APPROVED
By Nelson Velez at 3:48 pm, Jan 11, 2022

Review of 2020 Annual Groundwater Monitoring Report: **Content satisfactory**
Contractor recommendations approved by OCD and are as follows;
1. Continue quarterly groundwater gauging and sampling according to the schedule approved by the NMOCD
2. Sample monitor wells MW-2 (if there is sufficient water), MW-11R, MW-16R, MW-21R, MW-24, and MW-25 for PAH during the fourth quarter of 2021. Additionally, any wells that cease to have LNAPL will be sampled for PAH compounds
3. Terminate sampling from monitor wells MW-4, MW-6, MW-7, MW-12R, MW-17R, MW-18R, MW-19R, MW-20R, MW-22 and recovery well RW-12 for PAH
4. Continue remediation of the soil profile and groundwater by operating the trailer mounted automated remediation system on targeted wells
Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.

2020 Annual Groundwater Monitoring Report

Darr Angell #1, SRS Darr Angell #1

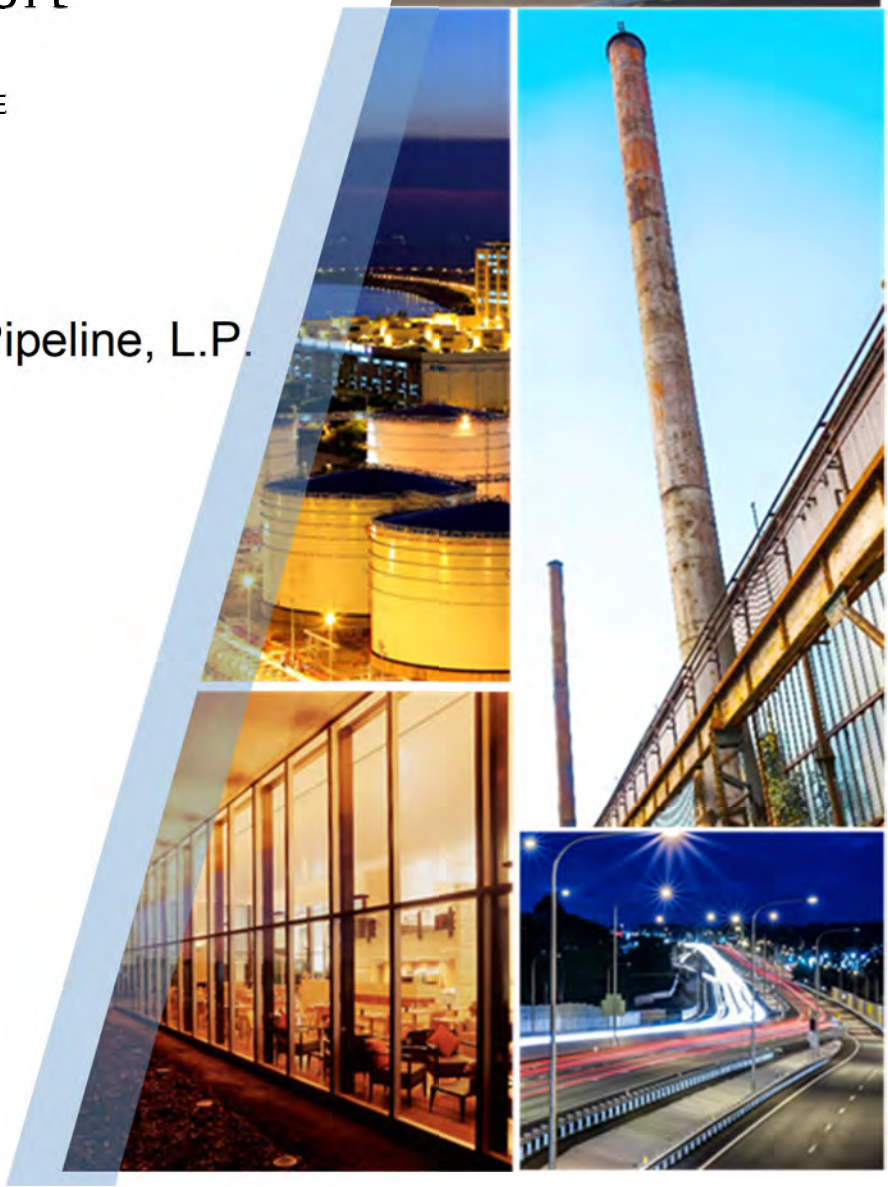
NW/4, SE/4 of Section 11, T15S, R37E

Lea County, New Mexico

NMOCD AP-007

Incident ID #: nAPP2108851028

Plains All American Pipeline, L.P.



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1. Introduction

This 2020 *Annual Groundwater Report* is being submitted on behalf of Plains All American Pipeline, L.P. (Plains) by GHD Services Inc. (GHD) 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. The Site falls under NMOCD Abatement Plan number AP-007. This report describes results of groundwater monitoring conducted in February, May, September, and October/November 2020. Also included are periodic remedial activities completed at the Darr Angell No.1 location (Site) in early 2020. The Site is located in Lea County, New Mexico. Latitude and longitude of the Site are 33.026600°N and 103.166600°W. A Site Location Map is provided as Figure 1and a Site Details Map is provided as Figure 2.

1.1 Site History

The Site was formerly the responsibility of Enron Oil Trading and Transportation (EOTT) and 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 New Mexico Oil Conservation Division (NMOCD) on May 1, 1997. According to the release report, approximately 25 barrels of crude oil were released and 15 barrels were recovered during initial response actions. The release was reported to have occurred from an eight-inch EOTT pipeline and was attributed to internal corrosion.

Beginning on May 29, 2004, project management responsibilities were conducted by Nova Training and Environmental. Monitor wells MW-1 through MW-20 and recovery wells RW-1 through RW-10 were installed at the Site between 2000 and 2011.

GHD took over monitoring, remedial activities, and project management on May 2, 2011. A trailer-mounted mobile dual-phase extraction unit was installed and began operating at the Site in October 2012. The system included four AP4 bottom loading pumps, a vapor-liquid separator, an air compressor, a vacuum extraction manifold, and an above-ground tank for storage of extracted LNAPL and groundwater.

Monitoring wells MW-17, MW-19, and MW-20 were plugged and abandoned with NMOCD approval in October 2014. Replacement monitoring wells MW-17R, MW-19R, and MW-20R, and recovery wells RW-13 and RW-14 were drilled and constructed with NMOCD approval in October 2014. Wells installed in 2014 were professionally surveyed on November 11, 2014.

Monitoring wells MW-12, MW-15, MW-16 and MW-18 were plugged and abandoned with NMOCD approval in February 2017. Monitoring and recovery wells MW-12R, MW-16R, MW-18R, MW-22, MW-23, and RW-12 were installed with NMOCD approval in February 2017. Wells installed in 2017 were professionally surveyed on 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 five monitor wells and two recovery wells and installing four new monitor wells and six 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-3, MW-11, MW-13, MW-14, and MW-21 and recovery wells RW-1 and RW-2 were plugged and abandoned. From February 26 through March 3, 2020, monitoring and recovery wells MW-11R, MW-21R, MW-24, MW-25, RW-1R, and RW-15 through RW-19 were installed at the site.

Currently at the site there are twenty-one (21) monitor wells, MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11R, MW-12R, MW-16R, MW-17R, MW-18R, MW-19R, MW-20R, MW-21R, MW-22, MW-23, MW-24, and MW-25, and eighteen (18) recovery wells, RW-1R, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, RW-14, RW-15, RW-16, RW-17, RW-18 and RW-19. The new well locations were professionally surveyed on September 17, 2020. A Site Details Map is presented as Figure 2.

2. Regulatory Framework

The Site has been assigned Abatement Plan number AP-007 by the New Mexico Oil Conservation Division (NMOCD). The NMOCD guidelines require groundwater to be analyzed for potential contaminants as defined in the New Mexico Administrative Code 20.6.2.3103 Section A, which provides the Human Health Standards for Groundwater. The constituents of concern (COCs) in affected groundwater at the Site are benzene, toluene, ethylbenzene, and total xylenes (BTEX); benzo(a)pyrene; and combined naphthalene and monomethylnaphthalenes. NMWQCC standards as shown in Table 2.1 are used to guide assessment and remediation of the Site.

Table 2.1 NMWQCC Human Health and Toxic Pollutant Standards

Analyte	NMWQCC Human Health and 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 mg/L

Table 2.2 is the sampling schedule approved by the NMOCD in a correspondence dated March 26, 2020.

Table 2.2 NMOCD-Approved Sampling Schedule

Location	Schedule
MW-4	Annually
MW-7	Semi-Annually
MW-1, MW-2, MW-5, MW-6, MW-8, MW-9, MW-10, MW-12R, MW-16R, MW-17R, MW-18R, MW-19R, MW-20R, MW-22, MW-23, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, and RW-14	Quarterly
MW-3, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, RW-1, and RW-2	Plugged/Abandoned

Monitoring wells MW-11R, MW-21R, MW-24, MW-25 and recovery wells RW-1R, RW-15, RW-16, RW-17, RW-18, and RW-19 were installed in 2020 and are currently monitored on a quarterly basis to establish consistent historical data regarding dissolved phase COCs and LNAPL thicknesses. These wells will be added to the quarterly sampling schedule. A change in the sampling schedule was approved in an email from the NMOCD dated March 26, 2020.

3. Groundwater Monitoring

GHD conducted quarterly groundwater monitoring on February 11 and 14, May 12 and 14, September 14, 17 and 18, and October 29 and November 2 and 5, 2020. A supplemental monitoring event was conducted on March 23 and 26, 2020 to sample the newly installed wells. Wells containing measurable amounts of LNAPL (>0.01 feet) were not sampled.

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. Wells not containing LNAPL were purged of three casing volumes of groundwater. Samples of groundwater were collected using clean, disposable polyvinyl chloride (PVC) bailers. Duplicate samples were collected from one to two wells during each sampling event. Laboratory-supplied sample containers were filled directly from bailers. 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 November 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 127.9 gallons, 160.7 gallons, 160.7 gallons, and 123.5 gallons. The total volume of groundwater purged from wells during monitoring events in 2020 was 572.8 gallons.

3.2 Potentiometric Surface and Gradient

All fluid level measurements were from tops of casings which were professionally surveyed. Elevations of the potentiometric surface were calculated using a specific gravity of 0.81 of LNAPL, where it is present. Fluid level measurements made by GHD during the quarterly groundwater monitoring events in 2019 and 2020 are presented in Table 1. Groundwater gradient maps for February, May, September, and October are provided as Figures 3, Figure 4, Figure 5, and Figure 6, respectively. The bottoms of LNAPL columns in MW-1, MW-5, MW-9, MW-10, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, and RW-10 were gauged at the bottoms of well casings during at least one quarterly monitoring event; therefore groundwater elevations could not be calculated on those occasions.

The groundwater flow is toward the southeast and is consistent with previous quarterly monitoring events. Gradients of the potentiometric surface during the first, second, third, and fourth quarterly monitoring events were 0.0017 feet/foot (ft./ft.), 0.0015 ft./ft., 0.0015 ft./ft., and 0.0015 ft./ft., respectively. These gradients are also consistent with gradients during previous years. Elevations of the potentiometric surface fell between October 21, 2019 and October 29, 2020 in all wells in which

fluid measurements could be made accurately. The amounts of decline were between 0.54 foot and 1.00 foot, averaging approximately 0.78 foot.

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

LNAPL was observed in MW-1, MW-5, MW-8, MW-9, MW-10, MW-23, RW-1R, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-13, RW-14, RW-15, RW-16, RW-17, RW-18 and RW-19 throughout 2020. The bottoms of LNAPL columns in MW-1, MW-5, MW-9, M-10, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, and RW-10 were below the bottoms of well casings during at least one quarterly monitoring event of 2020.

Charts showing thicknesses of LNAPL in all wells that have had significant impact by LNAPL are in Appendix A. The charts indicate fluctuating LNAPL thicknesses in RW-4 and RW-13, increases in MW-5, MW-8, MW-23, RW-7, RW-11, RW-14, and RW-15, and decreases in MW-1, MW-9, MW-10, RW-3, RW-8, and RW-10. All other wells exhibited a stable trend.

3.4 Dissolved-phase Hydrocarbons in Groundwater

Analytical results of groundwater monitoring conducted at the Site during 2019 and 2020 are summarized in Table 2. Results of analyses of BTEX during the first, second, third, and fourth quarterly monitoring events are shown on Figure 7, Figure 8, Figure 9, and Figure 10, respectively.

Dissolved benzene concentrations exceeding the NMWQCC Human Health Standard of 0.01 mg/L were observed in MW-2 during the first quarter, MW-6 during the first, second and third quarters, and MW-7 during the third quarter. Monitor well MW-7 has not exhibited concentrations over the NMWQCC Human Health Standard of 0.01 mg/L since December 1, 2017 while monitor well MW-6 has historically exhibited concentration exceeding standards. It is believed that samples MW-6 and MW-7 were mixed up in the field during the September 2020 sampling event because a duplicate sample in MW-7 exhibited concentrations below standards while a duplicate sample from MW-6 exhibited concentration above standards. No other wells exhibited benzene, toluene, ethylbenzene, or xylene concentrations above the NMWQCC Standards of 0.01 mg/L, 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively.

Charts showing concentrations of dissolved benzene versus time in monitor and recovery wells which have shown significant impact by dissolved benzene are in Appendix B. These wells show visually declining trends of concentrations of dissolved benzene except for MW-2 which fluctuating benzene concentrations. Certified laboratory reports are in Appendix C.

On December 12, 2012, NMCOD corresponded with Plains via email regarding PAHs providing 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 0.001mg/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).*

In accordance with the NMOCD requirement, samples from MW-11R, MW-16R, MW-21R, MW-24 and MW-25 were analyzed for PAH compounds. Well MW-2 is typically the only well sampled for PAHs that displays any concentrations of these compounds but had an insufficient amount of water during the 2020 event. No PAH compounds exceeded applicable regulatory standards in any of the wells sampled in 2020. Concentrations of PAH compounds that exceeded regulatory standards are also included on Figure 10. A cumulative summary of analytical results or PAH compounds is in Table 3.

4. Corrective Action

Remediation at the Site consists of recovery of LNAPL and impacted groundwater by hand-bailing (in early 2020) and recovery of soil-vapor by a trailer-mounted automated system which also operates total-fluid pumps in a number of wells. Fluids recovered by both methods are transferred to an above-ground storage tank (AST) from which fluids are periodically removed for disposal 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 volumes recovered less amounts removed for disposal indicate that approximately 445.04 gallons of LNAPL were recovered during 2020 by operation of the remediation system and by hand-bailing.

Hand bailing of various wells was conducted during the first quarter of 2020 to reduce thicknesses of LNAPL and concentrations of dissolved-phase contaminants. This activity was cancelled for the remainder of the year due to the pandemic. The total volume of LNAPL recovered in this manner during the year was 12.6 gallons. The total volume of groundwater recovered in this manner during the year was 16.6 gallons.

The trailer-mounted groundwater system was operated at the Site for a total of 215 days during 2020. Soil vapor and total fluids were recovered from RW-1R, RW-13, RW-14, RW-16, and RW-18 during 2020. GHD personnel conducted operation and maintenance (O&M) activities each week to maintain efficient soil vapor and fluid recovery. O&M activities included inspections of well-heads and flow lines, servicing pneumatic total fluid pumps and air compressor, adjustment of depths of total fluid pumps, and gauging of recovered fluids in the storage tank, and general housekeeping tasks.

Samples of emissions from the remediation system were collected on March 18, June 18, October 6 and November 23, 2020 and used to calculate emission rates and total emissions from the remediation system. Using a standard flow rate of 40 cubic feet per minute, the maximum rate of emissions during 2020 was 1.2688 TPH lb/hour for the second quarter. Total mass of emissions during 2020 was 3.1358 tons of TPH which is below the ten ton per year limit.

The total volume of LNAPL recovered since the start of the LNAPL abatement program in 1999 is approximately 83,622.74 gallons (1,991.02 barrels).

All liquids recovered from quarterly purging, remediation system operation, BTEX abatement by hand, and LNAPL abatement by hand were transferred to an AST at the Site and later disposed 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:

- Wells MW-2, RW-5, RW-6 and RW-10 were gauged dry periodically throughout 2020.
- Groundwater flow direction is toward the southeast and is consistent with previous monitoring events. Gradients of the potentiometric surface during all quarterly groundwater monitoring events were between 0.0015 ft./ft. and 0.0017 ft./ft., inclusive.
- Elevations of the potentiometric surface declined in all wells during 2020. The average decline was 0.78 ft.
- LNAPL was observed in MW-1, MW-5, MW-8, MW-9, MW-10, MW-23, RW-1R, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-13, RW-14, RW-15, RW-16, RW-17, RW-18 and RW-19 throughout 2020. The bottoms of LNAPL columns in MW-1, MW-5, MW-9, MW-10, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, and RW-10 were gauged at the bottoms of well casings during at least one quarterly monitoring event.
- Dissolved benzene concentrations exceeding the NMWQCC Human Health Standard of 0.01 mg/L were observed in MW-2 during the first quarter, MW-6 during the first, second and third quarters, and MW-7 during the third quarter. Monitor well MW-7 has not exhibited concentrations over the NMWQCC Human Health Standard of 0.01 mg/L since December 1, 2017 while monitor well MW-6 has historically exhibited concentrations exceeding standards.
- It is believed that samples MW-6 and MW-7 were mixed up in the field during the September 2020 sampling event because a duplicate sample in MW-7 exhibited concentrations below standards while a duplicate sample from MW-6 exhibited concentration above standards. No other wells exhibited benzene, toluene, ethylbenzene, or xylene concentrations above the NMWQCC Standards of 0.01 mg/L, 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively.
- None of the wells sampled for PAH compounds in 2020 exceeded applicable regulatory standards for these constituents.
- Approximately 445.04 gallons of LNAPL were recovered by the automated trailer mounted remediation system and hand bailing during 2020. The maximum rate of emissions during 2020 was 1.2688 lb. TPH/hour during the second quarter. Total mass of emissions during 2020 was 3.1358 tons TPH.
- The total volume of LNAPL recovered by hand-bailing during the year was 12.6 gallons. This practice was cancelled after the 1st quarter of the year due to the pandemic.
- During 2020 the system recovered 432.44 gallons of LNAPL. The total volume of LNAPL recovered since the start of the LNAPL abatement program in 1999 is approximately 83,622.74 gallons (1,991.02 barrels).

6. Recommendations

Based on data and conclusions presented in this report, GHD recommends the following for 2021:

- Continue quarterly groundwater gauging and sampling according to the schedule approved by the NMOCD and annual reporting to the NMOCD. Monitor wells MW-2 (if there is sufficient water), MW-11R, MW-16R, MW-21R, MW-24, and MW-25 will be sampled for PAH compounds during the fourth quarter of 2021. Additionally, any wells that cease to have LNAPL will be sampled for PAH compounds.
- Monitor wells MW-4, MW-6, MW-7, MW-12R, MW-17R, MW-18R, MW-19R, MW-20R, and MW-22 and recovery well RW-12 have established two consecutive years below the Human Health Standards for PAH, therefore these wells will no longer need to be analyzed for PAH unless they are re-impacted by LNAPL.
- Continue remediation of the soil profile and groundwater by operating the trailer mounted automated remediation system on targeted wells.

All of Which is Respectfully Submitted,

GHD

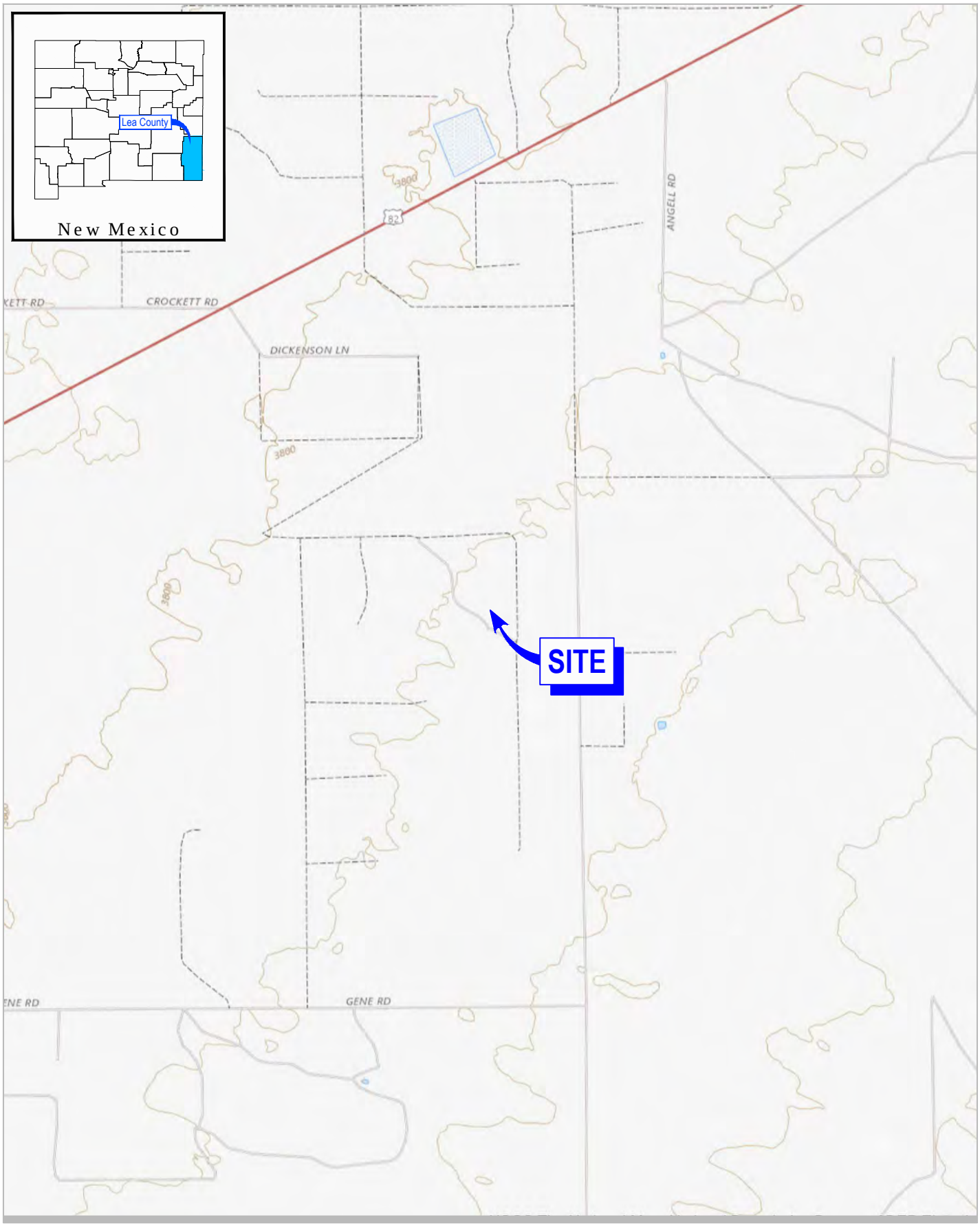
Rebecca Haskell

Senior project Manager

Thomas C Larson

Midland Operations Manger

Figures



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N

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

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

Project No. **11209885**
Date **January 2021**

SITE LOCATION MAP

FIGURE 1

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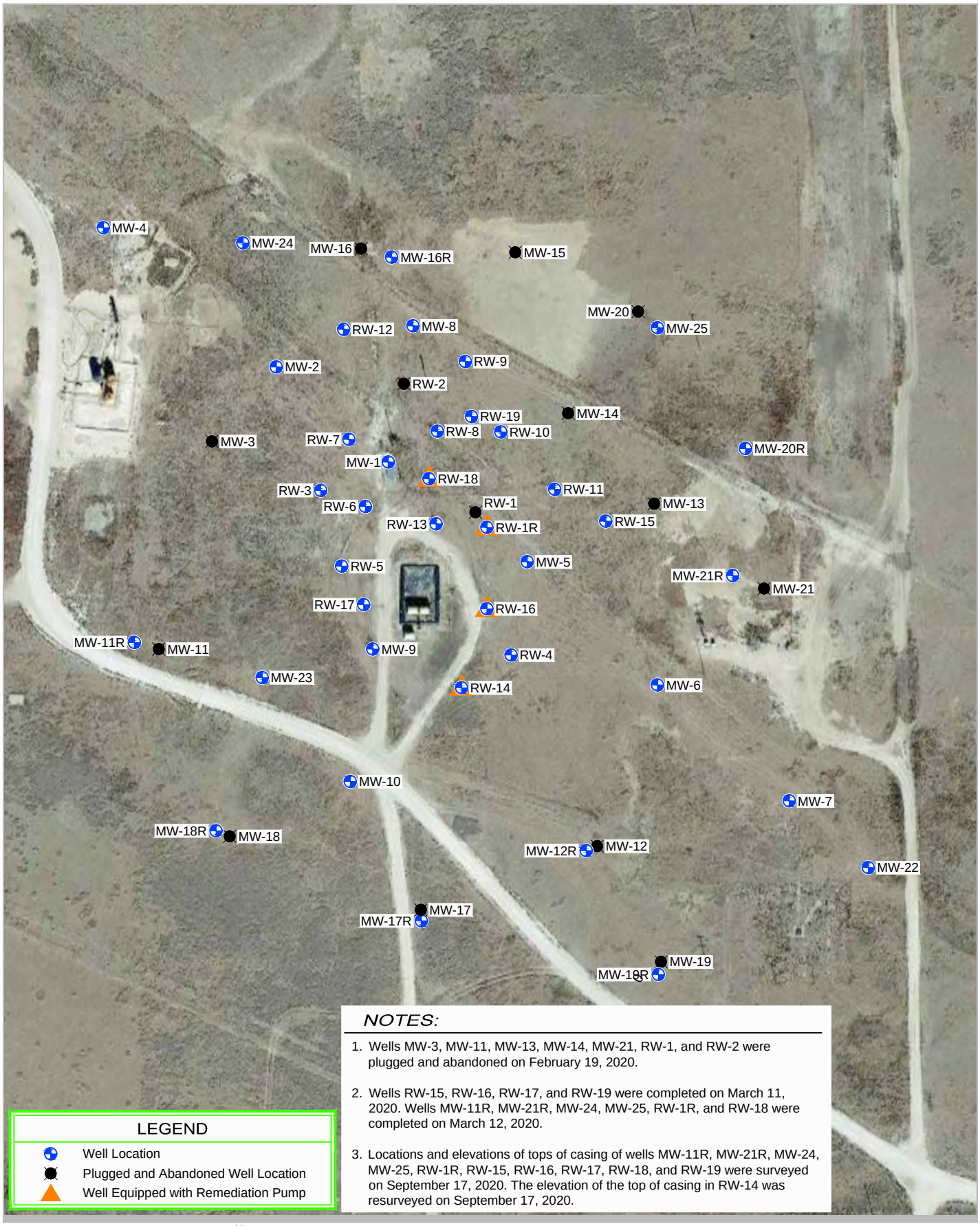

NOTES:

1. Wells MW-3, MW-11, MW-13, MW-14, MW-21, RW-1, and RW-2 were plugged and abandoned on February 19, 2020.
2. Wells RW-15, RW-16, RW-17, and RW-19 were completed on March 11, 2020. Wells MW-11R, MW-21R, MW-24, MW-25, RW-1R, and RW-18 were completed on March 12, 2020.
3. Locations and elevations of tops of casing of wells MW-11R, MW-21R, MW-24, MW-25, RW-1R, RW-15, RW-16, RW-17, RW-18, and RW-19 were surveyed on September 17, 2020. The elevation of the top of casing in RW-14 was resurveyed on September 17, 2020.

LEGEND

- Well Location
- Plugged and Abandoned Well Location
- Well Equipped with Remediation Pump

0 75 150 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.1

Project No. **11209885**
Date **January 2021**

SITE DETAILS MAP

FIGURE 2

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL002.dwg
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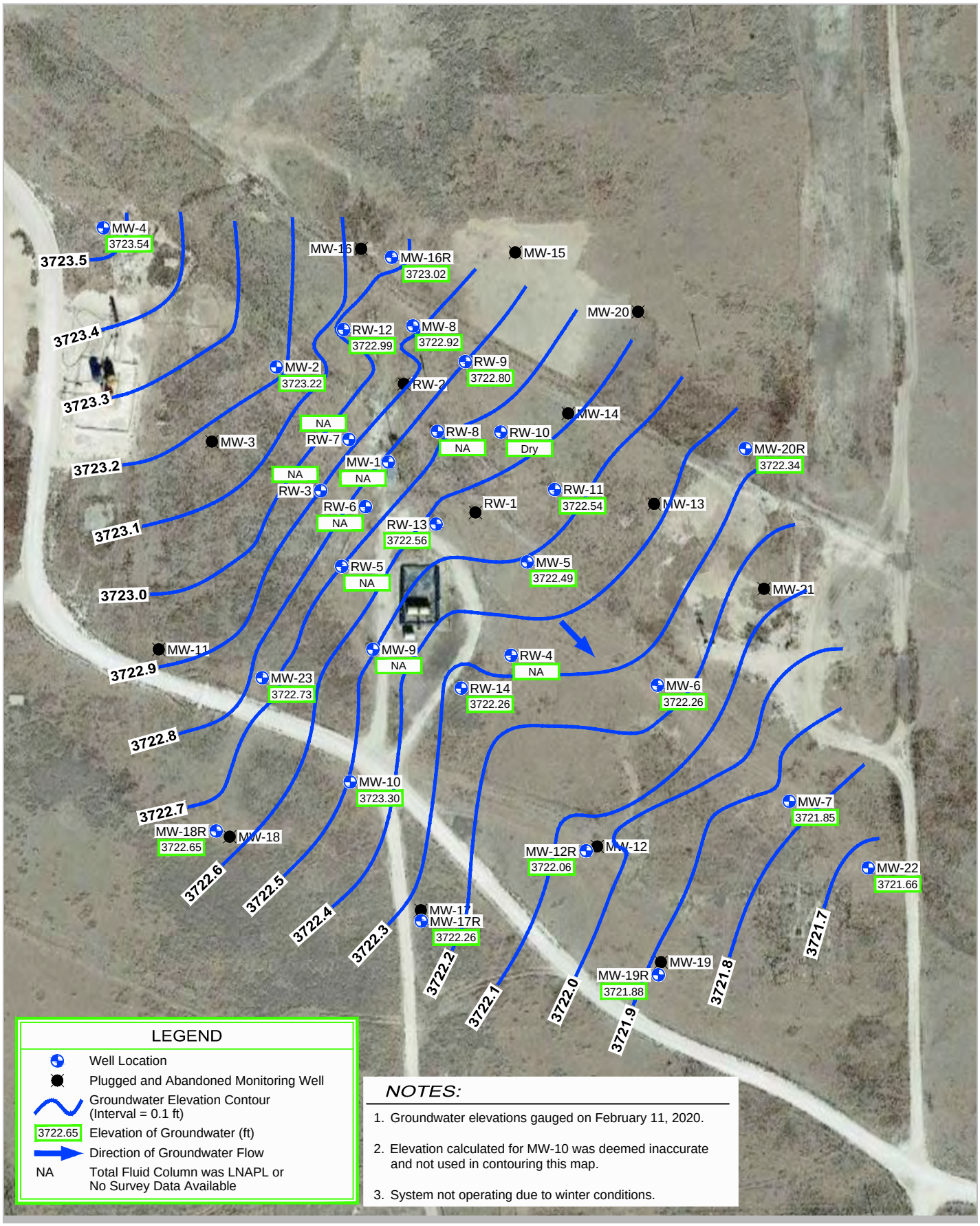

0 75 150 ft

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New Mexico East (US Feet)

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

GROUNDWATER GRADIENT MAP
FEBRUARY 11, 2020

Project No. **11209885**
Report No. **001**
Date **November 2020**

FIGURE 3

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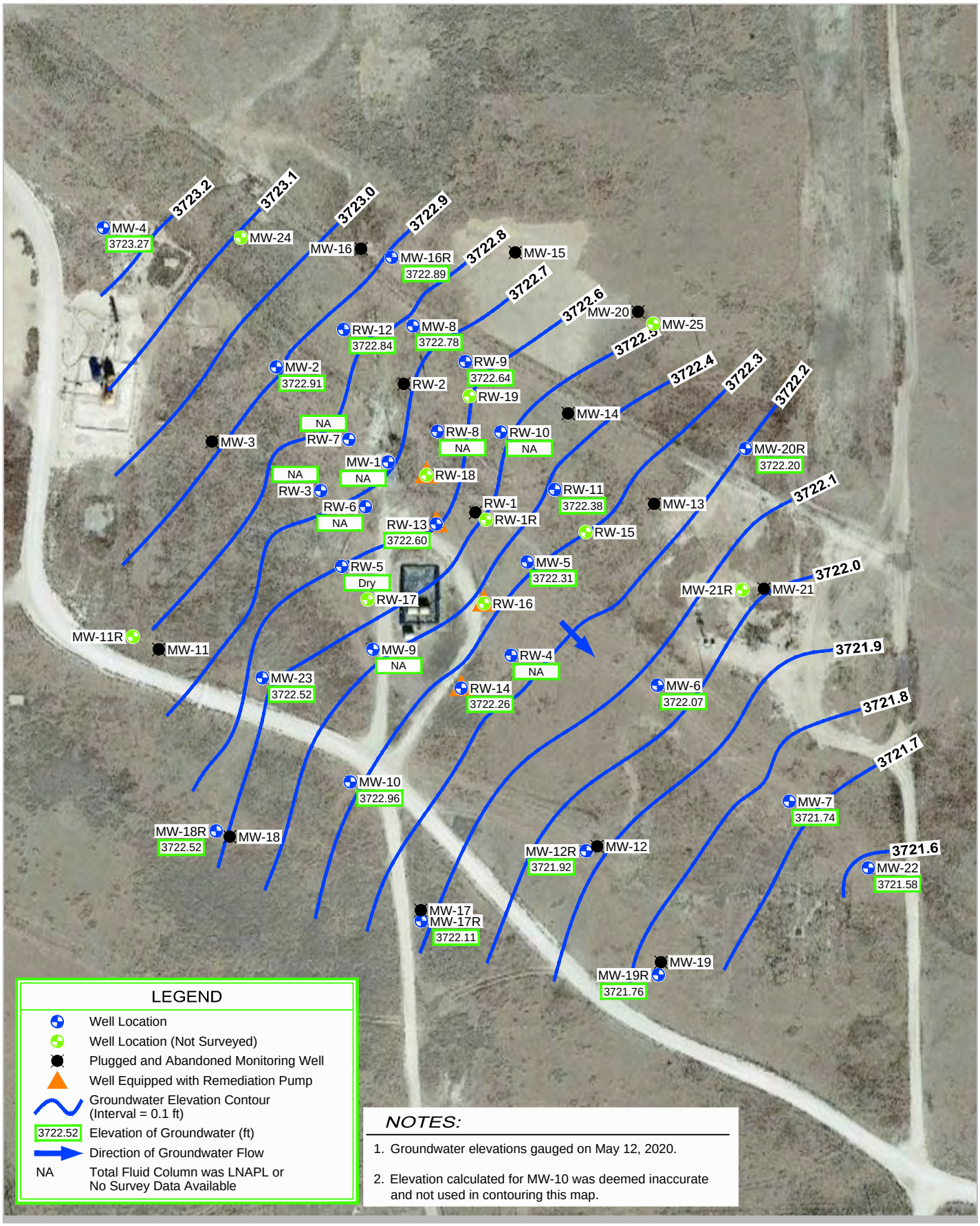

LEGEND

- Well Location
- Well Location (Not Surveyed)
- Plugged and Abandoned Monitoring Well
- Well Equipped with Remediation Pump
- Groundwater Elevation Contour (Interval = 0.1 ft)
- 3722.52 — Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA — Total Fluid Column was LNAPL or No Survey Data Available

NOTES:

1. Groundwater elevations gauged on May 12, 2020.
2. Elevation calculated for MW-10 was deemed inaccurate and not used in contouring this map.

0 75 150 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.1

Project No. **11209885**
Date **January 2021**

GROUNDWATER GRADIENT MAP
MAY 12, 2020

FIGURE 4

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL001.dwg
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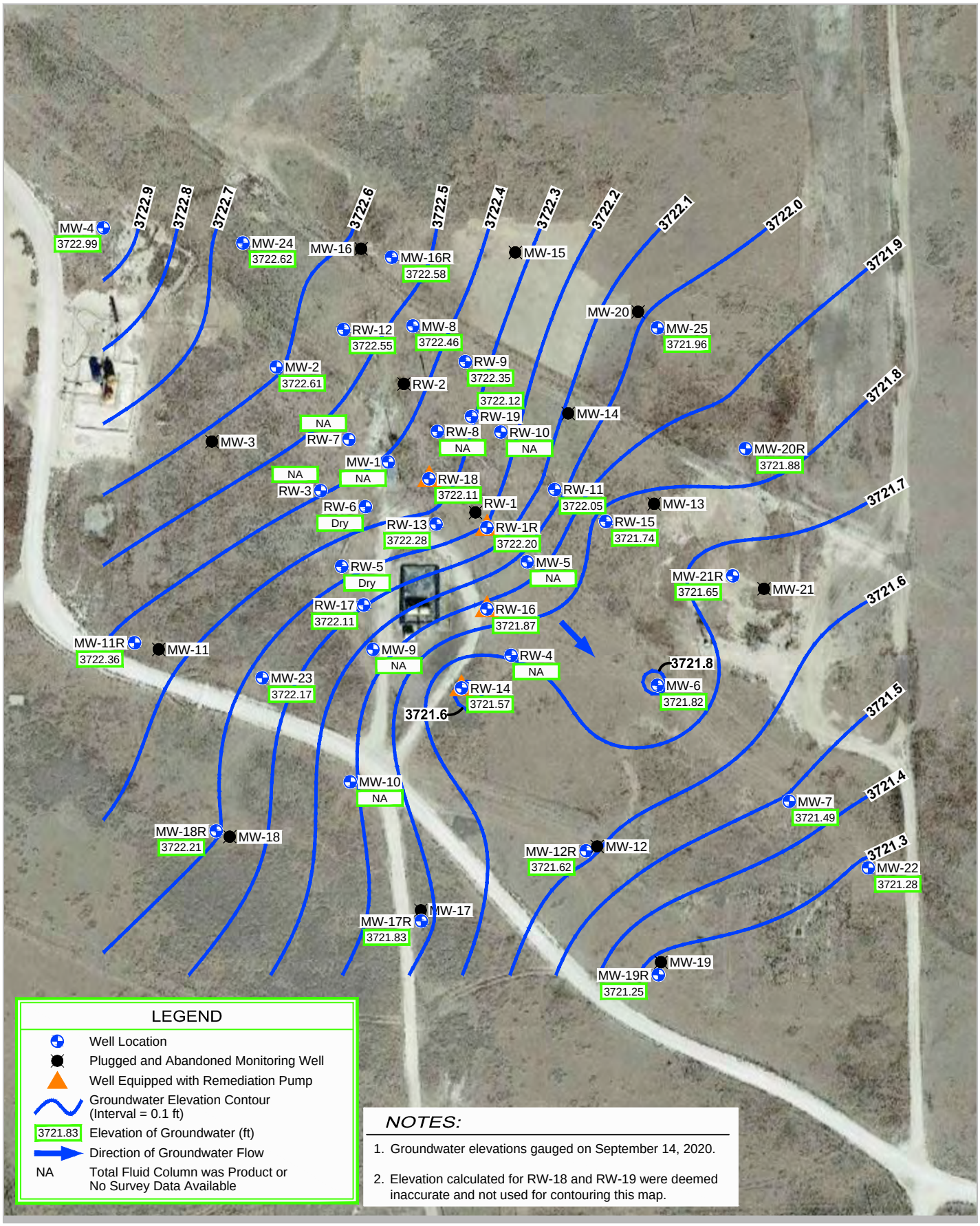

LEGEND

- Well Location
- Plugged and Abandoned Monitoring Well
- Well Equipped with Remediation Pump
- Groundwater Elevation Contour (Interval = 0.1 ft)
- 3721.83 — Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA — Total Fluid Column was Product or No Survey Data Available

NOTES:

1. Groundwater elevations gauged on September 14, 2020.
2. Elevation calculated for RW-18 and RW-19 were deemed inaccurate and not used for contouring this map.

0 75 150 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.1

GROUNDWATER GRADIENT MAP
SEPTEMBER 14, 2020

Project No. **11209885**
Date **January 2021**

FIGURE 5

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL002.dwg
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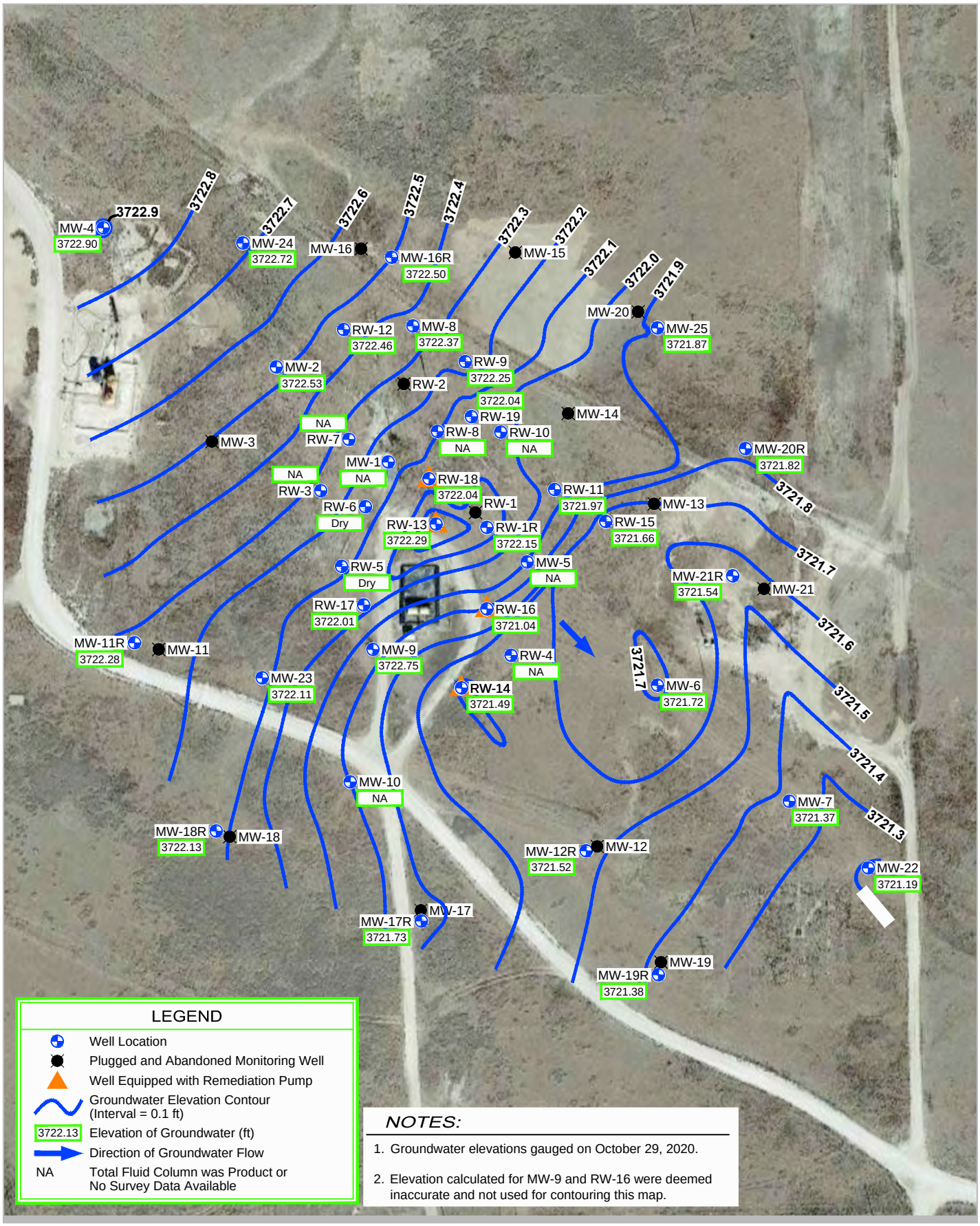

LEGEND

- Well Location
- Plugged and Abandoned Monitoring Well
- Well Equipped with Remediation Pump
- Groundwater Elevation Contour (Interval = 0.1 ft)
- 3722.13 Elevation of Groundwater (ft)
- Direction of Groundwater Flow
- NA Total Fluid Column was Product or No Survey Data Available

NOTES:

1. Groundwater elevations gauged on October 29, 2020.
2. Elevation calculated for MW-9 and RW-16 were deemed inaccurate and not used for contouring this map.

