice Mail		Date: 6/22/20	Time: 0915
TSR Initials: MB	Client Contact: Becky H								

Login Instructions:

Client notified

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 28, 2020

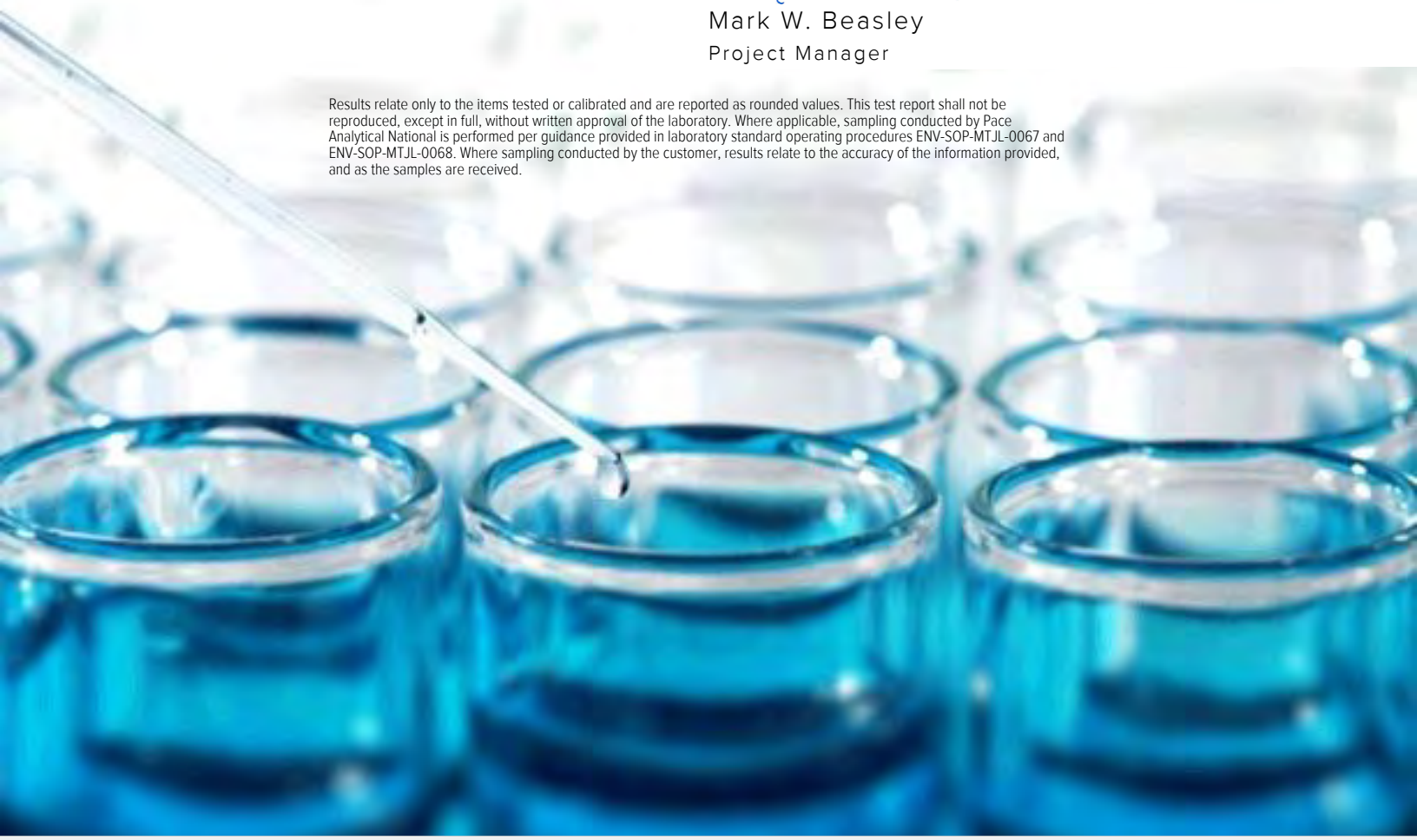
Plains All American, LP - GHD

Sample Delivery Group:	L1233089
Samples Received:	06/25/2020
Project Number:	11209891
Description:	Darr Angell #2 SRS LF 1999-62
Site:	SRS LF 1999-62
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.



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SAMPLE SUMMARY

SYSTEM ON L1233089-01 Air

	Collected by	Collected date/time	Received date/time
		06/23/20 13:07	06/25/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1499156	8000	06/26/20 23:39	06/26/20 23:39	CAW	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

Laboratory Name: Pace Analytical National	LRC Date: 06/28/2020 20:51
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1233089-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1499156

#[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: 06/28/2020 20:51
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1233089-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1499156

#[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: 06/28/2020 20:51
Project Name: Darr Angell #2 SRS LF 1999-62	Laboratory Job Number: L1233089-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1499156

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 (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	1600	5110	63600	203000		8000	WG1499156
Toluene	108-88-3	92.10	1600	6030	56300	212000		8000	WG1499156
Ethylbenzene	100-41-4	106	1600	6940	9050	39200		8000	WG1499156
m&p-Xylene	1330-20-7	106	3200	13900	11100	48100		8000	WG1499156
o-Xylene	95-47-6	106	1600	6940	4060	17600		8000	WG1499156
Methyl tert-butyl ether	1634-04-4	88.10	1600	5770	ND	ND		8000	WG1499156
TPH (GC/MS) Low Fraction	8006-61-9	101	1600000	6610000	10700000	44200000		8000	WG1499156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.6*				WG1499156

Method Blank (MB)

(MB) R3543455-3 06/26/20 10:20

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
MTBE	U		0.0647	0.200
Toluene	U		0.0870	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*94.9*			*60.0-140*

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

(LCS) R3543455-1 06/26/20 08:59 • (LCSD) R3543455-2 06/26/20 09:39

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.40	4.39	117	117	70.0-130			0.228	25
Benzene	3.75	4.55	4.51	121	120	70.0-130			0.883	25
Toluene	3.75	4.71	4.63	126	123	70.0-130			1.71	25
Ethylbenzene	3.75	4.41	4.36	118	116	70.0-130			1.14	25
m&p-Xylene	7.50	9.39	9.29	125	124	70.0-130			1.07	25
o-Xylene	3.75	4.51	4.45	120	119	70.0-130			1.34	25
TPH (GC/MS) Low Fraction	203	254	251	125	124	70.0-130			1.19	25
(S) 1,4-Bromofluorobenzene				*97.8*	*98.5*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection 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

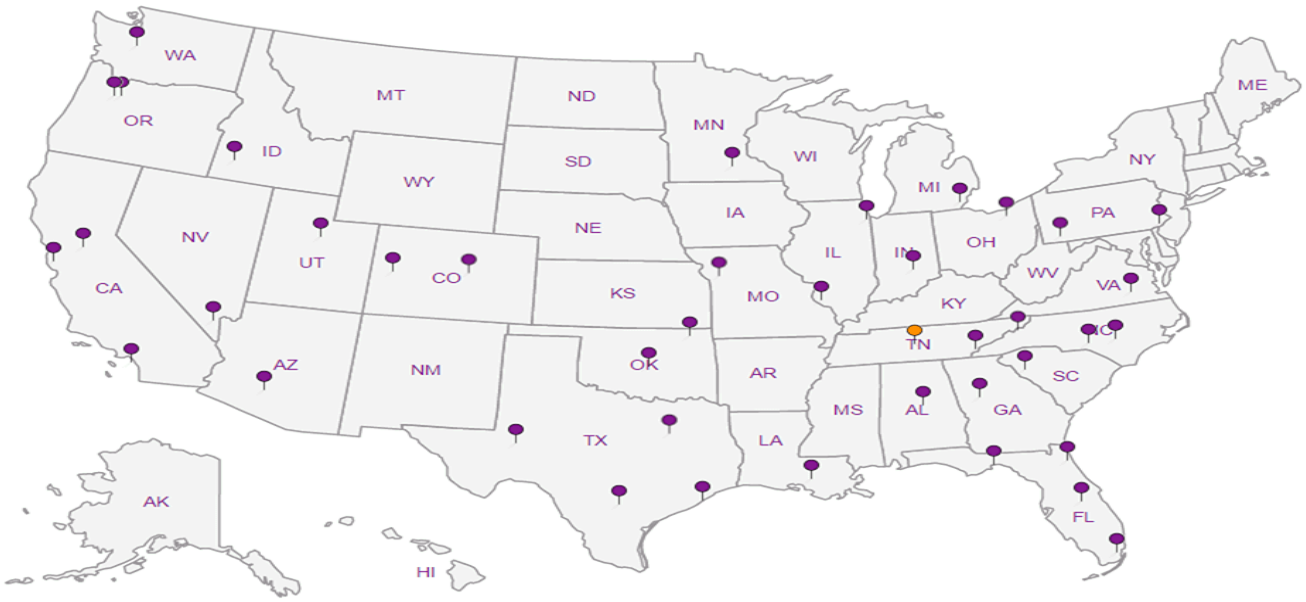
Third Party Federal Accreditations

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	11209891	L1233089	06/28/20 20:51	12 of 13

Chain of Custody Page 1 of 1

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# L1233089
A181

Acctnum: PLAINSGHD

Template:

Prelogin:

TSR:

PB:

Shipped Via:

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

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

Report to: **Becky Haskell**

Email To: **becky.haskell@ghd.com; glenn.quinney@ghd.com, christopher**

Project Description: **Darr Angell #2 SRS LF 1999-62**

City/State Collected: **Lea County NM**

Phone: **432-250-7917**
Fax:

Client Project # **11209899-02**

Lab Project # **PlainsGHD-11209891**

Collected by (print):

Site/Facility ID # **SRS LF 1999-62**

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	Pres Chk	M18-MOD Tedlar	Remarks	Sample # (lab only)
System On	Grab	Air	—	6-23-20	1307	2		X		-01

* 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 # 179030302434

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Joe Muila	6-24-20	0730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: AMB °C Bottles Received: 2	If preservation required by Login: Date/Time
	6-24-20	16:30	FedEx		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/25/20 Time: 8:45	Hold: / Condition: NCF / OK
			Sandy Yosseff		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 01, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1264759
Samples Received:	09/22/2020
Project Number:	11209891/02
Description:	Plains Darr 2 SRS-LF 1999-62

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

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

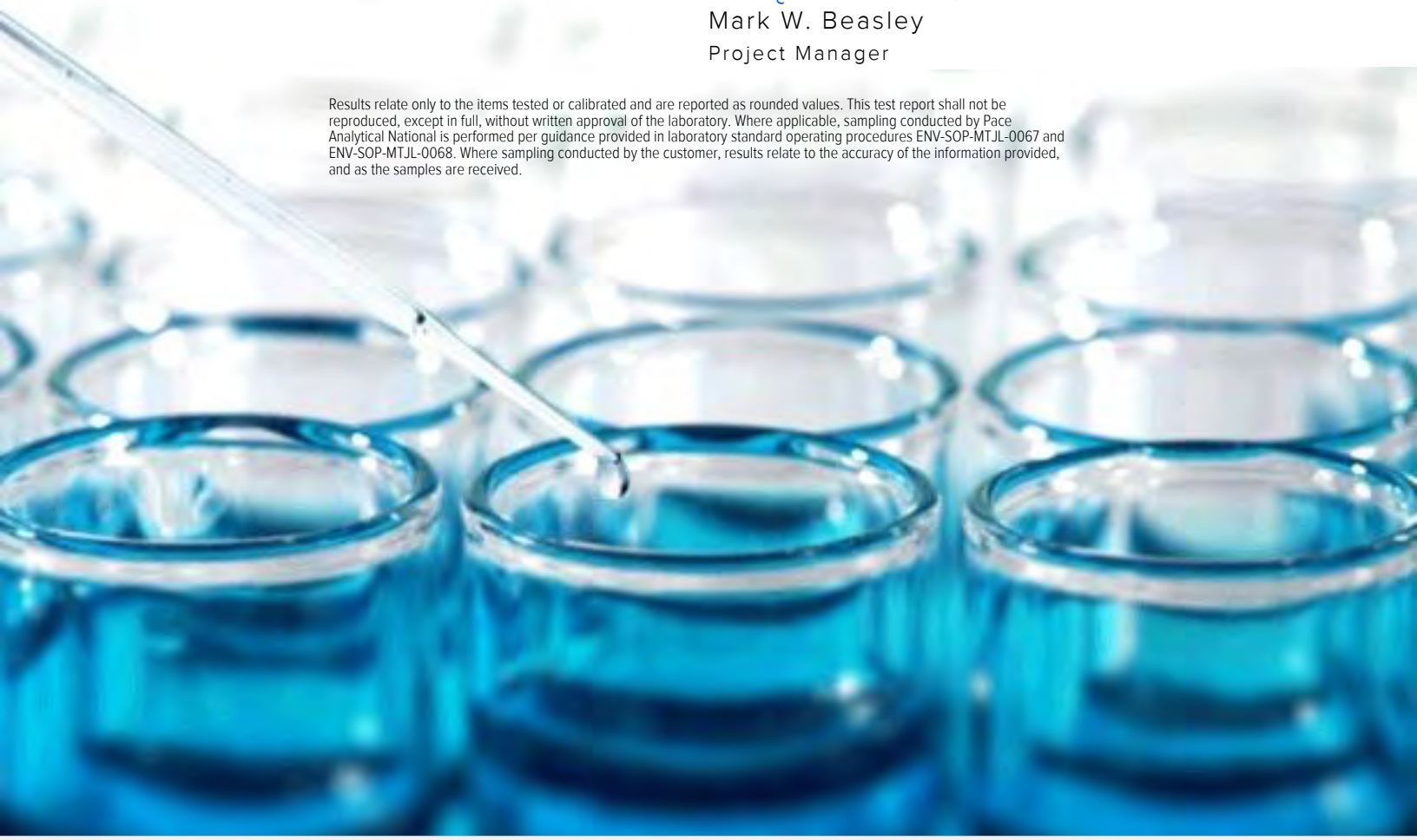


TABLE OF CONTENTS

MW-4R-091620 L1264759-01 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 09:00 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 19:14	09/25/20 19:14	ACG	Mt. Juliet, TN

MW-3R-091620 L1264759-02 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 09:15 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 19:40	09/25/20 19:40	ACG	Mt. Juliet, TN

MW-6R-091620 L1264759-03 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 09:30 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 20:05	09/25/20 20:05	ACG	Mt. Juliet, TN

MW-7R-091620 L1264759-04 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 09:45 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 20:31	09/25/20 20:31	ACG	Mt. Juliet, TN

MW-8R-091620 L1264759-05 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 10:00 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 20:56	09/25/20 20:56	ACG	Mt. Juliet, TN

MW-9R-091620 L1264759-06 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 10:15 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 21:21	09/25/20 21:21	ACG	Mt. Juliet, TN

MW-10R-091620 L1264759-07 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 10:30 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 21:46	09/25/20 21:46	ACG	Mt. Juliet, TN

MW-12-091620 L1264759-08 GW

Collected by: Matthew Laughlin | Collected date/time: 09/16/20 10:45 | Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 22:11	09/25/20 22:11	ACG	Mt. Juliet, TN

MW-13-091620 L1264759-09 GW

Collected by: Matthew Laughlin
Collected date/time: 09/16/20 11:00
Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 22:37	09/25/20 22:37	ACG	Mt. Juliet, TN

RW-11-091620 L1264759-10 GW

Collected by: Matthew Laughlin
Collected date/time: 09/16/20 11:30
Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 23:02	09/25/20 23:02	ACG	Mt. Juliet, TN

RW-12-091620 L1264759-11 GW

Collected by: Matthew Laughlin
Collected date/time: 09/16/20 12:00
Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1551312	10	09/30/20 08:13	09/30/20 08:13	JAH	Mt. Juliet, TN

DUP-1-091620 L1264759-12 GW

Collected by: Matthew Laughlin
Collected date/time: 09/16/20 00:00
Received date/time: 09/22/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1549230	1	09/25/20 23:27	09/25/20 23:27	ACG	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: 10/01/2020 11:23
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1264759-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1549230 and WG1551312

#[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

Laboratory Name: Pace Analytical National	LRC Date: 10/01/2020 11:23
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1264759-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1549230 and WG1551312

#[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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Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/01/2020 11:23
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1264759-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1549230 and WG1551312

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	09/25/2020 19:14	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 19:14	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 19:14	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 19:14	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*99.5*				*79.0-125*		*09/25/2020 19:14*	WG1549230

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	0.00186		0.000190	0.000500	0.000500	1	09/25/2020 19:40	WG1549230
Toluene	0.000779	J	0.000412	0.00100	0.00100	1	09/25/2020 19:40	WG1549230
Ethylbenzene	0.000239	J	0.000160	0.000500	0.000500	1	09/25/2020 19:40	WG1549230
Total Xylene	0.000974	J	0.000510	0.00150	0.00150	1	09/25/2020 19:40	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*97.4*				*79.0-125*		*09/25/2020 19:40*	WG1549230

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	09/25/2020 20:05	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 20:05	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 20:05	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 20:05	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*79.0-125*		*09/25/2020 20:05*	WG1549230

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	09/25/2020 20:31	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 20:31	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 20:31	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 20:31	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*99.1*				*79.0-125*		*09/25/2020 20:31*	WG1549230

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	09/25/2020 20:56	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 20:56	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 20:56	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 20:56	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*98.8*				*79.0-125*		*09/25/2020 20:56*	WG1549230

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	09/25/2020 21:21	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 21:21	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 21:21	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 21:21	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*99.6*				*79.0-125*		*09/25/2020 21:21*	WG1549230

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	09/25/2020 21:46	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 21:46	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 21:46	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 21:46	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/25/2020 21:46*	WG1549230

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	0.0383		0.000190	0.000500	0.000500	1	09/25/2020 22:11	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 22:11	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 22:11	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 22:11	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*96.4*				*79.0-125*		*09/25/2020 22:11*	WG1549230

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	09/25/2020 22:37	WG1549230
Toluene	U		0.000412	0.00100	0.00100	1	09/25/2020 22:37	WG1549230
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/25/2020 22:37	WG1549230
Total Xylene	U		0.000510	0.00150	0.00150	1	09/25/2020 22:37	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*79.0-125*		*09/25/2020 22:37*	WG1549230

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	0.0140		0.000190	0.000500	0.000500	1	09/25/2020 23:02	WG1549230
Toluene	0.00279		0.000412	0.00100	0.00100	1	09/25/2020 23:02	WG1549230
Ethylbenzene	0.00415		0.000160	0.000500	0.000500	1	09/25/2020 23:02	WG1549230
Total Xylene	0.0186		0.000510	0.00150	0.00150	1	09/25/2020 23:02	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*97.6*				*79.0-125*		*09/25/2020 23:02*	WG1549230

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	0.561		0.00190	0.000500	0.00500	10	09/30/2020 08:13	WG1551312
Toluene	0.00979	J	0.00412	0.00100	0.0100	10	09/30/2020 08:13	WG1551312
Ethylbenzene	0.165		0.00160	0.000500	0.00500	10	09/30/2020 08:13	WG1551312
Total Xylene	0.0986		0.00510	0.00150	0.0150	10	09/30/2020 08:13	WG1551312
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*09/30/2020 08:13*	WG1551312