0 75 150 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.1

Project No. **11209885**
Date **January 2021**

GROUNDWATER GRADIENT MAP OCTOBER 29, 2020

FIGURE 6

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL002.dwg
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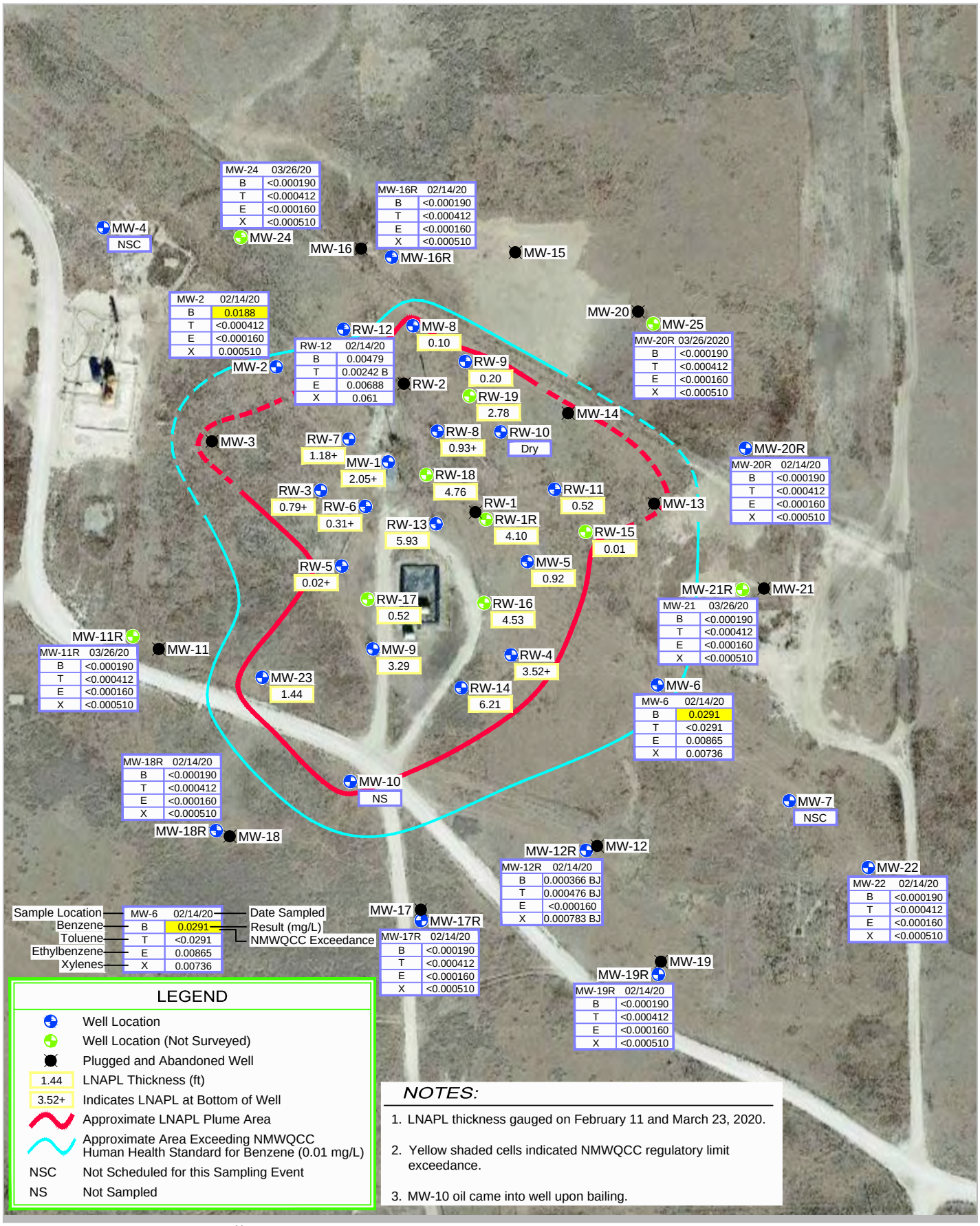


0 75 150 ft

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

N

GHD

PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

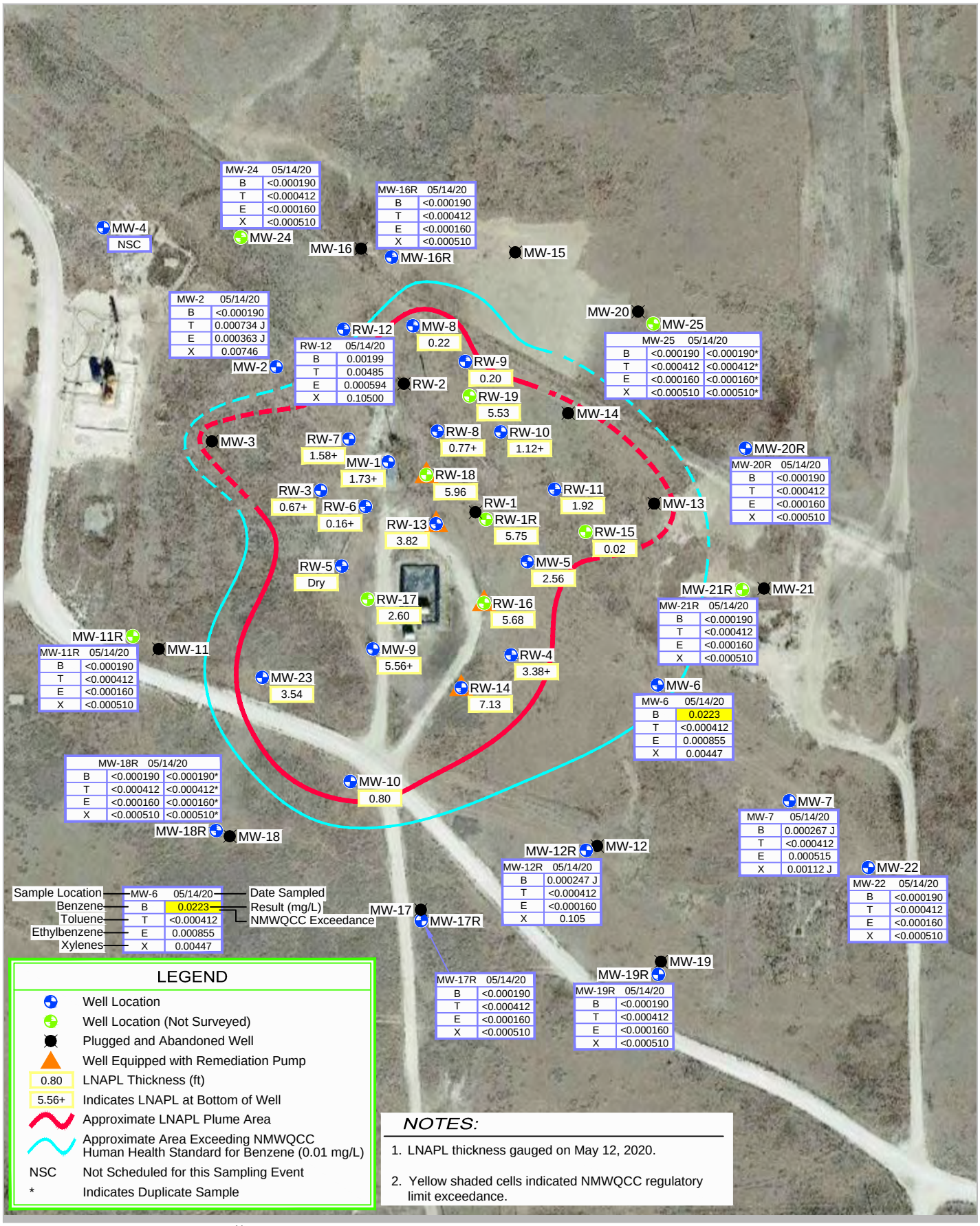
LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP
FEBRUARY 14, 2020 AND MARCH 26, 2020

Project No. 11209885
Date January 2021

FIGURE 7

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL001.dwg
Plot Date: 20 January 2021 2:54 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0266° North, 103.1666° West



PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

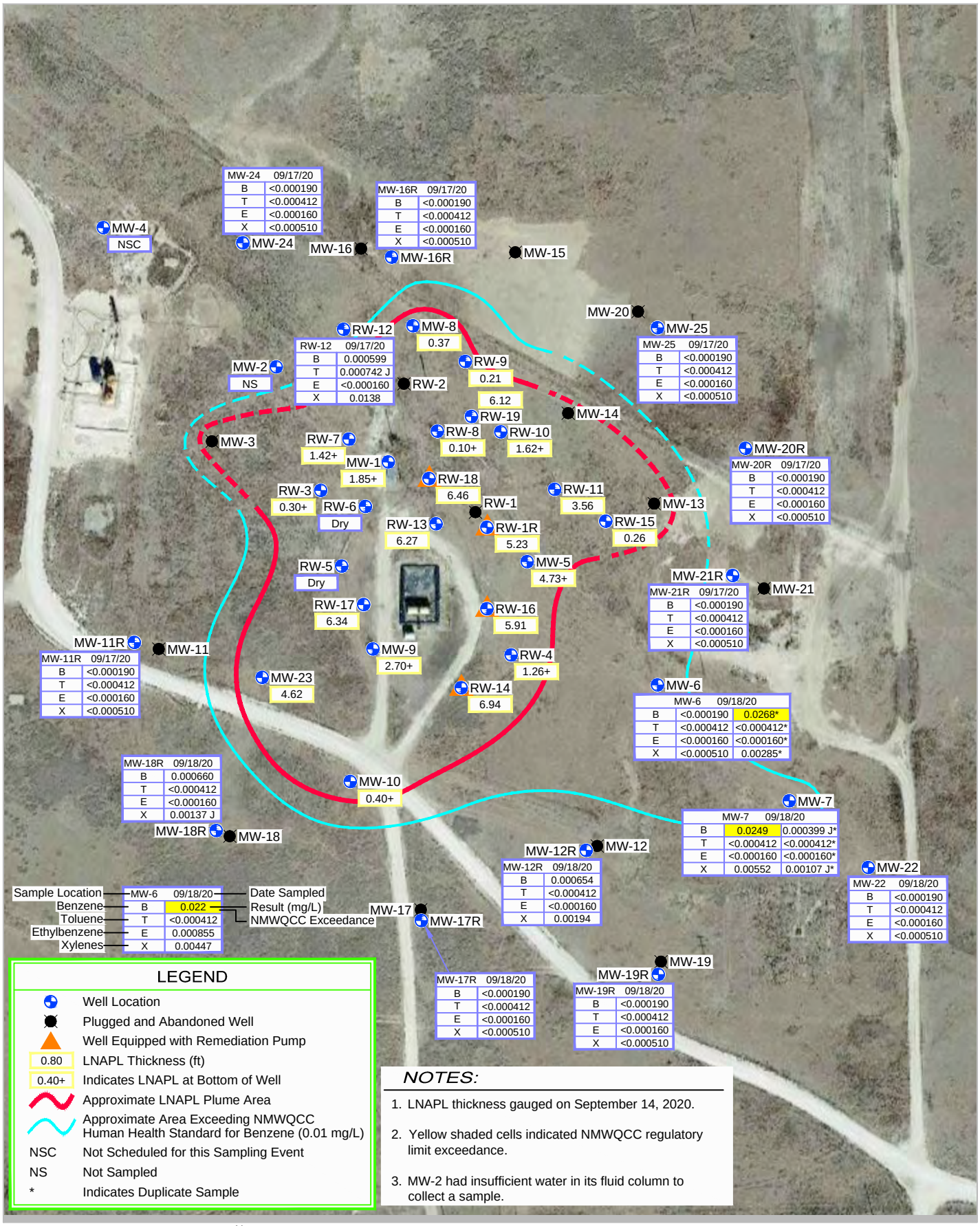
LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP
MAY 14, 2020

Project No. **11209885**
Date **January 2021**

FIGURE 8

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL001.dwg
Plot Date: 25 January 2021 2:00 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0266° North, 103.1666° West



PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

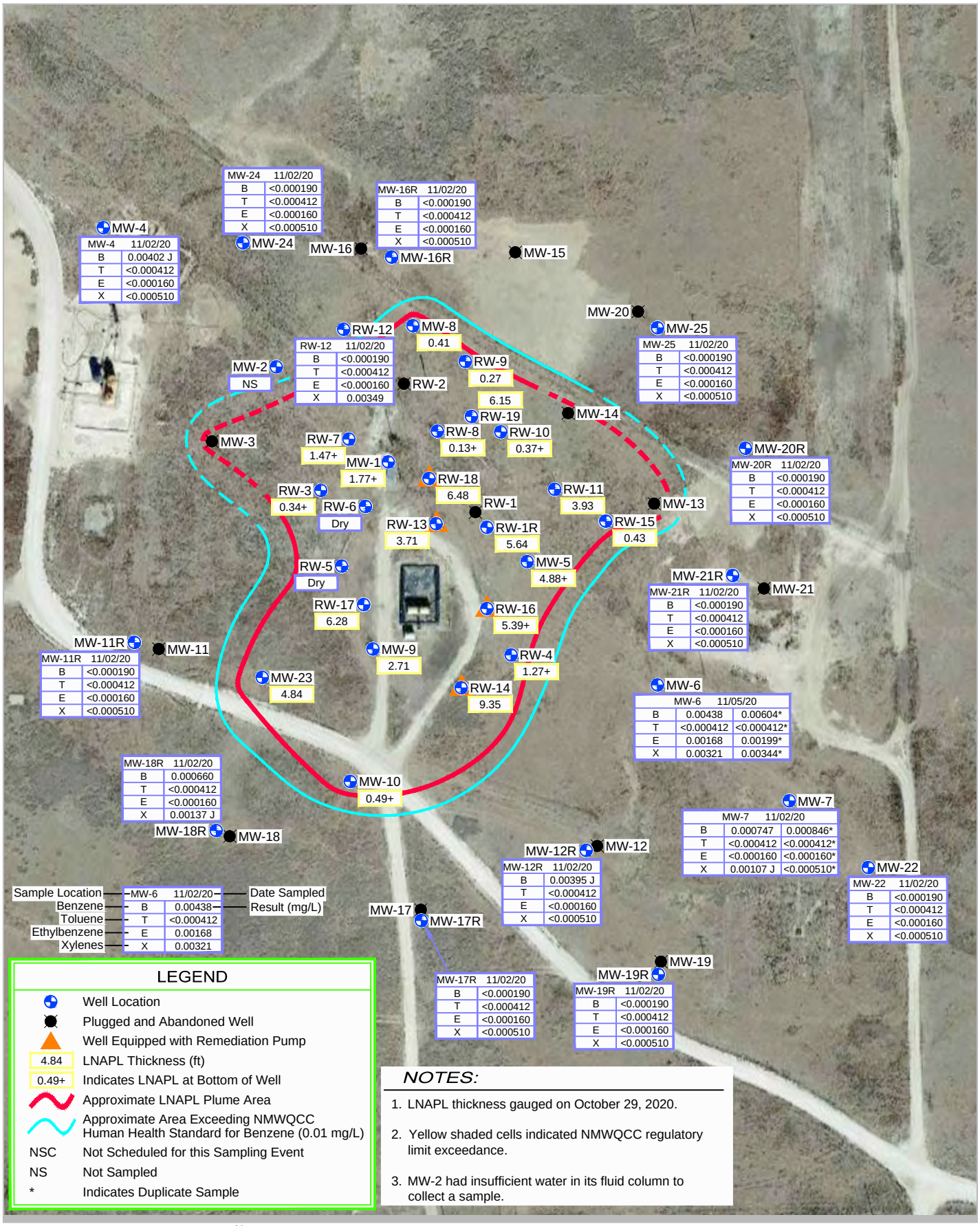
LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP SEPTEMBER 17 & 18, 2020

Project No. **11209885**
Date **January 2021**

FIGURE 9

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL002.dwg
Plot Date: 20 January 2021 2:54 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0266° North, 103.1666° West



PLAINS PIPELINE L.P.
LEA COUNTY, NEW MEXICO
DARR ANGELL No.1

LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP NOVEMBER 2 AND 5, 2020

Project No. **11209885**
Date **January 2021**

FIGURE 10

Filename: I:\CAD\Files\Eight Digit Job Numbers\1120----\11209885-Darr 1\11209885(GWR 2020)\11209885(GWR 2020)GN-DL002.dwg
Plot Date: 25 January 2021 2:08 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 33.0266° North, 103.1666° West

Tables

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-01	3790.02	1/29/19	-	-	-	-	-	-	3.5	0.2	-
MW-01	3790.02	2/5/19	-	-	-	-	-	-	0.0	-	-
MW-01	3790.02	2/25/19	-	65.30	2.97+	LNAPL at TD	-	-	-	-	-
MW-01	3790.02	3/6/19	-	-	-	-	-	-	0.0	0	-
MW-01	3790.02	4/30/19	69.33	66.39	2.94+	LNAPL at TD	-	-	1.0	0	-
MW-01	3790.02	5/20/19	-	66.48	2.63+	LNAPL at TD	-	-	-	-	-
MW-01	3790.02	6/11/19	-	-	-	-	-	-	3.0	0	-
MW-01	3790.02	6/18/19	-	-	-	-	-	-	2.0	0.2	-
MW-01	3790.02	6/25/19	-	-	-	-	-	-	3.1	0	-
MW-01	3790.02	7/2/19	-	-	-	-	-	-	2.0	0.0	-
MW-01	3790.02	7/8/19	-	-	-	-	-	-	1.3	0.2	-
MW-01	3790.02	7/22/19	-	66.65	2.56+	LNAPL at TD	69.21	-	-	-	-
MW-01	3790.02	8/6/19	-	-	-	-	-	-	1.5	0.0	-
MW-01	3790.02	8/13/19	-	-	-	-	-	-	1.9	0.1	-
MW-01	3790.02	8/20/19	-	-	-	-	-	-	2.4	0.1	-
MW-01	3790.02	8/28/19	-	-	-	-	-	-	2.3	0.1	-
MW-01	3790.02	9/10/19	-	-	-	-	-	-	0.0	1.5	-
MW-01	3790.02	9/25/19	-	-	-	-	-	-	1.8	0.0	-
MW-01	3790.02	10/2/19	-	-	-	-	-	-	1.8	-	-
MW-01	3790.02	10/21/19	68.19	65.82	2.37	3723.75	69.35	-	-	-	-
MW-01	3790.02	10/23/19	-	66.82	2.53+	LNAPL at TD	-	-	-	-	-
MW-01	3790.02	11/20/19	-	-	-	-	-	-	2.0	-	-
MW-01	3790.02	12/11/19	-	-	-	-	-	-	2.0	0.0	-
MW-01	3790.02	12/18/19	-	-	-	-	-	-	2.5	0.0	-
MW-01	3790.02	12/24/19	-	-	-	-	-	-	0.5	0.5	-
MW-01	3790.02	1/8/20	-	-	-	-	-	-	1.5	0.0	-
MW-01	3790.02	1/15/20	-	-	-	-	-	-	2.0	0.0	-
MW-01	3790.02	1/29/20	-	-	-	-	-	-	1.5	0.0	-
MW-01	3790.02	2/11/20	-	66.85	2.05+	LNAPL at TD	68.90	50-70 (4 in.)	-	-	-
MW-01	3790.02	4/28/20	-	66.17	1.93+	LNAPL at TD	68.10	-	-	-	-
MW-01	3790.02	5/12/20	-	67.17	1.73+	LNAPL at TD	68.90	-	-	-	-
MW-01	3790.02	6/19/20	-	67.25	1.65+	LNAPL at TD	68.90	-	-	-	-
MW-01	3790.02	7/29/20	-	67.36	1.84+	LNAPL at TD	69.20	-	-	-	-
MW-01	3790.02	8/27/20	-	67.41	1.60+	LNAPL at TD	69.01	-	-	-	-
MW-01	3790.02	9/14/20	-	66.48	1.85+	LNAPL at TD	68.33	-	-	-	-
MW-01	3790.02	10/29/20	-	66.59	1.77+	LNAPL at TD	68.36	-	-	-	-
MW-01	3790.02	12/7/20	-	67.63	1.45+	LNAPL at TD	69.08	-	-	-	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-02	3790.83	2/25/19	67.06	-	0.00	3723.77	-	-	-	-	-
MW-02	3790.83	2/26/19	-	-	-	-	-	-	-	1.0	-
MW-02	3790.83	5/20/19	67.20	-	0.00	3723.63	-	-	-	-	-
MW-02	3790.83	5/22/19	-	-	-	-	-	-	0	8.0	-
MW-02	3790.83	7/23/19	67.29	-	0.00	3723.54	-	-	-	-	-
MW-02	3790.83	7/24/19	-	-	-	-	-	-	0.0	3.0	-
MW-02	3790.83	8/28/19	-	-	-	-	-	-	0.0	0.5	-
MW-02	3790.83	9/10/19	-	-	-	-	-	-	-	0.5	-
MW-02	3790.83	10/2/19	-	-	-	-	-	-	-	1.0	-
MW-02	3790.83	10/21/19	67.51	-	0.00	3723.32	71.58	-	-	-	-
MW-02	3790.83	10/24/19	-	-	-	-	-	-	-	6.0	-
MW-02	3790.83	2/11/20	67.61	-	0.00	3723.22	74.01	50-70 (4 in.)	-	-	-
MW-02	3790.83	3/17/20	-	-	-	-	-	-	-	3.0	-
MW-02	3790.83	4/28/20	68.06	-	0.00	3722.77	-	-	-	-	-
MW-02	3790.83	5/12/20	67.92	-	0.00	3722.91	-	-	-	0.2	-
MW-02	3790.83	6/19/20	67.83	-	0.00	3723.00	-	-	-	-	-
MW-02	3790.83	7/29/20	68.12	-	0.00	3722.71	-	-	-	-	-
MW-02	3790.83	8/27/20	68.18	-	0.00	3722.65	-	-	-	-	-
MW-02	3790.83	9/14/20	68.22	-	0.00	3722.61	-	-	-	0.2	-
MW-02	3790.83	10/29/20	68.30	-	0.00	3722.53	-	-	-	-	-
MW-02	3790.83	12/7/20	68.21	-	0.00	3722.62	-	-	-	-	-
MW-03	3791.44	2/25/19	-	-	-	Dry	-	-	-	-	-
MW-03	3791.44	5/20/19	-	-	-	Dry	-	-	-	-	-
MW-03	3791.44	7/23/19	-	-	-	Dry	-	-	-	-	-
MW-03	3791.44	10/21/19	-	-	-	Dry	67.33	-	-	-	-
MW-03	P&A	2/19/20	-	-	-	-	-	-	-	-	-
MW-04	3792.51	2/25/19	68.03	-	0.00	3724.48	-	-	-		-
MW-04	3792.51	5/20/19	68.50	-	0.00	3724.01	-	-	-		-
MW-04	3792.51	7/23/19	68.59	-	0.00	3723.92	-	-	-		-
MW-04	3792.51	10/21/19	68.84	-	0.00	3723.67	70.24	-	-		-
MW-04	3792.51	10/24/19	-	-	-	-	-	-	-	0.5	-
MW-04	3792.51	2/11/20	69.06	-	0.00	3723.45	74.09	50-70 (4 in.)	-	-	-
MW-04	3792.51	4/28/20	69.21	-	0.00	3723.30	-	-	-	-	-
MW-04	3792.51	5/12/20	69.24	-	0.00	3723.27	-	-	-	-	-
MW-04	3792.51	6/19/20	69.34	-	0.00	3723.17	-	-	-	-	-
MW-04	3792.51	7/29/20	69.40	-	0.00	3723.11	-	-	-	-	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-04	3792.51	8/27/20	69.48	-	0.00	3723.03	-	-	-	-	-
MW-04	3792.51	9/14/20	69.52	-	0.00	3722.99	-	-	-	-	-
MW-04	3792.51	10/29/20	69.61	-	0.00	3722.90	69.94	-	-	Pull sample	-
MW-04	3792.51	12/7/20	69.70	-	0.00	3722.81	-	-	-	-	-
MW-05	3789.50	2/25/19	67.17	66.31	0.86	3723.03	-	-	-	-	-
MW-05	3789.50	4/30/19	-	-	-	-	-	-	0.5	0.0	-
MW-05	3789.50	5/20/19	68.93	65.91	3.02	3723.02	-	-	-	-	-
MW-05	3789.50	6/11/19	-	-	-	-	-	-	3.0	1.0	-
MW-05	3789.50	6/18/19	-	-	-	-	-	-	1.0	1.0	-
MW-05	3789.50	6/25/19	-	-	-	-	-	-	0.4	1.6	-
MW-05	3789.50	7/8/19	-	-	-	-	-	-	0.2	1.8	-
MW-05	3789.50	7/23/19	67.33	66.42	0.91	3722.91	-	-	-	-	-
MW-05	3789.50	10/21/19	67.00	66.68	0.32	3722.76	-	-	-	-	-
MW-05	3789.50	11/20/19	-	-	-	-	-	-	0.4	1.6	-
MW-05	3789.50	12/11/19	-	-	-	-	-	-	0.9	0.6	-
MW-05	3789.50	12/24/19	-	-	-	-	-	-	0.3	0.8	-
MW-05	3789.50	1/29/20	-	-	-	-	-	-	1	1.2	-
MW-05	3789.50	2/11/20	67.76	66.84	0.92	3722.49	73.85	50-70 (4 in.)	-	-	-
MW-05	3789.50	4/28/20	69.07	66.74	2.33	3722.32	-	-	-	-	-
MW-05	3789.50	5/12/20	69.26	66.70	2.56	3722.31	-	-	-	-	-
MW-05	3789.50	6/19/20	69.94	66.66	3.28	3722.22	-	-	-	-	-
MW-05	3789.50	7/29/20	70.70	66.62	4.08	3722.10	-	-	-	-	-
MW-05	3789.50	8/27/20	71.16	66.59	4.57	3722.04	-	-	-	-	-
MW-05	3789.50	9/14/20	-	66.58	4.73+	LNAPL at TD	71.31	-	-	-	-
MW-05	3789.50	10/29/20	-	66.47	4.88+	LNAPL at TD	71.35	-	-	-	-
MW-05	3789.50	12/7/20	-	66.49	4.98+	LNAPL at TD	71.47	-	-	-	-
MW-06	3789.27	2/25/19	66.33	-	0.00	3722.94	-	-	-	-	-
MW-06	3789.27	2/26/19	-	-	-	-	-	-	-	10.0	-
MW-06	3789.27	4/30/19	66.59	66.58	0.01	3722.69	-	-	-	-	-
MW-06	3789.27	5/20/19	66.50	-	0.00	3722.77	-	-	-	-	-
MW-06	3789.27	5/22/19	-	-	-	-	-	-	0	8.0	-
MW-06	3789.27	6/11/19	-	-	-	-	-	-	0.3	0.0	-
MW-06	3789.27	7/23/19	66.56	-	0.00	3722.71	-	-	-	-	-
MW-06	3789.27	7/24/19	-	-	-	-	-	-	0.0	5.0	-
MW-06	3789.27	8/21/19	-	-	-	-	-	-	0.2	0.0	-
MW-06	3789.27	8/28/19	-	-	-	-	-	-	0.0	3.0	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-06	3789.27	9/10/19	-	-	-	-	-	-	0.0	3.0	-
MW-06	3789.27	9/25/19	-	-	-	-	-	-	0.0	3.0	-
MW-06	3789.27	10/21/19	66.79	-	0.00	3722.48	71.24	-	-	-	-
MW-06	3789.27	10/24/19	-	-	-	-	-	-	-	5.0	-
MW-06	3789.27	2/11/20	67.01	-	0.00	3722.26	74.3	50-70 (4 in.)	-	14.0	-
MW-06	3789.27	3/17/20	-	-	-	-	-	-	-	3.0	-
MW-06	3789.27	4/28/20	67.19	-	0.00	3722.08	-	-	-	-	-
MW-06	3789.27	5/12/20	67.20	-	0.00	3722.07	-	-	-	10.0	-
MW-06	3789.27	6/19/20	67.28	-	0.00	3721.99	-	-	-	-	-
MW-06	3789.27	7/29/20	67.43	-	0.00	3721.84	-	-	-	-	-
MW-06	3789.27	8/27/20	67.42	-	0.00	3721.85	-	-	-	-	-
MW-06	3789.27	9/14/20	67.45	-	0.00	3721.82	-	-	-	10.0	-
MW-06	3789.27	10/29/20	67.55	-	0.00	3721.72	-	-	-	2.5	-
MW-06	3789.27	12/7/20	67.63	-	0.00	3721.64	-	-	-	-	-
MW-07	3789.26	2/25/19	66.65	-	0.00	3722.61	-	-	-	-	-
MW-07	3789.26	5/20/19	66.81	-	0.00	3722.45	-	-	-	-	-
MW-07	3789.26	7/23/19	67.05	-	0.00	3722.21	-	-	-	-	-
MW-07	3789.26	10/21/19	67.20	-	0.00	3722.06	73.33	-	-	-	-
MW-07	3789.26	10/24/19	-	-	-	-	-	-	-	7	-
MW-07	3789.26	2/11/20	67.41	-	0.00	3721.85	75.36	50-70 (4 in.)	-	-	-
MW-07	3789.26	4/28/20	67.51	-	0.00	3721.75	-	-	-	-	-
MW-07	3789.26	5/12/20	67.52	-	0.00	3721.74	-	-	-	14	-
MW-07	3789.26	6/19/20	67.61	-	0.00	3721.65	-	-	-	-	-
MW-07	3789.26	7/29/20	67.70	-	0.00	3721.56	-	-	-	-	-
MW-07	3789.26	8/27/20	67.75	-	0.00	3721.51	-	-	-	-	-
MW-07	3789.26	9/14/20	67.77	-	0.00	3721.49	-	-	-	14	-
MW-07	3789.26	10/29/20	67.89	-	0.00	3721.37	-	-	-	3.5	-
MW-07	3789.26	12/7/20	67.96	-	0.00	3721.30	-	-	-	-	-
MW-08	3790.66	2/25/19	67.10	66.99	0.11	3723.65	-	-	-	-	-
MW-08	3790.66	5/20/19	67.24	67.20	0.04	3723.45	-	-	-	-	-
MW-08	3790.66	7/23/19	67.39	67.32	0.07	3723.33	-	-	-	-	-
MW-08	3790.66	10/21/19	67.54	67.48	0.06	3723.17	-	-	-	-	-
MW-08	3790.66	2/11/20	67.82	67.72	0.10	3722.92	74.35	50-70 (4 in)	-	-	-
MW-08	3790.66	4/28/20	68.04	67.86	0.18	3722.77	-	-	-	-	-
MW-08	3790.66	5/12/20	68.06	67.84	0.22	3722.78	-	-	-	-	-
MW-08	3790.66	6/19/20	68.19	67.94	0.25	3722.67	-	-	-	-	-
MW-08	3790.66	7/29/20	68.34	68.04	0.30	3722.56	-	-	-	-	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-08	3790.66	8/27/20	68.43	68.07	0.36	3722.52	-	-	-	-	-
MW-08	3790.66	9/14/20	68.50	68.13	0.37	3722.46	-	-	-	-	-
MW-08	3790.66	10/29/20	68.62	68.21	0.41	3722.37	-	-	-	-	-
MW-08	3790.66	12/7/20	68.74	68.27	0.47	3722.30	-	-	-	-	-
MW-09	3790.94	2/25/19	70.49	66.94	3.55	3723.33	-	-	-	-	-
MW-09	3790.94	5/20/19	-	66.85	3.22+	LNAPL at TD	-	-	-	-	-
MW-09	3790.94	7/23/19	-	67.60	3.55+	LNAPL at TD	-	-	-	-	-
MW-09	3790.94	10/21/19	-	67.06	3.14+	LNAPL at TD	70.21	-	-	-	-
MW-09	3790.94	12/11/19	-	-	-	-	-	-	1	0	-
MW-09	3790.94	12/24/19	-	-	-	-	-	-	0.3	1.2	-
MW-09	3790.94	1/29/20	-	-	-	-	-	-	0.2	0	-
MW-09	3790.94	2/11/20	-	67.51	3.29+	LNAPL at TD	70.80	50-70 (4 in.)	-	-	-
MW-09	3790.94	3/11/20	-	67.58	3.22+	LNAPL at TD	70.80	-	-	-	-
MW-09	3790.94	4/8/20	-	67.66	3.14+	LNAPL at TD	70.80	-	-	-	-
MW-09	3790.94	4/28/20	-	67.26	3.09+	LNAPL at TD	70.35	-	-	-	-
MW-09	3790.94	5/12/20	-	67.21	5.56+	LNAPL at TD	72.77	-	-	-	-
MW-09	3790.94	6/19/20	-	67.36	5.41+	LNAPL at TD	72.77	-	-	-	-
MW-09	3790.94	7/29/20	-	67.25	3.15+	LNAPL at TD	70.40	-	-	-	-
MW-09	3790.94	8/27/20	70.32	67.53	2.79	3722.88	-	-	-	-	-
MW-09	3790.94	9/14/20	-	67.56	2.70+	LNAPL at TD	70.26	-	-	-	-
MW-09	3790.94	10/29/20	70.39	67.68	2.71	3722.75	-	-	-	-	-
MW-09	3790.94	12/7/20	-	67.77	2.63+	LNAPL at TD	70.40	-	-	-	-
MW-10	3790.94	2/25/19	67.90	67.42	0.48	3723.43	-	-	-	-	-
MW-10	3790.94	5/20/19	-	67.40	1.20+	LNAPL at TD	-	-	-	-	-
MW-10	3790.94	6/11/19	-	-	-	-	-	-	0.1	0.0	-
MW-10	3790.94	7/23/19	-	67.51	0.97+	LNAPL at TD	-	-	-	-	-
MW-10	3790.94	8/28/19	-	-	-	-	-	-	0.3	0	-
MW-10	3790.94	10/21/19	-	67.54	0.96+	LNAPL at TD	68.5	-	-	-	-
MW-10	3790.94	2/11/20	67.64	-	0.00	3723.30	69.77	40-65 (2 in.)	-	-	-
MW-10	3790.94	4/28/20	-	67.82	0.90+	LNAPL at TD	68.72	-	-	-	-
MW-10	3790.94	5/12/20	68.63	67.83	0.80	3722.96	68.72	-	-	-	-
MW-10	3790.94	6/19/20	-	67.93	0.79+	LNAPL at TD	68.72	-	-	-	-
MW-10	3790.94	7/29/20	68.76	68.01	0.75	LNAPL at TD	68.72	-	-	-	-
MW-10	3790.94	8/27/20	68.72	68.08	0.64	3722.74	-	-	-	-	-
MW-10	3790.94	9/14/20	-	68.23	0.40+	LNAPL at TD	68.63	-	-	-	-
MW-10	3790.94	10/29/20	-	68.26	0.49+	LNAPL at TD	68.75	-	-	-	-
MW-10	3790.94	12/7/20	-	68.33	0.41+	LNAPL at TD	68.74	-	-	-	-

Table 1

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Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-11	3792.02	2/25/19	-	-	-	Dry	-	-	-	-	-
MW-11	3792.02	5/20/19	-	-	-	Dry	-	-	-	-	-
MW-11	3792.02	7/23/19	-	-	-	Dry	-	-	-	-	-
MW-11	3792.02	10/21/19	-	-	-	Dry	63.45	-	-	-	-
MW-11	P&A	2/19/20	-	-	-	-	-	-	-	-	-
MW-11R	3790.62	2/26/20	-	-	-	-	-	-	-	15	-
MW-11R	3790.62	3/12/20	67.76	-	0.00	3722.86	90.02	-	-	-	-
MW-11R	3790.62	3/23/20	67.88	-	0.00	3722.74	90.02	-	-	-	-
MW-11R	3790.62	4/28/20	67.95	-	0.00	3722.67	-	-	-	-	-
MW-11R	3790.62	5/12/20	67.96	-	0.00	3722.66	-	-	-	12	-
MW-11R	3790.62	6/19/20	68.03	-	0.00	3722.59	-	-	-	-	-
MW-11R	3790.62	7/29/20	69.14	-	0.00	3721.48	-	-	-	-	-
MW-11R	3790.62	8/27/20	68.19	-	0.00	3722.43	-	-	-	-	-
MW-11R	3790.62	9/14/20	68.26	-	0.00	3722.36	-	-	-	12	-
MW-11R	3790.62	10/29/20	68.34	-	0.00	3722.28	-	-	-	10	-
MW-11R	3790.62	12/7/20	68.42	-	0.00	3722.20	-	-	-	-	-
MW-12R	3789.55	2/25/19	66.53	-	0.00	3723.02	-	-	-	-	-
MW-12R	3789.55	2/26/19	-	-	-	-	-	-	-	9.6	-
MW-12R	3789.55	5/20/19	66.95	-	0.00	3722.60	-	-	-	-	-
MW-12R	3789.55	5/22/19	-	-	-	-	-	-	0	9.0	-
MW-12R	3789.55	7/23/19	67.02	-	0.00	3722.53	-	-	-	-	-
MW-12R	3789.55	7/24/19	-	-	-	-	-	-	0.0	6.0	-
MW-12R	3789.55	10/21/19	67.26	-	0.00	3722.29	85.13	-	-	-	-
MW-12R	3789.55	10/23/19	-	-	-	-	-	-	-	7.0	-
MW-12R	3789.55	2/11/20	67.49	-	0.00	3722.06	87.65	-	-	10.0	-
MW-12R	3789.55	4/28/20	67.65	-	0.00	3721.90	-	-	-	-	-
MW-12R	3789.55	5/12/20	67.63	-	0.00	3721.92	-	-	-	10.0	-
MW-12R	3789.55	6/19/20	67.72	-	0.00	3721.83	-	-	-	-	-
MW-12R	3789.55	7/29/20	67.80	-	0.00	3721.75	-	-	-	-	-
MW-12R	3789.55	8/27/20	67.88	-	0.00	3721.67	-	-	-	-	-
MW-12R	3789.55	9/14/20	67.93	-	0.00	3721.62	-	-	-	10.0	-
MW-12R	3789.55	10/29/20	68.03	-	0.00	3721.52	-	-	-	5.0	-
MW-12R	3789.55	12/7/20	68.08	-	0.00	3721.47	-	-	-	-	-
MW-13	3790.98	2/25/19	-	-	-	Dry	-	-	-	-	-

Table 1

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Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-13	3790.98	5/20/19	-	-	-	Dry	-	-	-	-	-
MW-13	3790.98	7/23/19	-	-	-	Dry	-	-	-	-	-
MW-13	3790.98	10/21/19	-	-	-	Dry	63.31	-	-	-	-
MW-13	P&A	2/19/20	-	-	-	-	-	-	-	-	-
MW-14	3791.16	2/25/19	-	-	-	Dry	-	-	-	-	-
MW-14	3791.16	5/20/19	-	-	-	Dry	-	-	-	-	-
MW-14	3791.16	7/23/19	-	-	-	Dry	-	-	-	-	-
MW-14	3791.16	10/21/19	-	-	-	Dry	63.41	-	-	-	-
MW-14	P&A	2/19/20	-	-	-	-	-	-	-	-	-
MW-16R	3791.21	2/25/19	67.44	-	0.00	3723.77	-	-	-	-	-
MW-16R	3791.21	2/26/19	-	-	-	-	-	-	-	8.6	-
MW-16R	3791.21	5/20/19	67.60	-	0.00	3723.61	-	-	-	-	-
MW-16R	3791.21	5/22/19	-	-	-	-	-	-	0	8.5	-
MW-16R	3791.21	7/23/19	67.71	-	0.00	3723.50	-	-	-	-	-
MW-16R	3791.21	7/24/19	-	-	-	-	-	-	0.0	6.0	-
MW-16R	3791.21	10/21/19	67.93	-	0.00	3723.28	84.78	-	-	-	-
MW-16R	3791.21	10/24/19	-	-	-	-	-	-	-	6.0	-
MW-16R	3791.21	2/11/20	68.19	-	0.00	3723.02	85.51	-	-	8.3	-
MW-16R	3791.21	4/28/20	68.32	-	0.00	3722.89	-	-	-	-	-
MW-16R	3791.21	5/12/20	68.32	-	0.00	3722.89	-	-	-	9.0	-
MW-16R	3791.21	6/19/20	68.45	-	0.00	3722.76	-	-	-	-	-
MW-16R	3791.21	7/29/20	68.50	-	0.00	3722.71	-	-	-	-	-
MW-16R	3791.21	8/27/20	68.63	-	0.00	3722.58	-	-	-	-	-
MW-16R	3791.21	9/14/20	68.63	-	0.00	3722.58	-	-	-	9.0	-
MW-16R	3791.21	10/29/20	68.71	-	0.00	3722.50	-	-	-	8.0	-
MW-16R	3791.21	12/7/20	68.79	-	0.00	3722.42	-	-	-	-	-
MW-17R	3790.20	2/25/19	67.21	-	0.00	3722.99	-	-	-	-	-
MW-17R	3790.20	2/26/19	-	-	-	-	-	-	-	5.6	-
MW-17R	3790.20	5/20/19	67.42	-	0.00	3722.78	-	-	-	-	-
MW-17R	3790.20	5/22/19	-	-	-	-	-	-	0	5.5	-
MW-17R	3790.20	7/23/19	67.50	-	0.00	3722.70	-	-	-	-	-
MW-17R	3790.20	7/24/19	-	-	-	-	-	-	0.0	4.0	-
MW-17R	3790.20	10/21/19	67.70	-	0.00	3722.50	78.69	-	-	-	-
MW-17R	3790.20	10/23/19	-	-	-	-	-	-	-	4.0	-
MW-17R	3790.20	2/11/20	67.94	-	0.00	3722.26	79.15	-	-	5.3	-

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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-17R	3790.20	4/28/20	68.06	-	0.00	3722.14	-	-	-	-	-
MW-17R	3790.20	5/12/20	68.09	-	0.00	3722.11	-	-	-	6.0	-
MW-17R	3790.20	6/19/20	68.17	-	0.00	3722.03	-	-	-	-	-
MW-17R	3790.20	7/29/20	68.26	-	0.00	3721.94	-	-	-	-	-
MW-17R	3790.20	8/27/20	68.33	-	0.00	3721.87	-	-	-	-	-
MW-17R	3790.20	9/14/20	68.37	-	0.00	3721.83	-	-	-	6.0	-
MW-17R	3790.20	10/29/20	68.47	-	0.00	3721.73	-	-	-	5.0	-
MW-17R	3790.20	12/7/20	68.55	-	0.00	3721.65	-	-	-	-	-
MW-18R	3791.04	2/25/19	67.67	-	0.00	3723.37	-	-	-	-	-
MW-18R	3791.04	2/26/19	-	-	-	-	-	-	-	7.0	-
MW-18R	3791.04	5/20/19	67.88	-	0.00	3723.16	-	-	-	-	-
MW-18R	3791.04	5/22/19	-	-	-	-	-	-	0	6.5	-
MW-18R	3791.04	7/23/19	67.91	-	0.00	3723.13	-	-	-	-	-
MW-18R	3791.04	7/24/19	-	-	-	-	-	-	0.0	5.0	-
MW-18R	3791.04	10/21/19	68.13	-	0.00	3722.91	81.48	-	-	-	-
MW-18R	3791.04	10/23/19	-	-	-	-	-	-	-	5.0	-
MW-18R	3791.04	2/11/20	68.39	-	0.00	3722.65	81.94	-	-	6.0	-
MW-18R	3791.04	4/28/20	68.52	-	0.00	3722.52	-	-	-	-	-
MW-18R	3791.04	5/12/20	68.52	-	0.00	3722.52	-	-	-	7.0	-
MW-18R	3791.04	6/19/20	68.62	-	0.00	3722.42	-	-	-	-	-
MW-18R	3791.04	7/29/20	68.70	-	0.00	3722.34	-	-	-	-	-
MW-18R	3791.04	8/27/20	68.77	-	0.00	3722.27	-	-	-	-	-
MW-18R	3791.04	9/14/20	68.83	-	0.00	3722.21	-	-	-	7.0	-
MW-18R	3791.04	10/29/20	68.91	-	0.00	3722.13	-	-	-	6.0	-
MW-18R	3791.04	12/7/20	69.00	-	0.00	3722.04	-	-	-	-	-
MW-19R	3789.67	2/25/19	67.06	-	0.00	3722.61	-	-	-	-	-
MW-19R	3789.67	2/26/19	-	-	-	-	-	-	-	2.0	-
MW-19R	3789.67	5/20/19	67.23	-	0.00	3722.44	-	-	-	-	-
MW-19R	3789.67	5/22/19	-	-	-	-	-	-	0	1.5	-
MW-19R	3789.67	7/23/19	67.30	-	0.00	3722.37	-	-	-	-	-
MW-19R	3789.67	7/24/19	-	-	-	-	-	-	0.0	1.0	-
MW-19R	3789.67	10/21/19	67.51	-	0.00	3722.16	71.11	-	-	-	-
MW-19R	3789.67	10/23/19	-	-	-	-	-	-	-	0.8	-
MW-19R	3789.67	2/11/20	67.79	-	0.00	3721.88	78.79	61.5-81.5 (2 in)	-	-	-
MW-19R	3789.67	4/28/20	67.90	-	0.00	3721.77	-	-	-	-	-
MW-19R	3789.67	5/12/20	67.91	-	0.00	3721.76	-	-	-	6.0	-

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MW-19R	3789.67	6/19/20	68.00	-	0.00	3721.67	-	-	-	-	-
MW-19R	3789.67	7/29/20	68.08	-	0.00	3721.59	-	-	-	-	-
MW-19R	3789.67	8/27/20	68.15	-	0.00	3721.52	-	-	-	-	-
MW-19R	3789.67	9/14/20	68.42	-	0.00	3721.25	-	-	-	6.0	-
MW-19R	3789.67	10/29/20	68.29	-	0.00	3721.38	-	-	-	4.5	-
MW-19R	3789.67	12/7/20	68.35	-	0.00	3721.32	-	-	-	-	-
MW-20R	3789.73	2/25/19	66.67	-	0.00	3723.06	-	-	-	-	-
MW-20R	3789.73	2/26/19	-	-	-	-	-	-	-	2.5	-
MW-20R	3789.73	5/20/19	66.90	-	0.00	3722.83	-	-	-	-	-
MW-20R	3789.73	5/22/19	-	-	-	-	-	-	0	2.5	-
MW-20R	3789.73	7/23/19	66.95	-	0.00	3722.78	-	-	-	-	-
MW-20R	3789.73	7/24/19	-	-	-	-	-	-	0.0	1.5	-
MW-20R	3789.73	10/21/19	67.15	-	0.00	3722.58	72.06	-	-	-	-
MW-20R	3789.73	10/24/19	-	-	-	-	-	-	-	0.5	-
MW-20R	3789.73	2/11/20	67.39	-	0.00	3722.34	72.51	61.5-81.5 (2 in)	-	2.3	-
MW-20R	3789.73	4/28/20	67.55	-	0.00	3722.18	-	-	-	-	-
MW-20R	3789.73	5/12/20	67.53	-	0.00	3722.20	-	-	-	2.5	-
MW-20R	3789.73	6/19/20	67.64	-	0.00	3722.09	-	-	-	-	-
MW-20R	3789.73	7/29/20	67.71	-	0.00	3722.02	-	-	-	-	-
MW-20R	3789.73	8/27/20	67.77	-	0.00	3721.96	-	-	-	-	-
MW-20R	3789.73	9/14/20	67.85	-	0.00	3721.88	-	-	-	2.5	-
MW-20R	3789.73	10/29/20	67.91	-	0.00	3721.82	-	-	-	1.5	-
MW-20R	3789.73	12/7/20	67.98	-	0.00	3721.75	-	-	-	-	-
MW-21	3790.26	2/25/19	67.38	-	0.00	3722.88	-	-	-	-	-
MW-21	3790.26	2/26/19	-	-	-	-	-	-	-	0.3	-
MW-21	3790.26	5/20/19	67.61	-	0.00	3722.65	-	-	-	-	-
MW-21	3790.26	5/22/19	-	-	-	-	-	-	0	0.5	-
MW-21	3790.26	7/23/19	67.63	-	0.00	3722.63	-	-	-	-	-
MW-21	3790.26	7/24/19	-	-	-	-	-	-	0.0	0.25	-
MW-21	3790.26	10/21/19	67.87	-	0.00	3722.39	68.4	-	-	-	-
MW-21	3790.26	10/24/19	-	-	-	-	-	-	-	0.00	-
MW-21	P&A	2/19/20	-	-	-	-	-	-	-	-	-
MW-21R	3789.71	3/12/20	67.60	-	0.00	3722.11	89.94	-	-	-	-
MW-21R	3789.71	3/23/20	67.71	-	0.00	3722.00	89.93	-	-	11.00	-
MW-21R	3789.71	4/28/20	67.80	-	0.00	3721.91	-	-	-	-	-

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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-21R	3789.71	5/12/20	67.79	-	0.00	3721.92	-	-	-	12.00	-
MW-21R	3789.71	6/19/20	67.91	-	0.00	3721.80	-	-	-	-	-
MW-21R	3789.71	7/29/20	67.95	-	0.00	3721.76	-	-	-	-	-
MW-21R	3789.71	8/27/20	68.04	-	0.00	3721.67	-	-	-	-	-
MW-21R	3789.71	9/14/20	68.06	-	0.00	3721.65	-	-	-	12.00	-
MW-21R	3789.71	10/29/20	68.17	-	0.00	3721.54	-	-	-	10.00	-
MW-21R	3789.71	12/7/20	68.25	-	0.00	3721.46	-	-	-	-	-
MW-22	3788.97	2/25/19	66.53	-	0.00	3722.44	-	-	-	-	-
MW-22	3788.97	2/26/19	-	-	-	-	-	-	-	9.0	-
MW-22	3788.97	5/20/19	66.70	-	0.00	3722.27	-	-	-	-	-
MW-22	3788.97	5/22/19	-	-	-	-	-	-	0	8.5	-
MW-22	3788.97	7/23/19	66.79	-	0.00	3722.18	-	-	-	-	-
MW-22	3788.97	7/24/19	-	-	-	-	-	-	0.0	6.0	-
MW-22	3788.97	10/21/19	67.02	-	0.00	3721.95	84.56	-	-	-	-
MW-22	3788.97	10/24/19	-	-	-	-	-	-	-	6.0	-
MW-22	3788.97	2/11/20	67.31	-	0.00	3721.66	85.22	-	-	9.0	-
MW-22	3788.97	4/28/20	67.40	-	0.00	3721.57	-	-	-	-	-
MW-22	3788.97	5/12/20	67.39	-	0.00	3721.58	-	-	-	9.0	-
MW-22	3788.97	6/19/20	67.47	-	0.00	3721.50	-	-	-	-	-
MW-22	3788.97	7/29/20	67.58	-	0.00	3721.39	-	-	-	-	-
MW-22	3788.97	8/27/20	67.63	-	0.00	3721.34	-	-	-	-	-
MW-22	3788.97	9/14/20	67.69	-	0.00	3721.28	-	-	-	9.0	-
MW-22	3788.97	10/29/20	67.78	-	0.00	3721.19	-	-	-	8.5	-
MW-22	3788.97	12/7/20	67.83	-	0.00	3721.14	-	-	-	-	-
MW-23	3790.93	2/25/19	70.98	66.53	4.45	3723.55	-	-	-	-	-
MW-23	3790.93	4/30/19	72.64	66.52	6.12	3723.25	-	-	4.7	0.3	-
MW-23	3790.93	5/20/19	69.30	67.40	1.90	3723.17	-	-	-	-	-
MW-23	3790.93	6/11/19	-	-	-	-	-	-	3	1	-
MW-23	3790.93	6/18/19	-	-	-	-	-	-	1.5	0.5	-
MW-23	3790.93	6/25/19	-	-	-	-	-	-	1.1	0.4	-
MW-23	3790.93	7/2/19	-	-	-	-	-	-	0.3	0.4	-
MW-23	3790.93	7/8/19	-	-	-	-	-	-	0.5	1.2	-
MW-23	3790.93	7/23/19	69.31	67.50	1.81	3723.09	-	-	-	-	-
MW-23	3790.93	8/6/19	-	-	-	-	-	-	0.8	0.5	-
MW-23	3790.93	8/13/19	-	-	-	-	-	-	0.9	0.1	-
MW-23	3790.93	8/20/19	-	-	-	-	-	-	2.0	0.5	-