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	0.0135		0.000190	0.000500	0.000500	1	09/25/2020 23:27	WG1549230
Toluene	0.00268		0.000412	0.00100	0.00100	1	09/25/2020 23:27	WG1549230
Ethylbenzene	0.00397		0.000160	0.000500	0.000500	1	09/25/2020 23:27	WG1549230
Total Xylene	0.0180		0.000510	0.00150	0.00150	1	09/25/2020 23:27	WG1549230
(S) a,a,a-Trifluorotoluene(PID)	*97.2*				*79.0-125*		*09/25/2020 23:27*	WG1549230

Method Blank (MB)

(MB) R3575785-2 09/25/20 18:27

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)	*99.1*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3575785-1 09/25/20 17:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0468	93.6	77.0-122	
Toluene	0.0500	0.0475	95.0	80.0-121	
Ethylbenzene	0.0500	0.0503	101	80.0-123	
Total Xylene	0.150	0.149	99.3	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*98.1*	*79.0-125*	

Method Blank (MB)

(MB) R3576133-3 09/30/20 02:17

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) R3576133-1 09/30/20 00:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0459	91.8	77.0-122	
Toluene	0.0500	0.0470	94.0	80.0-121	
Ethylbenzene	0.0500	0.0496	99.2	80.0-123	
Total Xylene	0.150	0.148	98.7	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
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

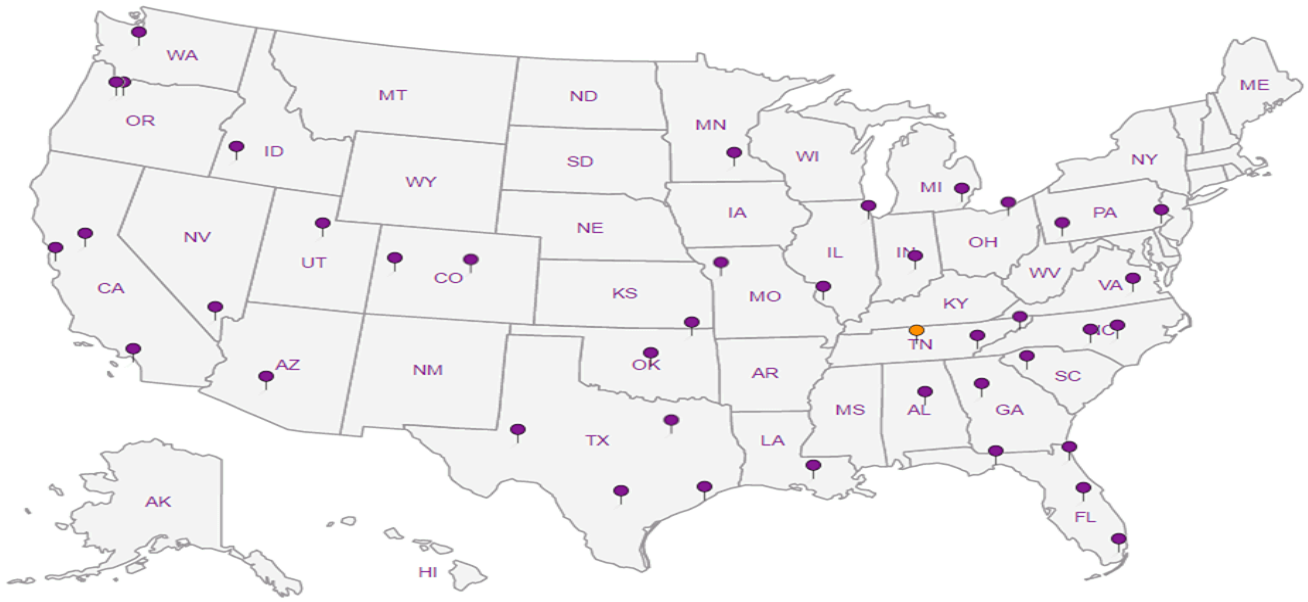
Third Party Federal Accreditations

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	11209891/02	L1264759	10/01/20 11:23	25 of 27

Chain of Custody

Page 1 of 2

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

Collected by (print): Matthew Laughlin

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	~~PAHSIMLV1 40mlAmb-NoPres-WT~~ (NL)	Remarks	Sample # (lab only)
MW-4R-091620	G	GW	-	09/16/20	0900	3	3			01
MW-3R-091620	G	GW	-	09/16/20	0915	3	3			02
MW-6R-091620	G	GW	-	09/16/20	0930	3	3			03
MW-7R-091620	G	GW	-	09/16/20	0945	3	3			04
MW-8R-091620	G	GW	-	09/16/20	1000	3	3			05
MW-9R-091620	G	GW	-	09/16/20	1015	3	3			06
MW-10R-091620	G	GW	-	09/16/20	1030	3	3			07
MW-12-091620	G	GW	-	09/16/20	1045	3	3			08
MW-13-091620	G	GW	-	09/16/20	1100	3	3			09
RW-11-091620	G	GW	-	09/16/20	1130	3	3			10

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 # 164759

Table # F137

Acctnum: PLAINSGHD

Template: T167386

Prelogin: P795999

PM:

PB:

Shipped Via: FedEX Ground

* 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 # 1922 0813 2454

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:		
Relinquished by: (Signature)	9-21-20	13:00	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	9-21-20	16:30	Received by: (Signature)	Temp: 0.3-2=0.1 °C Bottles Received: 36
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/22/20 Time: 900

If preservation required by Login: Date/Time

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

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

Chain of Custody Page 2 of 3

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 # 264759

Table #

Acctnum: PLAINSGHD

Template: T167386

Prelogin: P795999

PM:

PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	PAHSIMLV 40mlAmb-NoPres-WT (ML)	Remarks	Sample # (lab only)
RW-12-091620	G	GW	-	09/16/20	1200	3	3			11
Dup-1-091620	G	GW	-	09/16/20	-	3	3			12
		GW								
		GW								
		GW								
		GW								
		GW								
		GW								
		GW								
		GW								
		GW								

* 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 # 1927 6833 2491

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)
	9-21-20	15:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9.21.20	16:30	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Olivia Tirres

Trip Blank Received: Yes / (No)
HCL / MeoH
TBR

Temp: °C 0.3 2.0 1.4 Bottles Received: 36

Date: 9/22/20 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 08, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1270300
Samples Received:	10/07/2020
Project Number:	11209885/02
Description:	Darr Angell #1 SRS Darr Angell #1
Site:	SRS DARR ANGELL #1
Report To:	Becky Haskell 2135 S Loop 250 W Midland, TX 79703

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

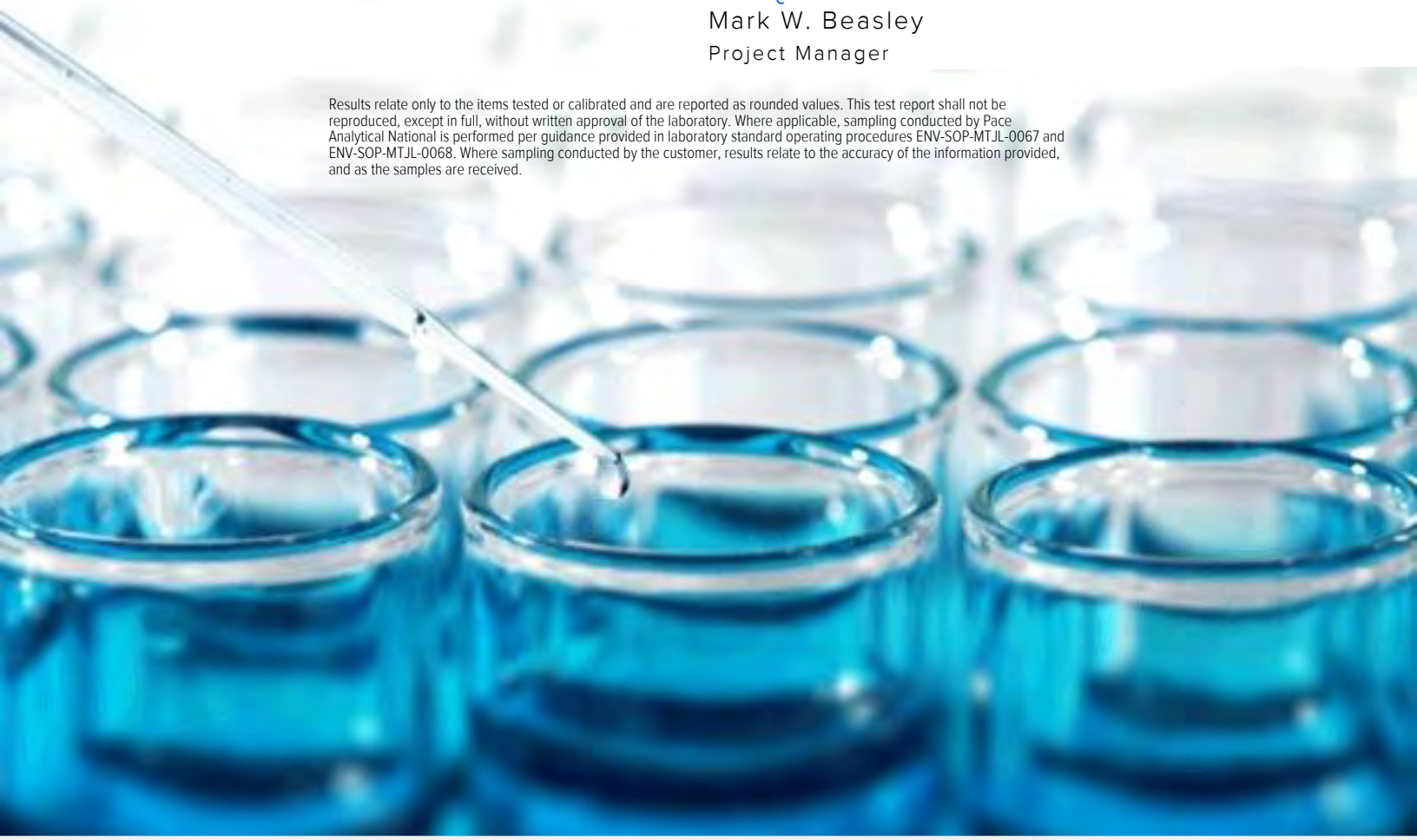


TABLE OF CONTENTS

DARR 2 PUMP ON L1270300-01 Air

			Collected by	Collected date/time	Received date/time
				10/06/20 10:10	10/07/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1555481	2000	10/08/20 06:38	10/08/20 06:38	MBF	Mt. Juliet, TN

DARR 2 PUMP OFF L1270300-02 Air

			Collected by	Collected date/time	Received date/time
				10/06/20 10:12	10/07/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1555481	80	10/08/20 07:17	10/08/20 07:17	MBF	Mt. Juliet, TN

DARR 1 PUMP ON L1270300-03 Air

			Collected by	Collected date/time	Received date/time
				10/06/20 10:30	10/07/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1555481	400	10/08/20 07:52	10/08/20 07:52	MBF	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: 10/08/2020 17:12
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1270300-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1555481

#[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: 10/08/2020 17:12
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1270300-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1555481

#[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: Exception Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/08/2020 17:12
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1270300-01, 02 and 03
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1555481

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 (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	21200	67700		2000	WG1555481
Toluene	108-88-3	92.10	400	1510	23900	90000		2000	WG1555481
Ethylbenzene	100-41-4	106	400	1730	3360	14600		2000	WG1555481
m&p-Xylene	1330-20-7	106	800	3470	5680	24600		2000	WG1555481
o-Xylene	95-47-6	106	400	1730	1540	6680		2000	WG1555481
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG1555481
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	2050000	8470000		2000	WG1555481
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.9*				WG1555481

DARK 2 PUMP OFF
Collected date/time: 10/06/20 10:12

SAMPLE RESULTS - 02

L1270300

ONE LAB. NAT

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	16.0	51.1	2640	8430		80	WG1555481
Toluene	108-88-3	92.10	16.0	60.3	3440	13000		80	WG1555481
Ethylbenzene	100-41-4	106	16.0	69.4	473	2050		80	WG1555481
m&p-Xylene	1330-20-7	106	32.0	139	869	3770		80	WG1555481
o-Xylene	95-47-6	106	16.0	69.4	260	1130		80	WG1555481
Methyl tert-butyl ether	1634-04-4	88.10	16.0	57.7	ND	ND		80	WG1555481
TPH (GC/MS) Low Fraction	8006-61-9	101	16000	66100	292000	1210000		80	WG1555481
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.3*				WG1555481

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	80.0	256	15300	48900		400	WG1555481
Toluene	108-88-3	92.10	80.0	301	27900	105000		400	WG1555481
Ethylbenzene	100-41-4	106	80.0	347	5750	24900		400	WG1555481
m&p-Xylene	1330-20-7	106	160	694	12000	52000		400	WG1555481
o-Xylene	95-47-6	106	80.0	347	3800	16500		400	WG1555481
Methyl tert-butyl ether	1634-04-4	88.10	80.0	288	ND	ND		400	WG1555481
TPH (GC/MS) Low Fraction	8006-61-9	101	80000	330000	1780000	7350000		400	WG1555481
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG1555481

Method Blank (MB)

(MB) R3579127-3 10/07/20 20:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
MTBE	U		0.0647	0.200
Toluene	U		0.0870	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*95.7*			*60.0-140*

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

(LCS) R3579127-1 10/07/20 19:12 • (LCSD) R3579127-2 10/07/20 19:51

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	3.53	3.70	94.1	98.7	70.0-130			4.70	25
Benzene	3.75	3.60	3.65	96.0	97.3	70.0-130			1.38	25
Toluene	3.75	3.60	3.64	96.0	97.1	70.0-130			1.10	25
Ethylbenzene	3.75	3.59	3.71	95.7	98.9	70.0-130			3.29	25
m&p-Xylene	7.50	7.34	7.55	97.9	101	70.0-130			2.82	25
o-Xylene	3.75	3.59	3.74	95.7	99.7	70.0-130			4.09	25
TPH (GC/MS) Low Fraction	203	204	213	100	105	70.0-130			4.32	25
(S) 1,4-Bromofluorobenzene				*100*	*100*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection 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

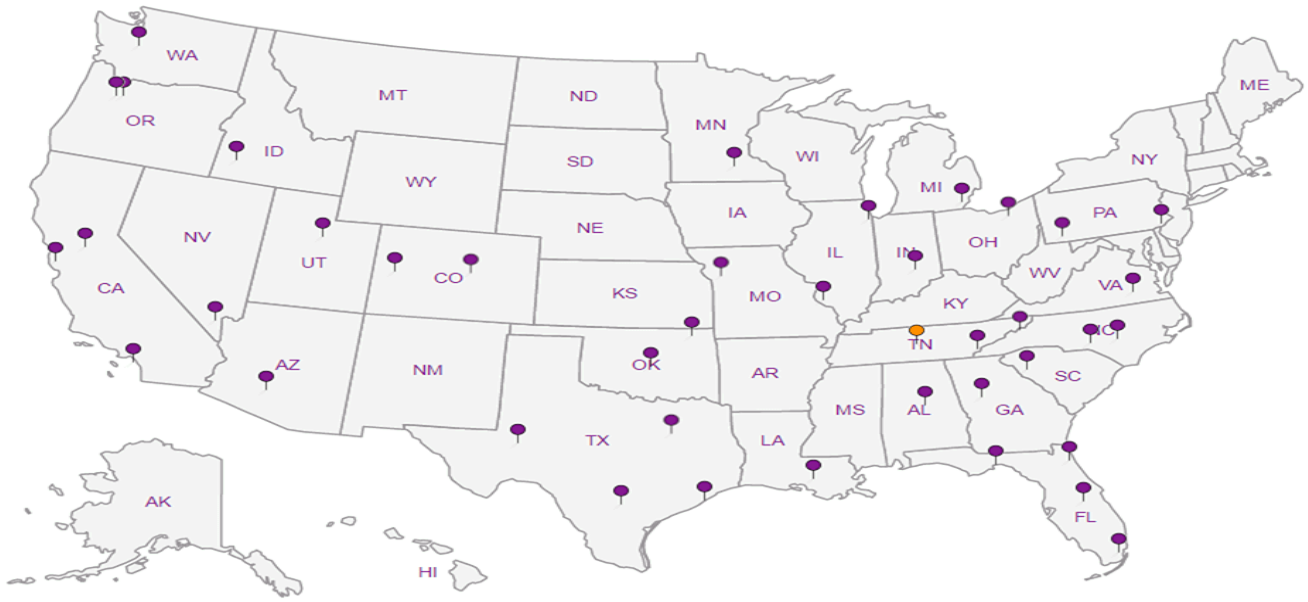
Third Party Federal Accreditations

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	11209885/02	L1270300	10/08/20 17:12	14 of 16

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

Billing Information:
Attn: 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.co

Project Description: **Darr Angell #1 SRS Darr Angell #1**

City/State Collected:

Please Circle: PT MT CT ET

Phone: **432-250-7917**

Client Project # **11209885/02**

Lab Project # **PLAINSGHD-11209885**

Collected by (print):

Site/Facility ID # **SRS DARR ANGELL #1**

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 TD	M18-MOD Tedlar	Analysis / Container / Preservative	Remarks	Sample # (lab only)
Darr 2 pump on		Air		10/6/20	1010	1	X			-01
Darr 2 pump off		Air			1012	1				-02
Darr 1 pump on		Air			1030	1				-03
Darr 1 pump off		Air			1035					

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 # L1270300
C149

Acctnum: PLAINSGHD
Template: T163766
Prelogin: P795993
PM: 134 - Mark W. Beasley
PB: 9-3-20 MWB
Shipped Via: FedEX Ground

* 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
	10/6/20	727	Rebecca Haskell	
Relinquished by : (Signature) Rebecca Haskell	Date: 10/6/20	Time: 1300	Received by: (Signature)	Temp: Amb °C Bottles Received: 3
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/7/20 Time: 8:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Troy Dunlap

Pace Analytical®
National Center for Testing & Innovation

Login #: L1270300	Client: PLAINSGHD	Date: 10/7/20	Evaluated by: Troy Dunlap

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cour
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
X	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Tedlar received broken for DARR 1 PUMP OFF.

Client informed by:		Call		Email		Voice Mail		Date: 10/7/20	Time: 1315
TSR Initials: MB	Client Contact: Becky Haskell								

Login Instructions:

Client notified

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 11, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1281156
Samples Received:	11/03/2020
Project Number:	11209891/02
Description:	Plains Darr 2 SRS-LF 1999-62