Table 1

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Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-23	3790.93	8/28/19	-	-	-	-	-	-	1.4	1.4	-
MW-23	3790.93	9/10/19	-	-	-	-	-	-	0.9	0.1	-
MW-23	3790.93	9/25/19	-	-	-	-	-	-	0.0	3.0	-
MW-23	3790.93	10/2/19	-	-	-	-	-	-	0.8	0.2	-
MW-23	3790.93	10/21/19	69.69	67.61	2.08	3722.92	-	-	-	-	-
MW-23	3790.93	11/20/19	-	-	-	-	-	-	1.5	0.5	-
MW-23	3790.93	12/11/19	-	-	-	-	-	-	2.5	-	-
MW-23	3790.93	12/18/19	-	-	-	-	-	-	1.5	3.0	-
MW-23	3790.93	12/24/19	-	-	-	-	-	-	0.25	0.75	-
MW-23	3790.93	1/8/20	-	-	-	-	-	-	1.0	2.0	-
MW-23	3790.93	1/15/20	-	-	-	-	-	-	0.5	0.2	-
MW-23	3790.93	1/29/20	-	-	-	-	-	-	0.4	1.0	-
MW-23	3790.93	2/11/20	69.37	67.93	1.44	3722.73	84.92	-	-	-	-
MW-23	3790.93	4/28/20	70.98	67.80	3.18	3722.53	-	-	-	-	-
MW-23	3790.93	5/12/20	71.28	67.74	3.54	3722.52	-	-	-	-	-
MW-23	3790.93	6/19/20	71.81	67.74	4.07	3722.42	-	-	-	-	-
MW-23	3790.93	7/29/20	72.04	67.75	4.29	3722.36	-	-	-	-	-
MW-23	3790.93	8/27/20	72.37	67.78	4.59	3722.28	-	-	-	-	-
MW-23	3790.93	9/14/20	72.50	67.88	4.62	3722.17	-	-	-	-	-
MW-23	3790.93	10/29/20	72.74	67.90	4.84	3722.11	-	-	-	-	-
MW-23	3790.93	12/7/20	72.92	67.95	4.97	3722.04	-	-	-	-	-
MW-24	3791.40	2/27/20	-	-	-	-	-	-	-	15.0	-
MW-24	3791.40	3/12/20	68.30	-	0.00	3723.10	89.97	-	-	-	-
MW-24	3791.40	3/23/20	68.40	-	0.00	3723.00	90.02	-	-	11.0	-
MW-24	3791.40	4/28/20	68.47	-	0.00	3722.93	-	-	-	-	-
MW-24	3791.40	5/12/20	68.47	-	0.00	3722.93	-	-	-	11.0	-
MW-24	3791.40	6/19/20	68.58	-	0.00	3722.82	-	-	-	-	-
MW-24	3791.40	7/29/20	68.56	-	0.00	3722.84	-	-	-	-	-
MW-24	3791.40	8/27/20	68.74	-	0.00	3722.66	-	-	-	-	-
MW-24	3791.40	9/14/20	68.78	-	0.00	3722.62	-	-	-	11.0	-
MW-24	3791.40	10/29/20	68.68	-	0.00	3722.72	-	-	-	11.0	-
MW-24	3791.40	12/7/20	68.94	-	0.00	3722.46	-	-	-	-	-
MW-25	3790.01	2/27/20	-	-	-	-	-	-	-	15.0	-
MW-25	3790.01	3/12/20	67.57	-	0.00	3722.44	89.95	-	-	-	-
MW-25	3790.01	3/23/20	67.69	-	0.00	3722.32	90.09	-	-	11.0	-
MW-25	3790.01	4/28/20	67.76	-	0.00	3722.25	-	-	-	-	-

Table 1

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Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
MW-25	3790.01	5/12/20	67.74	-	0.00	3722.27	-	-	-	12.0	-
MW-25	3790.01	6/19/20	67.87	-	0.00	3722.14	-	-	-	-	-
MW-25	3790.01	7/29/20	67.93	-	0.00	3722.08	-	-	-	-	-
MW-25	3790.01	8/27/20	68.00	-	0.00	3722.01	-	-	-	-	-
MW-25	3790.01	9/14/20	68.05	-	0.00	3721.96	-	-	-	12.0	-
MW-25	3790.01	10/29/20	68.14	-	0.00	3721.87	-	-	-	10.0	-
MW-25	3790.01	12/7/20	68.20	-	0.00	3721.81	-	-	-	-	-
RW-01	3790.75	2/25/19	-	-	-	Dry	-	-	-	-	-
RW-01	3790.75	5/20/19	-	-	-	Dry	-	-	-	-	-
RW-01	3790.75	7/23/19	-	-	-	Dry	-	-	-	-	-
RW-01	3790.75	10/21/19	-	-	-	Dry	60.63	-	-	-	-
RW-01	P&A	2/19/20	-	-	-	-	-	-	-	-	-
RW-1R	3790.43	3/3/20	-	-	-	-	-	-	-	45	-
RW-1R	3790.43	3/12/20	68.77	67.49	1.28	3722.70	90.8	-	-	-	-
RW-1R	3790.43	3/23/20	71.19	67.09	4.10	3722.56	90.96	-	-	-	-
RW-1R	3790.43	4/28/20	72.60	66.85	5.75	3722.49	-	-	-	-	-
RW-1R	3790.43	5/12/20	72.60	66.85	5.75	3722.49	-	-	-	-	-
RW-1R	3790.43	6/19/20	-	-	-	-	-	-	-	-	-
RW-1R	3790.43	7/29/20	73.18	67.09	6.09	3722.18	-	-	-	-	-
RW-1R	3790.43	8/27/20	-	-	-	-	-	-	-	-	-
RW-1R	3790.43	9/14/20	72.47	67.24	5.23	3722.20	-	-	-	-	-
RW-1R	3790.43	10/29/20	72.85	67.21	5.64	3722.15	-	-	-	-	-
RW-1R	3790.43	12/7/20	73.02	67.32	5.70	3722.03	-	-	-	-	-
RW-02	3791.66	2/25/19	-	-	-	Dry	-	-	-	-	-
RW-02	3791.66	5/20/19	-	-	-	Dry	-	-	-	-	-
RW-02	3791.66	7/23/19	-	-	-	Dry	-	-	-	-	-
RW-02	3791.66	10/21/19	-	-	-	Dry	66.35	-	-	-	-
RW-02	P&A	2/19/20	-	-	-	-	-	-	-	-	-
RW-03	3791.34	2/25/19	67.66	66.48	1.18	3724.64	-	-	-	-	-
RW-03	3791.34	4/30/19	67.58	66.57	1.01	3724.58	-	-	0.3	0.3	-
RW-03	3791.34	5/20/19	67.80	66.65	1.15	3724.47	-	-	-	-	-
RW-03	3791.34	6/11/19	-	-	-	-	-	-	0.8	0	-
RW-03	3791.34	6/18/19	-	-	-	-	-	-	1.2	0.0	-
RW-03	3791.34	6/25/19	-	-	-	-	-	-	0.9	0.0	-
RW-03	3791.34	7/2/19	-	-	-	-	-	-	0.8	0	-

Table 1

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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-03	3791.34	7/8/19	-	-	-	-	-	-	0.8	0.1	-
RW-03	3791.34	7/23/19	-	63.77	4.13+	LNAPL at TD	-	-	-	-	-
RW-03	3791.34	8/6/19	-	-	-	-	-	-	0.5	0.0	-
RW-03	3791.34	8/20/19	-	-	-	-	-	-	0.2	0.0	-
RW-03	3791.34	8/28/19	-	-	-	-	-	-	0.5	0.0	-
RW-03	3791.34	10/21/19	-	66.96	1.19+	LNAPL at TD	68.15	-	-	-	-
RW-03	3791.34	12/11/19	-	-	-	-	-	-	0.4	0.1	-
RW-03	3791.34	12/18/19	-	-	-	-	-	-	0.5	0.0	-
RW-03	3791.34	12/24/19	-	-	-	-	-	-	0.25	0.25	-
RW-03	3791.34	1/8/20	-	-	-	-	-	-	0.5	0.0	-
RW-03	3791.34	2/11/20	-	67.22	0.79+	LNAPL at TD	68.01	-	-	-	-
RW-03	3791.34	4/28/20	-	67.35	0.61+	LNAPL at TD	67.96	-	-	-	-
RW-03	3791.34	5/12/20	-	67.34	0.67+	LNAPL at TD	68.01	-	-	-	-
RW-03	3791.34	6/19/20	-	67.42	0.59+	LNAPL at TD	68.01	-	-	-	-
RW-03	3791.34	7/29/20	67.61	67.05	0.56	3724.18	-	-	-	-	-
RW-03	3791.34	8/27/20	-	67.55	0.40+	LNAPL at TD	67.95	-	-	-	-
RW-03	3791.34	9/14/20	-	67.60	0.30+	LNAPL at TD	67.90	-	-	-	-
RW-03	3791.34	10/29/20	-	67.61	0.34+	LNAPL at TD	67.95	-	-	-	-
RW-03	3791.34	12/7/20	-	67.61	0.34+	LNAPL at TD	67.95	-	-	-	-
RW-04	3790.76	2/25/19	69.02	66.44	2.58	LNAPL at TD	69.02	-	-	-	-
RW-04	3790.76	4/30/19	68.98	66.53	2.45	LNAPL at TD	68.98	-	1.2	0.0	-
RW-04	3790.76	5/20/19	-	66.70	2.28+	LNAPL at TD	-	-	-	-	-
RW-04	3790.76	6/11/19	-	-	-	-	-	-	-	0	-
RW-04	3790.76	6/25/19	-	-	-	-	-	-	1.0	0.0	-
RW-04	3790.76	7/23/19	-	66.80	2.10+	LNAPL at TD	-	-	-	-	-
RW-04	3790.76	8/13/19	-	-	-	-	-	-	0.4	0.0	-
RW-04	3790.76	8/20/19	-	-	-	-	-	-	0.2	0.2	-
RW-04	3790.76	8/28/19	-	-	-	-	-	-	0.3	0.0	-
RW-04	3790.76	10/21/19	-	66.93	2.03+	LNAPL at TD	68.96	-	-	-	-
RW-04	3790.76	12/11/19	-	-	-	-	-	-	0.5	0.1	-
RW-04	3790.76	12/24/19	-	-	-	-	-	-	0.5	0.5	-
RW-04	3790.76	2/11/20	-	67.01	3.52+	LNAPL at TD	70.53	50-70 (4 in.)	-	-	-
RW-04	3790.76	4/8/20	68.80	67.12	1.68	-	68.81	-	-	-	-
RW-04	3790.76	4/28/20	-	67.14	1.66+	LNAPL at TD	68.80	-	-	-	-
RW-04	3790.76	5/12/20	-	67.15	3.38+	LNAPL at TD	70.53	-	-	-	-
RW-04	3790.76	6/19/20	-	67.24	3.29+	LNAPL at TD	70.53	-	-	-	-
RW-04	3790.76	7/29/20	68.96	67.52	1.44	3722.97	-	-	-	-	-

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RW-04	3790.76	8/27/20	68.84	67.38	1.46	3723.10	-	-	-	-	-
RW-04	3790.76	9/14/20	-	67.46	1.26+	LNAPL at TD	68.72	-	-	-	-
RW-04	3790.76	10/29/20	-	67.55	1.27+	LNAPL at TD	68.82	-	-	-	-
RW-04	3790.76	12/7/20	-	67.62	2.88+	LNAPL at TD	70.50	-	-	-	-
RW-05	3791.45	1/29/19	-	-	-	-	-	-	0.3	-	-
RW-05	3791.45	2/25/19	-	66.33	0.83+	LNAPL at TD	-	-	-	-	-
RW-05	3791.45	4/30/19	-	66.46	0.70+	LNAPL at TD	67.16	-	0.2	0.0	-
RW-05	3791.45	5/20/19	-	66.50	0.66+	LNAPL at TD	-	-	-	-	-
RW-05	3791.45	6/11/19	-	-	-	-	-	-	0.1	0	-
RW-05	3791.45	7/2/19	-	-	-	-	-	-	1.0	1.0	-
RW-05	3791.45	7/8/19	-	-	-	-	-	-	0.0	0.0	-
RW-05	3791.45	7/23/19	-	66.65	0.51+	LNAPL at TD	-	-	-	-	-
RW-05	3791.45	8/20/19	-	-	-	-	-	-	0	0	-
RW-05	3791.45	8/28/19	-	-	-	-	-	-	0.2	0	-
RW-05	3791.45	10/21/19	-	66.86	0.43+	LNAPL at TD	67.29	-	-	-	-
RW-05	3791.45	12/18/19	-	-	-	-	-	-	0	Dry	-
RW-05	3791.45	12/24/19	-	-	-	-	-	-	0.2	0.8	-
RW-05	3791.45	1/8/20	-	-	-	Dry	-	-	-	-	-
RW-05	3791.45	1/15/20	-	-	-	-	-	-	0	0	-
RW-05	3791.45	2/11/20	-	67.11	0.02+	LNAPL at TD	67.13	-	-	-	-
RW-05	3791.45	3/11/20	-	-	-	-	-	-	-	-	-
RW-05	3791.45	4/28/20	-	-	-	Dry	67.12	-	-	-	-
RW-05	3791.45	5/12/20	-	-	-	Dry	67.13	-	-	-	-
RW-05	3791.45	6/19/20	-	-	-	-	-	-	-	-	-
RW-05	3791.45	7/29/20	-	-	-	Dry	-	-	-	-	-
RW-05	3791.45	8/27/20	-	-	-	Dry	67.16	-	-	-	-
RW-05	3791.45	9/14/20	-	-	-	Dry	67.10	-	-	-	-
RW-05	3791.45	10/29/20	-	-	-	Dry	67.19	-	-	-	-
RW-05	3791.45	12/7/20	-	-	-	Dry	67.20	-	-	-	-
RW-06	3791.39	1/29/19	-	-	-	-	-	-	0.3	-	-
RW-06	3791.39	2/25/19	67.54	66.48	1.06	3724.71	67.45	-	-	-	-
RW-06	3791.39	4/30/19	-	-	-	-	-	-	0.2	0.0	-
RW-06	3791.39	5/20/19	-	66.70	0.75+	LNAPL at TD	67.45	-	-	-	-
RW-06	3791.39	6/11/19	-	-	-	-	-	-	0.3	0	-
RW-06	3791.39	6/25/19	-	-	-	-	-	-	0.2	0.0	-
RW-06	3791.39	7/8/19	-	-	-	-	-	-	0.3	0.0	-

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Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-06	3791.39	7/23/19	-	66.84	0.61+	LNAPL at TD	-	-	-	-	-
RW-06	3791.39	8/21/19	-	-	-	-	-	-	0.2	0	-
RW-06	3791.39	8/28/19	-	-	-	-	-	-	0.3	0	-
RW-06	3791.39	10/21/19	-	66.98	1.58+	LNAPL at TD	68.56	-	-	-	-
RW-06	3791.39	12/11/19	-	-	-	-	-	-	0.1	0	-
RW-06	3791.39	12/18/19	-	-	-	-	-	-	0	Dry	-
RW-06	3791.39	12/24/19	-	-	-	-	-	-	-	0.1	-
RW-06	3791.39	1/8/20	-	-	-	Dry	-	-	-	-	-
RW-06	3791.39	2/11/20	-	67.22	0.31+	LNAPL at TD	67.53	-	-	-	-
RW-06	3791.39	4/8/20	67.44	67.34	0.10	3724.03	67.58	-	-	-	-
RW-06	3791.39	4/28/20	67.45	67.35	0.10	3724.02	-	-	-	-	-
RW-06	3791.39	5/12/20	-	67.37	0.16+	LNAPL at TD	67.53	-	-	-	-
RW-06	3791.39	6/19/20	-	67.46	0.07+	LNAPL at TD	67.53	-	-	-	-
RW-06	3791.39	7/29/20	67.60	-	0.00	3723.79	-	-	-	-	-
RW-06	3791.39	8/27/20	-	-	-	Dry	67.50	-	-	-	-
RW-06	3791.39	9/14/20	-	-	-	Dry	67.45	-	-	-	-
RW-06	3791.39	10/29/20	-	-	-	Dry	67.56	-	-	-	-
RW-06	3791.39	12/7/20	-	-	-	Dry	67.62	-	-	-	-
RW-07	3791.51	1/29/19	-	-	-	-	-	-	1.2	-	-
RW-07	3791.51	2/25/19	68.80	67.69	1.11	3723.61	-	-	-	-	-
RW-07	3791.51	4/30/19	69.32	66.50	2.82	LNAPL at TD	69.32	-	1.0	0.0	-
RW-07	3791.51	5/20/19	-	67.90	1.42+	LNAPL at TD	-	-	-	-	-
RW-07	3791.51	6/11/19	-	-	-	-	-	-	0.6	0	-
RW-07	3791.51	6/25/19	-	-	-	-	-	-	0.2	0.1	-
RW-07	3791.51	7/8/19	-	-	-	-	-	-	0.2	0.2	-
RW-07	3791.51	7/23/19	68.70	68.13	0.57	3723.27	-	-	-	-	-
RW-07	3791.51	8/20/19	-	-	-	-	-	-	0.3	0.2	-
RW-07	3791.51	8/28/19	-	-	-	-	-	-	0.5	0.5	-
RW-07	3791.51	10/21/19	69.03	68.24	0.79	3723.12	-	-	-	-	-
RW-07	3791.51	12/18/19	-	-	-	-	-	-	0.4	0	-
RW-07	3791.51	2/11/20	-	68.30	1.18+	LNAPL at TD	69.48	-	-	-	-
RW-07	3791.51	4/28/20	-	67.94	1.51+	LNAPL at TD	69.45	-	-	-	-
RW-07	3791.51	5/12/20	-	67.90	1.58+	LNAPL at TD	69.48	-	-	-	-
RW-07	3791.51	6/19/20	-	67.83	1.65+	LNAPL at TD	69.48	-	-	-	-
RW-07	3791.51	7/29/20	-	67.86	1.74+	LNAPL at TD	69.60	-	-	-	-
RW-07	3791.51	8/27/20	-	67.87	1.55+	LNAPL at TD	69.42	-	-	-	-
RW-07	3791.51	9/14/20	-	67.95	1.42+	LNAPL at TD	69.37	-	-	-	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-07	3791.51	10/29/20	-	68.03	1.47+	LNAPL at TD	69.5	-	-	-	-
RW-07	3791.51	12/7/20	-	68.03	1.47+	LNAPL at TD	69.5	-	-	-	-
RW-08	3790.90	2/25/19	-	66.28	1.14+	LNAPL at TD	-	-	-	-	-
RW-08	3790.90	5/20/19	-	Dry	-	Dry	-	-	-	-	-
RW-08	3790.90	6/25/19	-	-	-	-	-	-	0.1	0.0	-
RW-08	3790.90	7/8/19	-	-	-	-	-	-	0.1	0.0	-
RW-08	3790.90	7/23/19	-	66.60	0.82+	LNAPL at TD	-	-	-	-	-
RW-08	3790.90	8/20/19	-	-	-	-	-	-	0.2	0.3	-
RW-08	3790.90	8/28/19	-	-	-	-	-	-	0.1	0	-
RW-08	3790.90	10/21/19	-	66.75	1.25+	LNAPL at TD	68	-	-	-	-
RW-08	3790.90	2/11/20	-	66.93	0.93+	LNAPL at TD	67.86	47-67 (4 in.)	-	-	-
RW-08	3790.90	3/11/20	-	67.00	0.86+	LNAPL at TD	67.86	-	-	-	-
RW-08	3790.90	3/23/20	-	67.00	0.86+	LNAPL at TD	67.86	-	-	-	-
RW-08	3790.90	4/28/20	-	67.06	0.76+	LNAPL at TD	67.82	-	-	-	-
RW-08	3790.90	5/12/20	-	67.09	0.77+	LNAPL at TD	67.86	-	-	-	-
RW-08	3790.90	6/19/20	-	67.17	0.69+	LNAPL at TD	67.86	-	-	-	-
RW-08	3790.90	7/29/20	-	67.32	0.38+	LNAPL at TD	67.70	-	-	-	-
RW-08	3790.90	8/27/20	-	67.29	0.34+	LNAPL at TD	67.63	-	-	-	-
RW-08	3790.90	9/14/20	-	67.37	0.10+	LNAPL at TD	67.47	-	-	-	-
RW-08	3790.90	10/29/20	-	67.45	0.13+	LNAPL at TD	67.58	-	-	-	-
RW-08	3790.90	12/7/20	67.66	67.52	0.14	3723.35	-	-	-	-	-
RW-09	3791.33	2/25/19	68.04	67.76	0.28	3723.52	-	-	-	-	-
RW-09	3791.33	5/20/19	68.18	68.01	0.17	3723.29	-	-	-	-	-
RW-09	3791.33	7/23/19	68.33	68.10	0.23	3723.19	-	-	-	-	-
RW-09	3791.33	8/28/19	-	-	-	-	-	-	0.1	1	-
RW-09	3791.33	9/10/19	-	-	-	-	-	-	0.1	0.9	-
RW-09	3791.33	10/2/19	-	-	-	-	-	-	0.1	0.9	-
RW-09	3791.33	10/21/19	68.37	68.23	0.14	3723.07	-	-	-	-	-
RW-09	3791.33	11/20/19	-	-	-	-	-	-	0.1	0.9	-
RW-09	3791.33	1/15/20	-	-	-	-	-	-	0.3	0	-
RW-09	3791.33	2/11/20	68.69	68.49	0.20	3722.80	73.29	-	-	-	-
RW-09	3791.33	4/28/20	68.81	68.60	0.21	3722.69	-	-	-	-	-
RW-09	3791.33	5/12/20	68.85	68.65	0.20	3722.64	-	-	-	-	-
RW-09	3791.33	6/19/20	68.93	68.71	0.22	3722.58	-	-	-	-	-
RW-09	3791.33	7/29/20	69.05	68.81	0.24	3722.47	-	-	-	-	-
RW-09	3791.33	8/27/20	69.07	68.85	0.22	3722.44	-	-	-	-	-

Table 1

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Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-09	3791.33	9/14/20	69.15	68.94	0.21	3722.35	-	-	-	-	-
RW-09	3791.33	10/29/20	69.30	69.03	0.27	3722.25	-	-	-	-	-
RW-09	3791.33	12/7/20	69.32	69.06	0.26	3722.22	-	-	-	-	-
RW-10	3791.16	2/25/19	-	66.68	2.02+	LNAPL at TD	-	-	-	-	-
RW-10	3791.16	5/20/19	-	66.98	1.62+	LNAPL at TD	68.70	-	-	-	-
RW-10	3791.16	7/23/19	-	67.00	1.70+	LNAPL at TD	-	-	-	-	-
RW-10	3791.16	10/21/19	-	67.18	1.64+	LNAPL at TD	68.82	-	-	-	-
RW-10	3791.16	2/11/20	-	-	-	Dry	68.68	-	-	-	-
RW-10	3791.16	4/28/20	68.74	67.55	1.19	3723.38	-	-	-	-	-
RW-10	3791.16	5/12/20	-	67.56	1.12+	LNAPL at TD	68.68	-	-	-	-
RW-10	3791.16	6/19/20	-	67.62	1.06+	LNAPL at TD	68.68	-	-	-	-
RW-10	3791.16	7/29/20	-	67.74	0.46+	LNAPL at TD	68.20	-	-	-	-
RW-10	3791.16	8/27/20	-	67.74	0.94+	LNAPL at TD	68.68	-	-	-	-
RW-10	3791.16	9/14/20	-	67.07	1.62+	LNAPL at TD	68.69	-	-	-	-
RW-10	3791.16	10/29/20	-	67.93	0.37+	LNAPL at TD	68.30	-	-	-	-
RW-10	3791.16	12/7/20	68.70	67.97	0.73	3723.05	-	-	-	-	-
RW-11	3790.82	2/25/19	70.56	66.88	3.68	3723.24	-	-	-	-	-
RW-11	3790.82	5/20/19	69.05	67.45	1.60	3723.07	-	-	-	-	-
RW-11	3790.82	7/23/19	68.15	67.80	0.35	3722.95	-	-	-	-	-
RW-11	3790.82	8/13/19	-	-	-	-	-	-	0.3	0.7	-
RW-11	3790.82	8/20/19	-	-	-	-	-	-	0.2	0.5	-
RW-11	3790.82	8/28/19	-	-	-	-	-	-	0.5	2.0	-
RW-11	3790.82	9/10/19	-	-	-	-	-	-	0.5	1.5	-
RW-11	3790.82	9/25/19	-	-	-	-	-	-	0.2	1.3	-
RW-11	3790.82	10/2/19	-	-	-	-	-	-	0.4	-	-
RW-11	3790.82	10/21/19	69.06	67.78	1.28	3722.80	-	-	-	-	-
RW-11	3790.82	12/11/19	-	-	-	-	-	-	2.0	0.1	-
RW-11	3790.82	12/24/19	-	-	-	-	-	-	0.4	1.0	-
RW-11	3790.82	1/15/20	-	-	-	-	-	-	0.4	1.6	-
RW-11	3790.82	1/29/20	-	-	-	-	-	-	1.5	1.0	-
RW-11	3790.82	2/11/20	68.70	68.18	0.52	3722.54	74.93	-	-	-	-
RW-11	3790.82	2/25/20	-	-	-	-	-	-	1.0	0.2	-
RW-11	3790.82	4/28/20	69.81	68.10	1.71	3722.40	-	-	-	-	-

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Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-11	3790.82	5/12/20	70.00	68.08	1.92	3722.38	-	-	-	-	-
RW-11	3790.82	6/19/20	70.56	68.07	2.49	3722.28	-	-	-	-	-
RW-11	3790.82	7/29/20	71.10	68.05	3.05	3722.19	-	-	-	-	-
RW-11	3790.82	8/27/20	71.42	68.04	3.38	3722.14	-	-	-	-	-
RW-11	3790.82	9/14/20	71.65	68.09	3.56	3722.05	-	-	-	-	-
RW-11	3790.82	10/29/20	72.03	68.10	3.93	3721.97	-	-	-	-	-
RW-11	3790.82	12/7/20	72.35	68.09	4.26	3721.92	-	-	-	-	-
RW-12	3791.20	2/25/19	67.47	-	0.00	3723.73	-	-	-	-	-
RW-12	3791.20	4/30/19	67.59	-	0.00	3723.61	-	-	0	3	-
RW-12	3791.20	5/20/19	67.65	-	0.00	3723.55	-	-		-	-
RW-12	3791.20	5/22/19	-	-	-	-	-	-	0	36.0	-
RW-12	3791.20	7/23/19	67.74	-	0.00	3723.46	-	-	-	-	-
RW-12	3791.20	7/24/19	-	-	-	-	-	-	0.0	27.0	-
RW-12	3791.20	8/28/19	-	-	-	-	-	-	0.0	3.0	-
RW-12	3791.20	9/10/19	-	-	-	-	-	-	0.0	0.5	-
RW-12	3791.20	9/25/19	-	-	-	-	-	-	0.0	3.0	-
RW-12	3791.20	10/2/19	-	-	-	-	-	-	-	1.0	-
RW-12	3791.20	10/21/19	67.95	-	0.00	3723.25	85.81	-	-	-	-
RW-12	3791.20	10/24/19	-	-	-	-	-	-	-	33.0	-
RW-12	3791.20	2/11/20	68.21	-	0.00	3722.99	88.59	-	-	40.0	-
RW-12	3791.20	2/25/20	-	-	-	-	-	-	0.8	0.4	-
RW-12	3791.20	3/17/20	-	-	-	-	-	-	-	3.0	-
RW-12	3791.20	4/28/20	68.38	-	0.00	3722.82	-	-	-	-	-
RW-12	3791.20	5/12/20	68.36	-	0.00	3722.84	-	-	-	40.0	-
RW-12	3791.20	6/19/20	68.45	-	0.00	3722.75	-	-	-	-	-
RW-12	3791.20	7/29/20	67.53	-	0.00	3723.67	-	-	-	-	-
RW-12	3791.20	8/27/20	68.61	-	0.00	3722.59	-	-	-	-	-
RW-12	3791.20	9/14/20	68.65	-	0.00	3722.55	-	-	-	40.0	-
RW-12	3791.20	10/29/20	68.74	-	0.00	3722.46	-	-	-	38.0	-
RW-12	3791.20	12/7/20	68.83	-	0.00	3722.37	-	-	-	38.0	-
RW-13	3791.08	2/25/19	71.71	66.64	5.07	3723.48	-	-	-	-	-
RW-13	3791.08	5/20/19	70.11	67.20	2.91	3723.33	-	-	-	-	-
RW-13	3791.08	7/23/19	71.40	67.30	4.10	3723.00	-	-	-	-	-
RW-13	3791.08	10/21/19	72.86	67.17	5.69	3722.83	-	-	-	-	-
RW-13	3791.08	2/11/20	73.32	67.39	5.93	3722.56	84.33	-	-	-	-

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RW-13	3791.08	4/28/20	-	-	-	-	-	-	-	-	-
RW-13	3791.08	5/12/20	71.57	67.75	3.82	3722.60	-	-	-	-	-
RW-13	3791.08	6/19/20	73.31	67.43	5.88	3722.53	-	-	-	-	-
RW-13	3791.08	7/29/20	74.04	67.74	6.30	3722.14	-	-	-	-	-
RW-13	3791.08	8/27/20	73.56	67.57	5.99	3722.37	-	-	-	-	-
RW-13	3791.08	9/14/20	73.88	67.61	6.27	3722.28	-	-	-	-	-
RW-13	3791.08	10/29/20	71.80	68.09	3.71	3722.29	-	-	-	-	-
RW-13	3791.08	12/7/20	-	-	-	-	-	-	-	-	-
RW-14	3790.92	2/25/19	70.65	66.95	3.70	3723.27	-	-	-	-	-
RW-14	3790.92	5/20/19	69.55	67.65	1.90	3722.91	-	-	-	-	-
RW-14	3790.92	7/23/19	73.21	67.13	6.08	3722.63	-	-	-	-	-
RW-14	3790.92	7/30/19	73.41	67.05	6.36	3722.66	-	-	-	-	-
RW-14	3790.92	10/21/19	73.28	67.29	5.99	3722.49	-	-	-	-	-
RW-14	3790.92	2/11/20	73.69	67.48	6.21	3722.26	81.46	-	-	-	-
RW-14	3790.92	4/21/20	77.16	66.94	10.22	3722.04	-	-	-	-	-
RW-14	3790.92	4/28/20	-	-	-	-	-	-	-	-	-
RW-14	3790.92	5/12/20	74.44	67.31	7.13	3722.26	-	-	-	-	-
RW-14	3790.92	6/19/20	-	-	-	-	-	-	-	-	-
RW-14	3790.92	7/29/20	-	-	-	-	-	-	-	-	-
RW-14	3790.92	8/27/20	-	-	-	-	-	-	-	-	-
RW-14	3790.69	9/14/20	74.74	67.80	6.94	3721.57	-	-	-	-	-
RW-14	3790.69	10/29/20	76.77	67.42	9.35	3721.49	-	-	-	-	-
RW-14	3791.08	12/7/20	-	-	-	-	-	-	-	-	-
RW-15	3789.74	2/28/20	-	-	-	-	-	-	-	45	-
RW-15	3789.74	3/12/20	67.53	-	0.00	3722.21	90.89	-	-	-	-
RW-15	3789.74	3/23/20	67.65	67.64	0.01	3722.10	90.96	-	-	-	-
RW-15	3789.74	4/28/20	67.71	-	0.00	3722.03	-	-	-	-	-
RW-15	3789.74	5/12/20	67.72	67.70	0.02	3722.04	-	-	-	-	-
RW-15	3789.74	6/19/20	67.84	67.79	0.05	3721.94	-	-	-	-	-
RW-15	3789.74	7/29/20	68.00	67.75	0.25	3721.94	-	-	-	-	-
RW-15	3789.74	8/27/20	68.11	67.89	0.22	3721.81	-	-	-	-	-
RW-15	3789.74	9/14/20	68.21	67.95	0.26	3721.74	-	-	-	-	-
RW-15	3789.74	10/29/20	68.43	68.00	0.43	3721.66	-	-	-	-	-
RW-15	3789.74	12/7/20	68.59	68.07	0.52	3721.57	-	-	-	-	-

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Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-16	3789.70	3/2/20	67.28	-	0.00	3722.42	91.15	-	-	45	-
RW-16	3789.70	3/12/20	69.54	67.70	1.84	3721.65	90.9	-	-	-	-
RW-16	3789.70	3/23/20	71.85	67.32	4.53	3721.52	91	-	-	-	-
RW-16	3789.70	4/28/20	73.10	67.11	5.99	3721.45	-	-	-	-	-
RW-16	3789.70	5/12/20	72.88	67.20	5.68	3721.42	-	-	-	-	-
RW-16	3789.70	6/19/20	-	-	-	-	-	-	-	-	-
RW-16	3789.70	7/29/20	-	-	-	-	-	-	-	-	-
RW-16	3789.70	8/27/20	-	-	-	-	-	-	-	-	-
RW-16	3789.70	9/14/20	72.62	66.71	5.91	3721.87	-	-	-	-	-
RW-16	3789.70	10/29/20	73.03	67.64	5.39	3721.04	-	-	-	-	-
RW-16	3789.70	12/7/20	-	-	-	-	-	-	-	-	-
RW-17	3790.62	3/2/20	67.94	-	0.00	3722.68	90.85	-	-	45	-
RW-17	3790.62	3/12/20	68.18	67.93	0.25	3722.64	90.85	-	-	-	-
RW-17	3790.62	3/23/20	68.52	68.00	0.52	3722.52	90.97	-	-	-	-
RW-17	3790.62	4/28/20	69.61	67.84	1.77	3722.44	-	-	-	-	-
RW-17	3790.62	5/12/20	70.30	67.70	2.60	3722.43	-	-	-	-	-
RW-17	3790.62	6/19/20	72.75	67.27	5.48	3722.31	-	-	-	-	-
RW-17	3790.62	7/29/20	73.55	67.20	6.35	3722.21	-	-	-	-	-
RW-17	3790.62	8/27/20	73.63	67.25	6.38	3722.16	-	-	-	-	-
RW-17	3790.62	9/14/20	73.65	67.31	6.34	3722.11	-	-	-	-	-
RW-17	3790.62	10/29/20	73.70	67.42	6.28	3722.01	-	-	-	-	-
RW-17	3790.62	12/7/20	73.75	67.51	6.24	3721.92	-	-	-	-	-
RW-18	3790.85	3/3/20	-	-	-	-	-	-	-	45	-
RW-18	3790.85	3/12/20	69.02	67.45	1.57	3723.10	90.75	-	-	-	-
RW-18	3790.85	3/23/20	71.76	67.00	4.76	3722.95	90.84	-	-	-	-
RW-18	3790.85	4/28/20	73.25	66.75	6.50	3722.87	-	-	-	-	-
RW-18	3790.85	5/12/20	72.80	66.84	5.96	3722.88	-	-	-	-	-
RW-18	3790.85	6/19/20	-	-	-	-	-	-	-	-	-
RW-18	3790.85	7/29/20	-	-	-	-	-	-	-	-	-
RW-18	3790.85	8/27/20	-	-	-	-	-	-	-	-	-
RW-18	3790.85	9/14/20	73.97	67.51	6.46	3722.11	-	-	-	-	-
RW-18	3790.85	10/29/20	74.06	67.58	6.48	3722.04	-	-	-	-	-
RW-18	3790.85	12/7/20	-	-	-	-	-	-	-	-	-
RW-19	3790.46	2/27/20	-	-	-	-	-	-	-	45	-
RW-19	3790.46	3/12/20	69.20	67.45	1.75	3722.68	90.75	-	-	-	-

Table 1

Summary of Fluid Level Measurements 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Well ID	Elevation of Top of Casing (famsl)	Date	Depth to Groundwater (fbtoc)	Depth to LNAPL (fbtoc)	Thickness of LNAPL (ft.)	Elevation of Potentiometric Surface (famsl)	Measured Well Depth (fbtoc)	Screen Interval (fbgs) Well Diameter (in.)	Volume Product Removed (gal.)	Volume Groundwater Bailed (gal.)	Volume Groundwater Removed by EFR (gal.)
RW-19	3790.46	3/23/20	70.18	67.40	2.78	3722.53	90.98	-	-	-	-
RW-19	3790.46	4/28/20	72.08	67.05	5.03	3722.45	-	-	-	-	-
RW-19	3790.46	5/12/20	72.51	66.98	5.53	3722.43	-	-	-	-	-
RW-19	3790.46	6/19/20	72.98	67.00	5.98	3722.32	-	-	-	-	-
RW-19	3790.46	7/29/20	73.15	67.06	6.09	3722.24	-	-	-	-	-
RW-19	3790.46	8/27/20	73.24	67.10	6.14	3722.19	-	-	-	-	-
RW-19	3790.46	9/14/20	73.30	67.18	6.12	3722.12	-	-	-	-	-
RW-19	3790.46	10/29/20	73.40	67.25	6.15	3722.04	-	-	-	-	-
RW-19	3790.46	12/7/20	73.52	67.33	6.19	3721.95	-	-	-	-	-

Notes:

1. famsl - Feet above mean sea level
2. fbtoc - Feet below top of casing
3. LNAPL - Light non-aqueous phase liquid.
4. fbgs - below ground surface.
5. Factor of 0.81 was used for density of LNAPL to calculate elevation of potentiometric surface where measureable thickness of LNAPL was present.
6. 0.37+ LNAPL was present at bottom of well; therefore full thickness of LNAPL could not be determined.

Table 2

Summary of Dissolved Hydrocarbons in Groundwater 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-2	2/27/19	**0.0166**	<0.000412	<0.000160	**0.0124**
MW-2 (DUP-2)	2/27/19	**0.0177**	<0.000412	<0.000160	**0.0130**
MW-2	5/22/19	**0.0118**	**0.000966 J**	**0.00286**	**0.00667**
MW-2	7/24/19	**0.00339**	<0.000412	<0.000160	**0.00161**
MW-2	10/24/19	**0.00860**	<0.000412	**0.00187**	**0.0190**
MW-2 (Dup-1)	10/24/19	**0.0137**	<0.000412	**0.00377**	**0.0437**
MW-2	2/14/20	**0.0188**	<0.000412	<0.000160	0.000510
MW-2	5/14/20	<0.000190	**0.000734 J**	**0.000363 J**	**0.00746**
MW-2	9/17/20	Insufficient water to sample			
MW-2	11/2/20	Insufficient water to sample			
MW-4	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-4	11/2/20	**0.00402 J**	<0.000412	<0.000160	<0.000510
MW-6	2/27/19	**0.0994**	**0.00146**	**0.0115**	**0.0115**
MW-6	5/22/19	**0.0724**	**0.000675 J**	**0.00415**	**0.00905**
MW-6	7/24/19	**0.0746**	<0.000412	**0.000864**	**0.00431**
MW-6 (DUP-1)	7/24/19	**0.0691**	<0.000412	**0.000755**	**0.00394 B**
MW-6	10/24/19	**0.0590**	**0.000554 J**	**0.00156**	**0.00631**
MW-6 (Dup-2)	10/24/19	**0.0649**	**0.000664 J**	**0.00157**	**0.00622**
MW-6	2/14/20	**0.0291**	<0.0291	**0.00865**	**0.00736**
MW-6	5/14/20	**0.0223**	<0.000412	**0.000855**	**0.00447**
MW-6	9/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-6 (DUP-2)	9/18/20	**0.0268**	<0.000412	<0.000160	**0.00285**
MW-6	11/5/20	**0.00438**	<0.000412	**0.00168**	**0.00321**
MW-6 (DUP-2)	11/5/20	**0.00604**	<0.00412	**0.00199**	**0.00344**
MW-7	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-7	5/14/20	**0.000267 J**	<0.000412	**0.000515**	**0.00112 J**
MW-7	9/18/20	**0.0249**	<0.000412	<0.000160	**0.00552**
MW-7 (DUP-1)	9/18/20	**0.000399 J**	<0.000412	<0.000160	**0.00107 J**
MW-7	11/2/20	**0.000747**	<0.000412	<0.000160	**0.00107 J**
MW-7 (DUP-1)	11/2/20	**0.000846**	<0.000412	<0.000160	<0.000510
MW-11	2/25/19	Dry			
MW-11	5/20/19	Dry			
MW-11	7/23/19	Dry			
MW-11	10/21/19	Dry			
MW-11	2/19/20	P&A			
MW-11R	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510

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Table 2

Summary of Dissolved Hydrocarbons in Groundwater 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-11R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11R	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-11R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-12	2/10/17	P&A			
MW-12R	2/27/19	**0.000563**	<0.000412	<0.000160	<0.000510
MW-12R	5/22/19	<0.000190	<0.000412	**0.000507**	**0.00108 B J**
MW-12R	7/24/19	**0.000300 J**	<0.000412	<0.000160	<0.000510
MW-12R	10/24/19	**0.000236 J**	<0.000412	<0.000160	**0.000537 J**
MW-12R	2/14/20	**0.000366 B J**	**0.000476 B J**	<0.000160	**0.000783 B J**
MW-12R	5/14/20	**0.000247 J**	<0.000412	<0.000160	<0.000510
MW-12R	9/18/20	**0.000654**	<0.000412	<0.000160	**0.00194**
MW-12R	11/2/20	**0.00395 J**	<0.000412	<0.000160	<0.000510
MW-15	2/10/17	P&A			
MW-16	2/10/17	P&A			
MW-16R	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R (DUP-1)	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	5/22/19	**0.000480 J**	<0.000412	**0.000200 J**	<0.000510
MW-16R	7/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-16R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-17	10/8/14	P&A			
MW-17R	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R (DUP-1)	5/22/19	**0.000250 J**	<0.000412	<0.000160	<0.000510
MW-17R	7/24/19	<0.000190	<0.000412	**0.000189 J**	<0.000510
MW-17R	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R	9/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-17R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510

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Table 2

Summary of Dissolved Hydrocarbons in Groundwater 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-18	2/10/17	P&A			
MW-18R	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-18R	5/22/19	**0.000258 J**	<0.000412	<0.000160	<0.000510
MW-18R	7/24/19	**0.000201 J**	**0.000448 J**	**0.000365 J**	**0.00101 J**
MW-18R	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-18R	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-18R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-18R (DUP-1)	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-18R	9/18/20	**0.000660**	<0.000412	<0.000160	**0.00137 J**
MW-18R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-19	10/8/14	P&A			
MW-19R	2/27/19	**0.000519**	<0.000412	<0.000160	<0.000510
MW-19R	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	7/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	9/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-19R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-20	10/9/14	P&A			
MW-20R	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	7/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-20R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-21	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-21	5/22/19	**0.000279 J**	<0.000412	<0.000160	<0.000510
MW-21	7/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-21	10/24/19		Insufficient Water to Sample		
MW-21	2/19/20	P&A			

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Table 2

Summary of Dissolved Hydrocarbons in Groundwater 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
MW-21R	3/26/20	<0.00190	<0.00412	<0.000160	<0.000510
MW-21R	5/14/20	<0.00190	<0.00412	<0.000160	<0.000510
MW-21R	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-21R	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	5/22/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	7/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	2/13/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	9/18/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-22	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-24	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-24	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-24	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-24	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-25	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-25 (DUP-1)	3/26/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-25	5/14/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-25 (DUP-2)	5/14/2020	<0.000190	<0.000412	<0.000160	<0.000510
MW-25	9/17/20	<0.000190	<0.000412	<0.000160	<0.000510
MW-25	11/2/20	<0.000190	<0.000412	<0.000160	<0.000510
RW-12	2/27/19	**0.00739**	**0.00863**	**0.00722**	**0.0826**
RW-12	5/22/19	**0.00663**	**0.00768**	**0.00491**	**0.0564**
RW-12 (DUP-2)	5/22/19	**0.00782**	**0.0113**	**0.00920**	**0.108**
RW-12	7/24/19	**0.00869**	**0.0115**	**0.0223**	**0.162**
RW-12 (DUP-2)	7/24/19	**0.00807**	**0.0109**	**0.0210**	**0.151**
RW-12	10/24/19	**0.00505**	**0.00408**	**0.00361**	**0.104**
RW-12	2/14/20	**0.00479**	**0.00242 B**	**0.00688**	**0.061**
RW-12	5/14/20	**0.00199**	**0.00485**	**0.000594**	**0.105**
RW-12	9/17/20	**0.000599**	**0.000742 J**	<0.000160	**0.0138**
RW-12	11/2/20	<0.000190	<0.000412	<0.000160	**0.00349**
Trip Blank	8/30/18	<0.000190	<0.000412	<0.000160	**0.000510 J**
Trip Blank	2/27/19	<0.000190	<0.000412	<0.000160	<0.000510
Trip Blank	10/24/19	<0.000190	<0.000412	<0.000160	<0.000510

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Table 2

Summary of Dissolved Hydrocarbons in Groundwater 2019 & 2020
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes
		NMWQCC Human Health Standards			
		0.01	0.75	0.75	0.62
Trip Blank	2/14/20	<0.000190	<0.000412	<0.000160	<0.000510

Notes:

1. Shaded cells indicate concentrations exceeding New Mexico Water Quality Control Commission Human Health Standards.
2. Bold indicates detection.
3. BTEX analyses by EPA Method 8021B.
4. Samples collected during March 2011 were collected by NOVA.
5. MW-12R, MW-16R, MW-18R, MW-22, MW-23, and RW-12 were installed in February 2017.
6. D Flag—The sample was diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
7. Flag J indicates the identification of the analyte is acceptable and the reported result is an estimate.
8. Flag B indicates the same analyte is found in the associated blank.