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

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

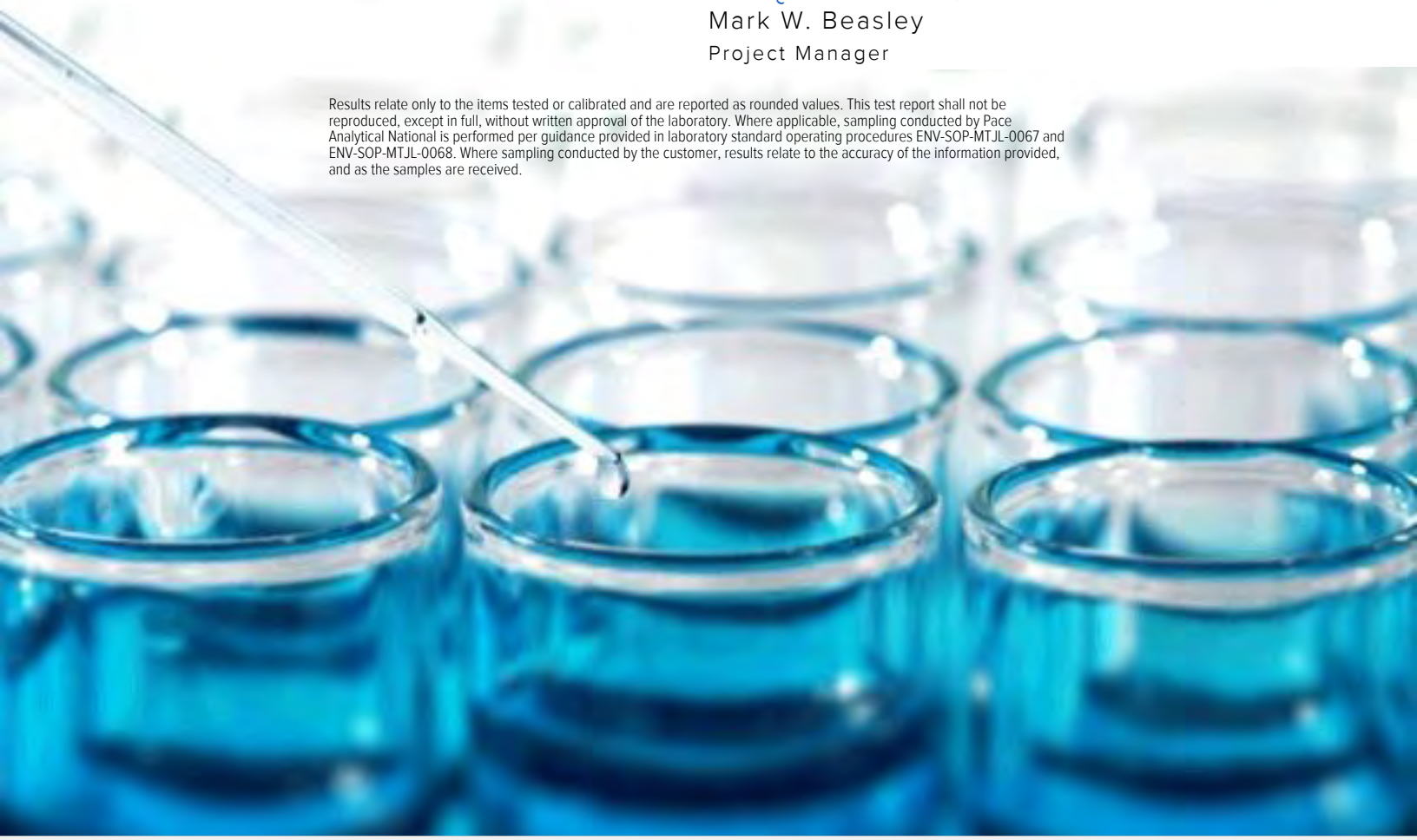


TABLE OF CONTENTS

MW-4R L1281156-01 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 10:20 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 15:55	11/07/20 15:55	JHH	Mt. Juliet, TN

MW-6R L1281156-02 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 10:45 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 16:18	11/07/20 16:18	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 16:23	LEA	Mt. Juliet, TN

MW-7R L1281156-03 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 11:10 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 16:40	11/07/20 16:40	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 16:43	LEA	Mt. Juliet, TN

MW-8R L1281156-04 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 11:35 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 17:02	11/07/20 17:02	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 17:03	LEA	Mt. Juliet, TN

MW-9R L1281156-05 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 12:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 17:24	11/07/20 17:24	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 17:23	LEA	Mt. Juliet, TN

MW-10R L1281156-06 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 12:20 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 17:47	11/07/20 17:47	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 17:43	LEA	Mt. Juliet, TN

MW-13 L1281156-07 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 12:40 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 18:09	11/07/20 18:09	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 18:04	LEA	Mt. Juliet, TN

Cp Tc Ss Cn Tr Sr Qc Gl Al Sc

MW-3R L1281156-08 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 12:50 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572590	1	11/07/20 18:31	11/07/20 18:31	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 18:24	LEA	Mt. Juliet, TN

MW-12 L1281156-09 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 13:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 02:44	11/07/20 02:44	TPR	Mt. Juliet, TN

RW-11 L1281156-10 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 13:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 03:06	11/07/20 03:06	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 18:44	LEA	Mt. Juliet, TN

RW-12 L1281156-11 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 13:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	10	11/07/20 09:20	11/07/20 09:20	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 19:04	LEA	Mt. Juliet, TN

DUP-1 L1281156-12 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 00:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 03:28	11/07/20 03:28	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 19:24	LEA	Mt. Juliet, TN

DUP-2 L1281156-13 GW

Collected by: Zach Comino | Collected date/time: 10/30/20 00:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 03:50	11/07/20 03:50	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571230	1	11/05/20 07:40	11/05/20 19:45	LEA	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

Revised May 2010

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 11/11/2020 16:41
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1281156-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571230, WG1572590 and WG1572605

#[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: 11/11/2020 16:41
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1281156-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571230, WG1572590 and WG1572605

#[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: 11/11/2020 16:41
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1281156-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 and 13
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571230, WG1572590 and WG1572605

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	11/07/2020 15:55	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 15:55	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 15:55	WG1572590
Total Xylene	0.000712	J	0.000510	0.00150	0.00150	1	11/07/2020 15:55	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 15:55*	WG1572590

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	11/07/2020 16:18	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 16:18	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 16:18	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 16:18	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 16:18*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 16:23	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 16:23	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 16:23	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 16:23	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 16:23	WG1571230
(S) Nitrobenzene-d5	*83.2*				*31.0-160*		*11/05/2020 16:23*	WG1571230
(S) 2-Fluorobiphenyl	*105*				*48.0-148*		*11/05/2020 16:23*	WG1571230
(S) p-Terphenyl-d14	*107*				*37.0-146*		*11/05/2020 16:23*	WG1571230

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	11/07/2020 16:40	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 16:40	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 16:40	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 16:40	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 16:40*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 16:43	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 16:43	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 16:43	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 16:43	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 16:43	WG1571230
(S) Nitrobenzene-d5	*83.7*				*31.0-160*		*11/05/2020 16:43*	WG1571230
(S) 2-Fluorobiphenyl	*108*				*48.0-148*		*11/05/2020 16:43*	WG1571230
(S) p-Terphenyl-d14	*129*				*37.0-146*		*11/05/2020 16:43*	WG1571230

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	11/07/2020 17:02	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 17:02	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 17:02	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 17:02	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 17:02*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 17:03	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 17:03	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:03	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 17:03	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 17:03	WG1571230
(S) Nitrobenzene-d5	*84.2*				*31.0-160*		*11/05/2020 17:03*	WG1571230
(S) 2-Fluorobiphenyl	*112*				*48.0-148*		*11/05/2020 17:03*	WG1571230
(S) p-Terphenyl-d14	*143*				*37.0-146*		*11/05/2020 17:03*	WG1571230

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	11/07/2020 17:24	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 17:24	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 17:24	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 17:24	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 17:24*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 17:23	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 17:23	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:23	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 17:23	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 17:23	WG1571230
(S) Nitrobenzene-d5	*84.7*				*31.0-160*		*11/05/2020 17:23*	WG1571230
(S) 2-Fluorobiphenyl	*112*				*48.0-148*		*11/05/2020 17:23*	WG1571230
(S) p-Terphenyl-d14	*144*				*37.0-146*		*11/05/2020 17:23*	WG1571230

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	11/07/2020 17:47	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 17:47	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 17:47	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 17:47	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 17:47*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 17:43	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 17:43	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 17:43	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 17:43	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 17:43	WG1571230
(S) Nitrobenzene-d5	*84.7*				*31.0-160*		*11/05/2020 17:43*	WG1571230
(S) 2-Fluorobiphenyl	*113*				*48.0-148*		*11/05/2020 17:43*	WG1571230
(S) p-Terphenyl-d14	*132*				*37.0-146*		*11/05/2020 17:43*	WG1571230

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	11/07/2020 18:09	WG1572590
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 18:09	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:09	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 18:09	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 18:09*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 18:04	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 18:04	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:04	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 18:04	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 18:04	WG1571230
(S) Nitrobenzene-d5	*85.3*				*31.0-160*		*11/05/2020 18:04*	WG1571230
(S) 2-Fluorobiphenyl	*111*				*48.0-148*		*11/05/2020 18:04*	WG1571230
(S) p-Terphenyl-d14	*126*				*37.0-146*		*11/05/2020 18:04*	WG1571230

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	0.00292		0.000190	0.000500	0.000500	1	11/07/2020 18:31	WG1572590
Toluene	0.000566	J	0.000412	0.00100	0.00100	1	11/07/2020 18:31	WG1572590
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:31	WG1572590
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 18:31	WG1572590
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 18:31*	WG1572590

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Acenaphthene	0.0000230	J	0.0000190	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Dibenzofuran	0.000308		0.0000191	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 18:24	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 18:24	WG1571230
Phenanthrene	0.0000352	J	0.0000180	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:24	WG1571230
1-Methylnaphthalene	0.000284		0.0000687	0.000250	0.000250	1	11/05/2020 18:24	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 18:24	WG1571230
(S) Nitrobenzene-d5	*86.8*				*31.0-160*		*11/05/2020 18:24*	WG1571230
(S) 2-Fluorobiphenyl	*107*				*48.0-148*		*11/05/2020 18:24*	WG1571230
(S) p-Terphenyl-d14	*120*				*37.0-146*		*11/05/2020 18:24*	WG1571230

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	0.00282		0.000190	0.000500	0.000500	1	11/07/2020 02:44	WG1572605
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 02:44	WG1572605
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 02:44	WG1572605
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 02:44	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 02:44*	WG1572605

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	0.00585		0.000190	0.000500	0.000500	1	11/07/2020 03:06	WG1572605
Toluene	0.000519	J	0.000412	0.00100	0.00100	1	11/07/2020 03:06	WG1572605
Ethylbenzene	0.00243		0.000160	0.000500	0.000500	1	11/07/2020 03:06	WG1572605
Total Xylene	0.0112		0.000510	0.00150	0.00150	1	11/07/2020 03:06	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 03:06*	WG1572605