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Table 3

Summary of Analytical Results of PAH Compounds in Groundwater
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Anthracene	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)	Phenanthrene (mg/L)	Pyrene (mg/L)	Naphthalene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)
		NMOCD Regulatory Standards																		
		0.001	0.001	0.001	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.03		
MW-1	11/24/08	<0.000183	<0.000183	**0.00485**	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0106**	<0.000183	**0.0167**	<0.000183	**0.0205**	<0.000183	**0.122**	**0.173**	**0.250**
MW-1	12/08/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0164**	<0.000922	**0.0436**	<0.000922	**0.0719**	<0.000922	**0.106**	<0.000922	**0.350**	**0.748**	**1.09**
LNAPL																				
MW-2	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00174**	<0.000183	**0.00255**	<0.000183	**0.00282**	<0.000183	**0.0285**	**0.0234**	**0.0302**
MW-2	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00314**	<0.000184	**0.00482**	<0.000184	**0.00625**	<0.000184	**0.0435**	**0.0536**	**0.0528**
MW-2	12/01/17	<0.000185	**0.000644**	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	**0.000941**	<0.000185	**0.00133**	<0.000185	**0.00128**	**0.000236**	**0.00546**	--	--
MW-2	11/29/18	**0.000671**	**0.000509**	<0.0000120	<0.00000410	<0.0000116	**0.0000380 J**	<0.00000227	<0.0000136	**0.000175**	<0.00000396	**0.00215**	<0.0000157	**0.00232**	<0.0000148	**0.00291**	<0.0000117	**0.0137**	**0.0257**	**0.0109**
MW-2	10/24/19	**0.00120**	**0.000502**	<0.0000120	**0.000537**	**0.000323**	**0.0000671 J**	**0.0000552 J**	<0.0000136	**0.000253**	<0.00000396	**0.00102**	**0.000181**	**0.00182**	<0.0000148	**0.00290**	**0.000539**	**0.00140**	**0.00629**	**0.00159**
MW-2	11/02/20	Insufficient water to sample																		
MW-3	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00292**	<0.000184	**0.00377**	<0.000184	**0.0037**	<0.000184	**0.0601**	**0.0455**	**0.0625**
MW-3	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00191**	<0.000184	**0.00242**	<0.000184	**0.00262**	<0.000184	**0.0372**	**0.0396**	**0.0451**
MW-3	11/22/10	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	**0.00579**	<0.000186	**0.00899**	<0.000186	**0.0136**	<0.000186	**0.0673**	**0.0915**	**0.115**
P&A																				
MW-4	11/24/08	<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-4	12/07/09	<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-5	11/24/08	**0.0424**	<0.000917	**0.0806**	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0201**	<0.000917	**0.0326**	<0.000917	**0.0427**	<0.000917	**0.136**	**0.261**	**0.372**
MW-5	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00262**	<0.000184	**0.00767**	<0.000184	**0.0122**	<0.000184	**0.0172**	<0.000184	**0.0779**	**0.137**	**0.194**
LNAPL																				
MW-6	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00251**	<0.000184	**0.00321**	<0.000184	**0.00322**	<0.000184	**0.0217**	**0.0339**	**0.015**
MW-6	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00125**	<0.000184	**0.00129**	<0.000184	**0.00144**	<0.000184	**0.00437**	**0.0133**	**0.00426**
MW-6	12/01/11	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	**0.00152**	<0.000186	**0.000962**	<0.000186	**0.00131**	<0.000186	**0.00345**	**0.00676**	**0.00328**
MW-6	12/06/12	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	**0.00398**	<0.000190	**0.00346**	<0.000190	**0.00406**	<0.000190	**0.0126**	**0.0206**	**0.0207**
MW-6	12/04/15	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	96	<0.000196	<0.000196	<0.000196	<0.000196	**0.00034**	<0.000196
MW-6	11/04/16	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	**0.000342**	<0.000185	<0.000185	<0.000185	<0.000185	**0.000273**	**0.00219**	**0.00141**	**0.00122**
MW-6	12/01/17	<0.000185	**0.000313**	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	**0.00047**	<0.000185	**0.000277**	<0.000185	**0.000360**	<0.000185	**0.00208**	---	---
MW-6	11/29/18	**0.000306**	**0.000311**	<0.0000120	<0.00000410	<0.0000116	**0.0000189 J**	**0.0000137 J**	<0.0000136	<0.0000108	<0.00000396	**0.000334**	**0.0000159 J**	**0.000146**	<0.0000148	**0.000293**	**0.000141**	**0.00196**	**0.00188**	**0.00107**
MW-6	10/24/19	**0.0000833**	0.000313	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.000332**	<0.0000157	**0.0000546**	<0.0000148	**0.000139**	**0.0000246 J**	**0.00161**	**0.000970**	**0.000783**
MW-7	11/24/08	<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-7	12/07/09	<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-7	11/29/18	<0.0000140	**0.0000476 J**	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00028**	<0.0000157	<0.00000850	<0.0000148	**0.0000751**	<0.0000117	**0.000254 B**	**0.000367**	**0.0000983 J**
MW-7	10/24/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000667 B J**	<0.0000157	<0.0000085	<0.0000148	<0.00000820	<0.0000117	**0.0000281 B J**	**0.0000148 B J**	**0.0000138 B J**
MW-8	11/25/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.0861**	<0.000184	**0.135**	<0.000184	**0.188**	<0.000184	**0.529**	**1.26**	**1.86**
MW-8	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0165**	<0.000917	**0.0566**	<0.000917	**0.0789**	<0.000917	**0.113**	<0.000917	**0.359**	**0.839**	**1.14**
LNAPL																				
MW-9	11/25/08	<0.000184	<0.000184	0.00163	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00172**	<0.000184	**0.00578**	<0.000184	**0.00846**	<0.000184	**0.0104**	<0.000184	**0.0641**	**0.0851**	**0.112**
LNAPL																				
MW-10	11/24/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0286**	<0.000922	**0.0382**	<0.000922	**0.0512**	<0.000922	**0.212**	**0.382**	**0.537**
MW-10	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0357**	<0.000917	**0.112**	<0.000917	**0.172**	<0.000917	**0.245**	<0.000917	**0.856**	**1.89**	**2.64**
LNAPL																				
MW-11	11/24/08	<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-11	12/07/09	<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
P&A																				
MW-11R	11/02/20	<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	<0.0000180	<0.0000169	<0.0000917	<0.0000687	<0.0000674
MW-12	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00145**	<0.000183	0.000696	<0.000183	<0.000183	<0.000183	**0.000648**	0.000372	<0.000183

Table 3

Summary of Analytical Results of PAH Compounds in Groundwater
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

Sample ID	Sample Date	Anthracene	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)	Phenanthrene (mg/L)	Pyrene (mg/L)	Naphthalene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)
		NMOCD Regulatory Standards																		
		0.001	0.001	0.001	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.03		
MW-12	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.000706**	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.000615**	<0.000184	<0.000184
MW-12	12/01/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.000228**	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.000302**	<0.000183
P&A																				
MW-12R	12/01/17	<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	<0.000184	<0.000184	<0.000368	---	---
MW-12R	11/29/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	**0.00000214 J**	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000847 B J**	<0.0000157	<0.00000850	<0.0000148	**0.0000133 J**	<0.0000117	**0.0000307 B J**	<0.00000821	<0.00000902
MW-12R	10/24/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000710 B J**	<0.0000157	<0.0000085	<0.0000148	**0.00000922 J**	<0.0000117	**0.0000286 B J**	**0.0000150 B J**	**0.0000132 B J**
MW-15	11/24/08	<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-15	12/07/09	<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
P&A																				
MW-16	11/24/08	**0.000888**	<0.000185	<0.000185	**0.000959**	**0.000847**	**0.000814**	**0.00102**	**0.000879**	**0.000958**	<0.000185	<0.000185	**0.0013**	**0.000417**	**0.0010**	**0.00076**	**0.0012**	<0.000185	**0.000216**	**0.000313**
MW-16	12/07/09	<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
P&A																				
MW-16R	11/02/20	<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	<0.0000180	<0.0000169	<0.0000917	<0.0000687	<0.0000674
MW-17	11/24/08	<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-17	12/07/09	<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
P&A																				
MW-17R	12/11/14	<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-17R	12/04/15	<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-18	11/24/08	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	**0.000216**	**0.000245**	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187
MW-18	12/07/09	<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
P&A																				
MW-18R	12/01/17	<0.000184	<0.000184	<0.000184	**0.000257**	<0.000184	**0.000252**	**0.000298**	**0.000278**	**0.000250**	**0.000348**	<0.000184	**0.000286**	<0.000184	**0.000329**	<0.000184	**0.00029**	<0.000368	<0.000184	<0.000184
MW-18R	11/29/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000623 B J**	<0.0000157	<0.00000850	<0.0000148	**0.00000952 J**	<0.0000117	**0.000134 B J**	**0.0000439 J**	**0.0000423 J**
MW-19	11/24/08	<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-19	12/07/09	<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
P&A																				
MW-19R	12/11/14	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	**0.000930**	<0.000186	<0.000186	<0.000186	**0.00180**	<0.000186	<0.000186	**0.000330**	**0.000326**
MW-19R	12/04/15	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197	<0.000197
MW-19R	11/04/16	<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	**0.000296**	<0.000185	<0.000185	<0.000185
MW-19R	11/29/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000399 B J**	<0.0000157	<0.00000850	<0.0000148	<0.00000820	<0.0000117	**0.0000460 B J**	<0.00000821	<0.00000902
MW-20	11/24/08	<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-20	12/07/09	<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
P&A																				
MW-20R	12/11/14	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186
MW-20R	12/04/15	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196	<0.000196
MW-21	11/24/08	<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-21	12/07/09	<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
P&A																				
MW-21R	11/02/20	<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	<0.0000180	<0.0000169	<0.0000917	<0.0000687	<0.0000674
MW-22	12/01/17	<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	<0.000184	<0.000184	<0.000368	---	---
MW-22	11/29/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000399 B J**	<0.0000157	<0.00000850	<0.0000148	<0.00000820	<0.0000117	**0.0000537 B J**	<0.00000821	<0.00000902

Table 3

Summary of Analytical Results of PAH Compounds in Groundwater
Plains Pipeline, L.P.
Darr Angell No. 1
Lea County, New Mexico

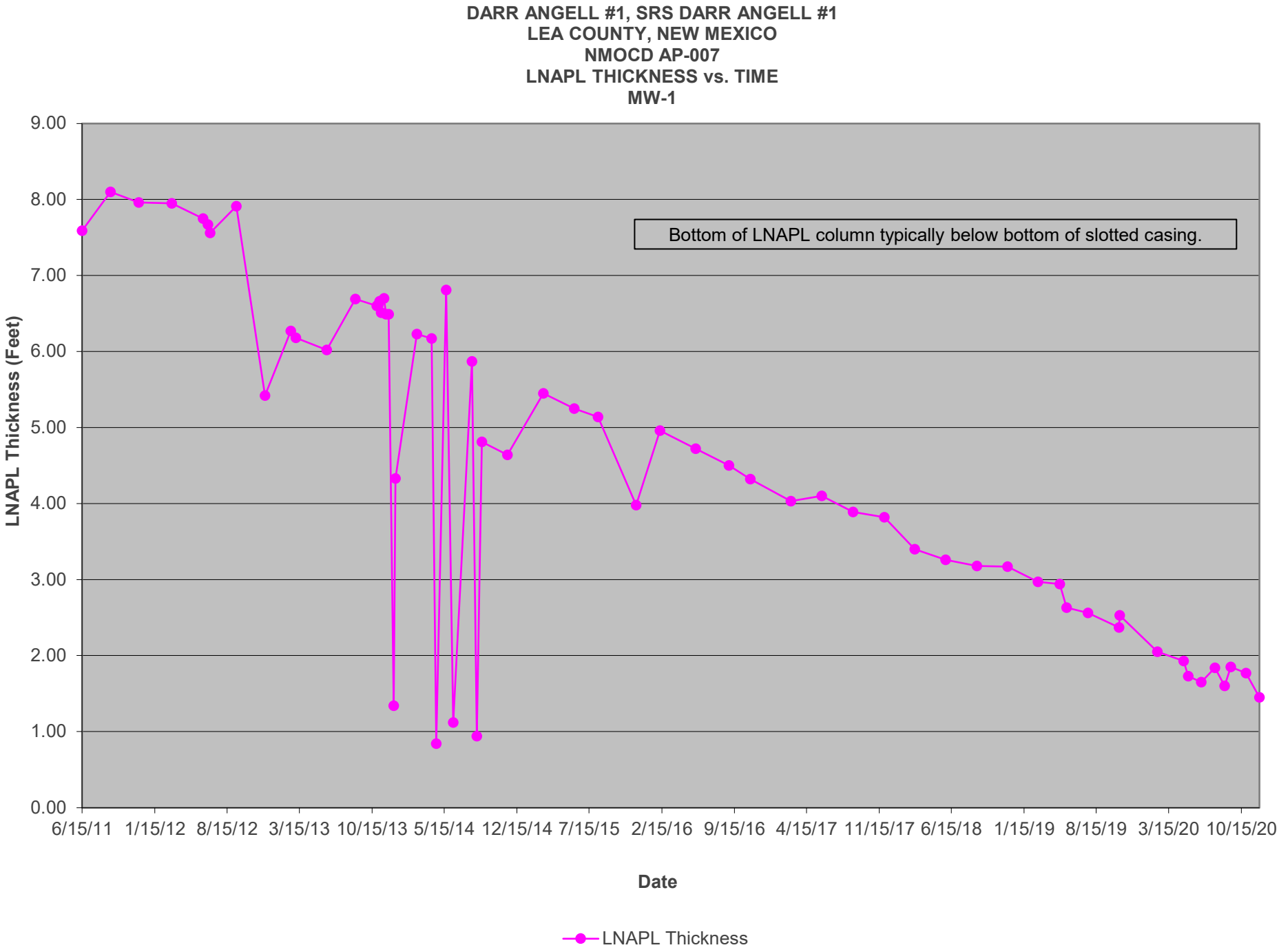
Sample ID	Sample Date	Anthracene	Acenaphthene (mg/L)	Acenaphthylene (mg/l)	Benzo(a)anthracene (mg/L)	Benzo(a)pyrene (mg/L)	Benzo(b)fluoranthene (mg/L)	Benzo(g,h,i)perylene (mg/L)	Benzo(k)fluoranthene (mg/L)	Chrysene (mg/L)	Dibenzo(a,h)anthracene (mg/L)	Dibenzofuran (mg/L)	Fluoranthene (mg/L)	Fluorene (mg/L)	Indeno(1,2,3-cd)pyrene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)	Naphthalene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)
		NMOCD Regulatory Standards																		
		0.001	0.001	0.001	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.03		
MW-22	10/24/19	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000625 B J**	<0.0000157	<0.00000850	<0.0000148	<0.00000820	<0.0000117	**0.0000362 B J**	**0.0000126 B J**	**0.0000132 B J**
MW-24	11/02/20	<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	<0.0000180	<0.0000169	<0.0000917	<0.0000687	<0.0000674
MW-25	11/02/20	<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	<0.0000180	<0.0000169	<0.0000917	<0.0000687	<0.0000674
RW-2	12/08/09	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	**0.0379**	<0.00184	**0.0964**	<0.00184	**0.162**	<0.00184	**0.256**	<0.00184	**0.798**	**1.74**	**2.60**
P&A																				
RW-3	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0218**	<0.000917	**0.0633**	<0.000917	**0.0966**	<0.000917	**0.129**	<0.000917	**0.400**	**0.888**	**1.31**
RW-3	12/08/09	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.0506**	<0.00183	**0.130**	<0.00183	**0.210**	<0.00183	**0.321**	<0.00183	**1.02**	**2.27**	**3.29**
LNAPL																				
RW-4	12/08/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00224**	<0.000183	**0.00772**	<0.000183	**0.011**	<0.000183	**0.0161**	<0.000183	**0.0801**	**0.134**	**0.184**
LNAPL																				
RW-5	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.013**	<0.000917	**0.0218**	<0.000917	**0.0273**	<0.000917	**0.132**	**0.17**	**0.254**
RW-5	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0166**	<0.000917	**0.0426**	<0.000917	**0.0726**	<0.000917	**0.105**	<0.000917	**0.338**	**0.726**	**1.07**
LNAPL																				
RW-6	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0286**	<0.000917	**0.0751**	<0.000917	**0.126**	<0.000917	**0.167**	<0.000917	**0.564**	**1.33**	**1.93**
RW-6	12/08/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0110**	<0.000922	**0.0180**	<0.000922	**0.0330**	<0.000922	**0.0456**	<0.000922	**0.175**	**0.327**	**0.462**
LNAPL																				
RW-7	11/25/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0254**	<0.000922	**0.0709**	<0.000922	**0.106**	<0.000922	**0.143**	<0.000922	**0.477**	**1.07**	**1.55**
RW-7	12/08/09	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	**0.191**	<0.00862	**0.0531**	<0.00862	**0.844**	<0.00862	**1.28**	<0.00862	**3.95**	**9.15**	**13.1**
LNAPL																				
RW-8	11/25/08	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	**0.214**	<0.00459	**0.342**	<0.00459	**0.436**	<0.00459	**1.17**	**2.87**	**4.15**
RW-8	12/08/09	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	**0.116**	<0.00461	**0.294**	<0.00461	**0.480**	<0.00461	**0.704**	<0.00461	**2.16**	**5.04**	**7.19**
LNAPL																				
RW-9	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0488**	<0.000917	**0.064**	<0.000917	**0.0838**	<0.000917	**0.294**	**0.587**	**0.841**
RW-9	12/08/09	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.0186**	<0.00183	**0.0576**	<0.00183	**0.0795**	<0.00183	**0.117**	<0.00183	**0.402**	**0.890**	**1.24**
LNAPL																				
RW-10	12/08/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00344**	<0.000183	0.00496	<0.000183	**0.00643**	<0.000183	**0.0478**	**0.0674**	**0.0898**
LNAPL																				
RW-11	11/25/08	<0.000917	**0.0062**	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0105**	<0.000917	**0.0269**	<0.000917	**0.0426**	<0.000917	**0.0571**	<0.000917	**0.145**	**0.322**	**0.441**
LNAPL																				
RW-12	12/01/17	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000182	<0.000364	---	---
RW-12	11/29/18	<0.0000140	<0.0000100	<0.0000120	<0.00000410	<0.0000116	<0.00000212	<0.00000227	<0.0000136	<0.0000108	<0.00000396	**0.00000538 B J**	<0.0000157	<0.00000850	<0.0000148	<0.00000820	<0.0000117	**0.000138 B J**	**0.0000167 J**	<0.00000902
RW-12	11/12/19	<0.00000800	<0.0000100	<0.00000700	**0.0000120 J**	<0.0000158	**0.00000573 J**	**0.00000505 J**	<0.0000255	<0.0000144	<0.00000454	**0.00000221 J**	<0.0000165	<0.00000898	<0.00000739	<0.0000184	<0.0000155	**0.0000393 B J**	<0.0000189	<0.0000155

Notes:

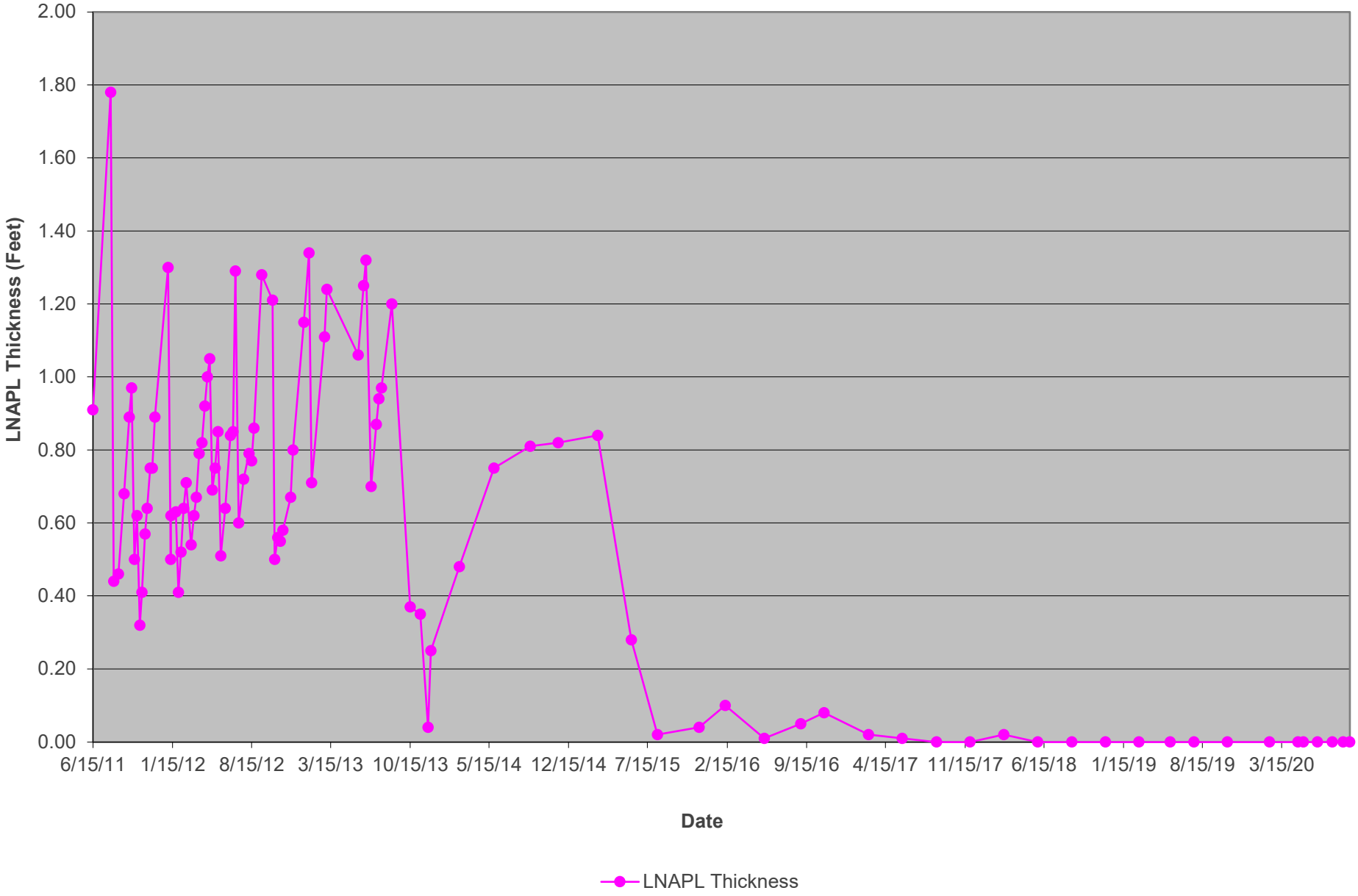
1. PAH analyses by EPA Method 8270D.
2. Shaded cells indicate NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A exceedance.
3. **Bold** indicates detection.
4. Nova Training and Environmental collected samples from 2008 through 2010.
5. Flag J indicates the identification of the analyte is acceptable and the reported result is an estimate.
6. Flag B indicates the same analyte is found in the associated blank.
7. Regulaotry standards of 0.001 mg/L noted above are requirements of the NMOCD. Other standards are required by NMAC 20.6.2.3103 Section A..

Appendices

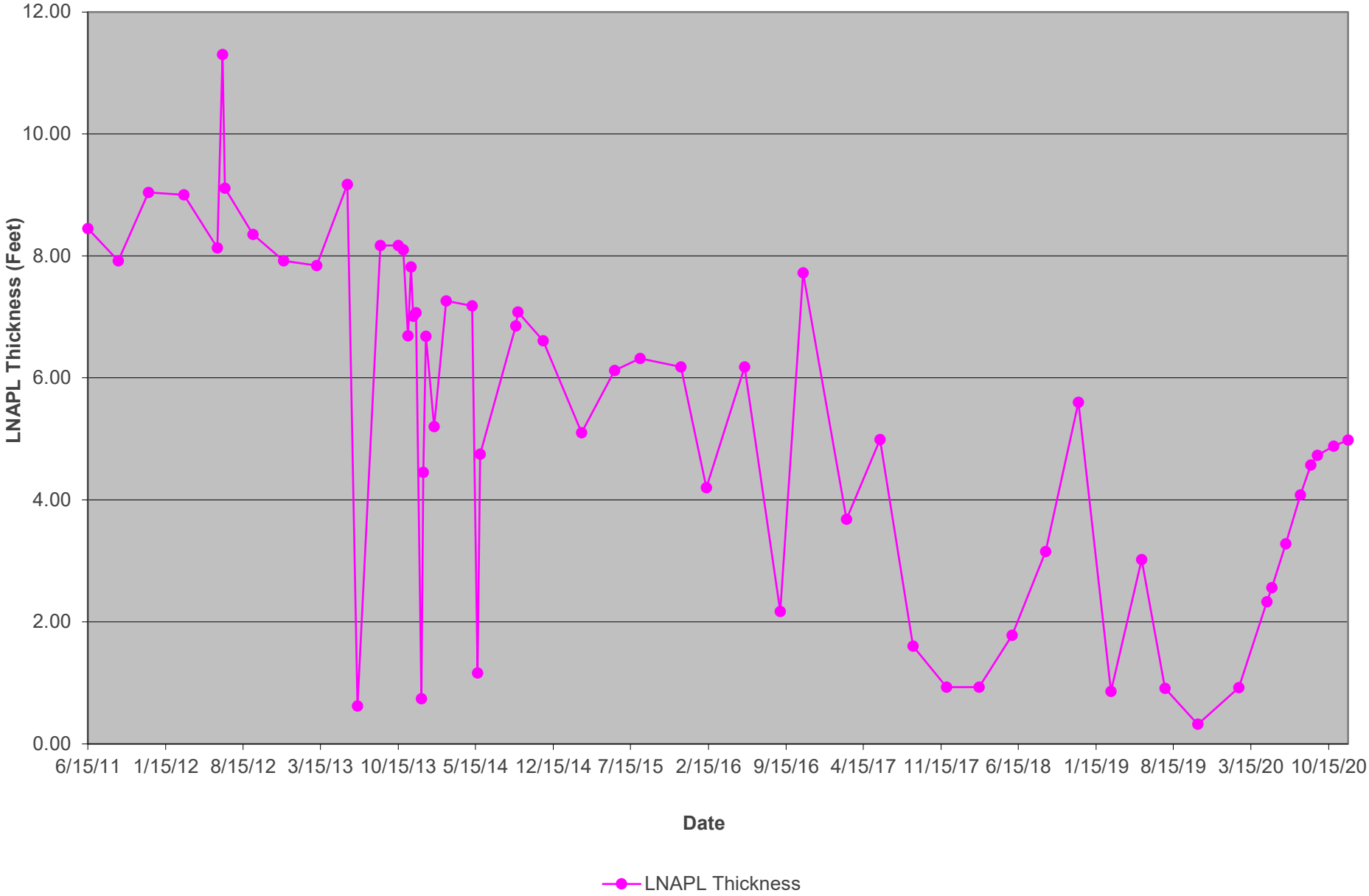
Appendix A
Charts of LNAPL Thicknesses in Monitor and Recovery Wells vs. Time



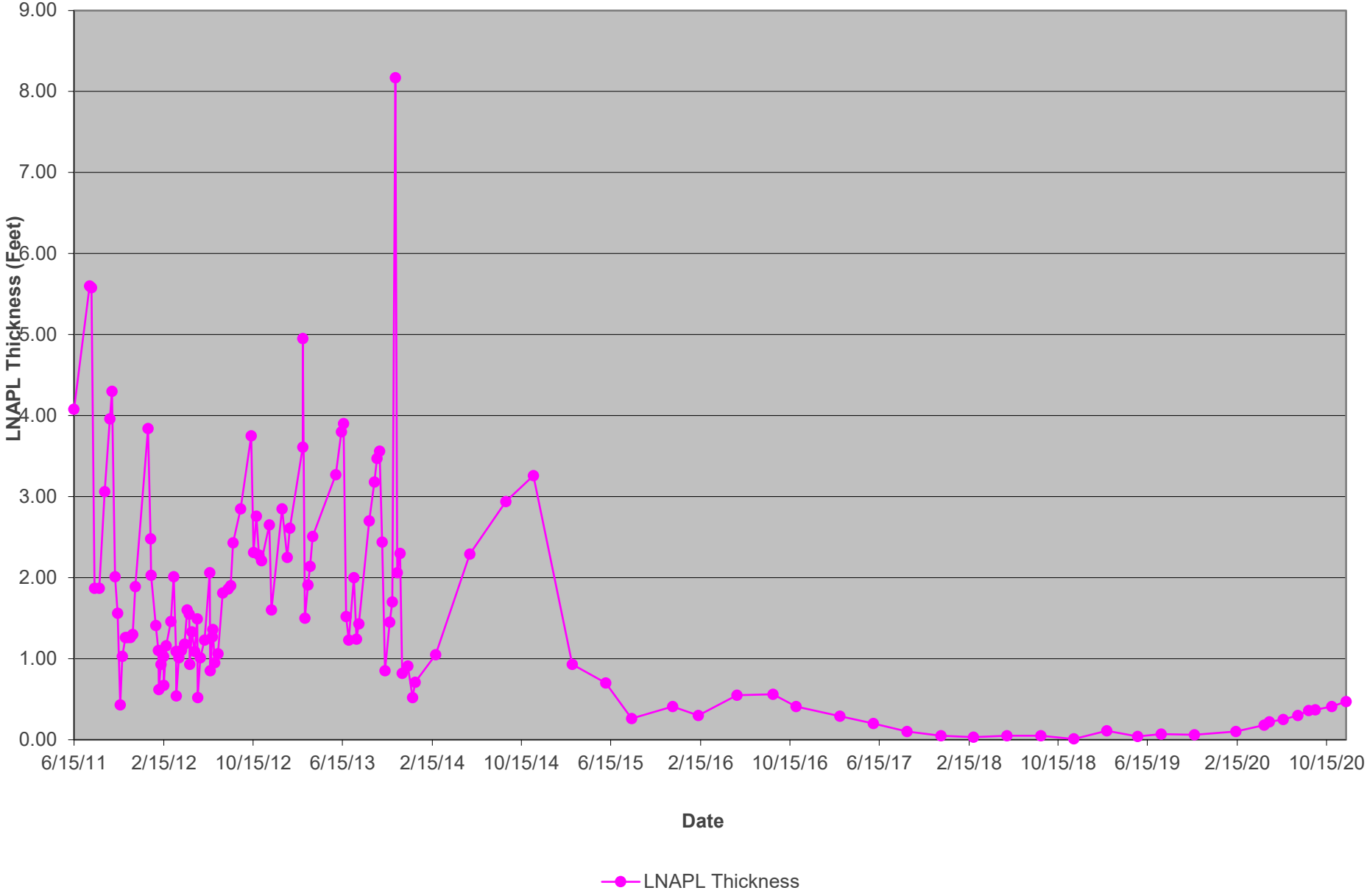
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-2



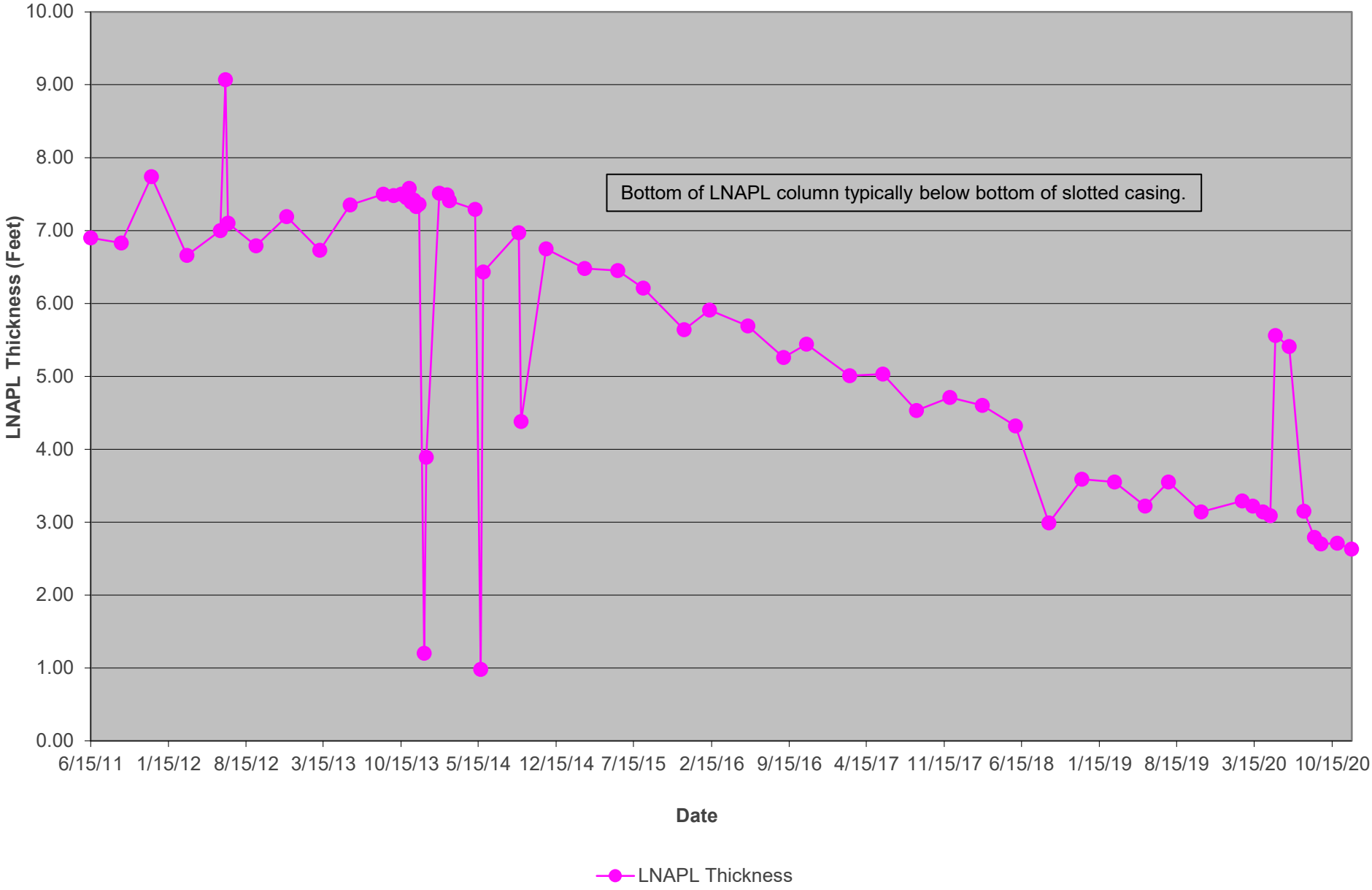
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-5



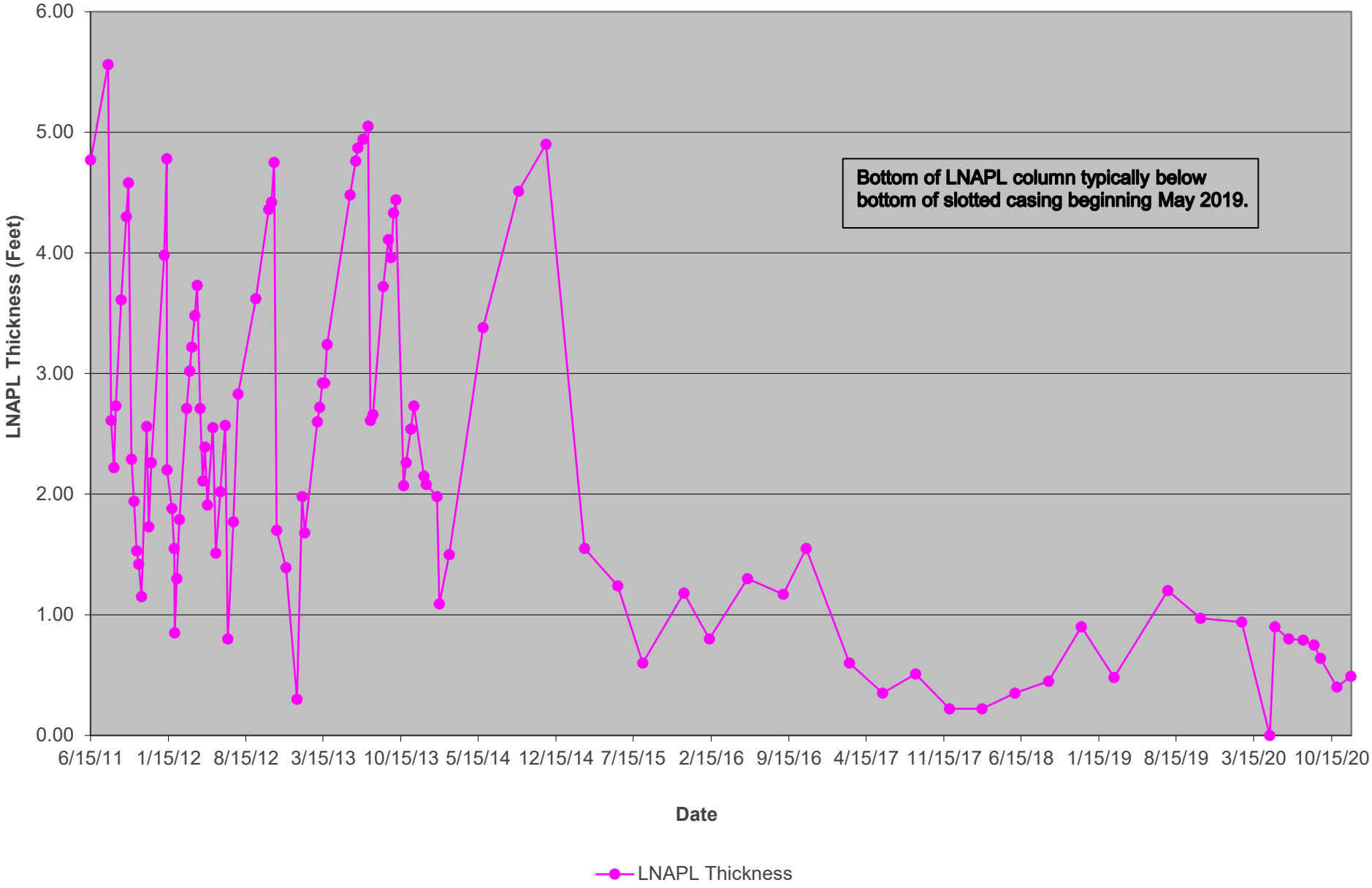
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-8



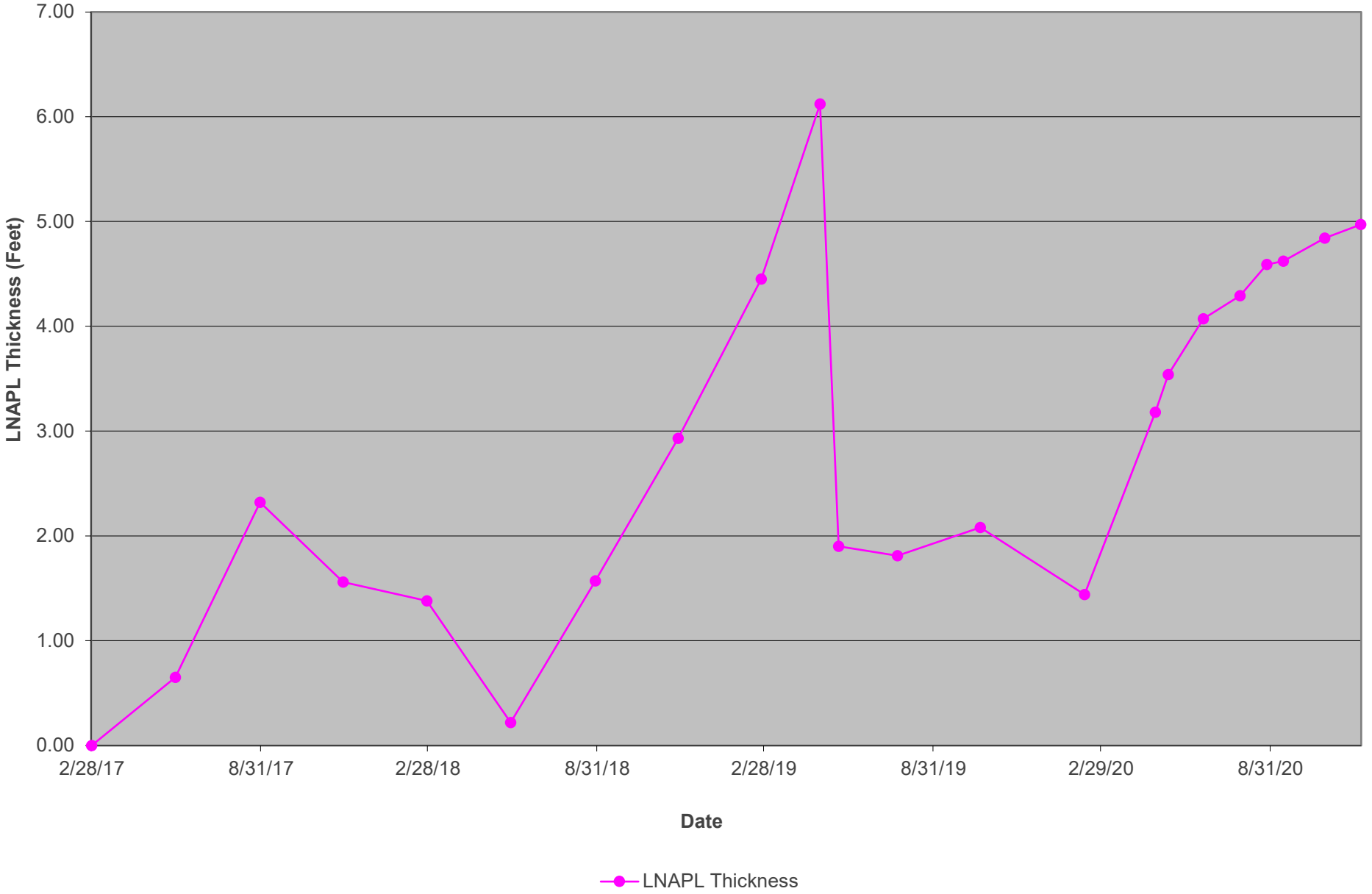
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-9



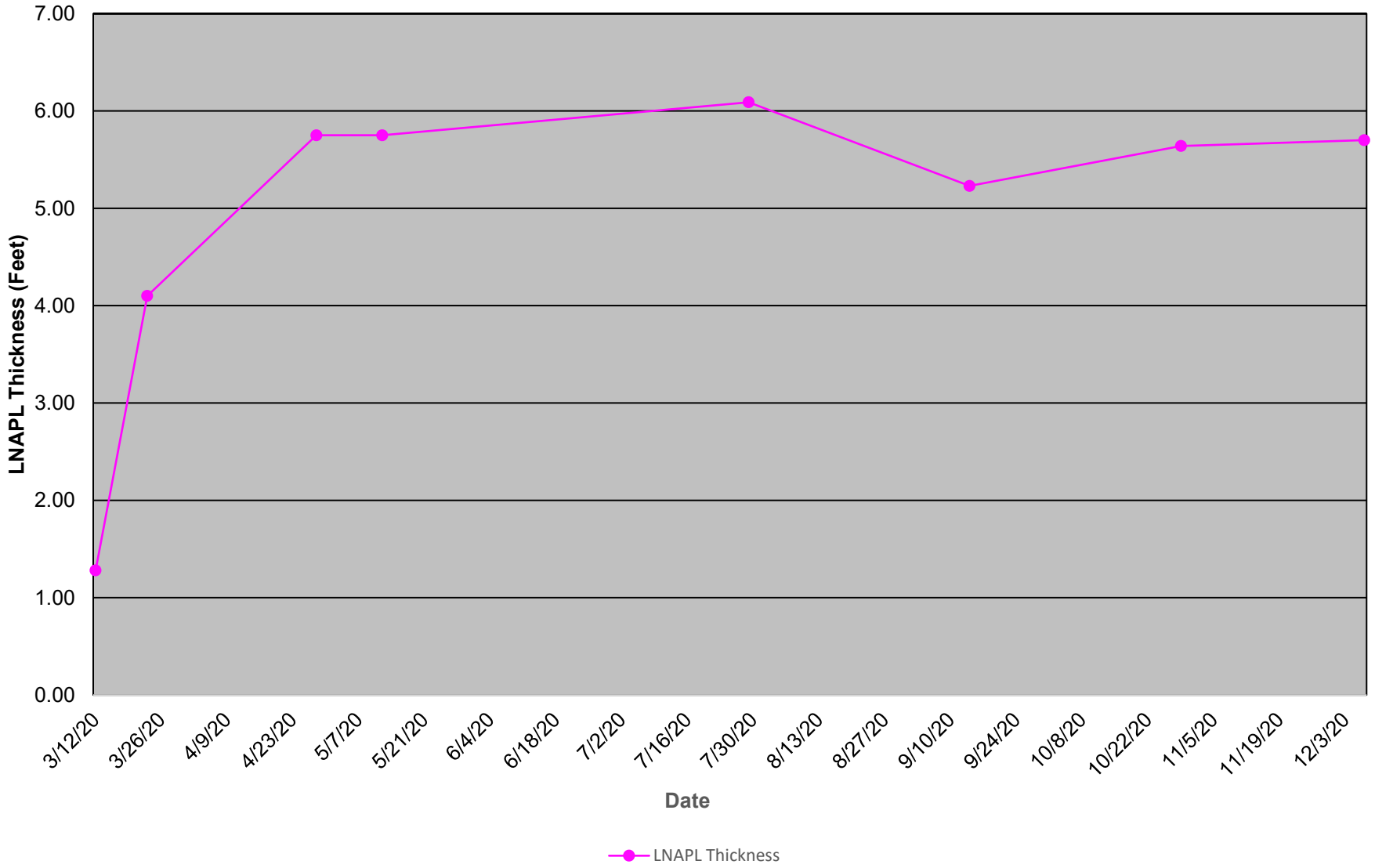
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-10



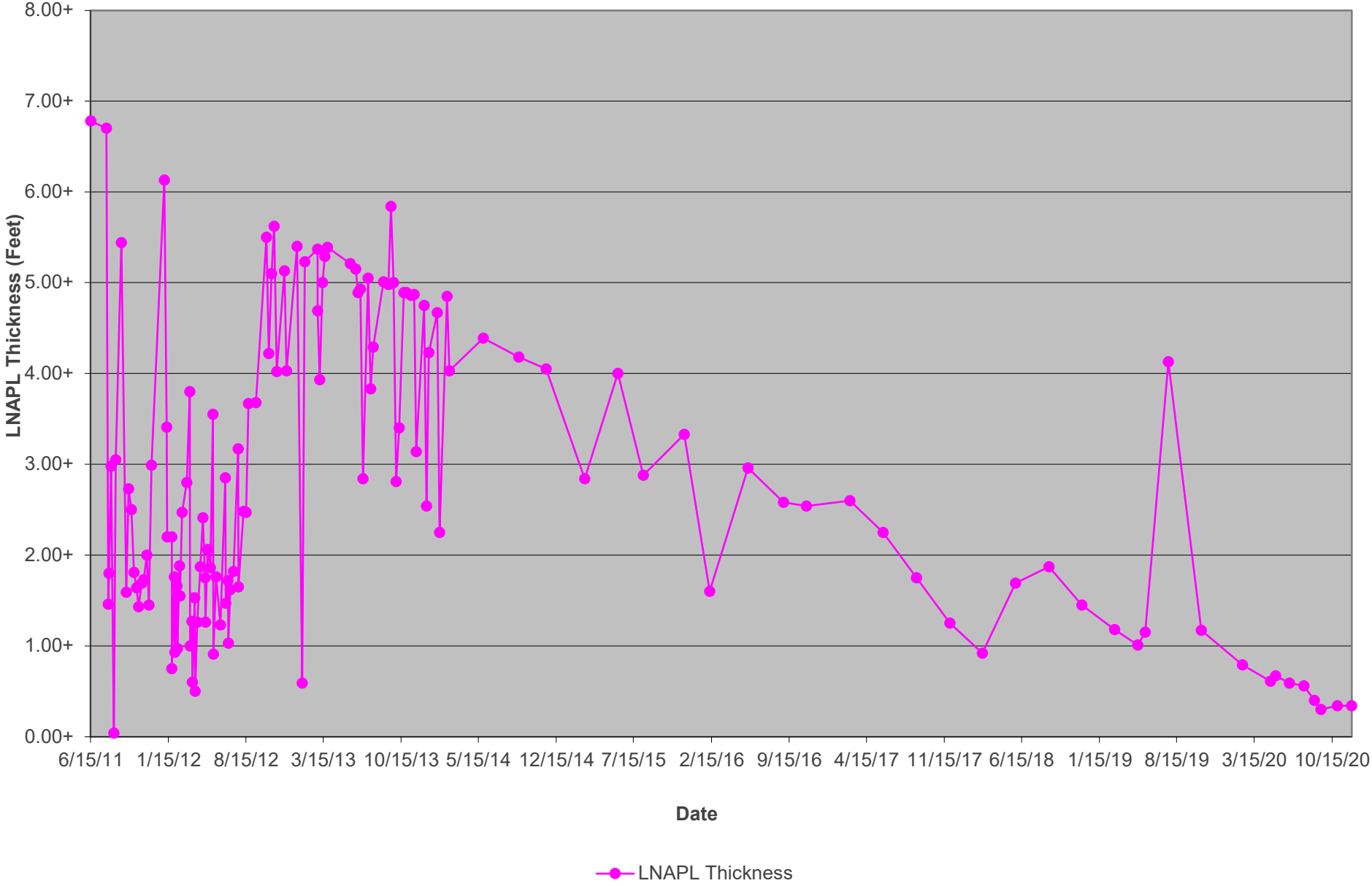
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
MW-23