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	0.000285		0.0000190	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Chrysene	0.000144		0.0000179	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Dibenzofuran	0.000825		0.0000191	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Fluoranthene	0.0000377	J	0.0000270	0.000100	0.000100	1	11/05/2020 18:44	WG1571230
Fluorene	0.000425		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Naphthalene	0.00102		0.0000917	0.000250	0.000250	1	11/05/2020 18:44	WG1571230
Phenanthrene	0.000384		0.0000180	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
Pyrene	0.000131		0.0000169	0.0000500	0.0000500	1	11/05/2020 18:44	WG1571230
1-Methylnaphthalene	0.00181		0.0000687	0.000250	0.000250	1	11/05/2020 18:44	WG1571230
2-Methylnaphthalene	0.00151		0.0000674	0.000250	0.000250	1	11/05/2020 18:44	WG1571230
(S) Nitrobenzene-d5	*85.3*				*31.0-160*		*11/05/2020 18:44*	WG1571230
(S) 2-Fluorobiphenyl	*114*				*48.0-148*		*11/05/2020 18:44*	WG1571230
(S) p-Terphenyl-d14	*118*				*37.0-146*		*11/05/2020 18:44*	WG1571230

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	0.562		0.00190	0.000500	0.00500	10	11/07/2020 09:20	WG1572605
Toluene	U		0.00412	0.00100	0.0100	10	11/07/2020 09:20	WG1572605
Ethylbenzene	0.0250		0.00160	0.000500	0.00500	10	11/07/2020 09:20	WG1572605
Total Xylene	0.0218		0.00510	0.00150	0.0150	10	11/07/2020 09:20	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*11/07/2020 09:20*	WG1572605

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Anthracene	0.000123		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Acenaphthene	0.000212		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Acenaphthylene	0.000114		0.0000171	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Dibenzofuran	0.00189		0.0000191	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 19:04	WG1571230
Fluorene	0.0000461	J	0.0000169	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Naphthalene	0.00687		0.0000917	0.000250	0.000250	1	11/05/2020 19:04	WG1571230
Phenanthrene	0.000495		0.0000180	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 19:04	WG1571230
1-Methylnaphthalene	0.00358		0.0000687	0.000250	0.000250	1	11/05/2020 19:04	WG1571230
2-Methylnaphthalene	0.00384		0.0000674	0.000250	0.000250	1	11/05/2020 19:04	WG1571230
(S) Nitrobenzene-d5	*69.5*				*31.0-160*		*11/05/2020 19:04*	WG1571230
(S) 2-Fluorobiphenyl	*114*				*48.0-148*		*11/05/2020 19:04*	WG1571230
(S) p-Terphenyl-d14	*121*				*37.0-146*		*11/05/2020 19:04*	WG1571230

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	11/07/2020 03:28	WG1572605
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 03:28	WG1572605
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 03:28	WG1572605
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 03:28	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 03:28*	WG1572605

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 19:24	WG1571230
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/05/2020 19:24	WG1571230
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/05/2020 19:24	WG1571230
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/05/2020 19:24	WG1571230
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/05/2020 19:24	WG1571230
(S) Nitrobenzene-d5	*85.0*				*31.0-160*		*11/05/2020 19:24*	WG1571230
(S) 2-Fluorobiphenyl	*108*				*48.0-148*		*11/05/2020 19:24*	WG1571230
(S) p-Terphenyl-d14	*133*				*37.0-146*		*11/05/2020 19:24*	WG1571230

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	0.00555		0.000190	0.000500	0.000500	1	11/07/2020 03:50	WG1572605
Toluene	0.000495	J	0.000412	0.00100	0.00100	1	11/07/2020 03:50	WG1572605
Ethylbenzene	0.00233		0.000160	0.000500	0.000500	1	11/07/2020 03:50	WG1572605
Total Xylene	0.0107		0.000510	0.00150	0.00150	1	11/07/2020 03:50	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 03:50*	WG1572605

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Anthracene	0.000250		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Acenaphthene	0.0000964		0.0000190	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Chrysene	0.000145		0.0000179	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Dibenzofuran	0.000780		0.0000191	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/05/2020 19:45	WG1571230
Fluorene	0.000418		0.0000169	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Naphthalene	0.000970		0.0000917	0.000250	0.000250	1	11/05/2020 19:45	WG1571230
Phenanthrene	0.000359		0.0000180	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
Pyrene	0.000110		0.0000169	0.0000500	0.0000500	1	11/05/2020 19:45	WG1571230
1-Methylnaphthalene	0.00174		0.0000687	0.000250	0.000250	1	11/05/2020 19:45	WG1571230
2-Methylnaphthalene	0.00136		0.0000674	0.000250	0.000250	1	11/05/2020 19:45	WG1571230
(S) Nitrobenzene-d5	*87.9*				*31.0-160*		*11/05/2020 19:45*	WG1571230
(S) 2-Fluorobiphenyl	*114*				*48.0-148*		*11/05/2020 19:45*	WG1571230
(S) p-Terphenyl-d14	*112*				*37.0-146*		*11/05/2020 19:45*	WG1571230

Method Blank (MB)

(MB) R3590995-3 11/07/20 10:39

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) R3590995-1 11/07/20 09:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0531	106	77.0-122	
Toluene	0.0500	0.0549	110	80.0-121	
Ethylbenzene	0.0500	0.0562	112	80.0-123	
Total Xylene	0.150	0.169	113	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*79.0-125*	

L1280890-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280890-01 11/07/20 11:01 • (MS) R3590995-4 11/07/20 18:53 • (MSD) R3590995-5 11/07/20 19:26

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	U	0.0534	0.0499	107	99.8	1	10.0-160			6.78	21
Toluene	0.0500	U	0.0497	0.0478	99.4	95.6	1	12.0-148			3.90	21
Ethylbenzene	0.0500	U	0.0500	0.0486	100	97.2	1	22.0-149			2.84	21
Total Xylene	0.150	U	0.149	0.144	99.3	96.0	1	13.0-155			3.41	21
(S) a,a,a-Trifluorotoluene(PID)					*104*	*103*		*79.0-125*				

Method Blank (MB)

(MB) R3591558-2 11/07/20 02:22

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) R3591558-1 11/07/20 00:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0426	85.2	77.0-122	
Toluene	0.0500	0.0468	93.6	80.0-121	
Ethylbenzene	0.0500	0.0515	103	80.0-123	
Total Xylene	0.150	0.147	98.0	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*100*	*79.0-125*	

Method Blank (MB)

(MB) R3590001-3 11/05/20 14:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000190	0.0000500
Acenaphthene	U		0.0000190	0.0000500
Acenaphthylene	U		0.0000171	0.0000500
Benzo(a)anthracene	U		0.0000203	0.0000500
Benzo(a)pyrene	U		0.0000184	0.0000500
Benzo(b)fluoranthene	U		0.0000168	0.0000500
Benzo(g,h,i)perylene	U		0.0000184	0.0000500
Benzo(k)fluoranthene	U		0.0000202	0.0000500
Chrysene	U		0.0000179	0.0000500
Dibenz(a,h)anthracene	U		0.0000160	0.0000500
Fluoranthene	U		0.0000270	0.000100
Fluorene	U		0.0000169	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500
Naphthalene	U		0.0000917	0.000250
Phenanthrene	U		0.0000180	0.0000500
Pyrene	U		0.0000169	0.0000500
1-Methylnaphthalene	U		0.0000687	0.000250
2-Methylnaphthalene	U		0.0000674	0.000250
Dibenzofuran	U		0.0000191	0.0000500
(S) Nitrobenzene-d5	*87.0*			*31.0-160*
(S) 2-Fluorobiphenyl	*109*			*48.0-148*
(S) p-Terphenyl-d14	*136*			*37.0-146*

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

(LCS) R3590001-1 11/05/20 13:20 • (LCSD) R3590001-2 11/05/20 13:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dibenzofuran	0.00200	0.00225	0.00216	112	108	67.0-134			4.08	20
Anthracene	0.00200	0.00216	0.00222	108	111	67.0-150			2.74	20
Acenaphthene	0.00200	0.00231	0.00225	115	112	65.0-138			2.63	20
Acenaphthylene	0.00200	0.00228	0.00224	114	112	66.0-140			1.77	20
Benzo(a)anthracene	0.00200	0.00214	0.00208	107	104	61.0-140			2.84	20
Benzo(a)pyrene	0.00200	0.00186	0.00183	93.0	91.5	60.0-143			1.63	20
Benzo(b)fluoranthene	0.00200	0.00246	0.00245	123	122	58.0-141			0.407	20
Benzo(g,h,i)perylene	0.00200	0.00217	0.00203	108	102	52.0-153			6.67	20
Benzo(k)fluoranthene	0.00200	0.00242	0.00222	121	111	58.0-148			8.62	20
Chrysene	0.00200	0.00223	0.00222	111	111	64.0-144			0.449	20
Dibenz(a,h)anthracene	0.00200	0.00186	0.00175	93.0	87.5	52.0-155			6.09	20

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

(LCS) R3590001-1 11/05/20 13:20 • (LCSD) R3590001-2 11/05/20 13:40

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 %
Fluoranthene	0.00200	0.00208	0.00210	104	105	69.0-153			0.957	20
Fluorene	0.00200	0.00230	0.00225	115	112	64.0-136			2.20	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00173	0.00158	86.5	79.0	54.0-153			9.06	20
Naphthalene	0.00200	0.00225	0.00220	112	110	61.0-137			2.25	20
Phenanthrene	0.00200	0.00213	0.00210	106	105	62.0-137			1.42	20
Pyrene	0.00200	0.00230	0.00220	115	110	60.0-142			4.44	20
1-Methylnaphthalene	0.00200	0.00246	0.00241	123	120	66.0-142			2.05	20
2-Methylnaphthalene	0.00200	0.00228	0.00223	114	111	62.0-136			2.22	20
(S) Nitrobenzene-d5				*85.0*	*82.0*	*31.0-160*				
(S) 2-Fluorobiphenyl				*113*	*109*	*48.0-148*				
(S) p-Terphenyl-d14				*124*	*119*	*37.0-146*				

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.

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

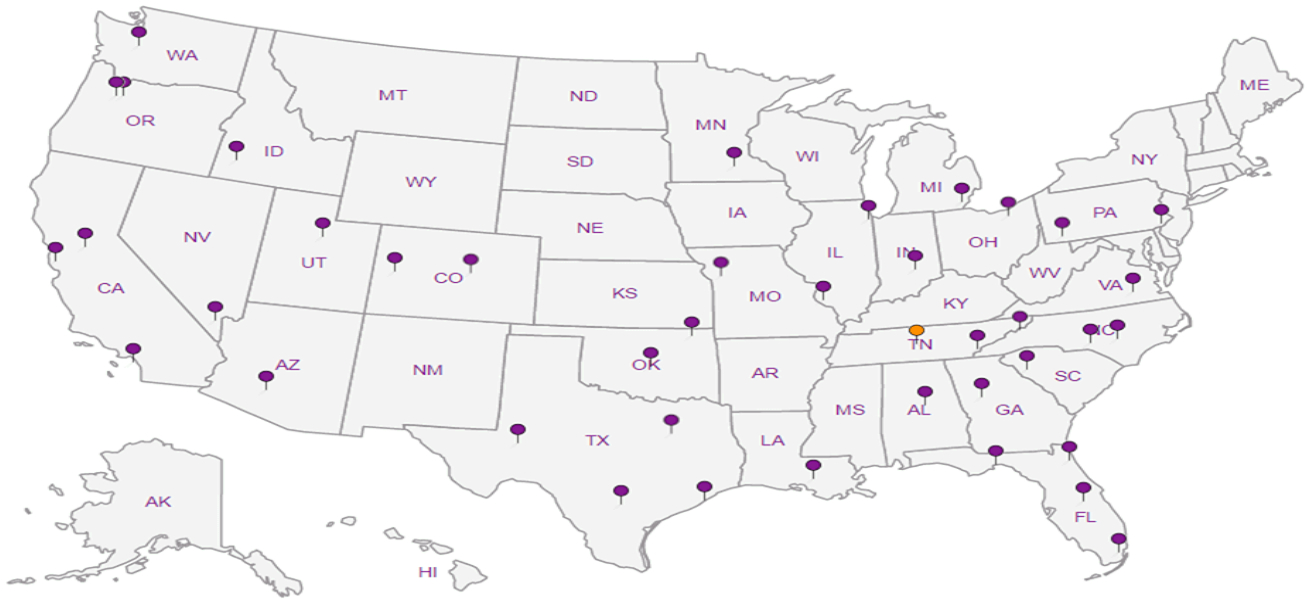
Third Party Federal Accreditations

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	11209891/02	L1281156	11/11/20 16:41	28 of 30

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 1 of 2

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET

SDG # 128156

A002

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

Acctnum: PLAINSGHD

Collected by (print): Zach Comino

Site/Facility ID #

P.O. #

Collected by (signature):

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

Quote #

Date Results Needed

MW-4R	Grab	GW	DTW	10/30/20	1020	3	X				-01
MW-6R		GW			1045	6	X	X			-02
MW-7R		GW			1110	6	X	X			-03
MW-8R		GW			1135	6	X	X			-04
MW-9R		GW			1200		X	X			-05
MW-10R		GW			1220		X	X			-06
MW-13		GW			1240		X	X			-07
MW-3R		GW			1250		X	X			-08
MW-12		GW			1300	3	X				-09
RW-11		GW			1315	6	X	X			-10

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

Remarks:

pH ____ Temp ____

Sample Receipt Checklist
COC Seal Present/Intact: α
COC Signed/Accurate:

Samples returned via:
___ UPS ___ FedEx ___ Courier

Relinquished by : (Signature)	Date: 10/30/20	Time: 1330	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date: 11-2-20	Time: 15:30	Received by: (Signature) 11-2-20 14:3	Temp: 0.3-1-0.2 °C 13 CK	Bottles Received: 72
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/3/20	Time: 0800

If preservation required by Login: Date/Time

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 2 of 2

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 432-250-7917

Client Project # 11209891/02

Lab Project # PLAINSGHD-11209891

SDG # L1281156

Acctnum: PLAINSGHD

Prelogin: P805693

Collected by (print): Zach Camino

Collected by (signature): [signature]

Same Day / Five Day

40mL Amb-Cl | 40mL Amb-NoPres-WT

Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	40mL Amb-Cl	40mL Amb NoPres-WT	Sample #
RW-12	Grab	GW	DTW	10/30/20	1330	6	X	X	-11
Dup-1	↓	GW	↓	↓		6	X	X	-12
Dup-2		GW				6	X	X	-13

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

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		
[signature]	10/30/20	1330	[signature]	11-2-20	14:30
[signature]	11-2-20	1530	SWA	Temp: 0.3-1=0.2 °C	Bottles Received: 72
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 11/3/20	Time: 0800

Hold: | Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 30, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1289351
Samples Received:	11/24/2020
Project Number:	11209891/01
Description:	Plains Darr 2 SRS-LF 1999-62
Site:	DARR ANGELL 1/2
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.

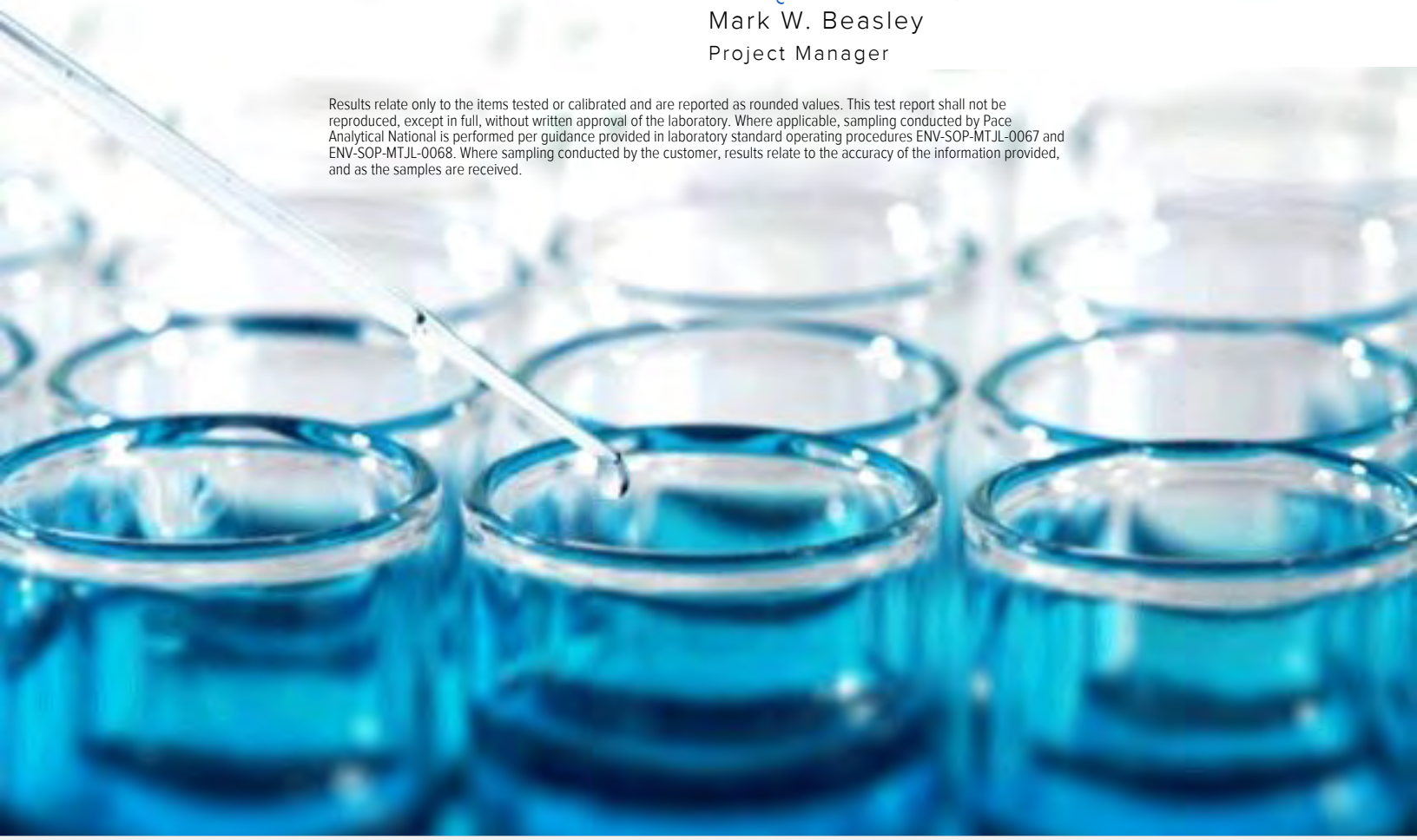


TABLE OF CONTENTS

DARR #2-SYSTEM OFF L1289351-01 Air

Collected by: Zach Comino | Collected date/time: 11/23/20 09:00 | Received date/time: 11/24/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1582368	20	11/25/20 13:44	11/25/20 13:44	CAW	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method M18-Mod	WG1583193	100	11/27/20 19:54	11/27/20 19:54	MBF	Mt. Juliet, TN

DARR #2-SYSTEM ON L1289351-02 Air

Collected by: Zach Comino | Collected date/time: 11/23/20 09:15 | Received date/time: 11/24/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1582368	100	11/25/20 14:22	11/25/20 14:22	CAW	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method M18-Mod	WG1583193	2000	11/27/20 20:34	11/27/20 20:34	MBF	Mt. Juliet, TN