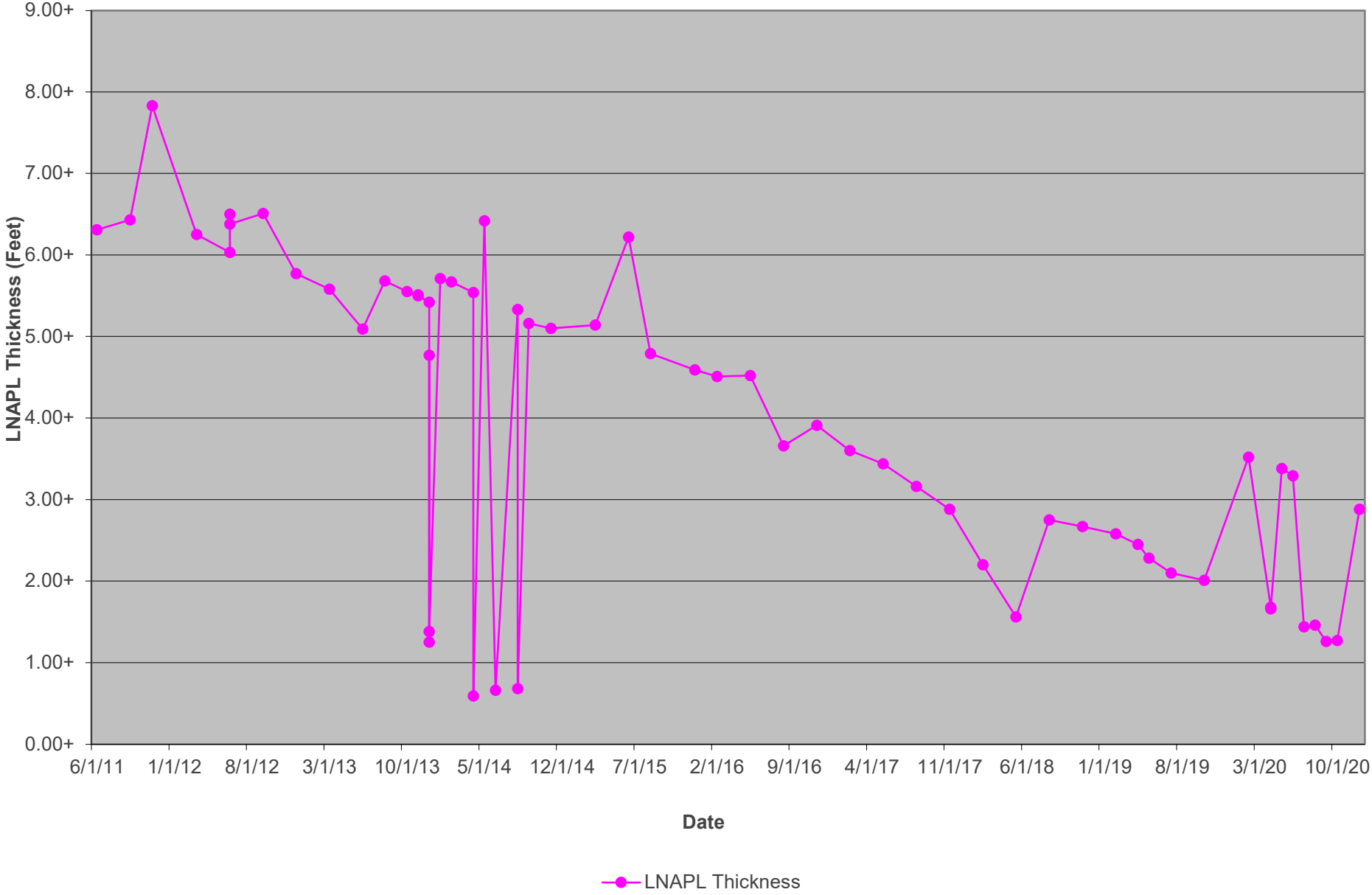
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-1R



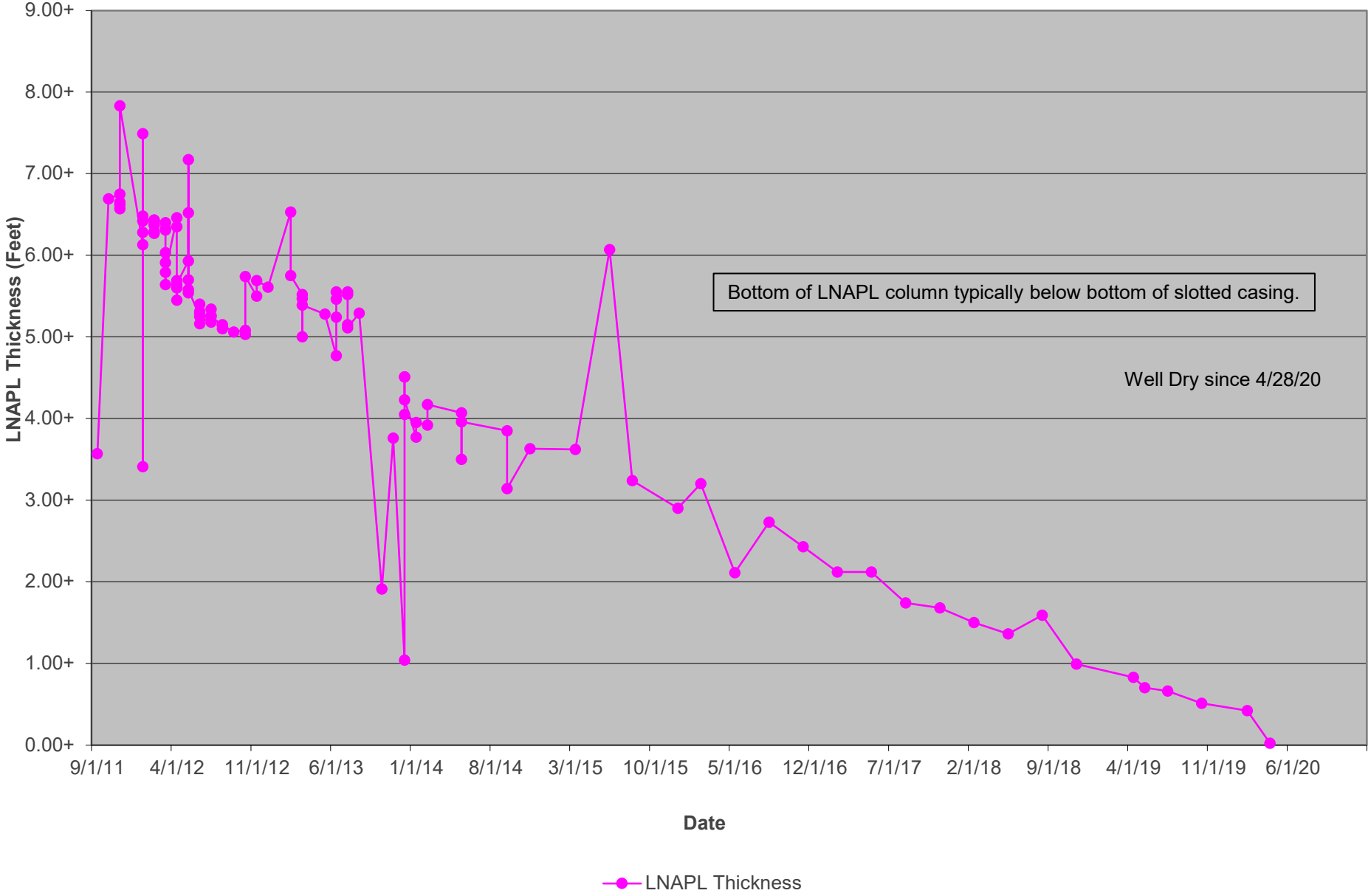
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-3



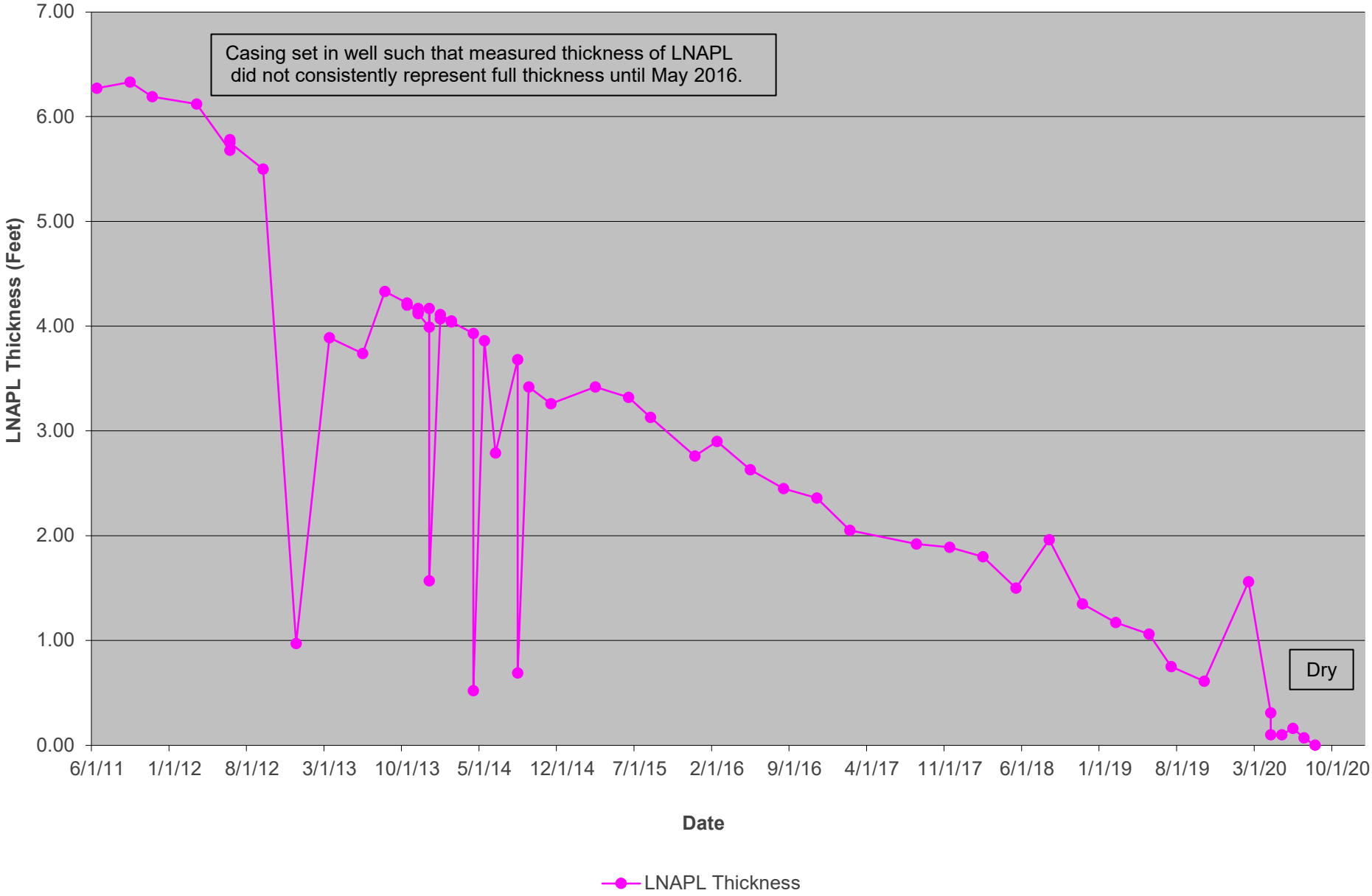
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-4



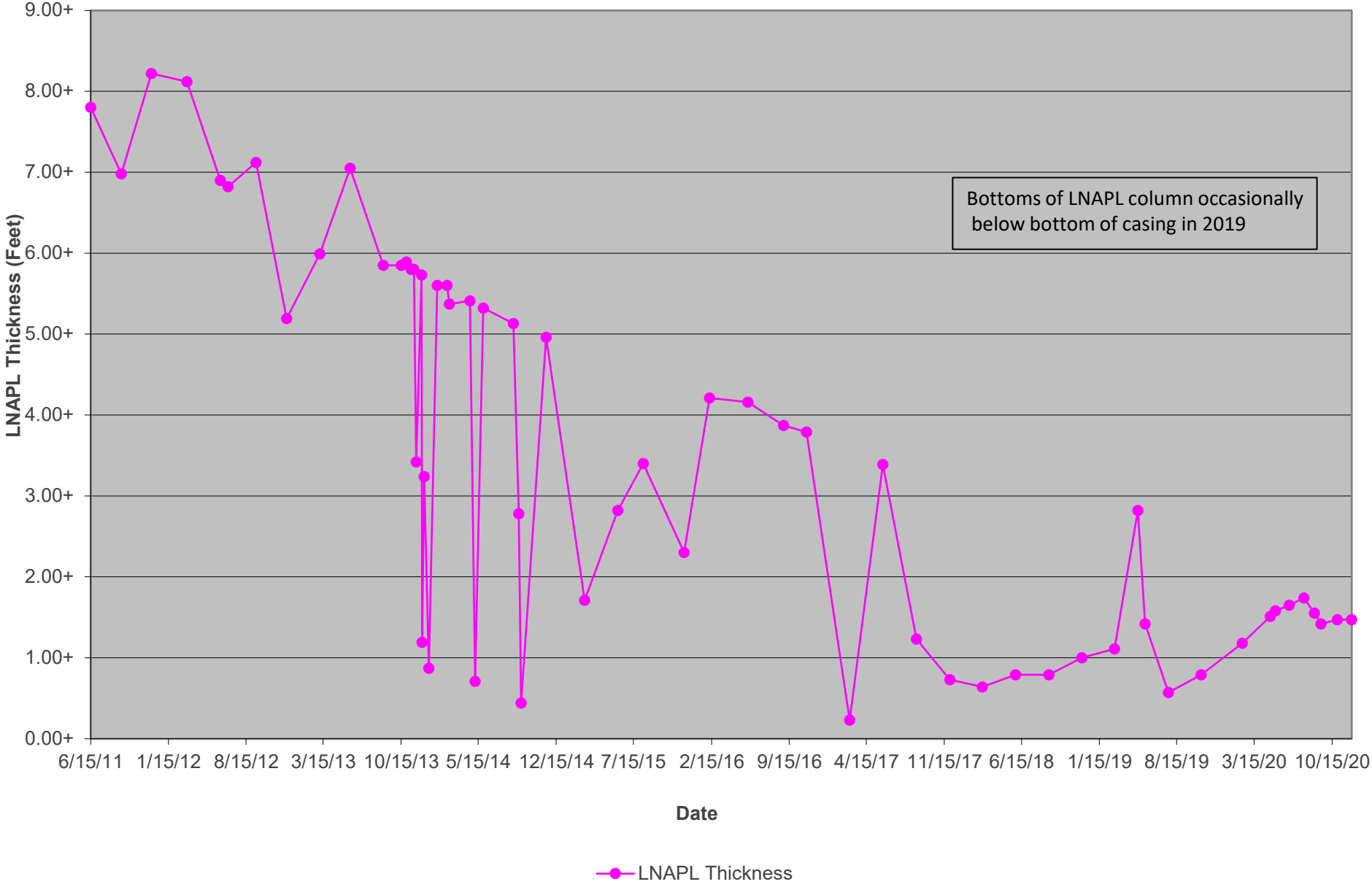
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-5



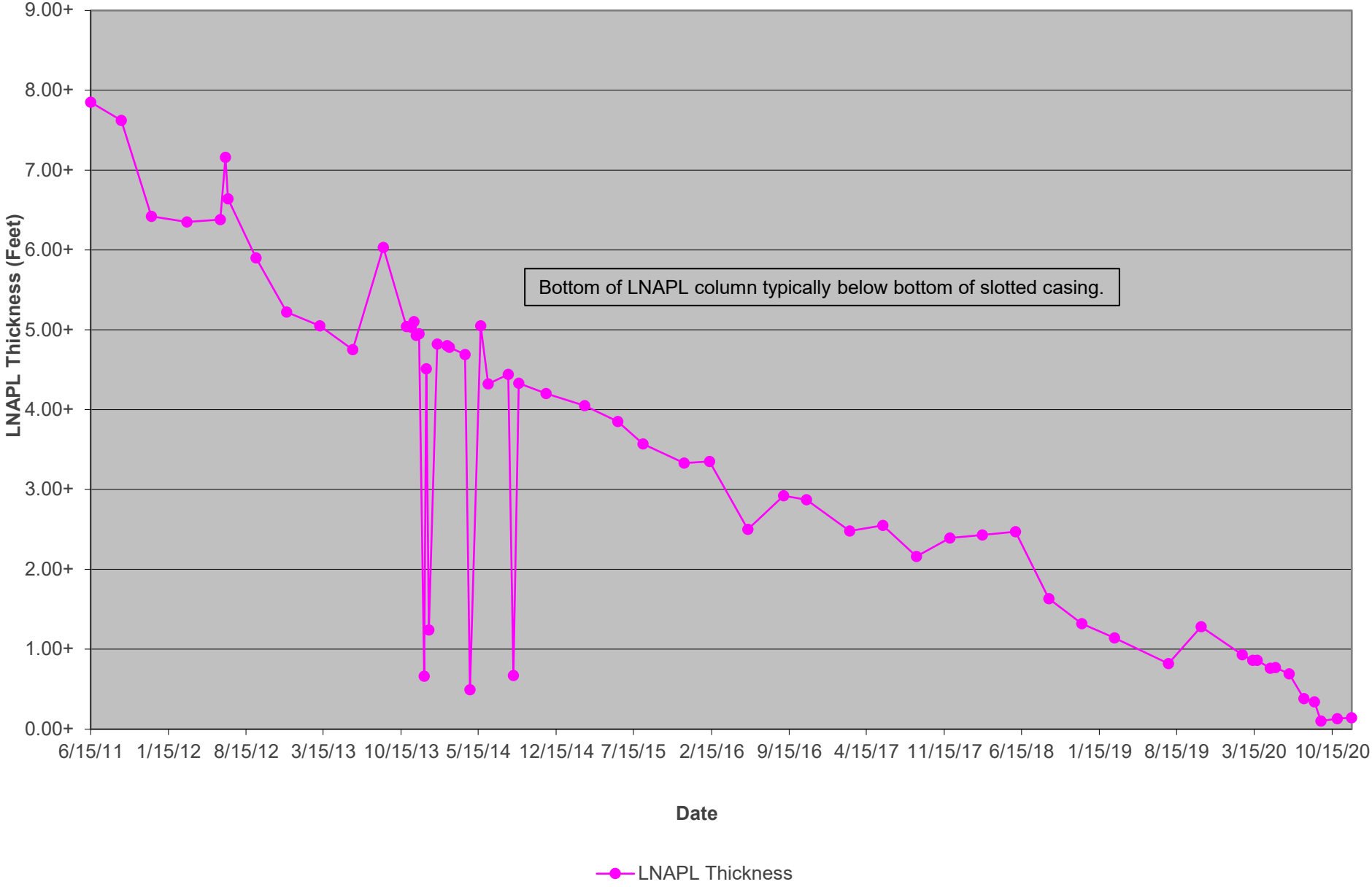
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-6



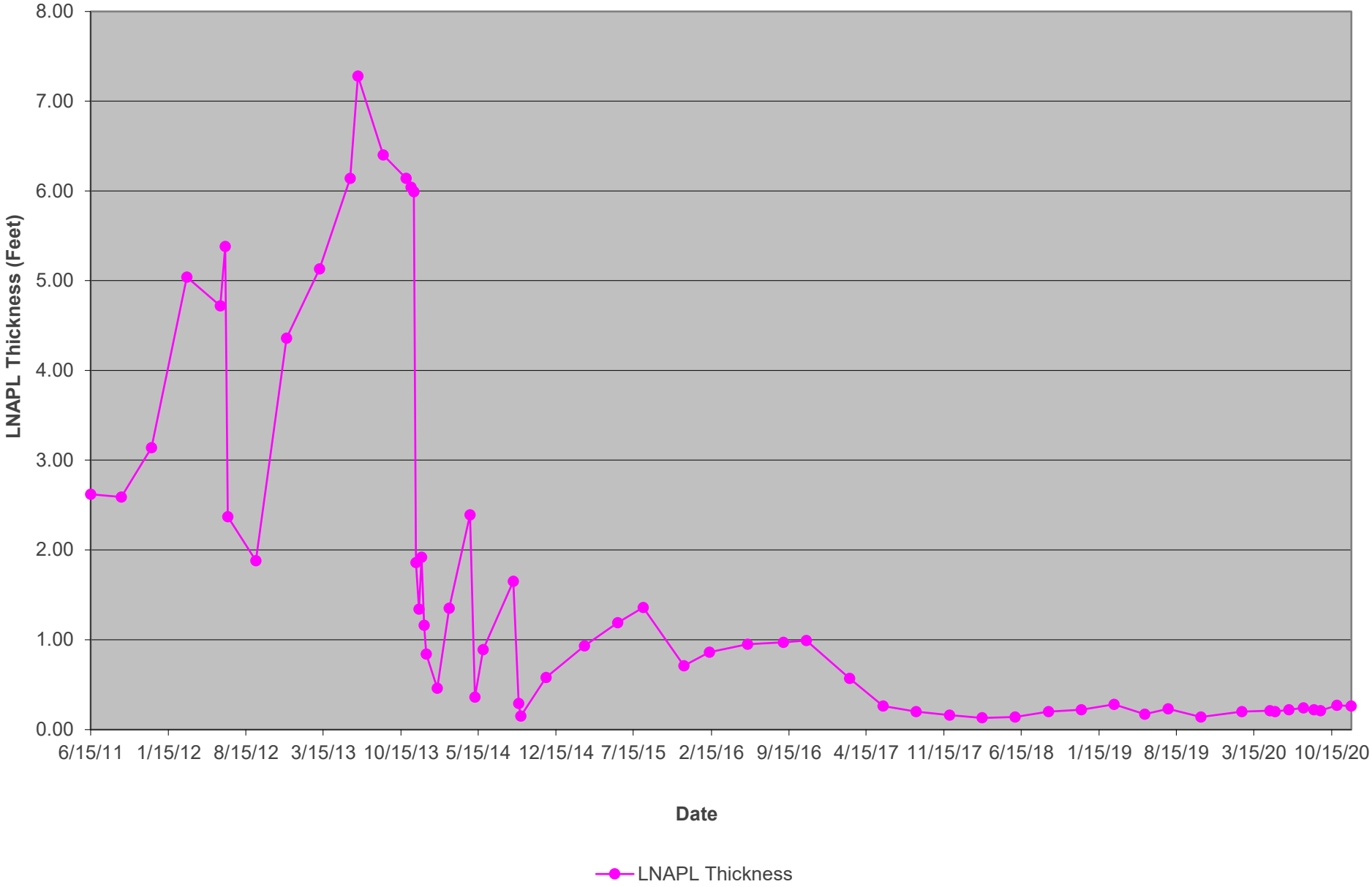
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-7



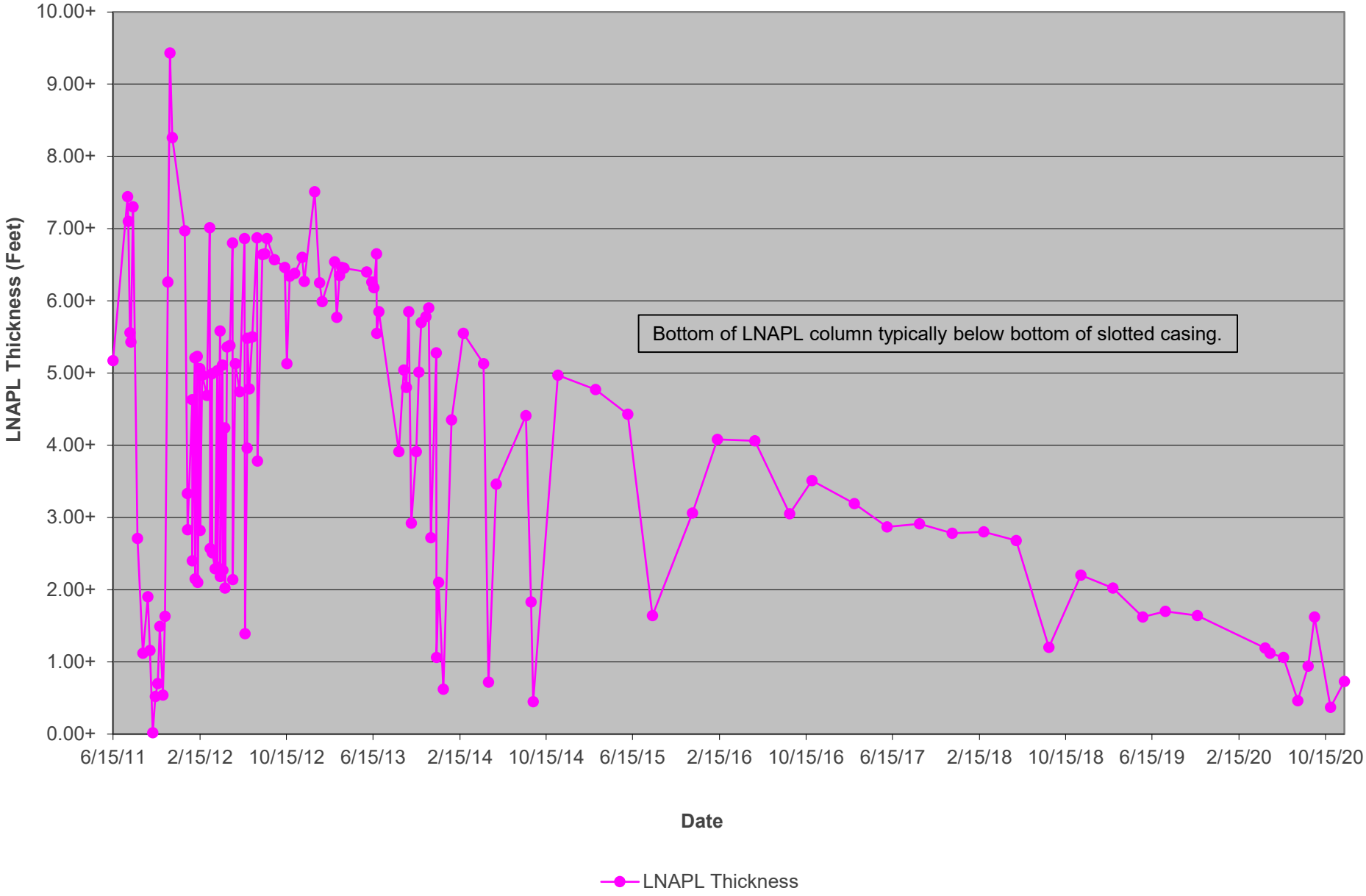
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-8



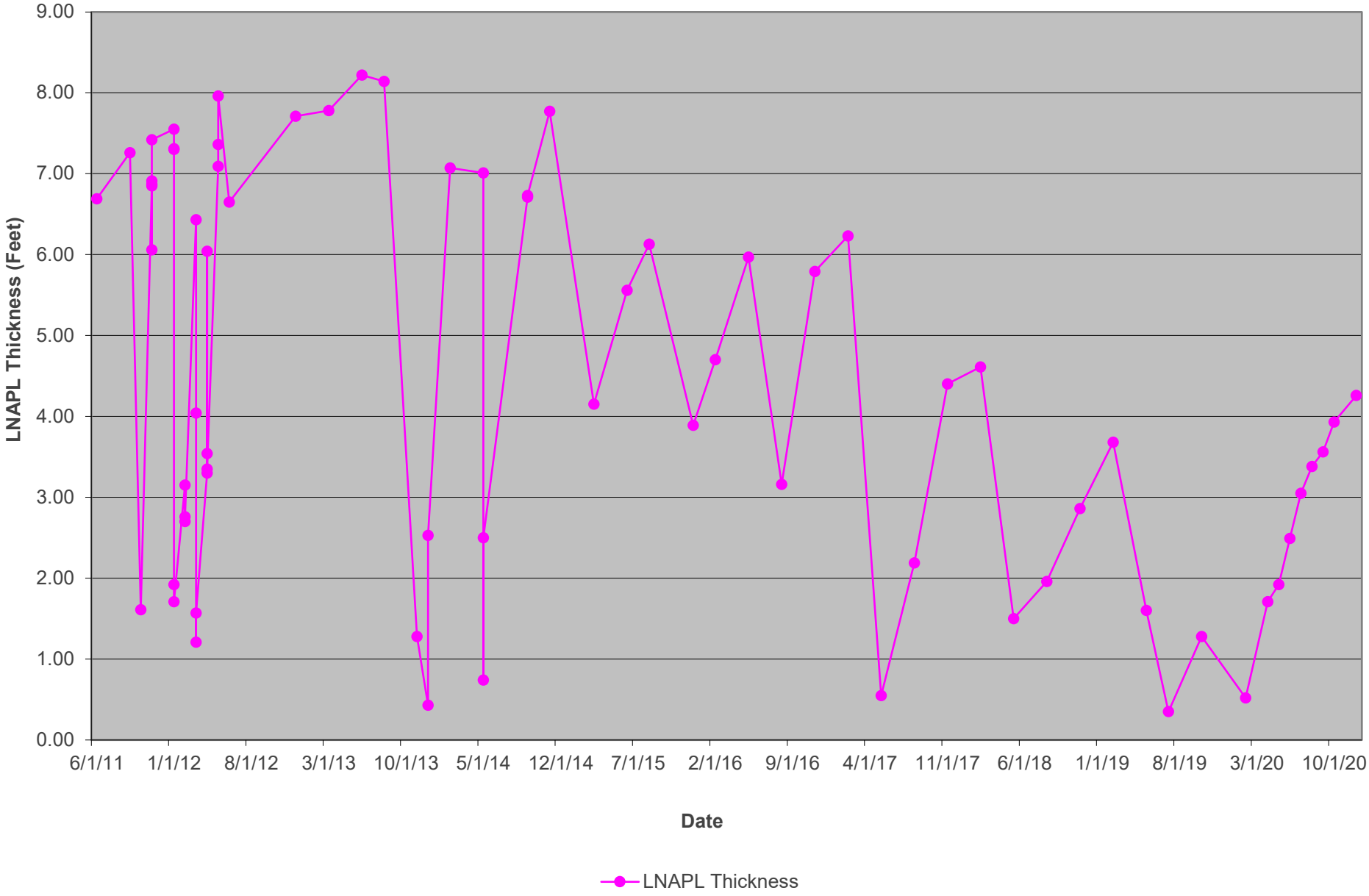
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-9



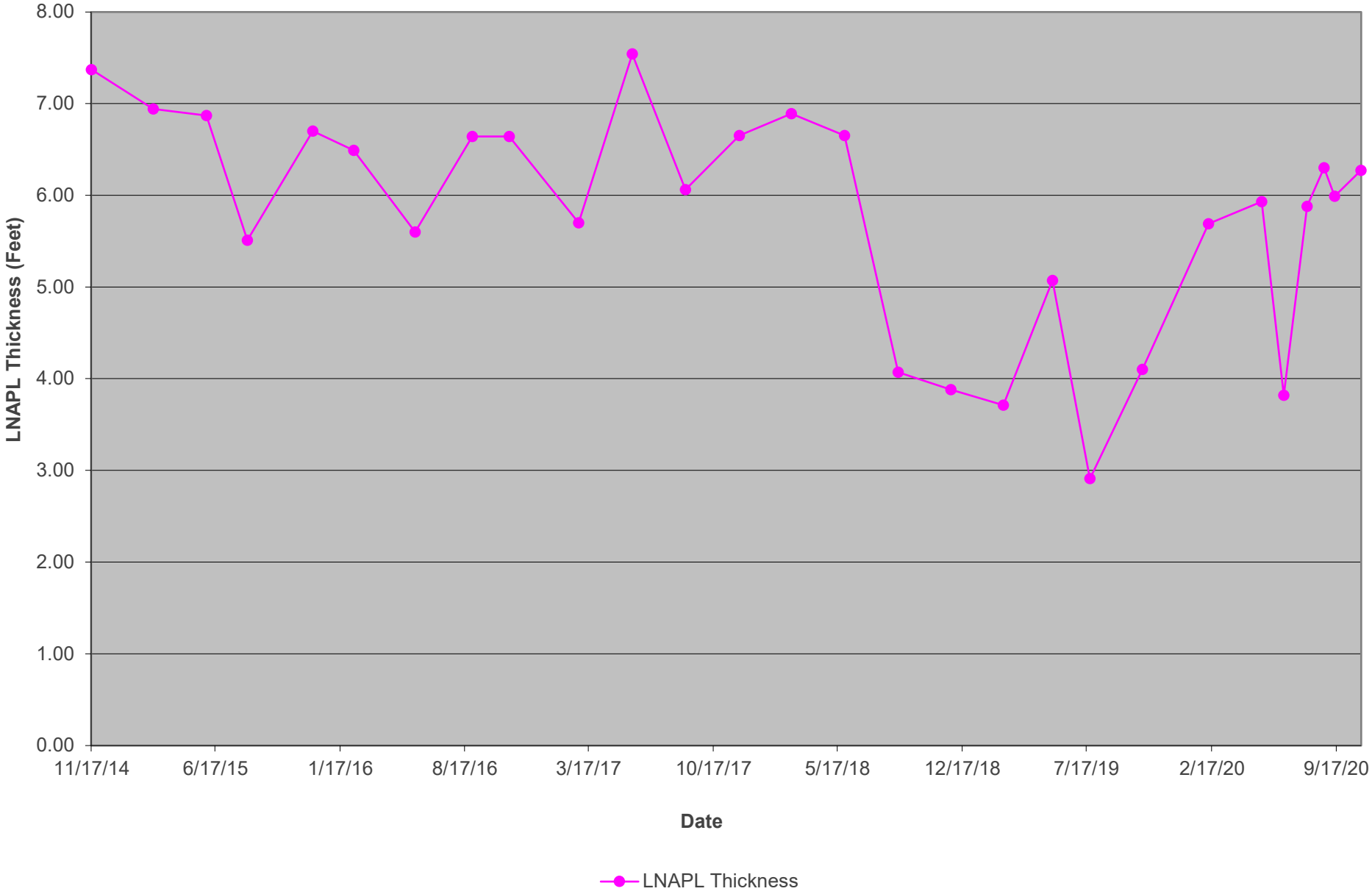
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-10



DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-11



DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-13



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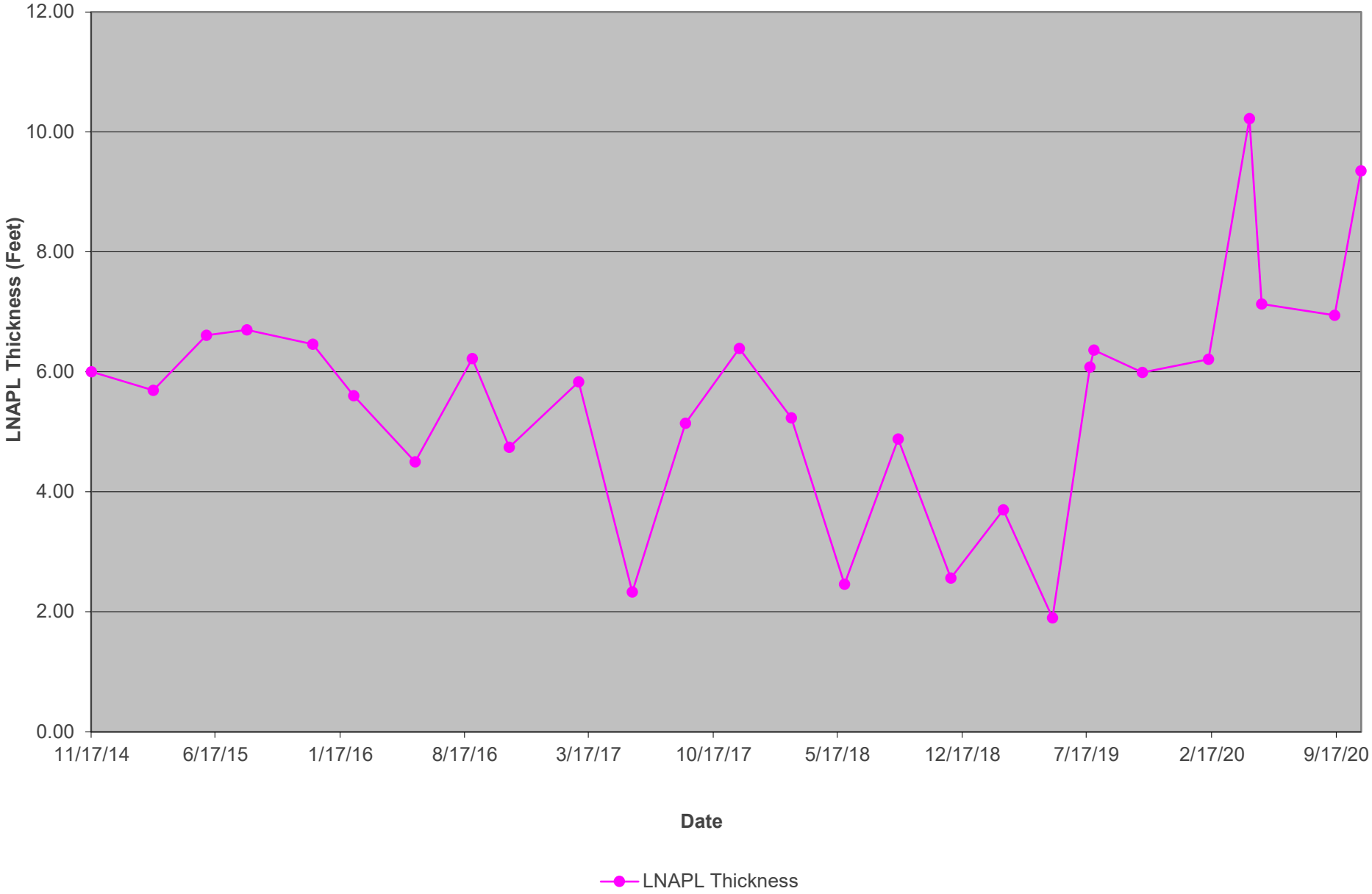
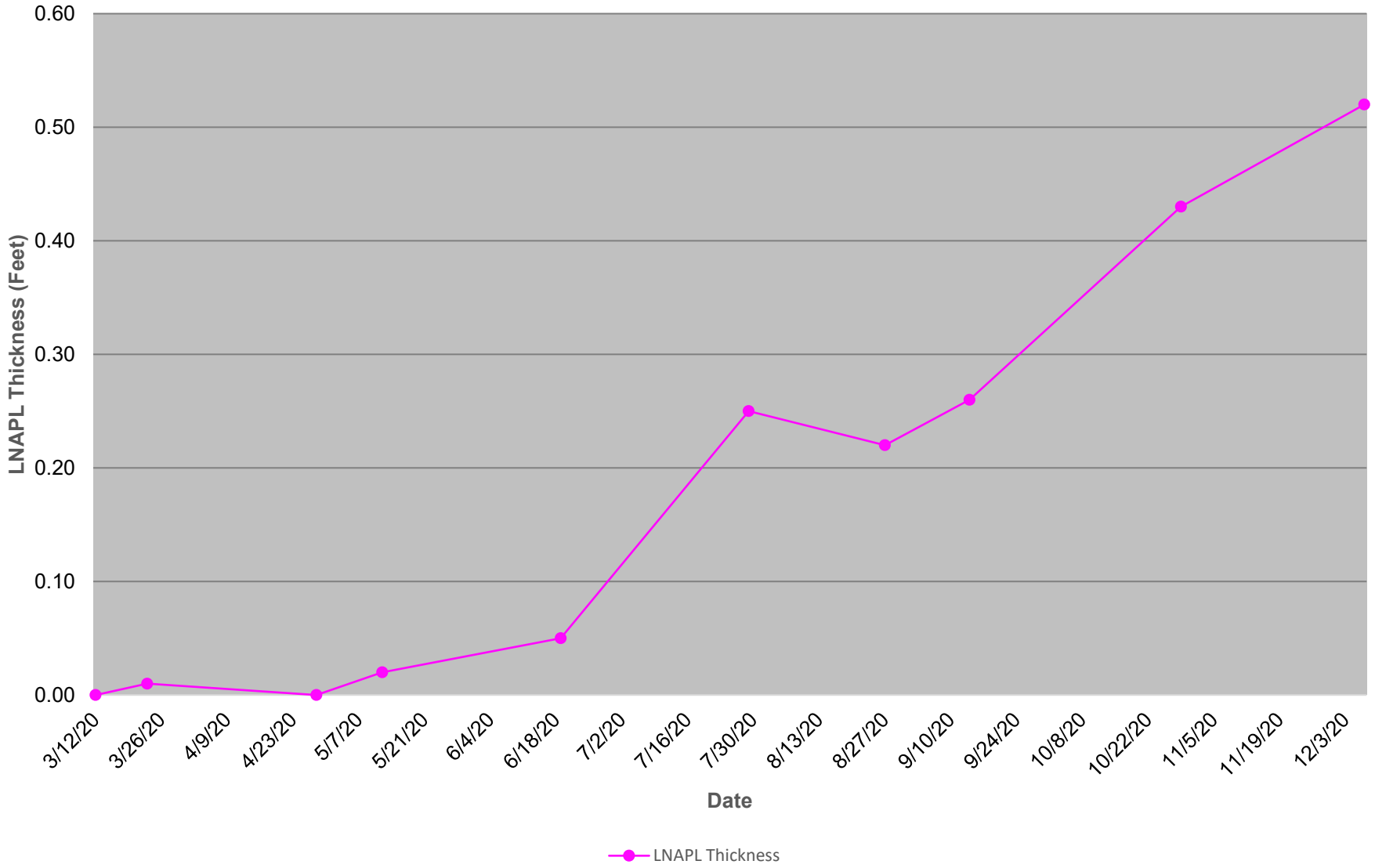
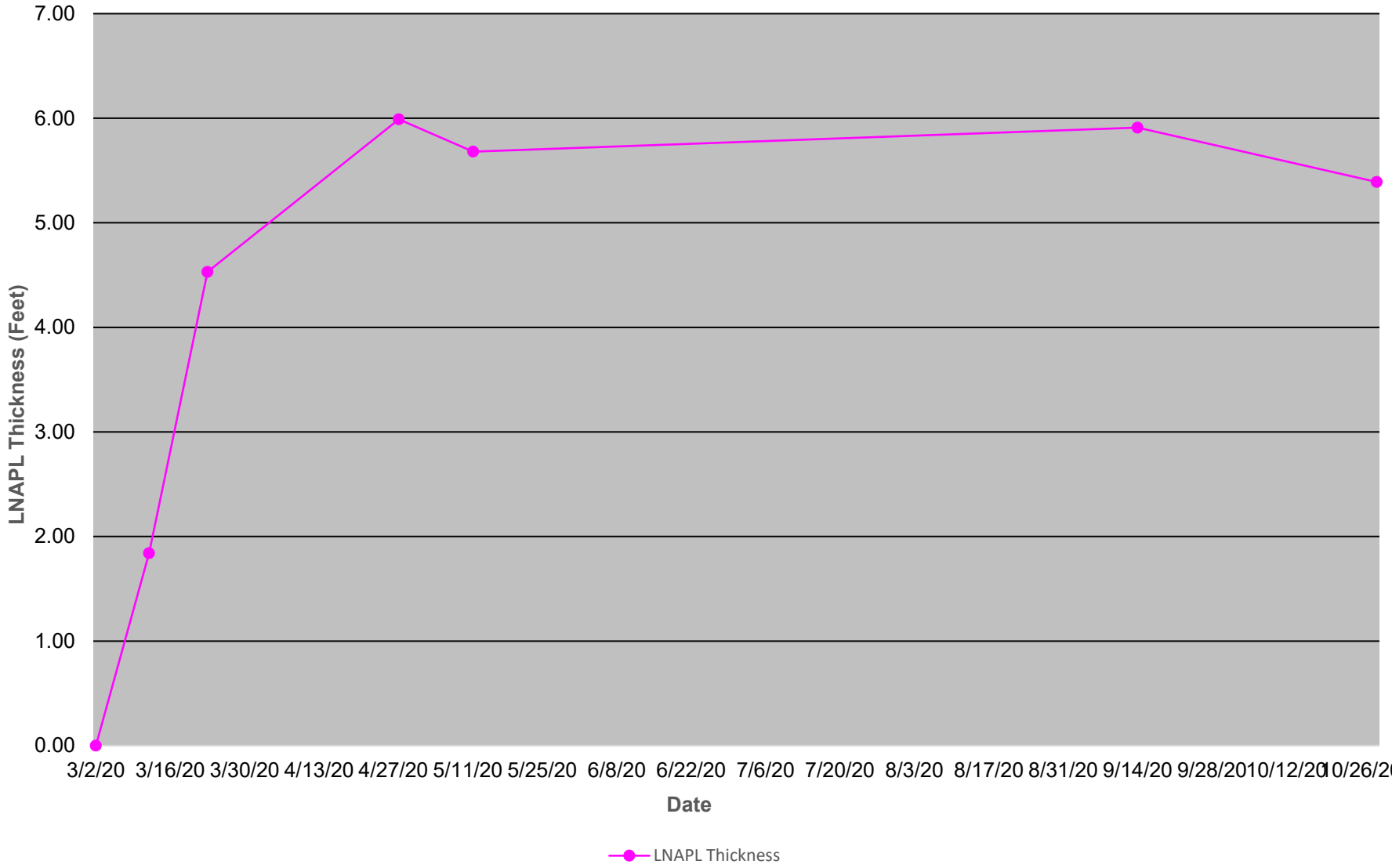
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-14



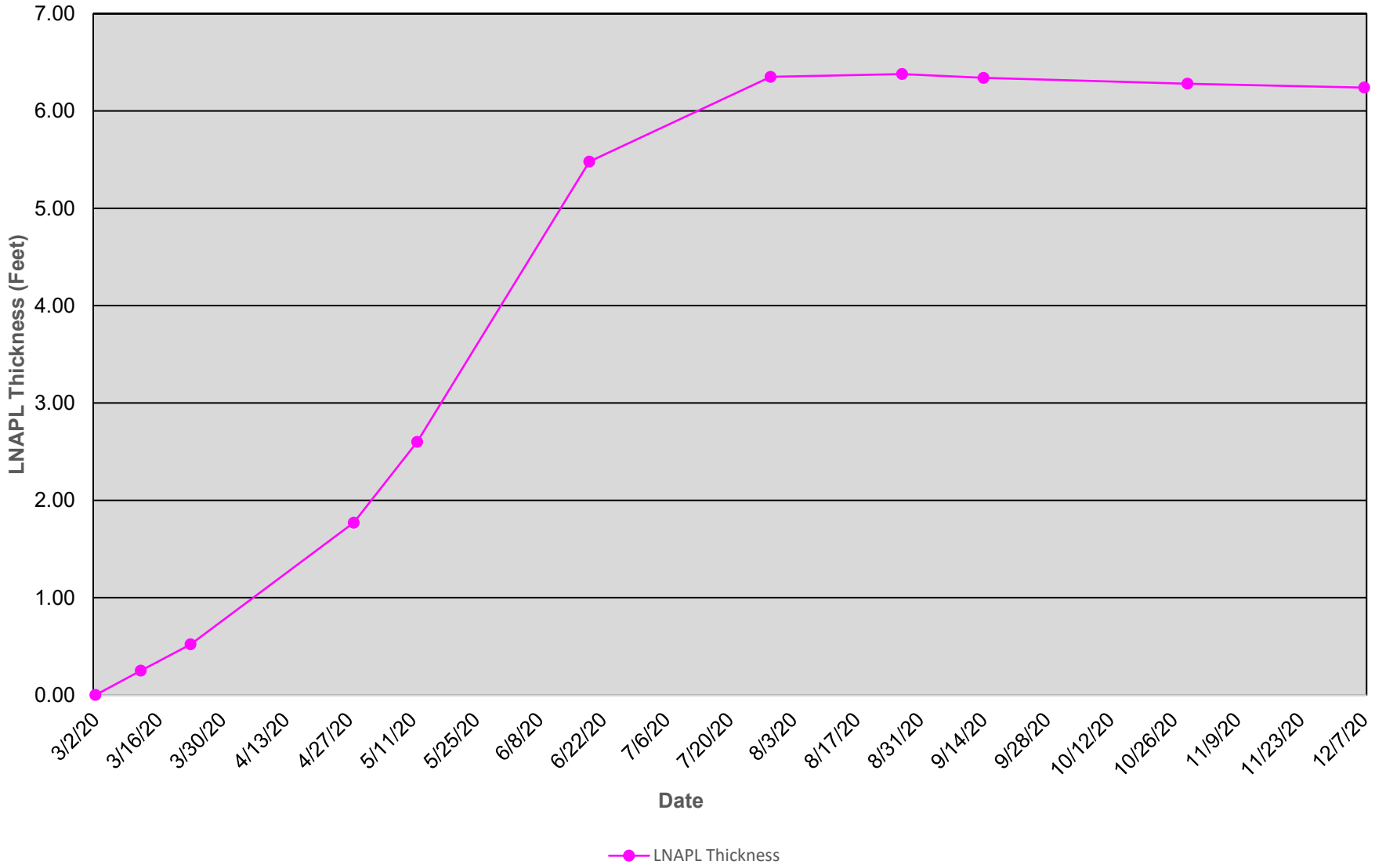
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-15



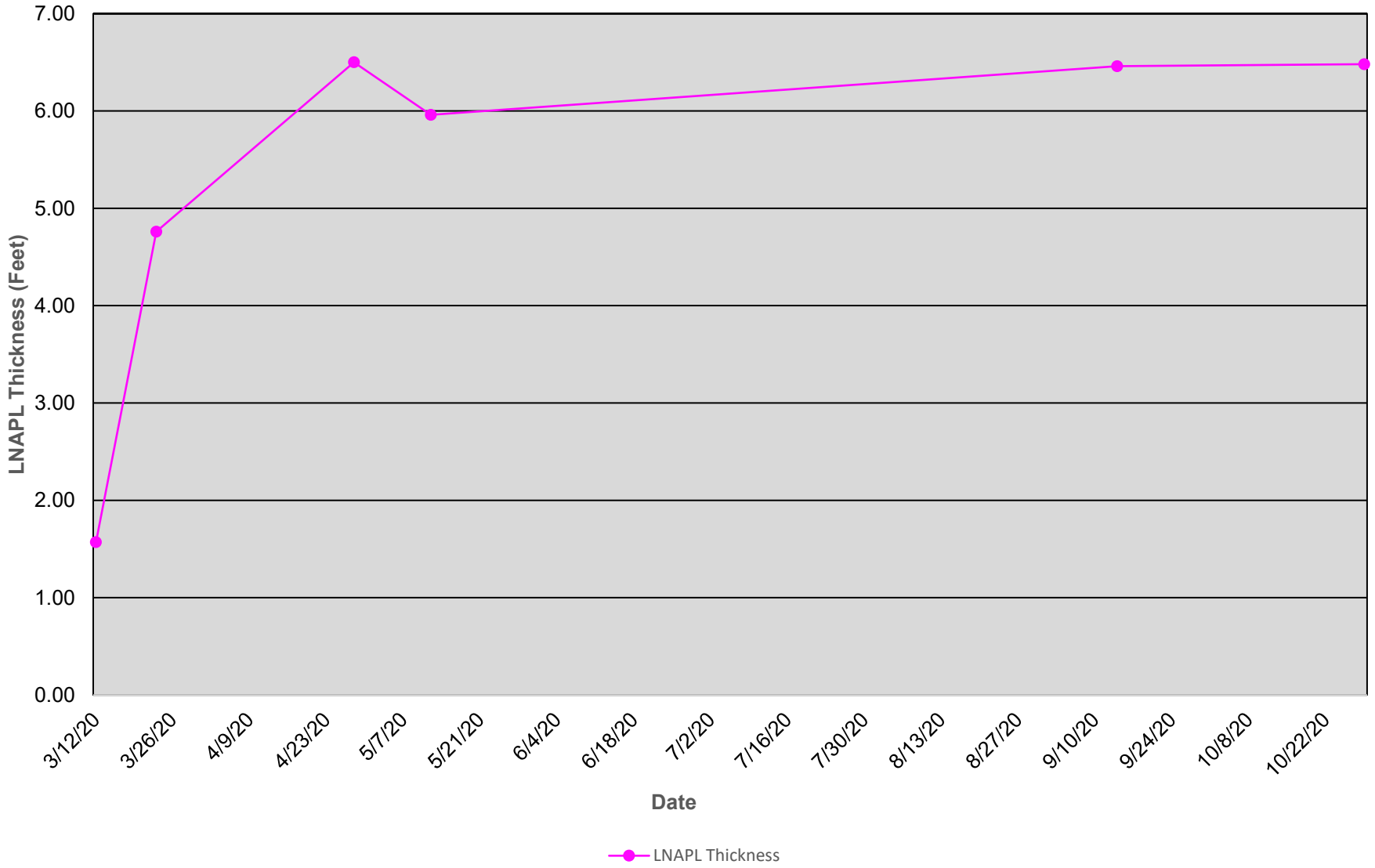
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-16



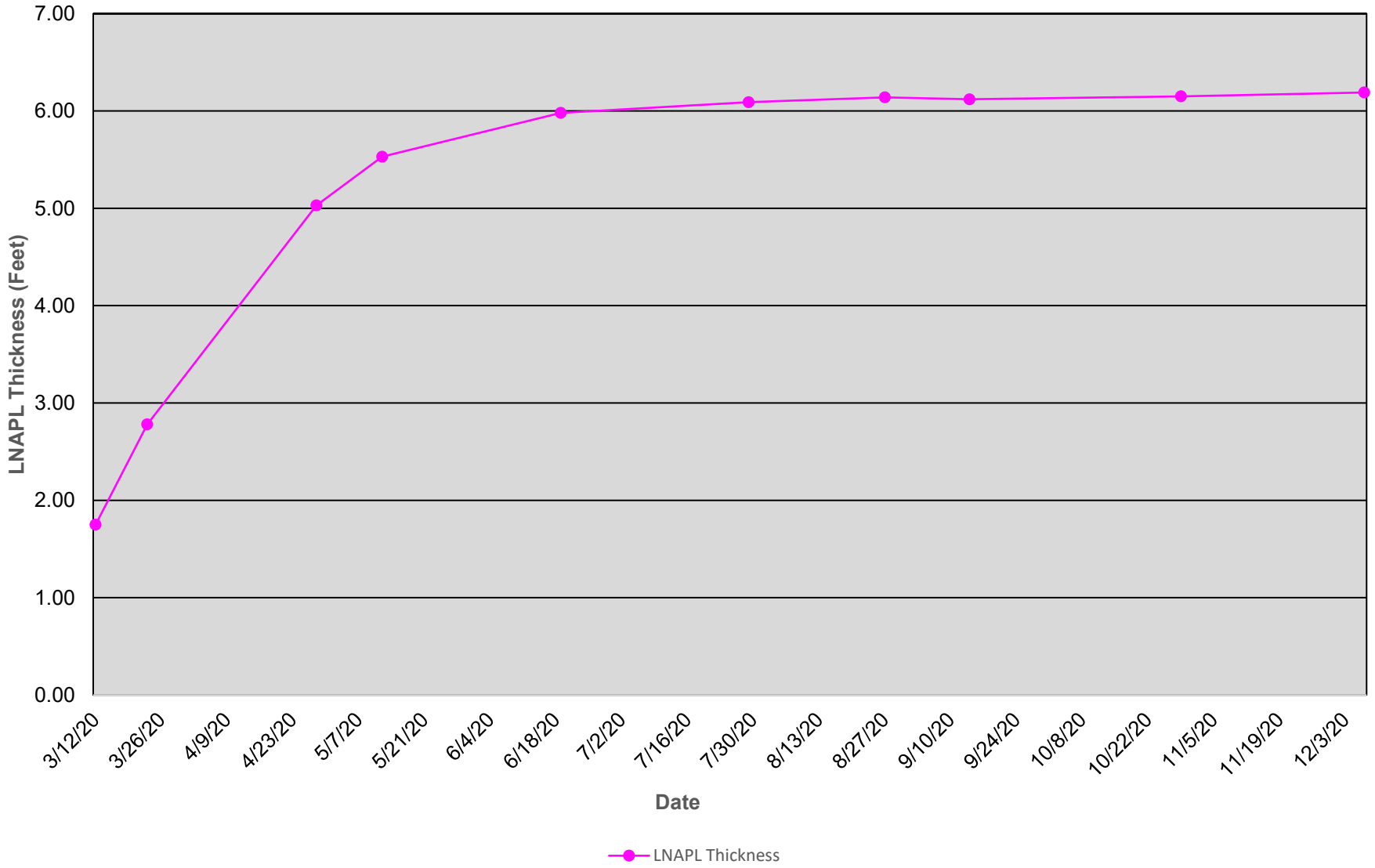
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-17



DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-18

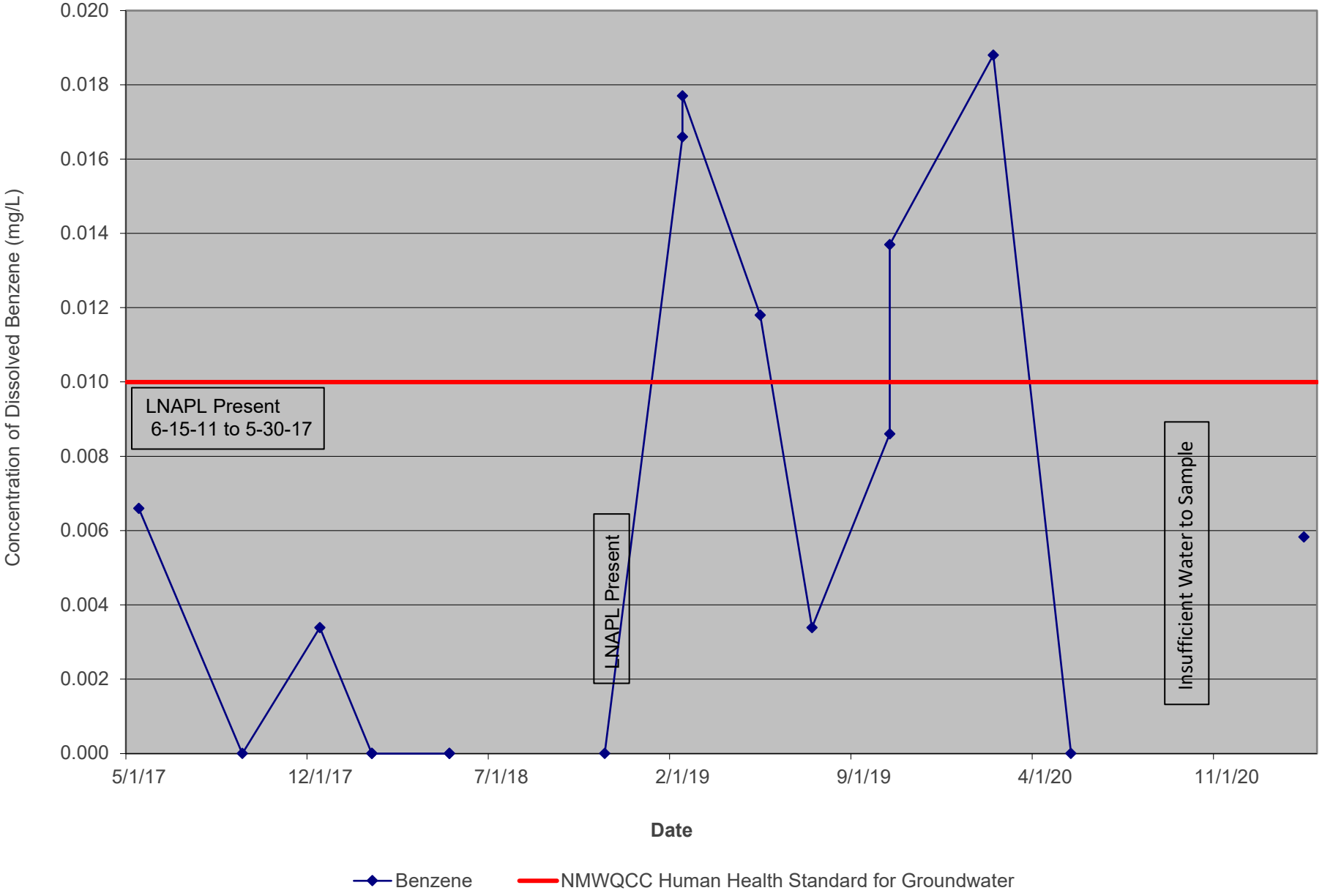


DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
LNAPL THICKNESS vs. TIME
RW-19

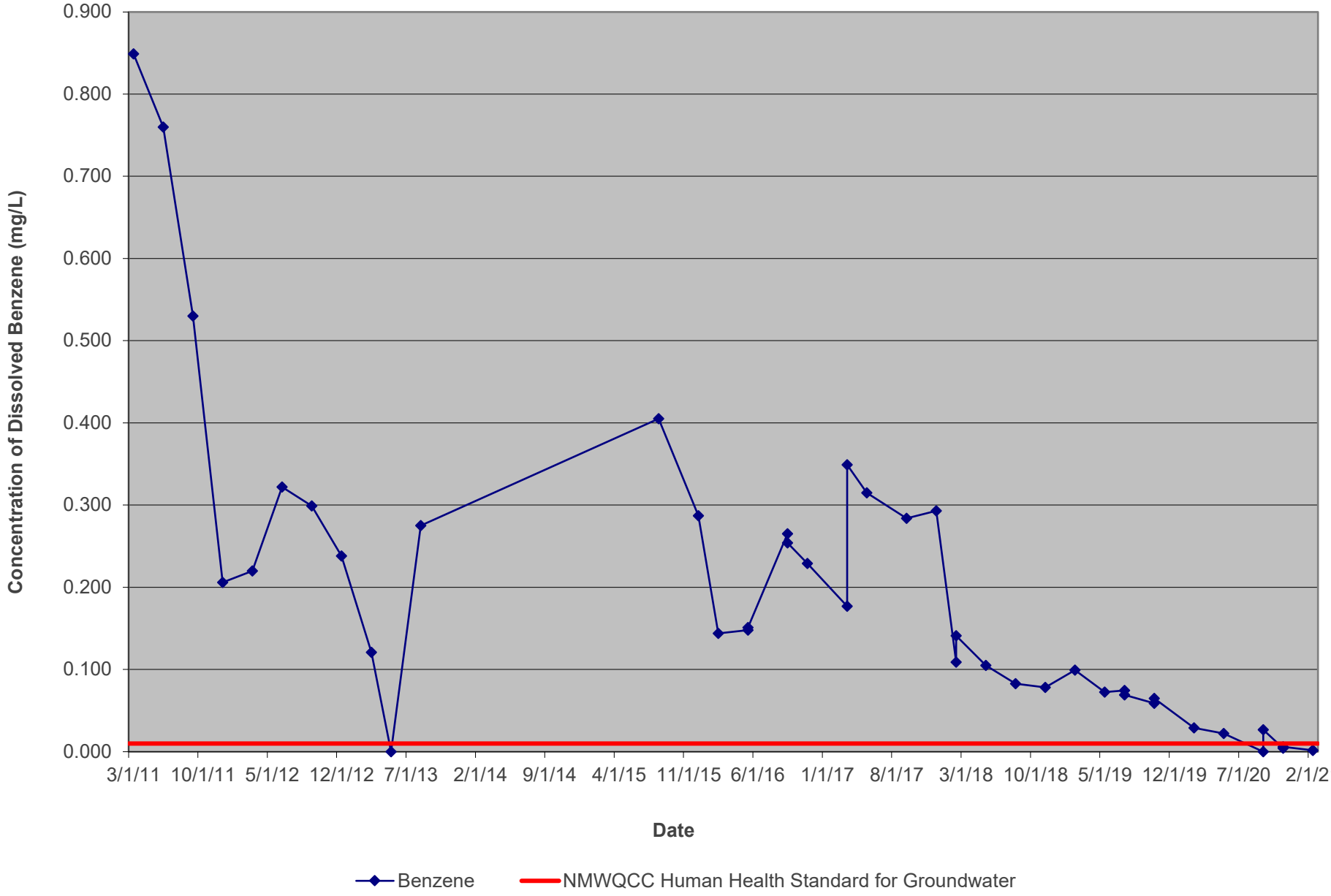


Appendix B
Charts of Concentrations of Dissolved Benzene in Monitor and Recovery Wells vs. Time

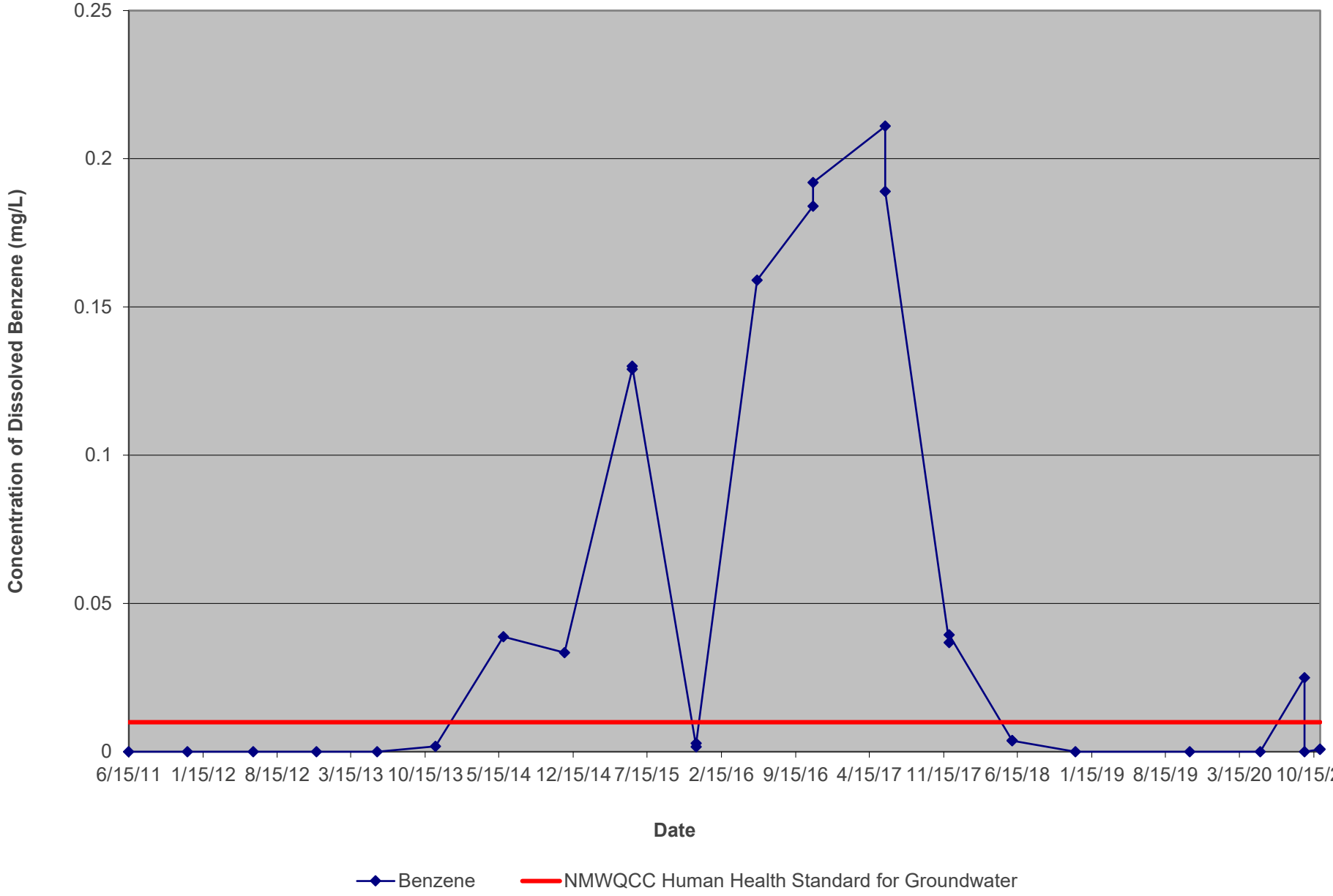
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-2



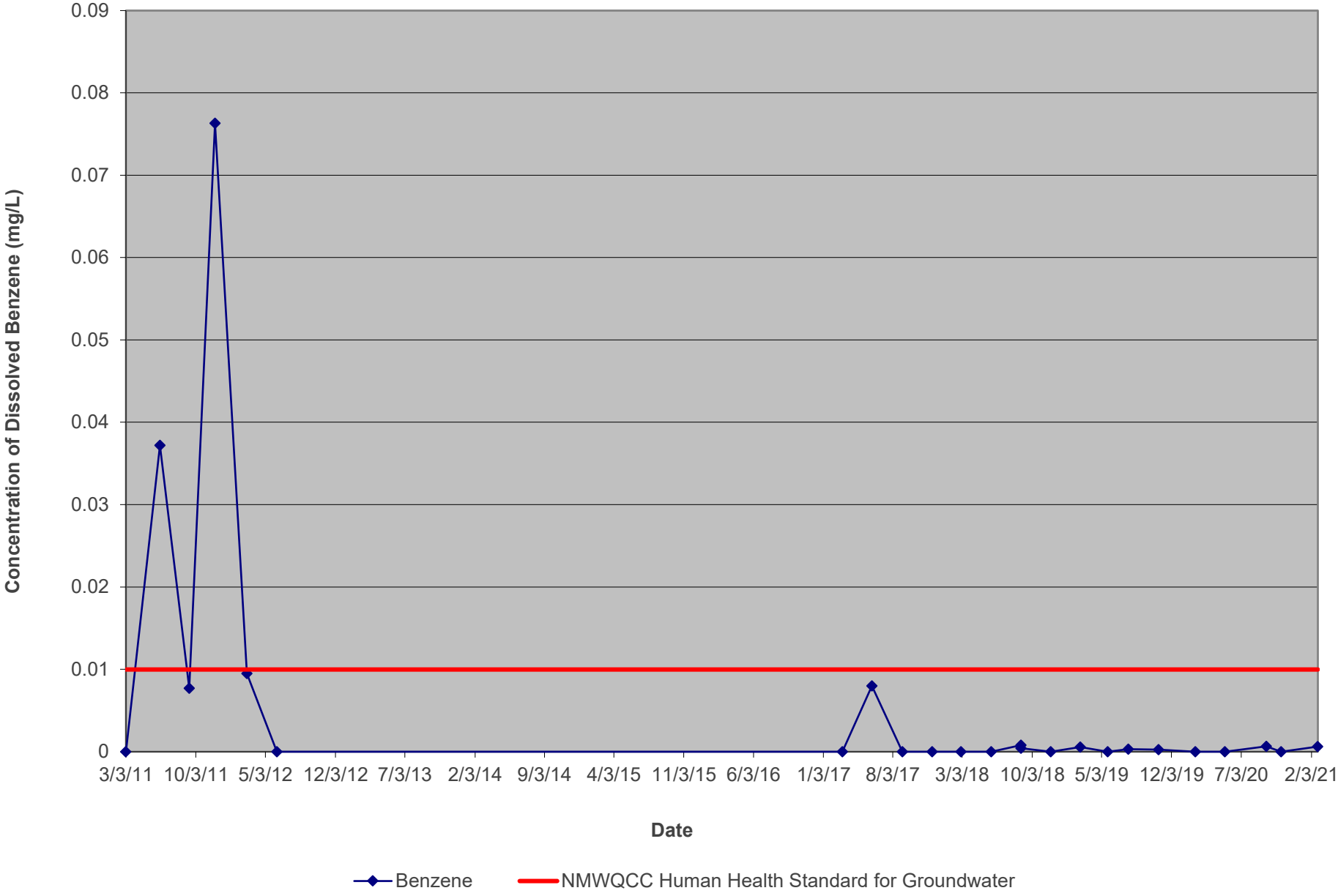
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-6



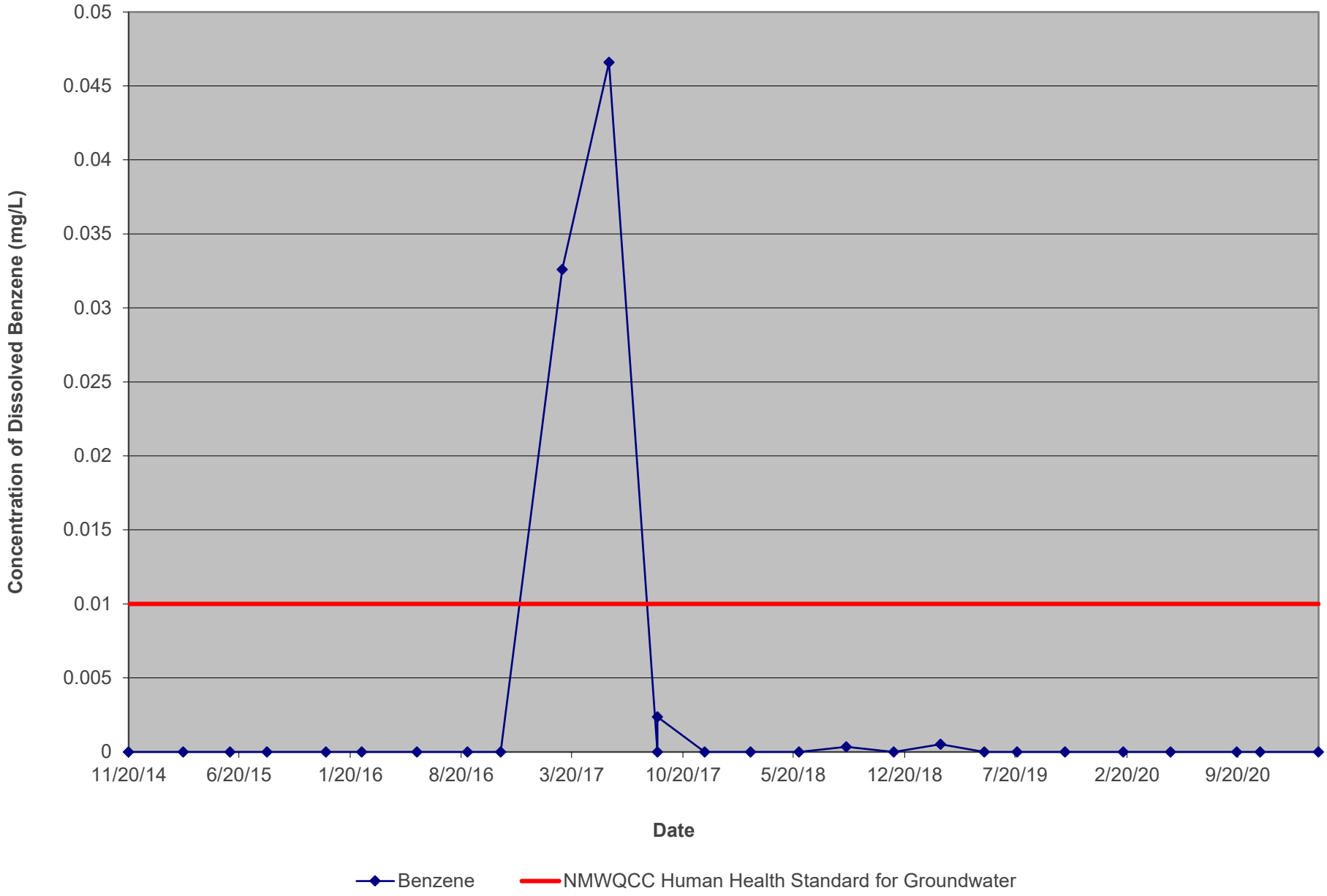
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-7



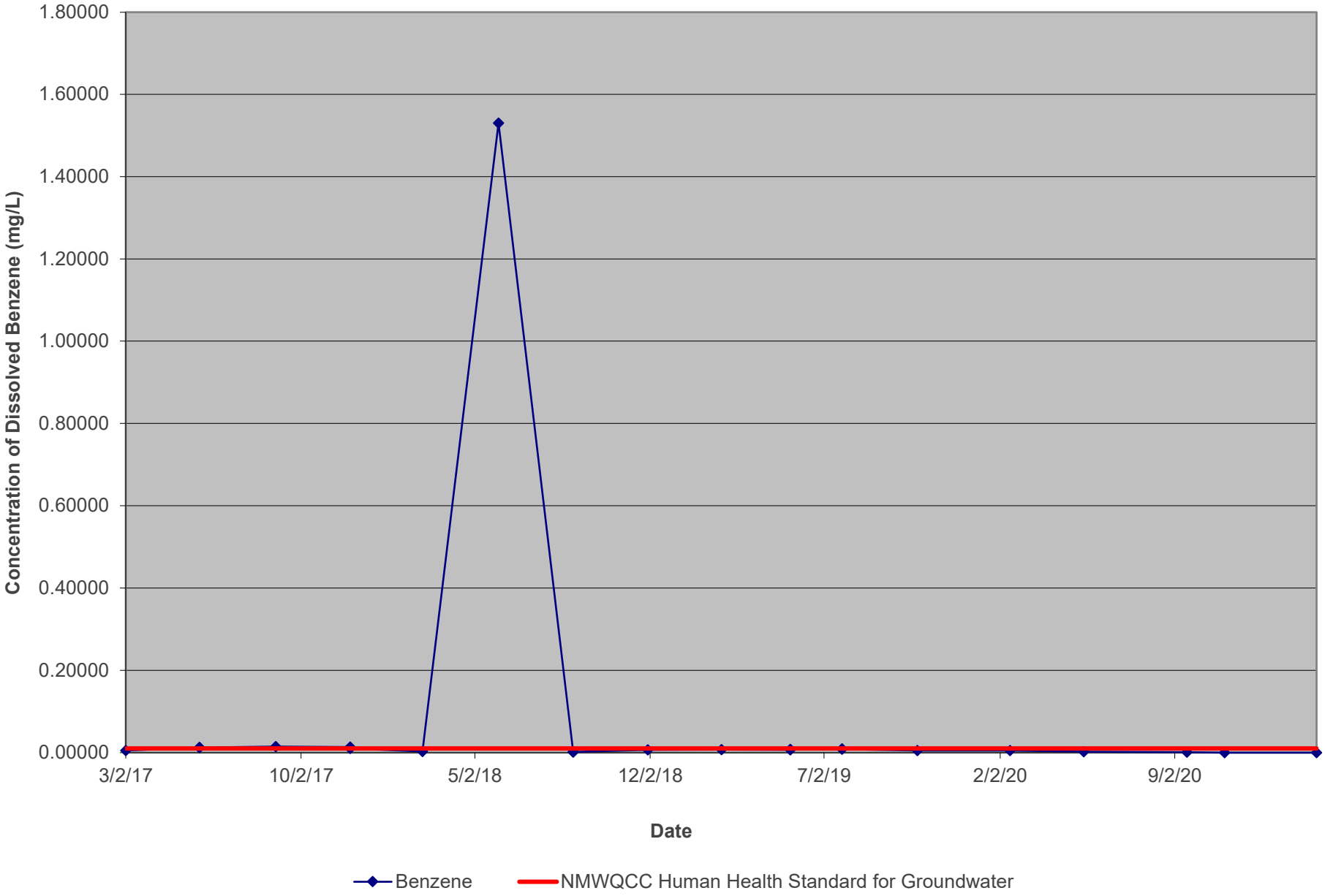
DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-12/12R



DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
MW-19R



DARR ANGELL #1, SRS DARR ANGELL #1
LEA COUNTY, NEW MEXICO
NMOCD AP-007
CONCENTRATION OF DISSOLVED BENZENE vs. TIME
RW-12



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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 25, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1189919
Samples Received:	02/15/2020
Project Number:	074683
Description:	Darr Angell #1- Lea County, New Mexico
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

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.

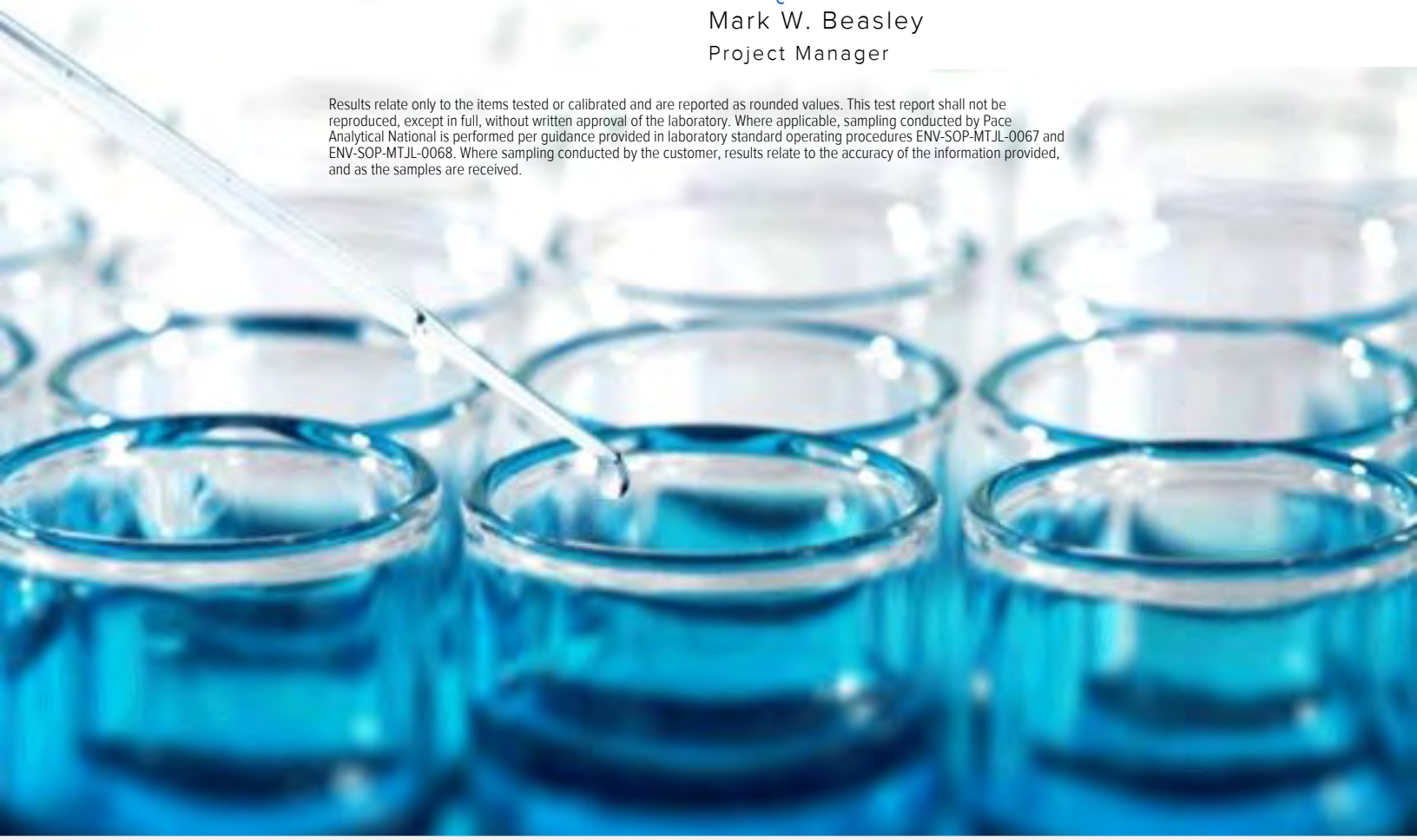


TABLE OF CONTENTS

MW-12R L1189919-01 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 11:00 | 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	WG1428854	1	02/16/20 20:52	02/16/20 20:52	DWR	Mt. Juliet, TN

RW-12R L1189919-02 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 11:30 | 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	WG1428854	1	02/16/20 21:16	02/16/20 21:16	DWR	Mt. Juliet, TN

MW-6 L1189919-03 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 12:30 | 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	WG1428854	1	02/16/20 21:40	02/16/20 21:40	DWR	Mt. Juliet, TN

MW-2 L1189919-04 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 12:00 | 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	WG1428854	1	02/16/20 22:04	02/16/20 22:04	DWR	Mt. Juliet, TN

MW-16R L1189919-05 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 14:20 | 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 21:05	02/16/20 21:05	BMB	Mt. Juliet, TN

MW-20R L1189919-06 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 12:35 | 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 21:27	02/16/20 21:27	BMB	Mt. Juliet, TN

MW-22 L1189919-07 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 13:50 | 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 21:49	02/16/20 21:49	BMB	Mt. Juliet, TN

MW-19R L1189919-08 GW

Collected by: Matthew Laughlin | Collected date/time: 02/14/20 13:50 | 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 22:12	02/16/20 22:12	BMB	Mt. Juliet, TN

MW-17R L1189919-09 GW

Collected by: Matthew Laughlin
Collected date/time: 02/14/20 14:50
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 22:34	02/16/20 22:34	BMB	Mt. Juliet, TN

MW-18R L1189919-10 GW

Collected by: Matthew Laughlin
Collected date/time: 02/14/20 15:30
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 22:56	02/16/20 22:56	BMB	Mt. Juliet, TN

TRIP BLANK L1189919-11 GW

Collected by: Matthew Laughlin
Collected date/time: 02/14/20 00:00
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 16:50	02/16/20 16:50	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

Revised May 2010

Laboratory Data Package Cover Page

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

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

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

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

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

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

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

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

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

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

b. MS/MSD spiking amounts,

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

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

e. The laboratory's MS/MSD QC limits

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

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

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

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

R10 - Other problems or anomalies.

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

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 02/25/2020 14:46
Project Name: Darr Angell #1- Lea County, New Mexico	Laboratory Job Number: L1189919-01, 02, 03, 04, 05, 06, 07, 08, 09, 10 and 11
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932 and WG1428854

#[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: 02/25/2020 14:46
Project Name: Darr Angell #1- Lea County, New Mexico	Laboratory Job Number: L1189919-01, 02, 03, 04, 05, 06, 07, 08, 09, 10 and 11
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932 and WG1428854

#[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: 02/25/2020 14:46
Project Name: Darr Angell #1- Lea County, New Mexico	Laboratory Job Number: L1189919-01, 02, 03, 04, 05, 06, 07, 08, 09, 10 and 11
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1428932 and WG1428854

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

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

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.000366	B J	0.000190	0.000500	0.000500	1	02/16/2020 20:52	WG1428854
Toluene	0.000476	B J	0.000412	0.00100	0.00100	1	02/16/2020 20:52	WG1428854
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 20:52	WG1428854
Total Xylene	0.000783	B J	0.000510	0.00150	0.00150	1	02/16/2020 20:52	WG1428854
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*02/16/2020 20:52*	WG1428854

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	0.00479		0.000190	0.000500	0.000500	1	02/16/2020 21:16	WG1428854
Toluene	0.00242	B	0.000412	0.00100	0.00100	1	02/16/2020 21:16	WG1428854
Ethylbenzene	0.00688		0.000160	0.000500	0.000500	1	02/16/2020 21:16	WG1428854
Total Xylene	0.0605		0.000510	0.00150	0.00150	1	02/16/2020 21:16	WG1428854
(S) a,a,a-Trifluorotoluene(PID)	*105*				*79.0-125*		*02/16/2020 21:16*	WG1428854

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	0.0291		0.000190	0.000500	0.000500	1	02/16/2020 21:40	WG1428854
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 21:40	WG1428854
Ethylbenzene	0.00865		0.000160	0.000500	0.000500	1	02/16/2020 21:40	WG1428854
Total Xylene	0.00736	B	0.000510	0.00150	0.00150	1	02/16/2020 21:40	WG1428854
(S) a,a,a-Trifluorotoluene(PID)	*95.9*				*79.0-125*		*02/16/2020 21:40*	WG1428854

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	0.0188		0.000190	0.000500	0.000500	1	02/16/2020 22:04	WG1428854
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 22:04	WG1428854
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 22:04	WG1428854
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 22:04	WG1428854
(S) a,a,a-Trifluorotoluene(PID)	*99.7*				*79.0-125*		*02/16/2020 22:04*	WG1428854

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 21:05	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 21:05	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 21:05	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 21:05	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*79.0-125*		*02/16/2020 21:05*	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	U		0.000190	0.000500	0.000500	1	02/16/2020 21:27	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 21:27	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 21:27	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 21:27	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*98.9*				*79.0-125*		*02/16/2020 21:27*	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	U		0.000190	0.000500	0.000500	1	02/16/2020 21:49	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 21:49	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 21:49	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 21:49	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*79.0-125*		*02/16/2020 21:49*	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	U		0.000190	0.000500	0.000500	1	02/16/2020 22:12	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 22:12	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 22:12	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 22:12	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*02/16/2020 22:12*	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	U		0.000190	0.000500	0.000500	1	02/16/2020 22:34	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 22:34	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 22:34	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 22:34	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*79.0-125*		*02/16/2020 22:34*	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	U		0.000190	0.000500	0.000500	1	02/16/2020 22:56	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 22:56	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 22:56	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 22:56	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*02/16/2020 22:56*	WG1428932

TRIP BLANK
Collected date/time: 02/14/20 00:00
L1189919

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 16:50	WG1428932
Toluene	U		0.000412	0.00100	0.00100	1	02/16/2020 16:50	WG1428932
Ethylbenzene	U		0.000160	0.000500	0.000500	1	02/16/2020 16:50	WG1428932
Total Xylene	U		0.000510	0.00150	0.00150	1	02/16/2020 16:50	WG1428932
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*02/16/2020 16:50*	WG1428932

Method Blank (MB)

(MB) R3502422-3 02/16/20 13:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	0.000346	J	0.000190	0.000500
Toluene	0.000571	J	0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	0.00108	J	0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*98.2*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3502422-1 02/16/20 11:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0501	100	77.0-122	
Toluene	0.0500	0.0491	98.2	80.0-121	
Ethylbenzene	0.0500	0.0500	100	80.0-123	
Total Xylene	0.150	0.148	98.7	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*98.3*	*79.0-125*	

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
B	The same analyte is found in the associated blank.
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

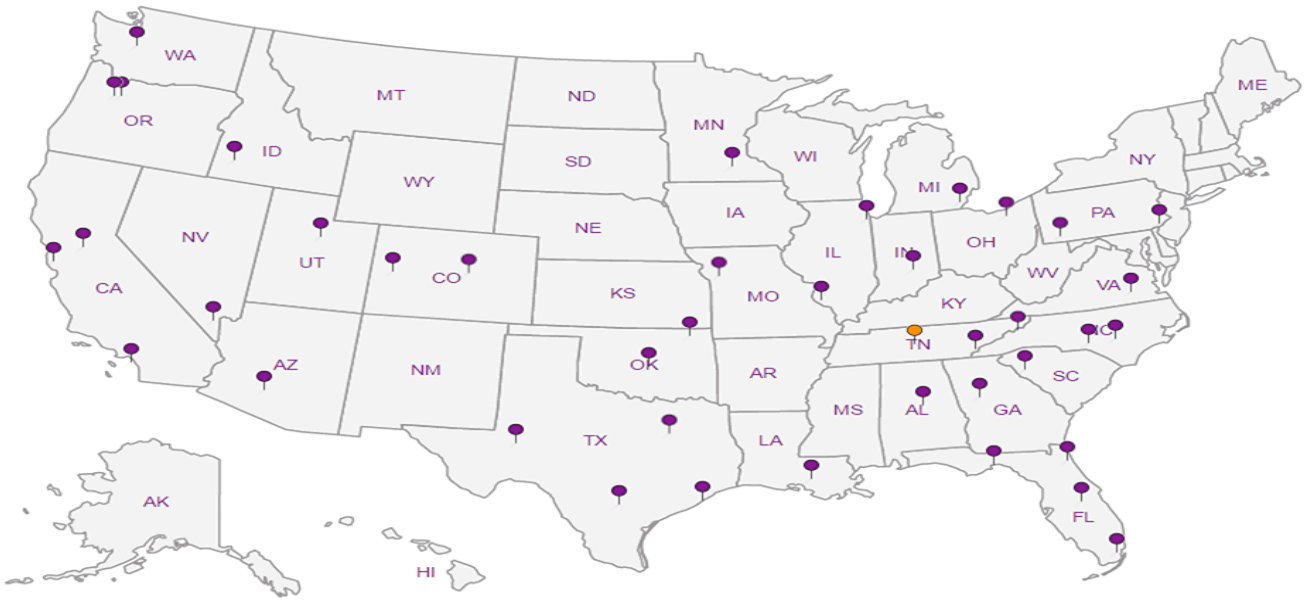
Third Party Federal Accreditations

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	074683	L1189919	02/25/20 14:46	24 of 26

Plains All American, LP - GHD

2135 S Loop 250 W
Midland, TX 79703

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

Pres Chk

Report to: Becky Haskell

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

Project Description: Darr Angell #1- Lea County, Ne

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 512-506-8803
Fax:

Client Project # 074683

Lab Project # PLAINSGHD-074683

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS DARR ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl										
MW-12R	Grab	GW	-	02/14	1100	3	3										-01
RW-12R	Grab	GW	-	02/14	1130	3	3										-02
MW-6	Grab	GW	-	02/14	1230	3	3										-03
MW-2	Grab	GW	-	02/14	1300	3	3										-04
MW-16R	Grab	GW	-	02/13	1420	3	3										-05
MW-20R	Grab	GW	-	02/13	1235	3	3										-06
MW-22	Grab	GW	-	02/13	1350	3	3										-07
MW-19R	Grab	GW	-	02/13	1350	3	3										-08
MW-17R	Grab	GW	-	02/13	1450	3	3										-09
MW-18R	Grab	GW	-	02/13	1530	3	3										-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 X FedEx __ Courier _____