DARR #1-SYSTEM OFF L1289351-03 Air

Collected by: Zach Comino | Collected date/time: 11/23/20 10:00 | Received date/time: 11/24/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1583193	80	11/27/20 21:14	11/27/20 21:14	MBF	Mt. Juliet, TN

DARR #1-SYSTEM ON L1289351-04 Air

Collected by: Zach Comino | Collected date/time: 11/23/20 10:15 | Received date/time: 11/24/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1582368	20	11/25/20 15:43	11/25/20 15:43	MBF	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method M18-Mod	WG1583193	200	11/27/20 21:54	11/27/20 21:54	MBF	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

Laboratory Name: Pace Analytical National	LRC Date: 11/30/2020 20:18
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1289351-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1582368 and WG1583193

#[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: 11/30/2020 20:18
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1289351-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1582368 and WG1583193

#[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: 11/30/2020 20:18
Project Name: Plains Darr 2 SRS-LF 1999-62	Laboratory Job Number: L1289351-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1582368 and WG1583193

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 (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	20.0	63.9	2060	6580		100	WG1583193
Toluene	108-88-3	92.10	50.0	188	2300	8660		100	WG1583193
Ethylbenzene	100-41-4	106	4.00	17.3	596	2580		20	WG1582368
m&p-Xylene	1330-20-7	106	8.00	34.7	1200	5200		20	WG1582368
o-Xylene	95-47-6	106	4.00	17.3	379	1640		20	WG1582368
Methyl tert-butyl ether	1634-04-4	88.10	4.00	14.4	ND	ND		20	WG1582368
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	186000	768000		100	WG1583193
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG1582368
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1583193

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	24400	77900		2000	WG1583193
Toluene	108-88-3	92.10	1000	3770	23500	88500		2000	WG1583193
Ethylbenzene	100-41-4	106	20.0	86.7	2890	12500		100	WG1582368
m&p-Xylene	1330-20-7	106	40.0	173	4820	20900		100	WG1582368
o-Xylene	95-47-6	106	20.0	86.7	1320	5720		100	WG1582368
Methyl tert-butyl ether	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG1582368
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	2230000	9210000		2000	WG1583193
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG1582368
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.2*				WG1583193

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	16.0	51.1	603	1930		80	WG1583193
Toluene	108-88-3	92.10	40.0	151	1000	3770		80	WG1583193
Ethylbenzene	100-41-4	106	16.0	69.4	234	1010		80	WG1583193
m&p-Xylene	1330-20-7	106	32.0	139	492	2130		80	WG1583193
o-Xylene	95-47-6	106	16.0	69.4	154	668		80	WG1583193
Methyl tert-butyl ether	1634-04-4	88.10	16.0	57.7	ND	ND		80	WG1583193
TPH (GC/MS) Low Fraction	8006-61-9	101	16000	66100	72400	299000		80	WG1583193
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*95.8*				WG1583193

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	4.00	12.8	1480	4730		20	WG1582368
Toluene	108-88-3	92.10	100	377	2440	9190		200	WG1583193
Ethylbenzene	100-41-4	106	4.00	17.3	599	2600		20	WG1582368
m&p-Xylene	1330-20-7	106	8.00	34.7	1240	5380		20	WG1582368
o-Xylene	95-47-6	106	4.00	17.3	401	1740		20	WG1582368
Methyl tert-butyl ether	1634-04-4	88.10	4.00	14.4	ND	ND		20	WG1582368
TPH (GC/MS) Low Fraction	8006-61-9	101	40000	165000	176000	727000		200	WG1583193
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1582368
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.3*				WG1583193

Method Blank (MB)

(MB) R3597506-3 11/25/20 10:09

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
MTBE	U		0.0647	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
(S) 1,4-Bromofluorobenzene	*94.7*			*60.0-140*

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

(LCS) R3597506-1 11/25/20 08:46 • (LCSD) R3597506-2 11/25/20 09:29

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.18	4.35	111	116	70.0-130			3.99	25
Benzene	3.75	4.39	4.34	117	116	70.0-130			1.15	25
Ethylbenzene	3.75	4.41	4.39	118	117	70.0-130			0.455	25
m&p-Xylene	7.50	9.22	9.11	123	121	70.0-130			1.20	25
o-Xylene	3.75	4.56	4.57	122	122	70.0-130			0.219	25
(S) 1,4-Bromofluorobenzene				*96.7*	*95.6*	*60.0-140*				

Method Blank (MB)

(MB) R3598490-3 11/27/20 10:22

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
MTBE	U		0.0647	0.200
Toluene	U		0.0870	0.500
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*91.4*			*60.0-140*

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

(LCS) R3598490-1 11/27/20 08:57 • (LCSD) R3598490-2 11/27/20 09:41

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.31	4.28	115	114	70.0-130			0.698	25
Benzene	3.75	4.11	4.09	110	109	70.0-130			0.488	25
Toluene	3.75	4.25	4.22	113	113	70.0-130			0.708	25
Ethylbenzene	3.75	4.18	4.09	111	109	70.0-130			2.18	25
m&p-Xylene	7.50	8.71	8.62	116	115	70.0-130			1.04	25
o-Xylene	3.75	4.27	4.29	114	114	70.0-130			0.467	25
TPH (GC/MS) Low Fraction	203	212	212	104	104	70.0-130			0.000	25
(S) 1,4-Bromofluorobenzene				*93.0*	*92.7*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection 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

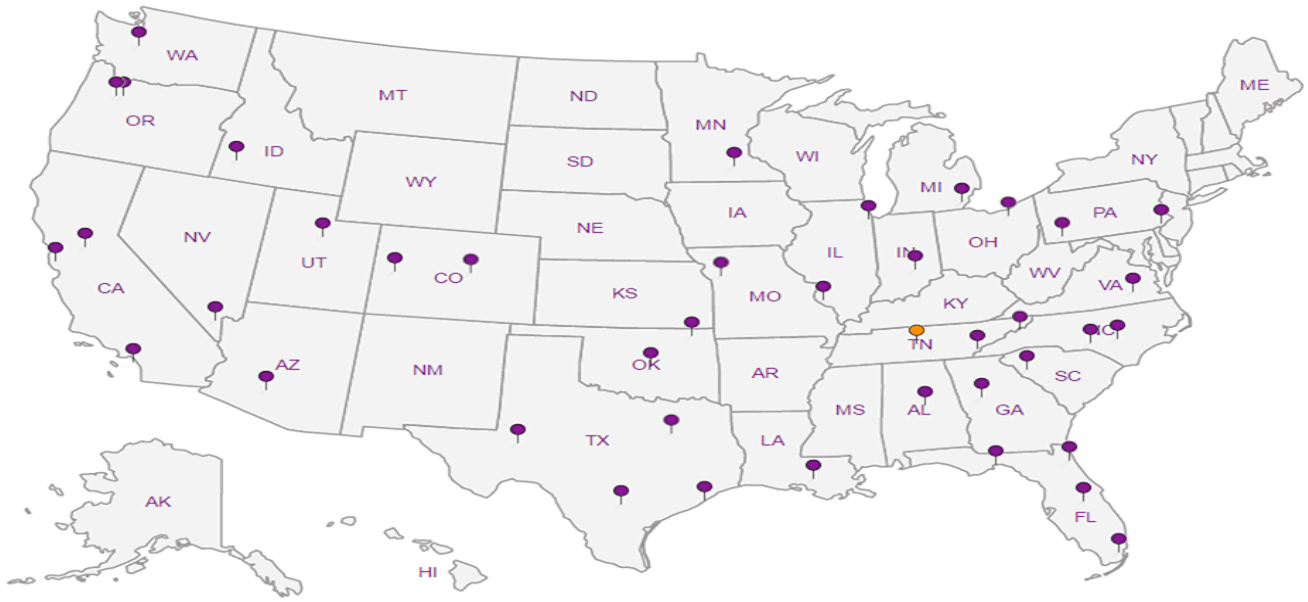
Third Party Federal Accreditations

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	11209891/01	L1289351	11/30/20 20:18	16 of 17

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.co

Project Description: Plains Darr 2 SRS-LF 1999-62

City/State Collected:

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209891/01

Lab Project # PLAINSGHD-11209891

Collected by (print): Zach Comino

Site/Facility ID # Darr Angell 1+2

P.O. #

Collected by (signature): ZC

Immediately Packed on Ice N X 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

No. of Cntrs

Analysis / Container / Preservative

M18-MOD Tedlar

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	M18-MOD Tedlar	Remarks	Sample # (lab only)
Darr #2 - System off		Air		112320	0900	2	X		01
Darr #2 - System on		Air		112320	0915	2	X		02
Darr #1 - System off		Air		112320	1000	2	X		03
Darr #1 - System on		Air		112320	1015	2	X		04

Chain of Custody Page 1 of 1

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 # 289351

C111

Acctnum: PLAINSGHD

Template: T173721

Prelogin: P795997

PM: 134 - Mark W. Beasley

PB: 9/30/20 MB

Shipped Via: FedEX Ground

* 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 # 9186 2496 0846

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
Zach Comino / ZC	112320	1100			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: AMB 8	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/29/20 Time: 9:30	Hold: / Condition: NCF / OK

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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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 22855

CONDITIONS

Operator:	OGRID:
PLAINS MARKETING L.P. 333 Clay St, Ste 1600 Houston, TX 77002	34053
	Action Number: 22855
	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 annual sampling for PAHs during the fourth quarterly event according to directives of NMOCD. This will include RW-11, RW-12 and all wells installed during 2020 which are not impacted by LNAPL 3. Continue remediation of the soil profile and groundwater by operating the trailer mounted soil vapor extraction system. Gaseous hydrocarbon emissions will be sampled quarterly to calculate emission rates and total emissions 4. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.	1/11/2022