Tracking # 3904 0333 1210

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 # 4189919

Tab J187

Acctnum: PLAINSGHD

Template: T139782

Prelogin: P754929

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

Remarks | Sample # (lab only)

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: 2/14/20	Time: 1600	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.2 °C Bottles Received: 18	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) L. Webb	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:
Accounts Payable
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 #1- Lea County, Ne

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 512-506-8803
Fax:

Client Project # 074683

Lab Project # PLAINSGHD-074683

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS DARR ANGELL #1

P.O. #

Collected by (signature): [signature]

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

SDG #
Table #
Acctnum: PLAINSGHD
Template: T139782
Prelogin: P754929
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)
Trip Blank	Grab	GW	—	—	—	1	1										-11
		GW															
		GW															
		GW															
		GW															
		GW															
		GW															
		GW															
~~TRIP BLANK~~ MWL		GW															

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

Remarks:

pH ______ Temp ______
Flow ______ Other ______

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

Samples returned via: __ UPS X FedEx __ Courier ______

Tracking # 3904 0333 1210

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: A2 °C .5+.1=.6 Bottles Received: 78
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 2/15/20 Time: 08:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 06, 2020

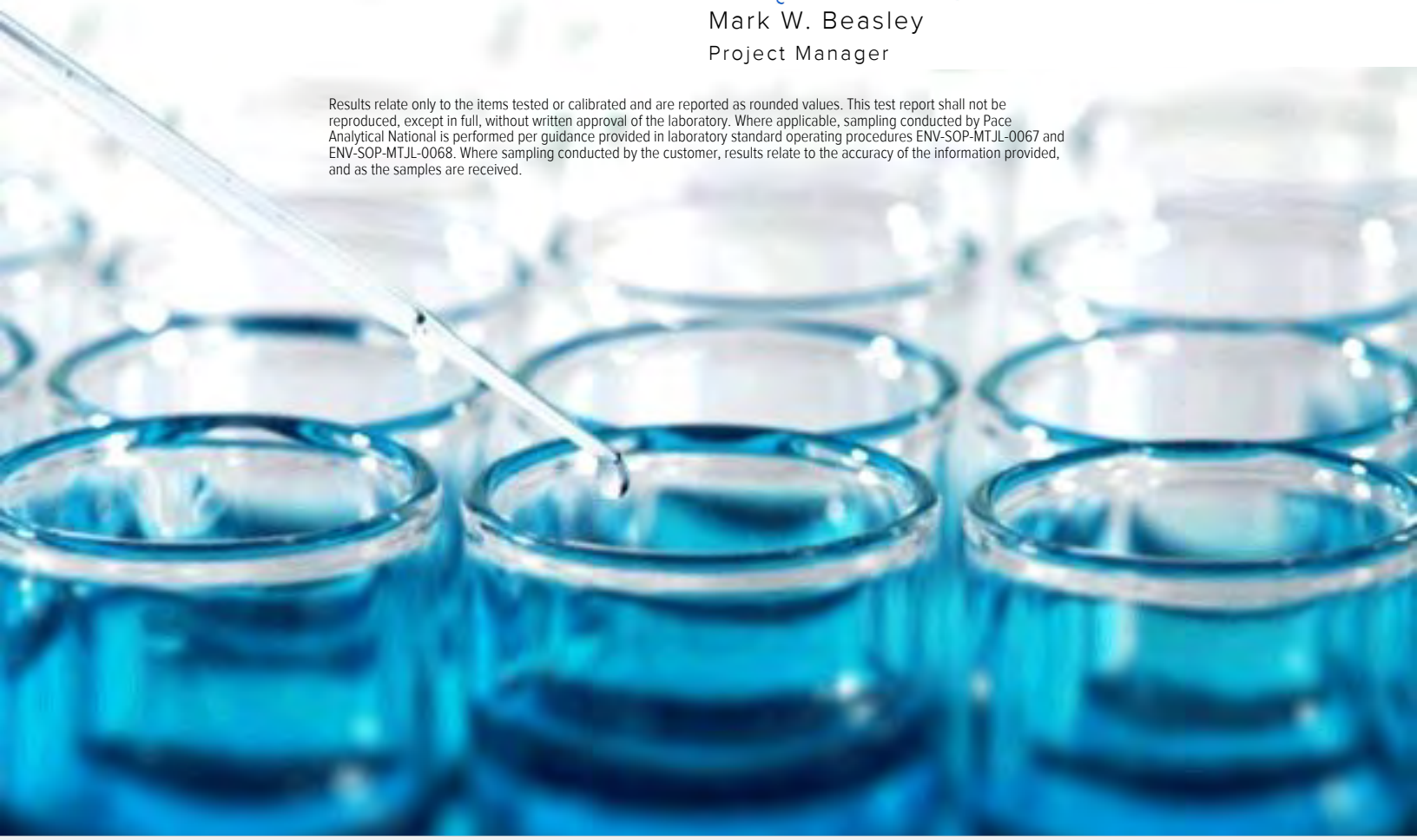
Plains All American, LP - GHD

Sample Delivery Group:	L1203857
Samples Received:	03/28/2020
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

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



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MW-21R L1203857-01 GW

Collected by: Ryan Livingston
Collected date/time: 03/26/20 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 16:47	03/31/20 16:47	BMB	Mt. Juliet, TN

MW-25 L1203857-02 GW

Collected by: Ryan Livingston
Collected date/time: 03/26/20 12:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 17:08	03/31/20 17:08	BMB	Mt. Juliet, TN

MW-24 L1203857-03 GW

Collected by: Ryan Livingston
Collected date/time: 03/26/20 12:40
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 17:30	03/31/20 17:30	BMB	Mt. Juliet, TN

MW-11R L1203857-04 GW

Collected by: Ryan Livingston
Collected date/time: 03/26/20 13:15
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 17:51	03/31/20 17:51	BMB	Mt. Juliet, TN

DUP-1 L1203857-05 GW

Collected by: Ryan Livingston
Collected date/time: 03/26/20 00:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1453220	1	03/31/20 18:13	03/31/20 18:13	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

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: 04/06/2020 10:33
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1203857-01, 02, 03, 04 and 05
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 10:33
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1203857-01, 02, 03, 04 and 05
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 10:33
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1203857-01, 02, 03, 04 and 05
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1453220

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

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

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	0.000500	1	03/31/2020 16:47	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 16:47	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 16:47	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 16:47	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 16:47*	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 17:08	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 17:08	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 17:08	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 17:08	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 17:08*	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 17:30	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 17:30	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 17:30	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 17:30	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 17:30*	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 17:51	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 17:51	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 17:51	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 17:51	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*03/31/2020 17:51*	WG1453220

DUP-1
Collected date/time: 03/26/20 00:00
L1203857

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 18:13	WG1453220
Toluene	U		0.000412	0.00100	0.00100	1	03/31/2020 18:13	WG1453220
Ethylbenzene	U		0.000160	0.000500	0.000500	1	03/31/2020 18:13	WG1453220
Total Xylene	U		0.000510	0.00150	0.00150	1	03/31/2020 18:13	WG1453220
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*03/31/2020 18:13*	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

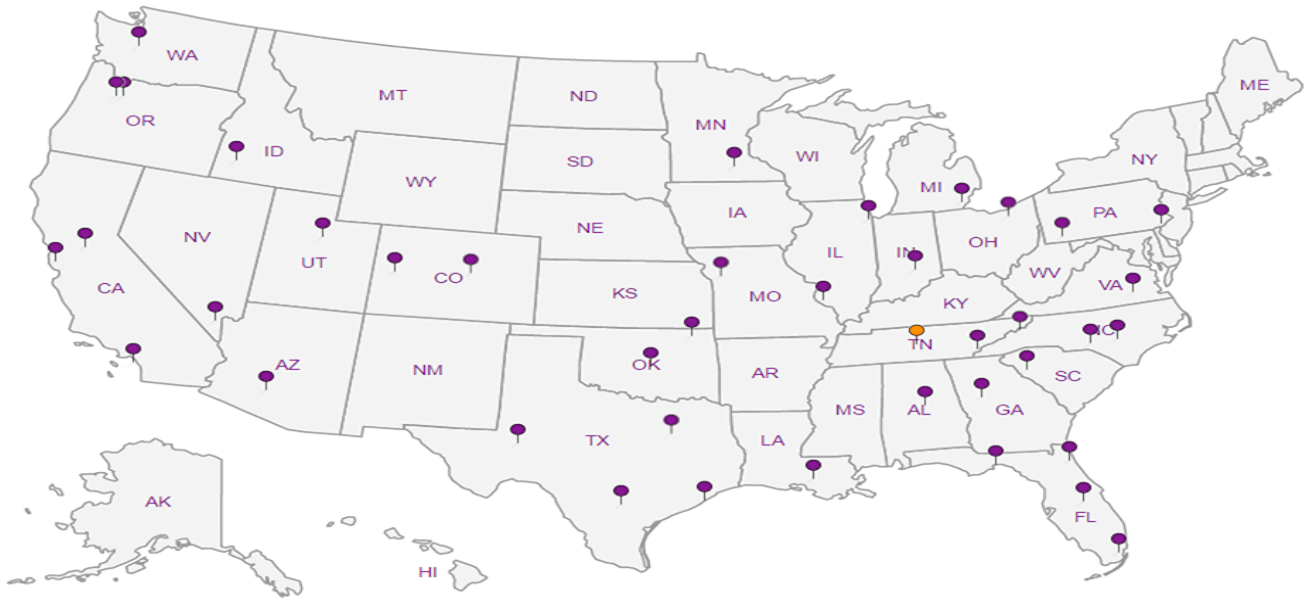
Third Party Federal Accreditations

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	11209885/02	L1203857	04/06/20 10:33	16 of 17

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

Billing Information:
Plains All American
#10 Desta Drive
Suite 550E
Midland, Texas 79705

Report to: **Becky Haskell**

Email To: **becky.haskell@ghd.com**

Project Description: **Plains Darr 1** SLS Darr Angell #1

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

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

Client Project # **11209885**

Lab Project #

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

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

L# 1203857
D114

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8021B	Remarks	Sample # (lab only)
mw-21r	Grab	GW		3-26-20	1130	3	X		-01
mw-25	Grab	GW		3-26-20	1200	3	X		-02
mw-24	Grab	GW		3-26-20	1240	3	X		-03
mw-11R	Grab	GW		3-26-20	1315	3	X		-04
DUP-1	Grab	GW		3-26-20	DUP	3	X		-05

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

Remarks: RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	3-27-20	1200		TP47	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.2 °C Bottles Received:	
	3-27-20	1500		0.5° 0.7° 15	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
				27 Mar 0800	

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 24, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1201080
Samples Received:	03/20/2020
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

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.

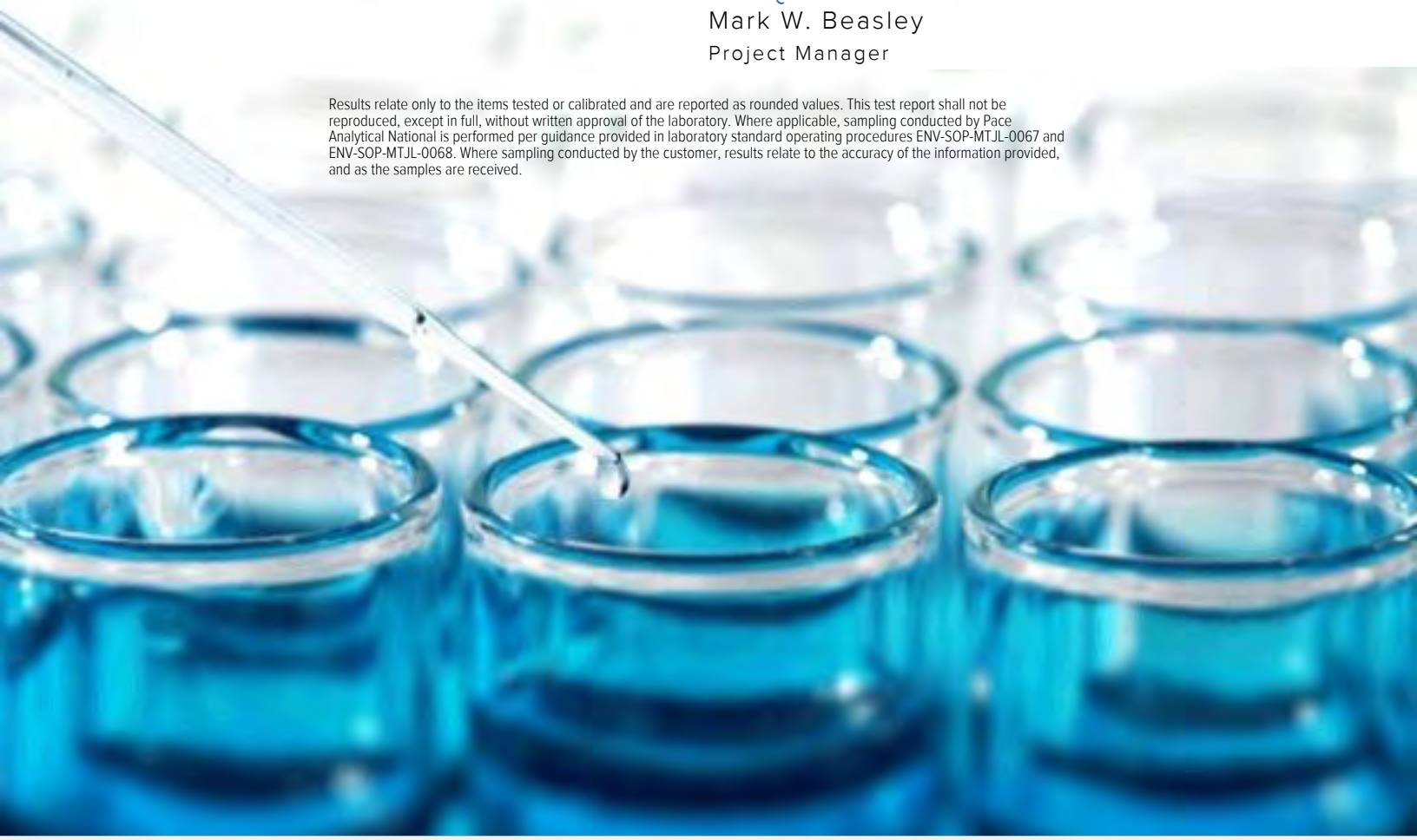


TABLE OF CONTENTS

DARR 1-SYSTEM ON L1201080-01 Air

Collected by: Matthew Laughlin
Collected date/time: 03/18/20 16:00
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	WG1447649	4000	03/20/20 18:43	03/20/20 18:43	CAW	Mt. Juliet, TN

DARR-1-SYSTEM OFF L1201080-02 Air

Collected by: Matthew Laughlin
Collected date/time: 03/18/20 16:30
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	WG1447649	4000	03/20/20 19:28	03/20/20 19:28	CAW	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

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: 03/24/2020 15:39
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1201080-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447649

#[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: 03/24/2020 15:39
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1201080-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447649

#[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: 03/24/2020 15:39
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1201080-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1447649

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	35400	113000		4000	WG1447649
Toluene	108-88-3	92.10	800	3010	44600	168000		4000	WG1447649
Ethylbenzene	100-41-4	106	800	3470	10400	45100		4000	WG1447649
m&p-Xylene	1330-20-7	106	1600	6940	30300	131000		4000	WG1447649
o-Xylene	95-47-6	106	800	3470	8800	38200		4000	WG1447649
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	ND	ND		4000	WG1447649
TPH (GC/MS) Low Fraction	8006-61-9	101	800000	3300000	4740000	19600000		4000	WG1447649
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1447649

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	36900	118000		4000	WG1447649
Toluene	108-88-3	92.10	800	3010	50900	192000		4000	WG1447649
Ethylbenzene	100-41-4	106	800	3470	10700	46400		4000	WG1447649
m&p-Xylene	1330-20-7	106	1600	6940	32400	140000		4000	WG1447649
o-Xylene	95-47-6	106	800	3470	9910	43000		4000	WG1447649
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	ND	ND		4000	WG1447649
TPH (GC/MS) Low Fraction	8006-61-9	101	800000	3300000	5000000	20700000		4000	WG1447649
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1447649

Method Blank (MB)

(MB) R3511210-3 03/20/20 14:02

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	20.6	J	6.91	200
(S) 1,4-Bromofluorobenzene	*93.9*			*60.0-140*

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

(LCS) R3511210-1 03/20/20 12:26 • (LCSD) R3511210-2 03/20/20 13:14

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	3.61	3.71	96.3	98.9	70.0-130			2.73	25
Benzene	3.75	3.74	3.71	99.7	98.9	70.0-130			0.805	25
Toluene	3.75	3.74	3.66	99.7	97.6	70.0-130			2.16	25
Ethylbenzene	3.75	3.81	3.83	102	102	70.0-130			0.524	25
m&p-Xylene	7.50	7.75	7.82	103	104	70.0-130			0.899	25
o-Xylene	3.75	3.83	3.83	102	102	70.0-130			0.000	25
TPH (GC/MS) Low Fraction	203	218	220	107	108	70.0-130			0.913	25
(S) 1,4-Bromofluorobenzene				*101*	*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
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

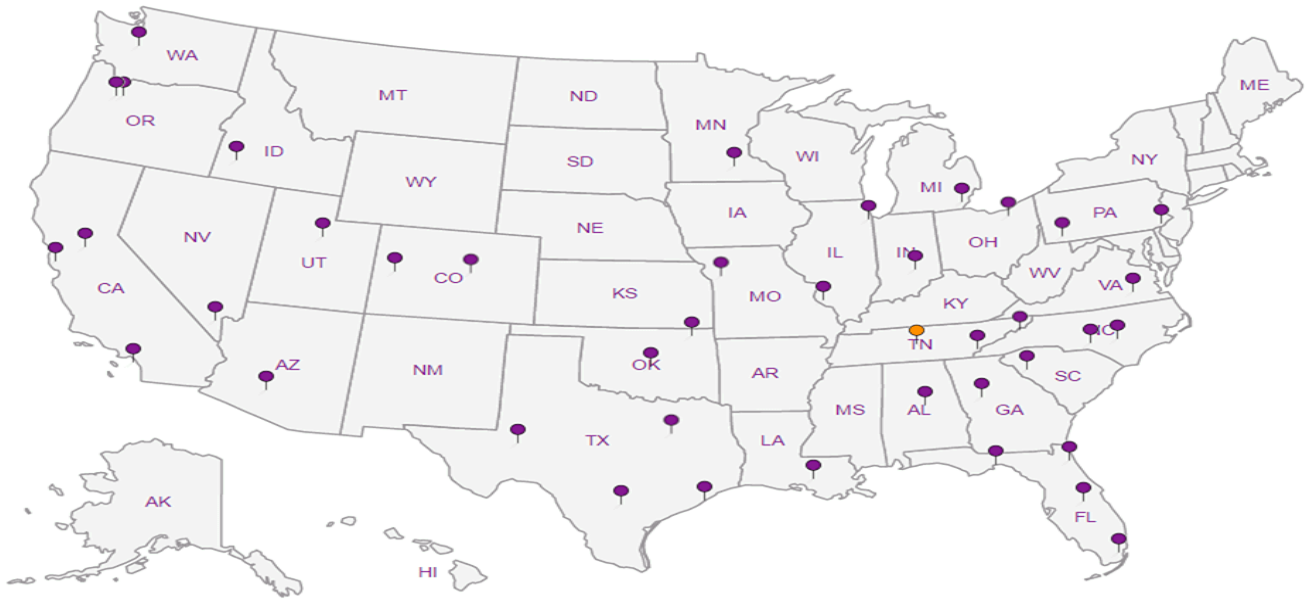
Third Party Federal Accreditations

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	L1201080	03/24/20 15:39	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

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

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		Remarks	Sample # (lab only)
Darr 2-System ON	Grab	Air	-	3/18/20	1500			-01 TD
Darr-2-System OFF	Grab	Air	-	3/18/20	1530			
Darr 1-System ON	Grab	Air	-	3/18/20	1600			-01
Darr 1-System OFF	Grab	Air	-	3/18/20	1630			-02

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 # L1201080

Table # H135

Acctnum: PLAINSGHD

Template: T163766

Prelogin: P757791

PM: 134 - Mark W. Beasley

PB: 2-25-2020 Gm

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 # 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

May 22, 2020

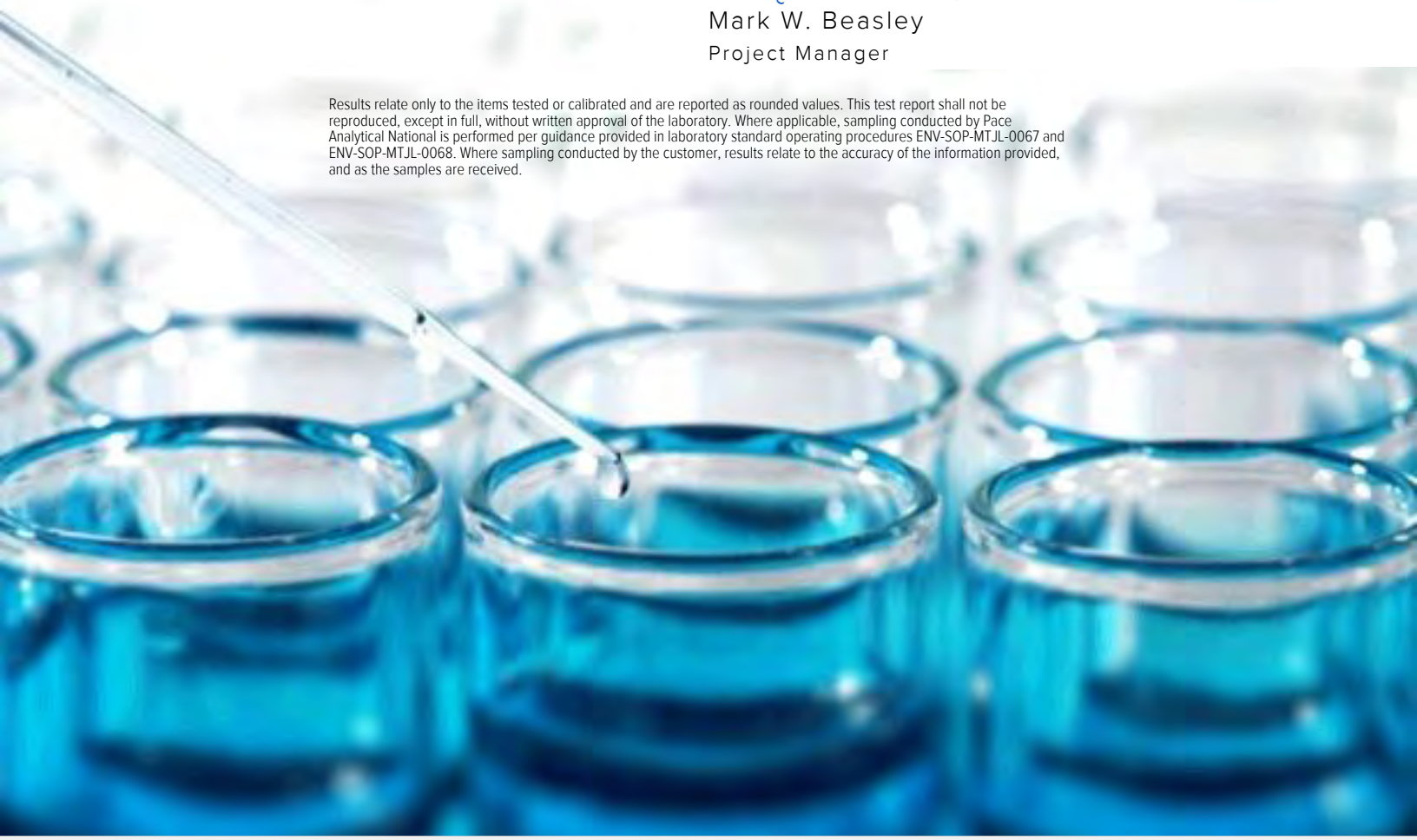
Plains All American, LP - GHD

Sample Delivery Group:	L1219543
Samples Received:	05/16/2020
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

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



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MW-7 L1219543-02 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 11:22 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 00:19	05/20/20 00:19	ACG	Mt. Juliet, TN

MW-11R L1219543-03 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 11:05 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 00:41	05/20/20 00:41	ACG	Mt. Juliet, TN

MW-16R L1219543-04 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 12:05 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 01:02	05/20/20 01:02	ACG	Mt. Juliet, TN

MW-17R L1219543-05 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 10:00 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 01:24	05/20/20 01:24	ACG	Mt. Juliet, TN

MW-18R L1219543-06 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 10:35 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 01:45	05/20/20 01:45	ACG	Mt. Juliet, TN

MW-19R L1219543-07 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 10:30 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 02:40	05/20/20 02:40	ACG	Mt. Juliet, TN

MW-20R L1219543-08 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 12:30 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 03:02	05/20/20 03:02	ACG	Mt. Juliet, TN

MW-21R L1219543-09 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 12:00 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 03:59	05/20/20 03:59	ACG	Mt. Juliet, TN

MW-22 L1219543-10 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 11:00 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 04:53	05/20/20 04:53	ACG	Mt. Juliet, TN

MW-24 L1219543-11 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 11:35 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 05:14	05/20/20 05:14	ACG	Mt. Juliet, TN

MW-25 L1219543-12 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 12:35 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 05:36	05/20/20 05:36	ACG	Mt. Juliet, TN

MW-12R L1219543-13 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 14:05 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 05:57	05/20/20 05:57	ACG	Mt. Juliet, TN

RW-12 L1219543-14 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 13:05 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 06:19	05/20/20 06:19	ACG	Mt. Juliet, TN

MW-2 L1219543-15 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 13:35 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 06:40	05/20/20 06:40	ACG	Mt. Juliet, TN

MW-6 L1219543-16 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 13:00 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 07:02	05/20/20 07:02	ACG	Mt. Juliet, TN

DUP-1 L1219543-17 GW

Collected by: Heath Boyd | Collected date/time: 05/14/20 00:00 | Received date/time: 05/16/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 07:23	05/20/20 07:23	ACG	Mt. Juliet, TN

DUP-2 L1219543-18 GW

			Collected by	Collected date/time	Received date/time	
			Heath Boyd	05/14/20 00:00	05/16/20 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1478331	1	05/20/20 08:08	05/20/20 08:08	ACG	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: 05/22/2020 20:02
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1219543-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17 and 18
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1478331

#[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: 05/22/2020 20:02
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1219543-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17 and 18
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1478331

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

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

Laboratory Name: Pace Analytical National	LRC Date: 05/22/2020 20:02
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1219543-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17 and 18
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1478331

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

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

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.000267	J	0.000190	0.000500	0.000500	1	05/20/2020 00:19	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 00:19	WG1478331
Ethylbenzene	0.000515		0.000160	0.000500	0.000500	1	05/20/2020 00:19	WG1478331
Total Xylene	0.00112	J	0.000510	0.00150	0.00150	1	05/20/2020 00:19	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 00:19*	WG1478331

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	05/20/2020 00:41	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 00:41	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 00:41	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 00:41	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 00:41*	WG1478331

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	05/20/2020 01:02	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 01:02	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 01:02	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 01:02	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 01:02*	WG1478331

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	05/20/2020 01:24	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 01:24	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 01:24	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 01:24	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 01:24*	WG1478331

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	05/20/2020 01:45	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 01:45	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 01:45	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 01:45	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 01:45*	WG1478331

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	05/20/2020 02:40	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 02:40	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 02:40	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 02:40	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*05/20/2020 02:40*	WG1478331

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	05/20/2020 03:02	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 03:02	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 03:02	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 03:02	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 03:02*	WG1478331

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	05/20/2020 03:59	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 03:59	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 03:59	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 03:59	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 03:59*	WG1478331

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	05/20/2020 04:53	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 04:53	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 04:53	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 04:53	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 04:53*	WG1478331

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	05/20/2020 05:14	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 05:14	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 05:14	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 05:14	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 05:14*	WG1478331

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	05/20/2020 05:36	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 05:36	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 05:36	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 05:36	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 05:36*	WG1478331

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	0.000247	J	0.000190	0.000500	0.000500	1	05/20/2020 05:57	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 05:57	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 05:57	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 05:57	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 05:57*	WG1478331

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	0.00199		0.000190	0.000500	0.000500	1	05/20/2020 06:19	WG1478331
Toluene	0.00485		0.000412	0.00100	0.00100	1	05/20/2020 06:19	WG1478331
Ethylbenzene	0.000594		0.000160	0.000500	0.000500	1	05/20/2020 06:19	WG1478331
Total Xylene	0.105		0.000510	0.00150	0.00150	1	05/20/2020 06:19	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 06:19*	WG1478331

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	05/20/2020 06:40	WG1478331
Toluene	0.000734	J	0.000412	0.00100	0.00100	1	05/20/2020 06:40	WG1478331
Ethylbenzene	0.000363	J	0.000160	0.000500	0.000500	1	05/20/2020 06:40	WG1478331
Total Xylene	0.00746		0.000510	0.00150	0.00150	1	05/20/2020 06:40	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 06:40*	WG1478331

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	0.0223		0.000190	0.000500	0.000500	1	05/20/2020 07:02	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 07:02	WG1478331
Ethylbenzene	0.000855		0.000160	0.000500	0.000500	1	05/20/2020 07:02	WG1478331
Total Xylene	0.00447		0.000510	0.00150	0.00150	1	05/20/2020 07:02	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*05/20/2020 07:02*	WG1478331

DUP-1
Collected date/time: 05/14/20 00:00
L1219543

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	05/20/2020 07:23	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 07:23	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 07:23	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 07:23	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 07:23*	WG1478331

DUP-2
Collected date/time: 05/14/20 00:00
L1219543

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	05/20/2020 08:08	WG1478331
Toluene	U		0.000412	0.00100	0.00100	1	05/20/2020 08:08	WG1478331
Ethylbenzene	U		0.000160	0.000500	0.000500	1	05/20/2020 08:08	WG1478331
Total Xylene	U		0.000510	0.00150	0.00150	1	05/20/2020 08:08	WG1478331
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*05/20/2020 08:08*	WG1478331

Method Blank (MB)

(MB) R3530590-2 05/19/20 23:36

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) R3530590-1 05/19/20 22:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0553	111	77.0-122	
Toluene	0.0500	0.0558	112	80.0-121	
Ethylbenzene	0.0500	0.0575	115	80.0-123	
Total Xylene	0.150	0.175	117	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

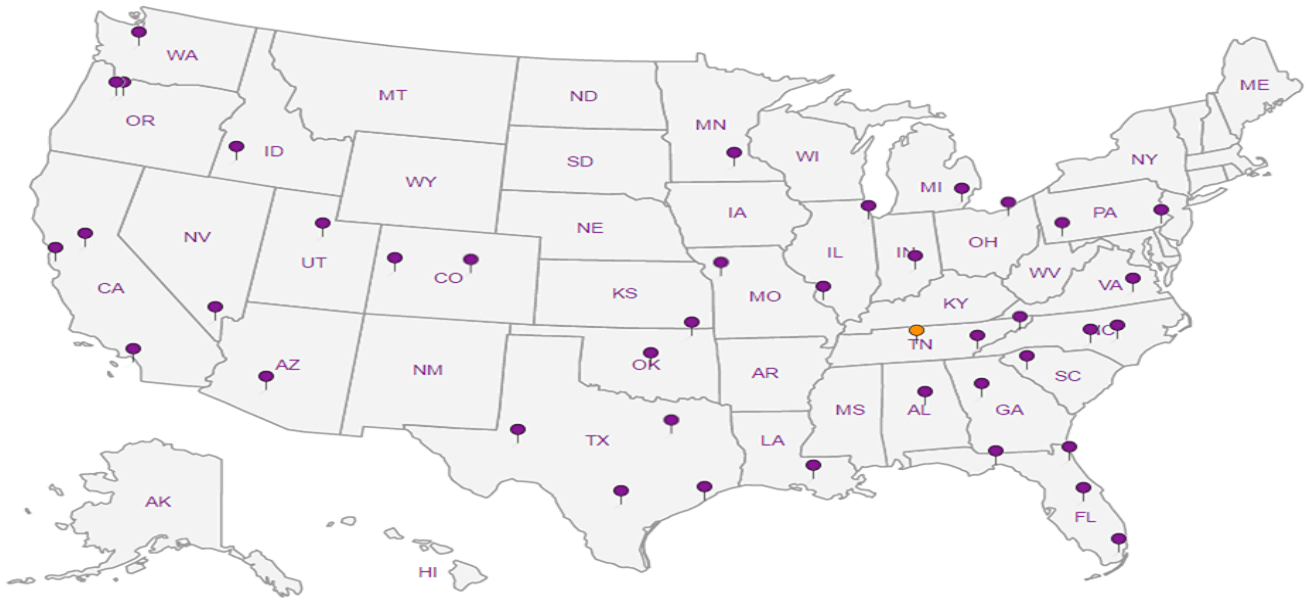
Third Party Federal Accreditations

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	11209885/02	L1219543	05/22/20 20:02	30 of 33

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: Lovington New Mexico

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

Collected by (print): Heath Boyd

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

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 # L1219543

C128

Acctnum: PLAINSGHD
Template: T167385
Prelogin: P772362
PM: 134 - Mark W. Beasley
PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-4	Grab	GW	DTW	5/14/20	1122	3	X		-01
MW-7		GW			1105		X		02
MW-11R		GW			1205		X		03
MW-16R		GW			1000		X		04
MW-17R		GW			1035		X		05
MW-18R		GW			1030		X		06
MW-19R		GW			1230		X		07
MW-20R		GW			1200		X		08
MW-21R		GW			1100		X		09
		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 # 3929 0430 3007

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
	5/15/20	1600			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.6-2=-.4 °C Bottles Received: 51	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-16-20 Time: 0900	Hold: / Condition: NCF / OK

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

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: Becky Haskell

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

SDG # L1219543

Table #

Collected by (print): Keith Boyd

Site/Facility ID # SRS DARR ANGELL #1

P.O. #

Acctnum: PLAINSGHD
Template: T167385
Prelogin: P772362
PM: 134 - Mark W. Beasley
PB:
Shipped Via: FedEX Ground

Collected by (signature): [signature]

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl									Remarks	Sample # (lab only)
MW-22	Grab	GW	DTW	5/14/20	1100	3	X										-10
MW-24	↓	GW	↓	↓	1135	↓	X										11
MW-25	↓	GW	↓	↓	1235	↓	X										12
MW-12R	↓	GW	↓	↓	1405	↓	X										13
RW-12	↓	GW	↓	↓	1305	↓	X										14
MW-2	↓	GW	↓	↓	1335	↓	X										15
MW-6	↓	GW	↓	↓	1300	↓	X										16
Dup-1	↓	GW	↓	↓	–	↓	X										17
Dup-2	↓	GW	↓	↓	–	↓	X										18
		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 #

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:	
[signature]	5/15/20	1600		(Yes) / No HCL / MeOH TBR	
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp:** NA °C 1.6-.2=1.4	**Bottles Received:** 51
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)** [signature]	**Date:** 5-16-20	**Time:** 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Matt Shacklock

Pace Analytical®
National Center for Testing & Innovation

Login #: L1219543	Client: PLAINSGHD	Date: 5/16/20	Evaluated by: Jeremy

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: Did not receive MW-4

Client informed by:		Call		Email		Voice Mail		Date: 5/18/20	Time: 1315
TSR Initials: MB	Client Contact: Heath Boyd								

MW-4 was not collected

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 26, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1231404
Samples Received:	06/20/2020
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

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.

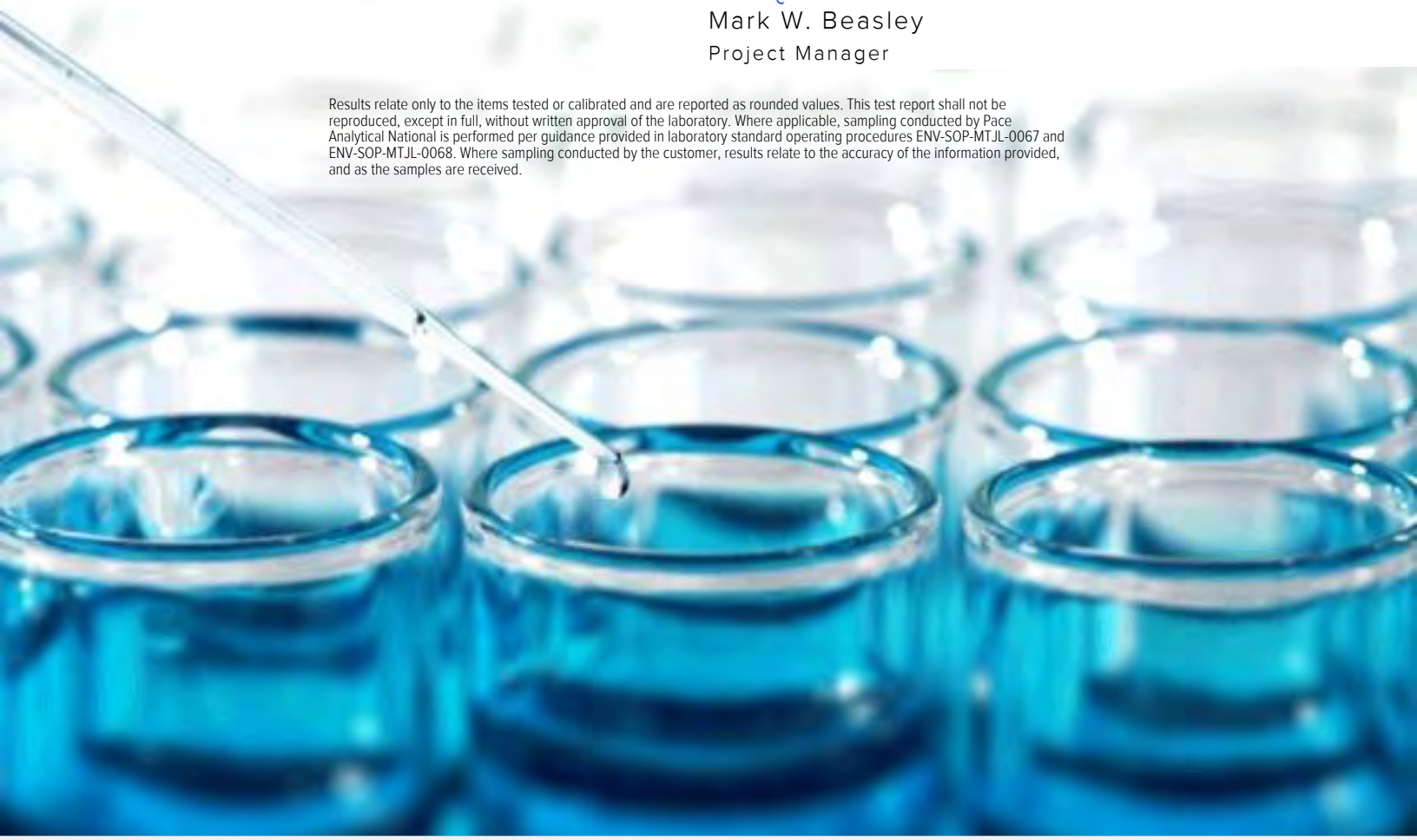


TABLE OF CONTENTS

SYSTEM OFF L1231404-01 Air

Collected by: Matthew Laughlin
Collected date/time: 06/18/20 11:25
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	800	06/23/20 07:07	06/23/20 07:07	CAW	Mt. Juliet, TN

SYSTEM ON L1231404-02 Air

Collected by: Matthew Laughlin
Collected date/time: 06/18/20 11:50
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	800	06/23/20 07:49	06/23/20 07:49	CAW	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: 06/26/2020 14:57
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1231404-01 and 02
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 #1 SRS Darr Angell #1	Laboratory Job Number: L1231404-01 and 02
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 #1 SRS Darr Angell #1	Laboratory Job Number: L1231404-01 and 02
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	160	511	7200	23000		800	WG1497132
Toluene	108-88-3	92.10	160	603	12800	48200		800	WG1497132
Ethylbenzene	100-41-4	106	160	694	2380	10300		800	WG1497132
m&p-Xylene	1330-20-7	106	320	1390	8170	35400		800	WG1497132
o-Xylene	95-47-6	106	160	694	2530	11000		800	WG1497132
Methyl tert-butyl ether	1634-04-4	88.10	160	577	ND	ND		800	WG1497132
TPH (GC/MS) Low Fraction	8006-61-9	101	160000	661000	1450000	5990000		800	WG1497132
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG1497132

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	11000	35100		800	WG1497132
Toluene	108-88-3	92.10	160	603	20900	78700		800	WG1497132
Ethylbenzene	100-41-4	106	160	694	3750	16300		800	WG1497132
m&p-Xylene	1330-20-7	106	320	1390	12100	52500		800	WG1497132
o-Xylene	95-47-6	106	160	694	3730	16200		800	WG1497132
Methyl tert-butyl ether	1634-04-4	88.10	160	577	ND	ND		800	WG1497132
TPH (GC/MS) Low Fraction	8006-61-9	101	160000	661000	2110000	8720000		800	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

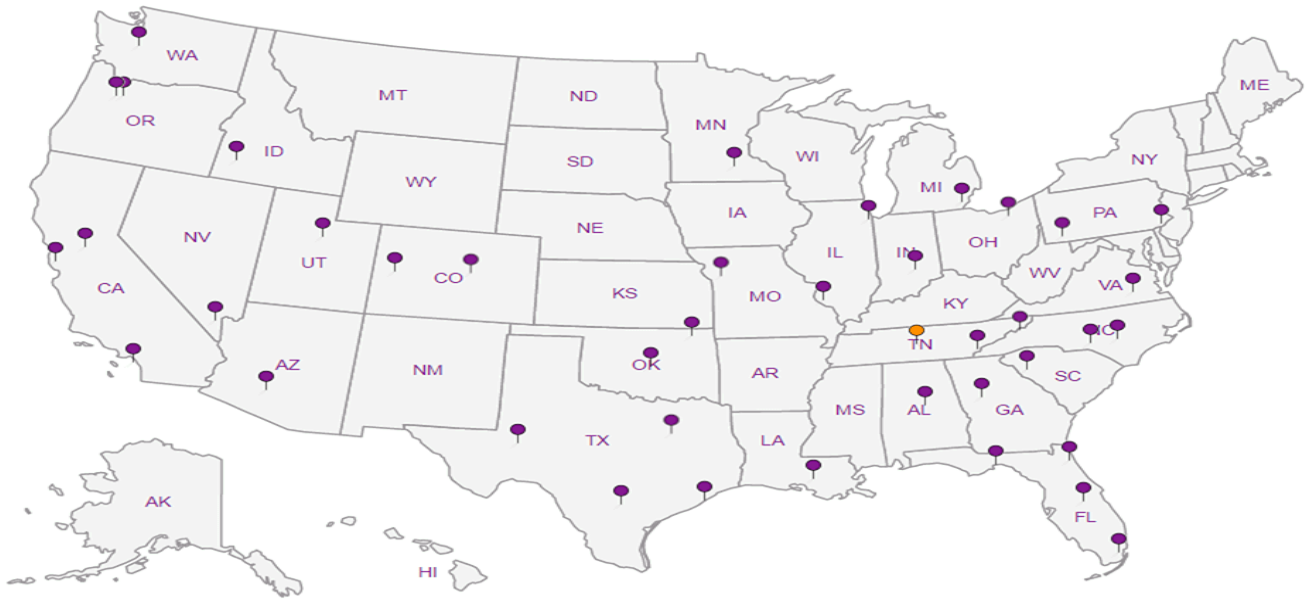
Third Party Federal Accreditations

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	11209885/02	L1231404	06/26/20 14:57	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.co

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

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET

Phone: **432-250-7917**

Client Project # **11209885/02**

Lab Project # **PLAINSGHD-11209885**

Collected by (print): Matthew Laughlin

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

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 OFF	G	Air	—	06/18/20	1125	1	X		01
System ON	G	Air	—	06/18/20	1150	1	X		02
		Air							
		Air							

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 # 231409

Table # A010

Acctnum: PLAINS

Template: T163766

Prelogin: P779287

PM: 134 - Mark W. Beasley

PB: LC 6/8

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 7981 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	12:00		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
	6/19/20	16:30	FedEx	AMB
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				6/19/20 8:45

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 30, 2020

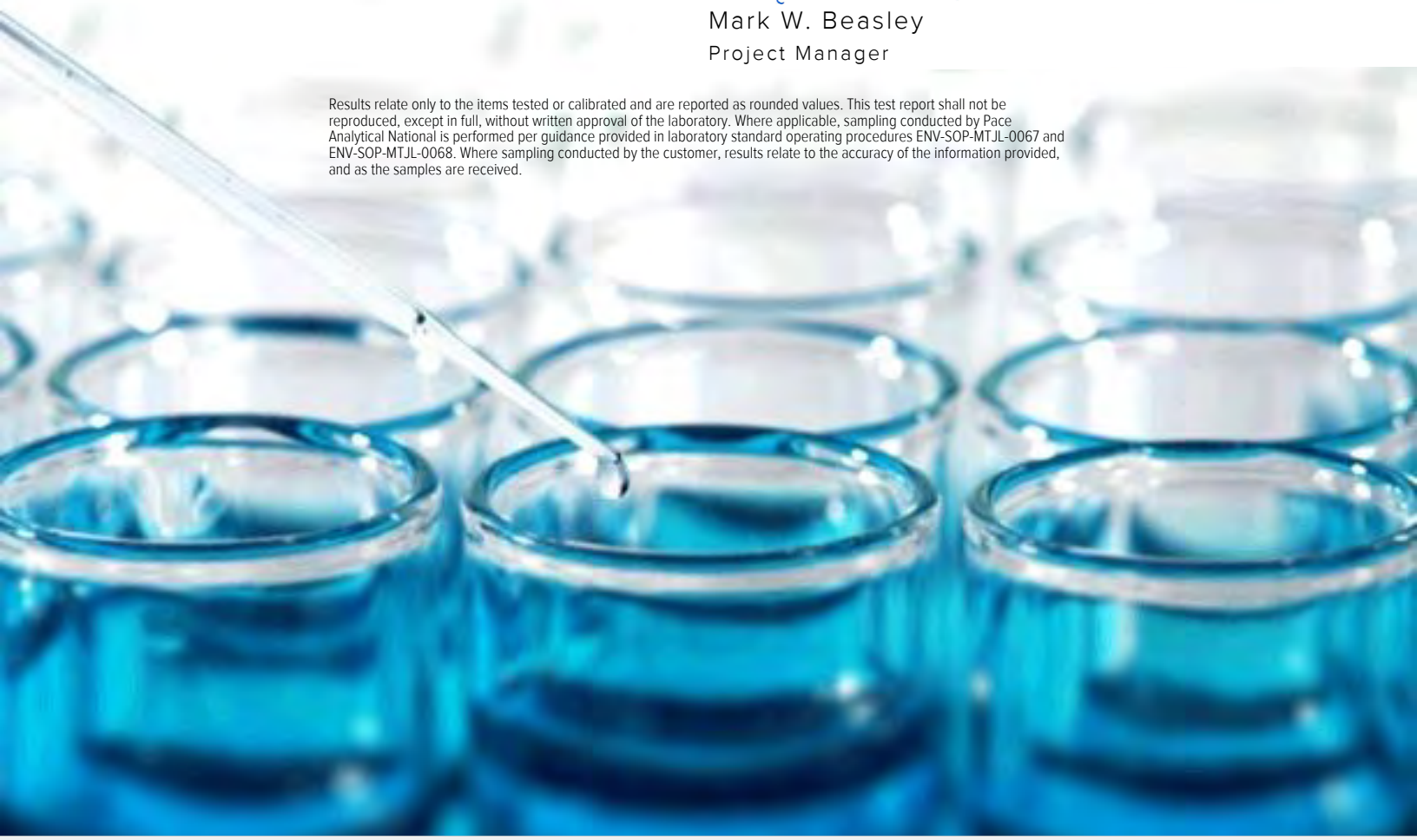
Plains All American, LP - GHD

Sample Delivery Group:	L1264756
Samples Received:	09/22/2020
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

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



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MW-11R-091720 L1264756-01 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 16:00 | 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	WG1548209	1	09/24/20 10:29	09/24/20 10:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1548900	1	09/24/20 18:56	09/24/20 18:56	BMB	Mt. Juliet, TN

RW-12-091720 L1264756-02 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 16:30 | 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	WG1548209	1	09/24/20 10:54	09/24/20 10:54	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1548900	1	09/24/20 19:21	09/24/20 19:21	BMB	Mt. Juliet, TN

MW-16R-091720 L1264756-03 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 16:45 | 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	WG1548209	1	09/24/20 11:19	09/24/20 11:19	ADM	Mt. Juliet, TN

MW-24-091720 L1264756-04 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 17:00 | 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	WG1548209	1	09/24/20 11:44	09/24/20 11:44	ADM	Mt. Juliet, TN

MW-25-091720 L1264756-05 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 17:15 | 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	WG1548209	1	09/24/20 12:09	09/24/20 12:09	ADM	Mt. Juliet, TN

MW-21R-091720 L1264756-06 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 17:30 | 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	WG1548209	1	09/24/20 12:34	09/24/20 12:34	ADM	Mt. Juliet, TN

MW-20R-091720 L1264756-07 GW

Collected by: Matthew Laughlin | Collected date/time: 09/17/20 17:45 | 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	WG1548209	1	09/24/20 12:59	09/24/20 12:59	ADM	Mt. Juliet, TN

MW-17R-091720 L1264756-08 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1548209	1	09/24/20 13:24	09/24/20 13:24	ADM	Mt. Juliet, TN

MW-12R-091720 L1264756-09 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/26/20 23:37	09/26/20 23:37	ACG	Mt. Juliet, TN

MW-19R-091720 L1264756-10 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 00:02	09/27/20 00:02	ACG	Mt. Juliet, TN

MW-22-091820 L1264756-11 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 00:27	09/27/20 00:27	ACG	Mt. Juliet, TN

MW-7-091820 L1264756-12 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 00:52	09/27/20 00:52	ACG	Mt. Juliet, TN

MW-18R-091820 L1264756-13 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 01:17	09/27/20 01:17	ACG	Mt. Juliet, TN

MW-6-091820 L1264756-14 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 01:42	09/27/20 01:42	ACG	Mt. Juliet, TN

DUP-1-091820 L1264756-15 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 02:07	09/27/20 02:07	ACG	Mt. Juliet, TN

DUP-2-091820 L1264756-16 GW

Collected by: Matthew Laughlin | Collected date/time: 09/18/20 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	WG1549888	1	09/27/20 02:33	09/27/20 02:33	ACG	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

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

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

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

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

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

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

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

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

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

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

b. MS/MSD spiking amounts,

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

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

e. The laboratory's MS/MSD QC limits

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

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

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

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

R10 - Other problems or anomalies.

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

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 09/30/2020 17:04
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1264756-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1548209, WG1548900 and WG1549888

#[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: 09/30/2020 17:04
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1264756-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1548209, WG1548900 and WG1549888

#[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: 09/30/2020 17:04
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1264756-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1548209, WG1548900 and WG1549888

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	09/24/2020 18:56	WG1548900
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 10:29	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 10:29	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 10:29	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*99.1*				*79.0-125*		*09/24/2020 10:29*	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*98.3*				*79.0-125*		*09/24/2020 18:56*	WG1548900

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	0.000599		0.000190	0.000500	0.000500	1	09/24/2020 19:21	WG1548900
Toluene	0.000742	J	0.000412	0.00100	0.00100	1	09/24/2020 10:54	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 10:54	WG1548209
Total Xylene	0.0138		0.000510	0.00150	0.00150	1	09/24/2020 10:54	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*96.7*				*79.0-125*		*09/24/2020 10:54*	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*97.1*				*79.0-125*		*09/24/2020 19:21*	WG1548900

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	09/24/2020 11:19	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 11:19	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 11:19	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 11:19	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*98.3*				*79.0-125*		*09/24/2020 11:19*	WG1548209

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	09/24/2020 11:44	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 11:44	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 11:44	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 11:44	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*97.8*				*79.0-125*		*09/24/2020 11:44*	WG1548209

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	09/24/2020 12:09	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 12:09	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 12:09	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 12:09	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*97.9*				*79.0-125*		*09/24/2020 12:09*	WG1548209

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	09/24/2020 12:34	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 12:34	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 12:34	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 12:34	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*98.2*				*79.0-125*		*09/24/2020 12:34*	WG1548209

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	09/24/2020 12:59	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 12:59	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 12:59	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 12:59	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*97.5*				*79.0-125*		*09/24/2020 12:59*	WG1548209

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	09/24/2020 13:24	WG1548209
Toluene	U		0.000412	0.00100	0.00100	1	09/24/2020 13:24	WG1548209
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/24/2020 13:24	WG1548209
Total Xylene	U		0.000510	0.00150	0.00150	1	09/24/2020 13:24	WG1548209
(S) a,a,a-Trifluorotoluene(PID)	*97.9*				*79.0-125*		*09/24/2020 13:24*	WG1548209

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	0.000654		0.000190	0.000500	0.000500	1	09/26/2020 23:37	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/26/2020 23:37	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/26/2020 23:37	WG1549888
Total Xylene	0.00194		0.000510	0.00150	0.00150	1	09/26/2020 23:37	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*97.7*				*79.0-125*		*09/26/2020 23:37*	WG1549888

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	09/27/2020 00:02	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 00:02	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 00:02	WG1549888
Total Xylene	U		0.000510	0.00150	0.00150	1	09/27/2020 00:02	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*09/27/2020 00:02*	WG1549888

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	09/27/2020 00:27	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 00:27	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 00:27	WG1549888
Total Xylene	U		0.000510	0.00150	0.00150	1	09/27/2020 00:27	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*79.0-125*		*09/27/2020 00:27*	WG1549888

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	0.0249		0.000190	0.000500	0.000500	1	09/27/2020 00:52	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 00:52	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 00:52	WG1549888
Total Xylene	0.00552		0.000510	0.00150	0.00150	1	09/27/2020 00:52	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*99.0*				*79.0-125*		*09/27/2020 00:52*	WG1549888

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	0.000660		0.000190	0.000500	0.000500	1	09/27/2020 01:17	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 01:17	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 01:17	WG1549888
Total Xylene	0.00137	J	0.000510	0.00150	0.00150	1	09/27/2020 01:17	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*97.7*				*79.0-125*		*09/27/2020 01:17*	WG1549888

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	09/27/2020 01:42	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 01:42	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 01:42	WG1549888
Total Xylene	U		0.000510	0.00150	0.00150	1	09/27/2020 01:42	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*99.9*				*79.0-125*		*09/27/2020 01:42*	WG1549888

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	0.000399	J	0.000190	0.000500	0.000500	1	09/27/2020 02:07	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 02:07	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 02:07	WG1549888
Total Xylene	0.00107	J	0.000510	0.00150	0.00150	1	09/27/2020 02:07	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*98.6*				*79.0-125*		*09/27/2020 02:07*	WG1549888

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	0.0268		0.000190	0.000500	0.000500	1	09/27/2020 02:33	WG1549888
Toluene	U		0.000412	0.00100	0.00100	1	09/27/2020 02:33	WG1549888
Ethylbenzene	U		0.000160	0.000500	0.000500	1	09/27/2020 02:33	WG1549888
Total Xylene	0.00285		0.000510	0.00150	0.00150	1	09/27/2020 02:33	WG1549888
(S) a,a,a-Trifluorotoluene(PID)	*98.5*				*79.0-125*		*09/27/2020 02:33*	WG1549888

Method Blank (MB)

(MB) R3574185-2 09/24/20 05:28

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)	*98.2*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3574185-1 09/24/20 04:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0427	85.4	77.0-122	
Toluene	0.0500	0.0435	87.0	80.0-121	
Ethylbenzene	0.0500	0.0456	91.2	80.0-123	
Total Xylene	0.150	0.136	90.7	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*97.8*	*79.0-125*	

Method Blank (MB)

(MB) R3574341-3 09/24/20 18:18

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)	*98.4*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3574341-2 09/24/20 17:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0439	87.8	77.0-122	
(S) a,a,a-Trifluorotoluene(PID)			*97.6*	*79.0-125*	

Method Blank (MB)

(MB) R3575831-2 09/26/20 22:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	*100*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3575831-1 09/26/20 21:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0439	87.8	77.0-122	
Toluene	0.0500	0.0449	89.8	80.0-121	
Ethylbenzene	0.0500	0.0475	95.0	80.0-123	
Total Xylene	0.150	0.142	94.7	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*98.6*	*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

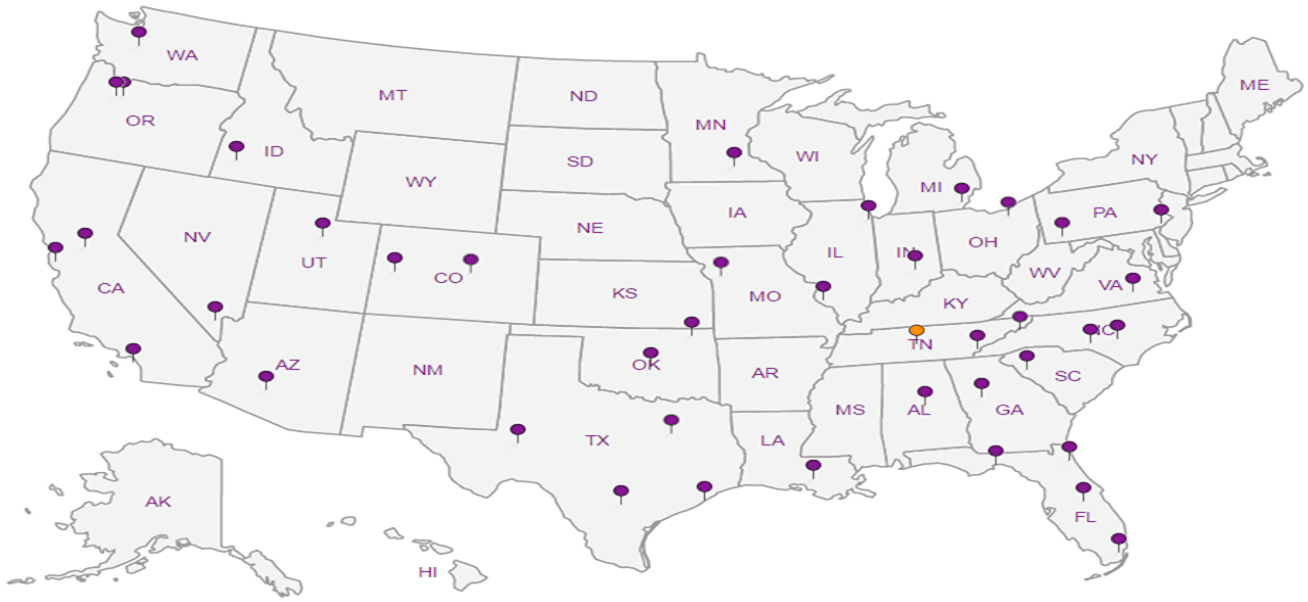
Third Party Federal Accreditations

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	11209885/02	L1264756	09/30/20 17:04	30 of 32

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: Lovington, NM

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS DARR ANGELL #1

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

No. of Cntrs

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

SDG # 176478

Table F138

Acctnum: PLAINSGHD

Template: T167385

Prelogin: P796004

PM: 134 - Mark W. Beasley

PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	PAHSIMLVI 40mlAmb-NoPres-WT (12)	Remarks	Sample # (lab only)
MW-11R-091720	G	GW	-	09/17/20	1600	3	3			01
RW-12-091720	G	GW	-	09/17/20	1630	3	3			02
MW-16R-091720	G	GW	-	09/17/20	1645	3	3			03
MW-24-091720	G	GW	-	09/17/20	1700	3	3			04
MW-25-091720	G	GW	-	09/17/20	1715	3	3			05
MW-21R-091720	G	GW	-	09/17/20	1730	3	3			06
MW-20R-091720	G	GW	-	09/17/20	1745	3	3			07
MW-17R-091820	G	GW	-	09/18/20	0900	3	3			08
MW-12R-091820	G	GW	-	09/18/20	0915	3	3			09
MW-19R-091820	G	GW	-	09/18/20	0930	3	3			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 # 1922 0813 2465

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	16:50	Received by: (Signature)	Temp: 0.3-0-0.1 °C Bottles Received: 48
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Olivia Cruz	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:
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: Lovington, NM

Please Circle: PT MT CT ET

Phone: 432-250-7917

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

Collected by (print): Matthew Laughlin

Site/Facility ID # SRS DARR ANGELL #1

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 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

SDG # L1247586

Table #

Acctnum: PLAINSGHD

Template: T167385

Prelogin: P796004

PM: 134 - Mark W. Beasley

PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40ml/Amb-HCl	~~PAH SIM LVI 40ml/Amb-NoPres-WT~~ (ML)	Remarks	Sample # (lab only)
MW-22-091820	G	GW	-	09/18/20	0945	3	W			11
MW-7-091820	G	GW	-	09/18/20	1000	3	W			12
MW-18R-091820	G	GW	-	09/18/20	1030	3	W			13
MW-6-091820	G	GW	-	09/18/20	1045	3	W			14
Dup-1-091820	G	GW	-	09/18/20	-	3	W			15
Dup-2-091820	G	GW	-	09/18/20	-	3	W			16
		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 # 1972 0813 2465

Sample Receipt Checklist

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	9-21-20	13:00			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C	Bottles Received:
	9-21-20	16:30	FedEx	0.3-2-0.1 IR	48
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:
			Olivia Turn	9/22/20	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

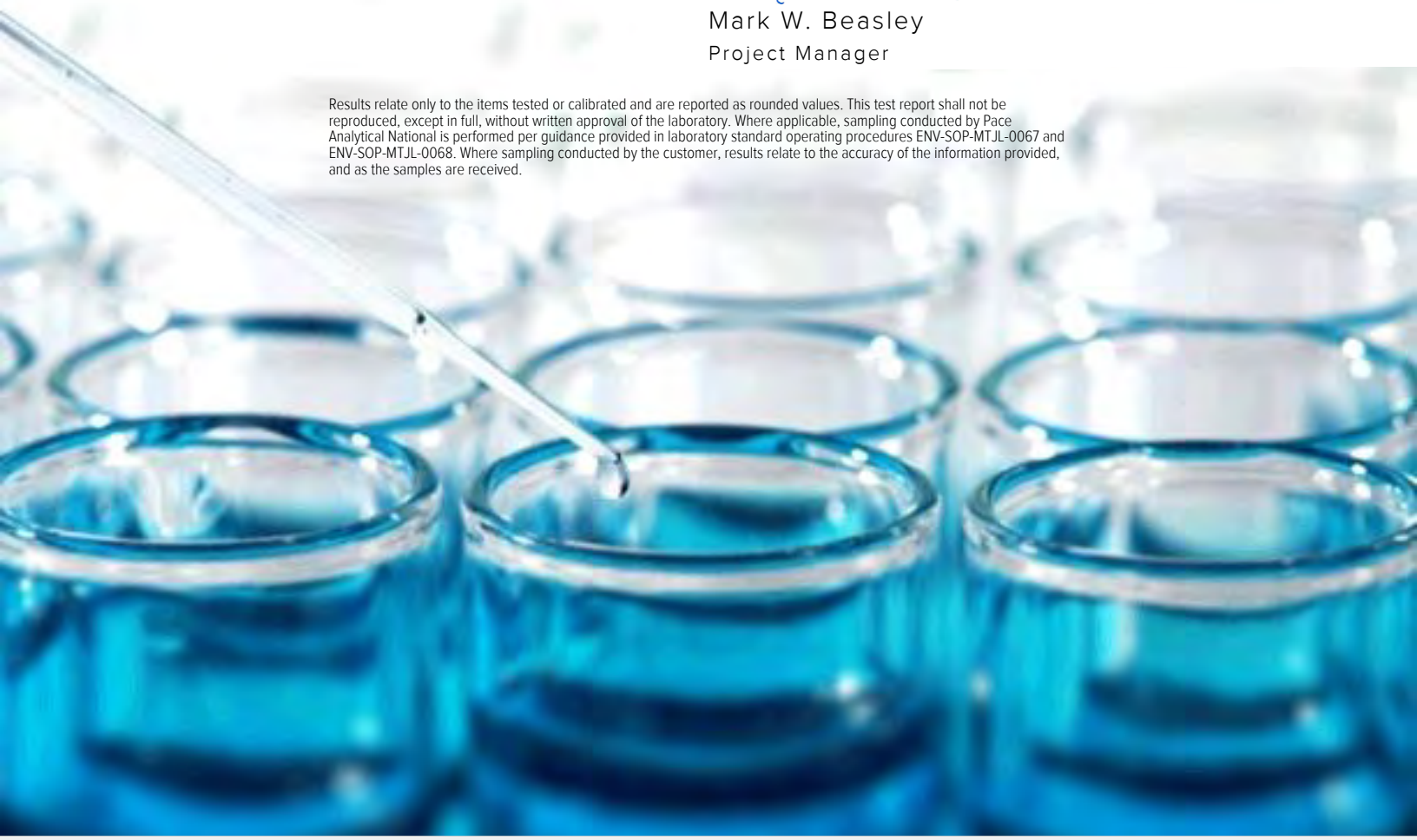


TABLE OF CONTENTS

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

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: 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).

Laboratory Review Checklist: Supporting 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]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

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

Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/08/2020 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).

DARK 2 PUMP ON
Collected date/time: 10/06/20 10:10

SAMPLE RESULTS - 01

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	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

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

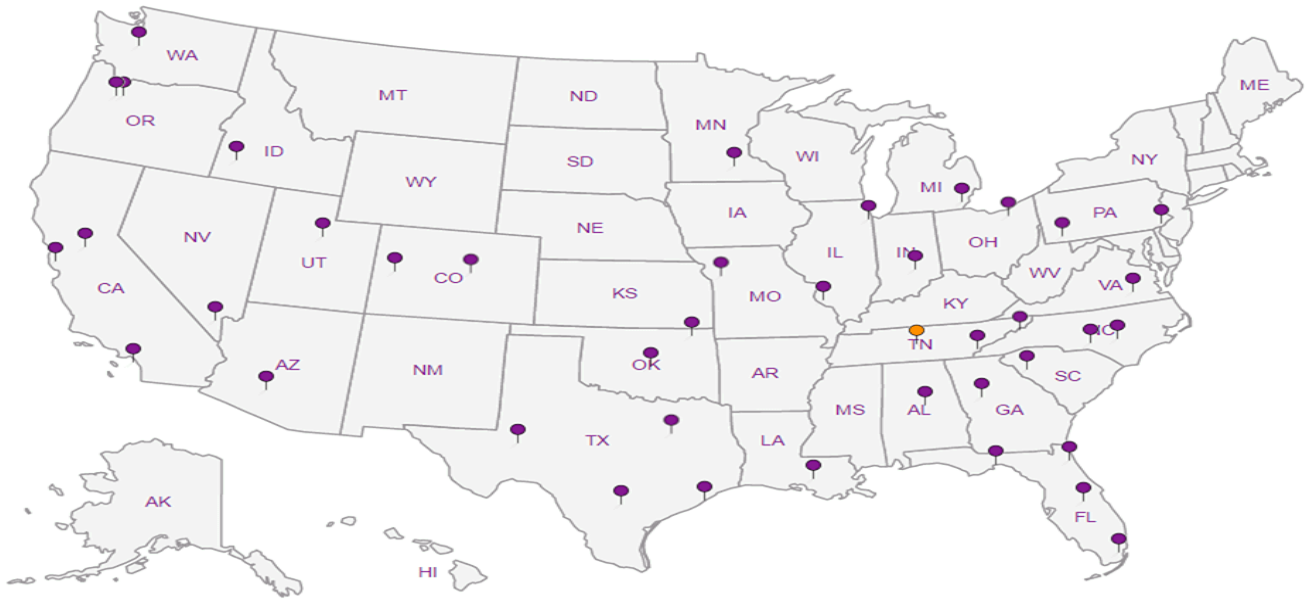
Third Party Federal Accreditations

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

Chain of Custody

Page 1 of 1

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	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				

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

October 19, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1271456
Samples Received:	10/09/2020
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: Erica McNeese

Erica McNeese
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 1 PUMP OFF L1271456-01 Air

			Collected by	Collected date/time	Received date/time
			Glenn Quinney	10/07/20 13:40	10/09/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1556779	2000	10/09/20 19:35	10/09/20 19:35	DAH	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.

Erica McNeese
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.

Erica McNeese

Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 10/19/2020 16:14
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1271456-01
Reviewer Name: Erica McNeese	Prep Batch Number(s): WG1556779

#[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: 10/19/2020 16:14
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1271456-01
Reviewer Name: Erica McNeese	Prep Batch Number(s): WG1556779

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

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

Revised May 2010

Laboratory Review Checklist: Exceptions Reports

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 10/19/2020 16:14
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1271456-01
Reviewer Name: Erica McNeese	Prep Batch Number(s): WG1556779

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	15500	49500		2000	WG1556779
Toluene	108-88-3	92.10	400	1510	28400	107000		2000	WG1556779
Ethylbenzene	100-41-4	106	400	1730	6870	29800		2000	WG1556779
m&p-Xylene	1330-20-7	106	800	3470	14900	64600		2000	WG1556779
o-Xylene	95-47-6	106	400	1730	4780	20700		2000	WG1556779
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG1556779
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	1940000	8010000		2000	WG1556779
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.5*				WG1556779

Method Blank (MB)

(MB) R3580018-3 10/09/20 09:45

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	*93.9*			*60.0-140*

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

(LCS) R3580018-1 10/09/20 08:30 • (LCSD) R3580018-2 10/09/20 09:08

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	3.72	3.81	99.2	102	70.0-130			2.39	25
Benzene	3.75	3.80	3.82	101	102	70.0-130			0.525	25
Toluene	3.75	3.81	3.78	102	101	70.0-130			0.791	25
Ethylbenzene	3.75	3.84	3.84	102	102	70.0-130			0.000	25
m&p-Xylene	7.50	7.77	7.74	104	103	70.0-130			0.387	25
o-Xylene	3.75	3.81	3.83	102	102	70.0-130			0.524	25
TPH (GC/MS) Low Fraction	203	224	224	110	110	70.0-130			0.000	25
(S) 1,4-Bromofluorobenzene				*99.0*	*98.8*	*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

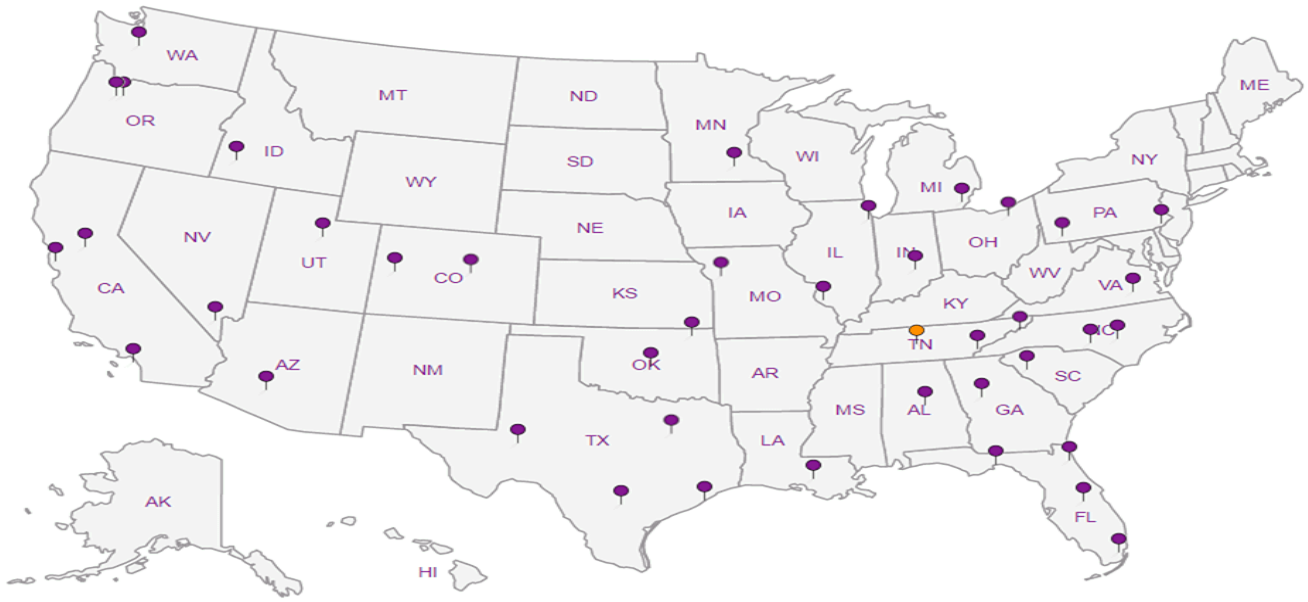
Third Party Federal Accreditations

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	L1271456	10/19/20 16:14	12 of 13

Plains All American, LP - GHD

2135 S Loop 250W
Midland, TX 79703

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

Pres Chk

Analysis / Container / Preservative

Chain of Custody

Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

U271456

D167

Table #

Report to: **Becky Haskell**

Email To: **becky.haskell@ghd.com**

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

City/State Collected:

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

Client Project # **11209885/02**

Lab Project # **PLAINSGHD-11209885**

Collected by (print): **Glenn Quinney**

Site/Facility ID # **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

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	M18-MOD Tedlar	Remarks	Sample # (lab only)
Darr 1 Pump Off		Air		10/7/20	1340	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 #

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	10.8.20	11:00	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	10.8.20	14:00	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: Amb. °C Bottles Received: 2

Date: 10-9 Time: 0800

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 12, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1281179
Samples Received:	11/03/2020
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

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.

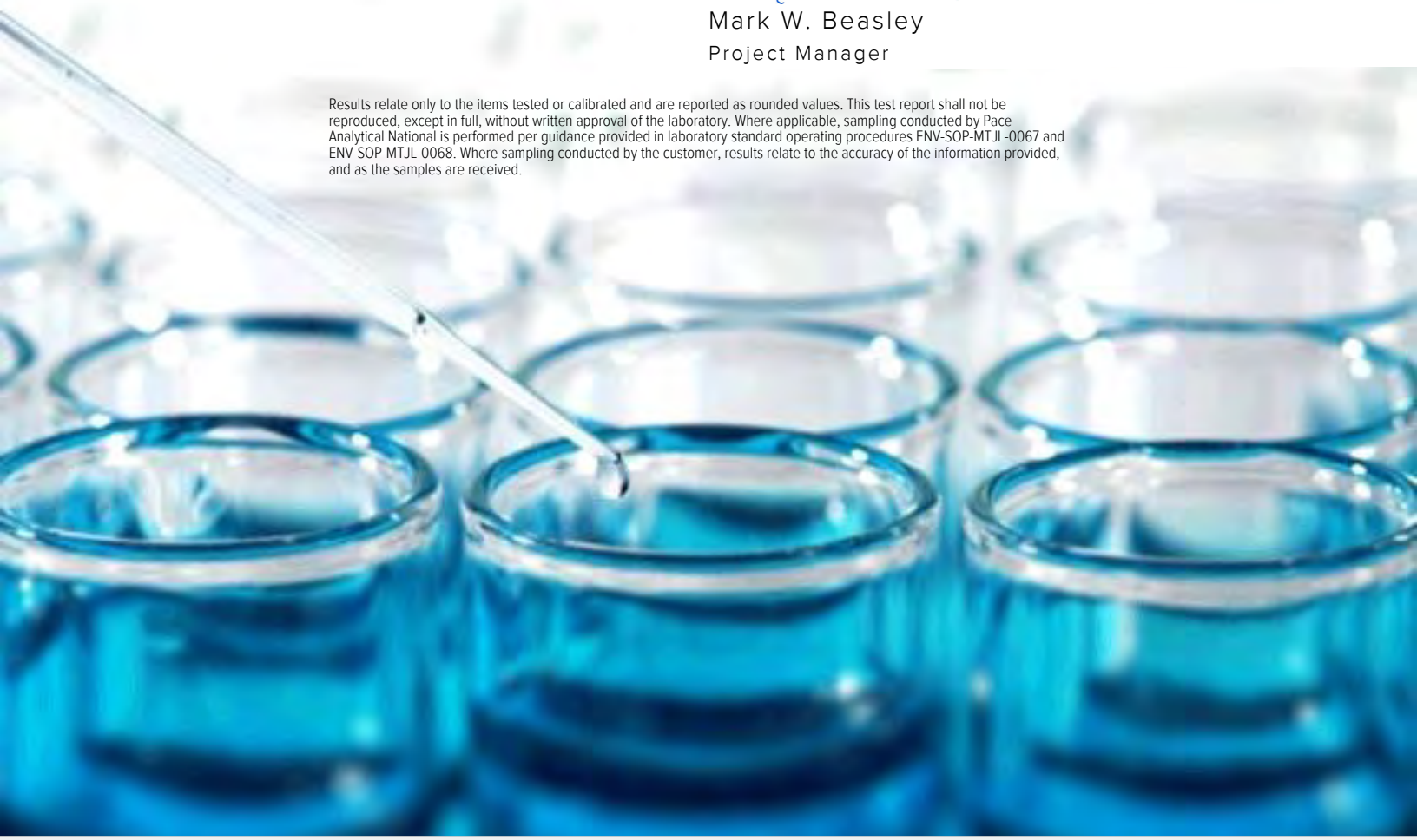


TABLE OF CONTENTS

MW-4R L1281179-01 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 08:25 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 08:14	11/07/20 08:14	TPR	Mt. Juliet, TN

MW-11R L1281179-02 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 08:50 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 08:36	11/07/20 08:36	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571756	1	11/05/20 22:15	11/06/20 11:32	SHG	Mt. Juliet, TN

MW-16R L1281179-03 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 09:15 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572605	1	11/07/20 08:58	11/07/20 08:58	TPR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571756	1	11/05/20 22:15	11/06/20 11:50	SHG	Mt. Juliet, TN

MW-17R L1281179-04 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 09:30 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 15:13	11/07/20 15:13	BMB	Mt. Juliet, TN

MW-18R L1281179-05 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 09:50 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 15:34	11/07/20 15:34	BMB	Mt. Juliet, TN

MW-19R L1281179-06 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 10:05 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 15:55	11/07/20 15:55	BMB	Mt. Juliet, TN

MW-20R L1281179-07 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 10:30 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 16:15	11/07/20 16:15	BMB	Mt. Juliet, TN

MW-21R L1281179-08 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 10:45 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 16:36	11/07/20 16:36	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571756	1	11/05/20 22:15	11/06/20 12:07	SHG	Mt. Juliet, TN

MW-22 L1281179-09 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 11:05 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 16:58	11/07/20 16:58	BMB	Mt. Juliet, TN

MW-24 L1281179-10 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 11:30 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 17:19	11/07/20 17:19	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571756	1	11/05/20 22:15	11/06/20 12:24	SHG	Mt. Juliet, TN

MW-25 L1281179-11 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 12:00 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 17:39	11/07/20 17:39	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1571756	1	11/05/20 22:15	11/06/20 12:42	SHG	Mt. Juliet, TN

MW-7 L1281179-12 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 12:45 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572643	1	11/07/20 18:00	11/07/20 18:00	BMB	Mt. Juliet, TN

MW-12R L1281179-13 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 13:05 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572855	1	11/07/20 18:04	11/07/20 18:04	DWR	Mt. Juliet, TN

RW-12 L1281179-14 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 13:35 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572855	1	11/07/20 18:26	11/07/20 18:26	DWR	Mt. Juliet, TN

DUP-1 L1281179-16 GW

Collected by: Zach Comino | Collected date/time: 11/02/20 00:00 | Received date/time: 11/03/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1572855	1	11/07/20 18:48	11/07/20 18:48	DWR	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

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

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

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

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

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

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

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

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

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

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

b. MS/MSD spiking amounts,

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

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

e. The laboratory's MS/MSD QC limits

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

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

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

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

R10 - Other problems or anomalies.

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

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 11/12/2020 11:29
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1281179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571756, WG1572605, WG1572855 and WG1572643

#[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 Name: Pace Analytical National	LRC Date: 11/12/2020 11:29
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1281179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571756, WG1572605, WG1572855 and WG1572643

#[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: 11/12/2020 11:29
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1281179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14 and 16
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1571756, WG1572605, WG1572855 and WG1572643

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

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

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.000402	J	0.000190	0.000500	0.000500	1	11/07/2020 08:14	WG1572605
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 08:14	WG1572605
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 08:14	WG1572605
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 08:14	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 08:14*	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	U		0.000190	0.000500	0.000500	1	11/07/2020 08:36	WG1572605
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 08:36	WG1572605
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 08:36	WG1572605
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 08:36	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 08:36*	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	11/06/2020 11:32	WG1571756
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/06/2020 11:32	WG1571756
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/06/2020 11:32	WG1571756
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 11:32	WG1571756
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/06/2020 11:32	WG1571756
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/06/2020 11:32	WG1571756
(S) Nitrobenzene-d5	*118*				*31.0-160*		*11/06/2020 11:32*	WG1571756
(S) 2-Fluorobiphenyl	*100*				*48.0-148*		*11/06/2020 11:32*	WG1571756
(S) p-Terphenyl-d14	*88.5*				*37.0-146*		*11/06/2020 11:32*	WG1571756

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 08:58	WG1572605
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 08:58	WG1572605
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 08:58	WG1572605
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 08:58	WG1572605
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 08:58*	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	11/06/2020 11:50	WG1571756
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/06/2020 11:50	WG1571756
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/06/2020 11:50	WG1571756
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 11:50	WG1571756
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/06/2020 11:50	WG1571756
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/06/2020 11:50	WG1571756
(S) Nitrobenzene-d5	*119*				*31.0-160*		*11/06/2020 11:50*	WG1571756
(S) 2-Fluorobiphenyl	*105*				*48.0-148*		*11/06/2020 11:50*	WG1571756
(S) p-Terphenyl-d14	*94.0*				*37.0-146*		*11/06/2020 11:50*	WG1571756

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 15:13	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 15:13	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 15:13	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 15:13	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 15:13*	WG1572643

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 15:34	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 15:34	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 15:34	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 15:34	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 15:34*	WG1572643

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	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 15:55	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 15:55	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 15:55	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 15:55*	WG1572643

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 16:15	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 16:15	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 16:15	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 16:15	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 16:15*	WG1572643

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 16:36	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 16:36	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 16:36	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 16:36	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*11/07/2020 16:36*	WG1572643

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	11/06/2020 12:07	WG1571756
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/06/2020 12:07	WG1571756
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/06/2020 12:07	WG1571756
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:07	WG1571756
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/06/2020 12:07	WG1571756
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/06/2020 12:07	WG1571756
(S) Nitrobenzene-d5	*111*				*31.0-160*		*11/06/2020 12:07*	WG1571756
(S) 2-Fluorobiphenyl	*91.0*				*48.0-148*		*11/06/2020 12:07*	WG1571756
(S) p-Terphenyl-d14	*66.0*				*37.0-146*		*11/06/2020 12:07*	WG1571756

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 16:58	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 16:58	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 16:58	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 16:58	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 16:58*	WG1572643

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 17:19	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 17:19	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 17:19	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 17:19	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*103*				*79.0-125*		*11/07/2020 17:19*	WG1572643

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	11/06/2020 12:24	WG1571756
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/06/2020 12:24	WG1571756
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/06/2020 12:24	WG1571756
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:24	WG1571756
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/06/2020 12:24	WG1571756
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/06/2020 12:24	WG1571756
(S) Nitrobenzene-d5	*122*				*31.0-160*		*11/06/2020 12:24*	WG1571756
(S) 2-Fluorobiphenyl	*108*				*48.0-148*		*11/06/2020 12:24*	WG1571756
(S) p-Terphenyl-d14	*100*				*37.0-146*		*11/06/2020 12:24*	WG1571756

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 17:39	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 17:39	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 17:39	WG1572643
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 17:39	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*102*				*79.0-125*		*11/07/2020 17:39*	WG1572643

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	11/06/2020 12:42	WG1571756
Acenaphthene	U		0.0000190	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Acenaphthylene	U		0.0000171	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Benzo(a)anthracene	U		0.0000203	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Benzo(a)pyrene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Chrysene	U		0.0000179	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Dibenzofuran	U		0.0000191	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Fluoranthene	U		0.0000270	0.000100	0.000100	1	11/06/2020 12:42	WG1571756
Fluorene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Naphthalene	U		0.0000917	0.000250	0.000250	1	11/06/2020 12:42	WG1571756
Phenanthrene	U		0.0000180	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
Pyrene	U		0.0000169	0.0000500	0.0000500	1	11/06/2020 12:42	WG1571756
1-Methylnaphthalene	U		0.0000687	0.000250	0.000250	1	11/06/2020 12:42	WG1571756
2-Methylnaphthalene	U		0.0000674	0.000250	0.000250	1	11/06/2020 12:42	WG1571756
(S) Nitrobenzene-d5	*108*				*31.0-160*		*11/06/2020 12:42*	WG1571756
(S) 2-Fluorobiphenyl	*96.5*				*48.0-148*		*11/06/2020 12:42*	WG1571756
(S) p-Terphenyl-d14	*84.5*				*37.0-146*		*11/06/2020 12:42*	WG1571756

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	0.000747		0.000190	0.000500	0.000500	1	11/07/2020 18:00	WG1572643
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 18:00	WG1572643
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:00	WG1572643
Total Xylene	0.00107	J	0.000510	0.00150	0.00150	1	11/07/2020 18:00	WG1572643
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*79.0-125*		*11/07/2020 18:00*	WG1572643

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	0.000395	J	0.000190	0.000500	0.000500	1	11/07/2020 18:04	WG1572855
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 18:04	WG1572855
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:04	WG1572855
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 18:04	WG1572855
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 18:04*	WG1572855

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 18:26	WG1572855
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 18:26	WG1572855
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:26	WG1572855
Total Xylene	0.00349		0.000510	0.00150	0.00150	1	11/07/2020 18:26	WG1572855
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 18:26*	WG1572855

DUP-1
Collected date/time: 11/02/20 00:00

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	0.000846		0.000190	0.000500	0.000500	1	11/07/2020 18:48	WG1572855
Toluene	U		0.000412	0.00100	0.00100	1	11/07/2020 18:48	WG1572855
Ethylbenzene	U		0.000160	0.000500	0.000500	1	11/07/2020 18:48	WG1572855
Total Xylene	U		0.000510	0.00150	0.00150	1	11/07/2020 18:48	WG1572855
(S) a,a,a-Trifluorotoluene(PID)	*101*				*79.0-125*		*11/07/2020 18:48*	WG1572855

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) R3592005-2 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)	*102*			*79.0-125*

Laboratory Control Sample (LCS)

(LCS) R3592005-3 11/07/20 11:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0493	98.6	77.0-122	
Toluene	0.0500	0.0492	98.4	80.0-121	
Ethylbenzene	0.0500	0.0503	101	80.0-123	
Total Xylene	0.150	0.159	106	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*79.0-125*	

L1281179-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1281179-04 11/07/20 15:13 • (MS) R3592005-4 11/07/20 18:42 • (MSD) R3592005-5 11/07/20 19:03

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	0.0417	0.0469	83.4	93.8	1	10.0-160			11.7	21
Toluene	0.0500	U	0.0416	0.0462	83.2	92.4	1	12.0-148			10.5	21
Ethylbenzene	0.0500	U	0.0418	0.0468	83.6	93.6	1	22.0-149			11.3	21
Total Xylene	0.150	U	0.132	0.146	88.0	97.3	1	13.0-155			10.1	21
(S) a,a,a-Trifluorotoluene(PID)					*101*	*101*		*79.0-125*				

Method Blank (MB)

(MB) R3591891-3 11/07/20 13:46

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) R3591891-1 11/07/20 11:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0432	86.4	77.0-122	
Toluene	0.0500	0.0473	94.6	80.0-121	
Ethylbenzene	0.0500	0.0518	104	80.0-123	
Total Xylene	0.150	0.148	98.7	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*79.0-125*	

Method Blank (MB)

(MB) R3590412-3 11/06/20 09:14

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	*117*			*31.0-160*
(S) 2-Fluorobiphenyl	*105*			*48.0-148*
(S) p-Terphenyl-d14	*99.0*			*37.0-146*

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

(LCS) R3590412-1 11/06/20 08:39 • (LCSD) R3590412-2 11/06/20 08:57

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	0.00203	0.00204	102	102	67.0-134			0.491	20
Anthracene	0.00200	0.00206	0.00204	103	102	67.0-150			0.976	20
Acenaphthene	0.00200	0.00202	0.00202	101	101	65.0-138			0.000	20
Acenaphthylene	0.00200	0.00224	0.00224	112	112	66.0-140			0.000	20
Benzo(a)anthracene	0.00200	0.00184	0.00184	92.0	92.0	61.0-140			0.000	20
Benzo(a)pyrene	0.00200	0.00171	0.00183	85.5	91.5	60.0-143			6.78	20
Benzo(b)fluoranthene	0.00200	0.00168	0.00185	84.0	92.5	58.0-141			9.63	20
Benzo(g,h,i)perylene	0.00200	0.00159	0.00176	79.5	88.0	52.0-153			10.1	20
Benzo(k)fluoranthene	0.00200	0.00177	0.00182	88.5	91.0	58.0-148			2.79	20
Chrysene	0.00200	0.00189	0.00198	94.5	99.0	64.0-144			4.65	20
Dibenz(a,h)anthracene	0.00200	0.00160	0.00173	80.0	86.5	52.0-155			7.81	20

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

(LCS) R3590412-1 11/06/20 08:39 • (LCSD) R3590412-2 11/06/20 08:57

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	0.00217	0.00207	108	104	69.0-153			4.72	20
Fluorene	0.00200	0.00211	0.00224	105	112	64.0-136			5.98	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00158	0.00169	79.0	84.5	54.0-153			6.73	20
Naphthalene	0.00200	0.00206	0.00209	103	104	61.0-137			1.45	20
Phenanthrene	0.00200	0.00198	0.00191	99.0	95.5	62.0-137			3.60	20
Pyrene	0.00200	0.00187	0.00187	93.5	93.5	60.0-142			0.000	20
1-Methylnaphthalene	0.00200	0.00209	0.00207	104	104	66.0-142			0.962	20
2-Methylnaphthalene	0.00200	0.00197	0.00194	98.5	97.0	62.0-136			1.53	20
(S) Nitrobenzene-d5				*130*	*120*	*31.0-160*				
(S) 2-Fluorobiphenyl				*105*	*105*	*48.0-148*				
(S) p-Terphenyl-d14				*89.0*	*96.0*	*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

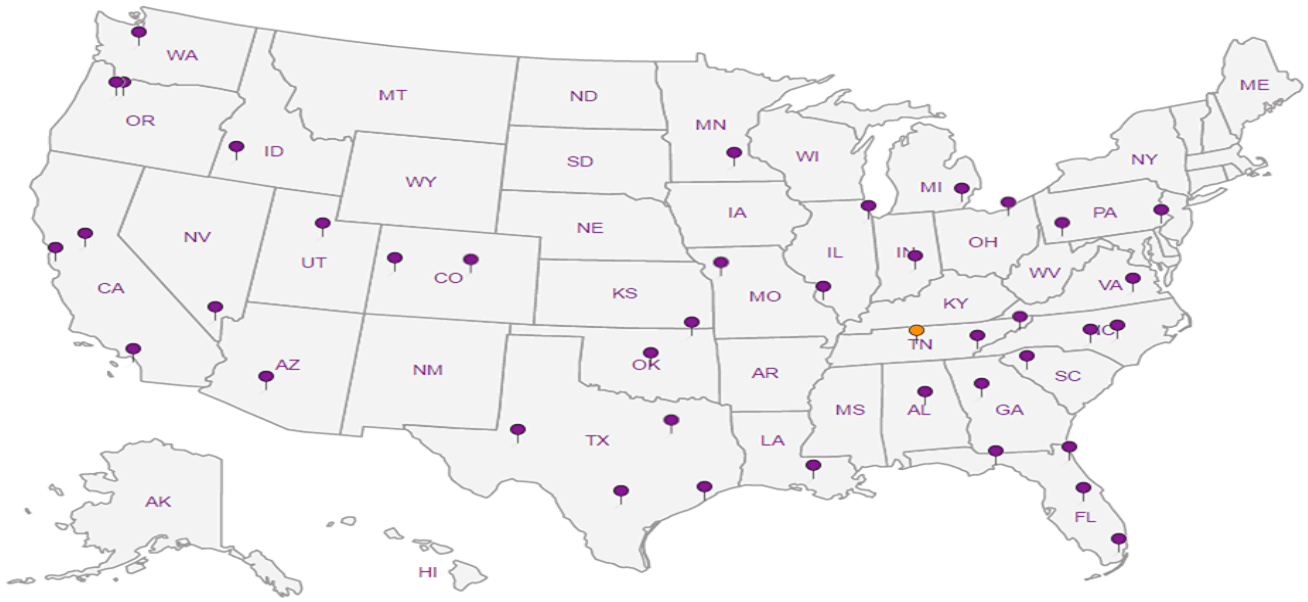
Third Party Federal Accreditations

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	11209885/02	L1281179	11/12/20 11:29	31 of 33

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

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;glenn.quinney@ghd.co

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

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET (MT circled)

Phone: 432-250-7917

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

SDG # L1281179
F094

Collected by (print): Zach Comino

Site/Facility ID # SRS DARR ANGELL #1

P.O. #

Acctnum: PLAINSGHD
Template: T167385
Prelogin: P805674
PM: 134 - Mark W. Beasley

Collected by (signature): [signature]

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEX 40mlAmb-HCl	SM VI 40mlAmb-NoPres-WT	Sample # (lab only)
MW-4R	Grab	GW		11/2/20	0825	3	X		-01
MW-11R	Grab	GW		11/2/20	0850	6	X	X	-02
MW-16R	↓	GW		↓	0915	6	X	X	-03
MW-17R		GW			0930	3	X		-04
MW-18R		GW			0950	3	X		-05
MW-19R		GW			1005	3	X		-06
MW-20R		GW			1030	3	X		-07
MW-21R		GW			1045	6	X	X	-08
MW-22		GW			1105	3	X		-09
MW-24		GW			1130	6	X	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 ______

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

Samples returned via:
__ UPS __ FedEx __ Courier

Tracking # 4050 0894 0782

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	
[signature]	11/2/20	1530		Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.3-1=0.2 °C Bottles Received: 16
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 110320 Time: 0930

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

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: Becky Haskell

Email To: becky.haskell@ghd.com;glenn.quinney@ghd.co

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

City/State Collected: Lovington, NM

Please Circle: PT MT CT ET (MT circled)

Phone: 432-250-7917

Client Project #: 11209885/02

Lab Project #: PLAINSGHD-11209885

SDG # 1281179

Table #

Collected by (print): Zac Comino

Site/Facility ID #: SRS DARR ANGELL #1

P.O. #

Acctnum: PLAINSGHD

Template: T167385

Prelogin: P805674

Collected by (signature): [signature]

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

Quote #

Packed on Ice N ___ Y X

Analyses: 40mlAmb-HCl; 40mlAmb-NoPres-WT

Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	40mlAmb-HCl	40mlAmb-NoPres-WT	Sample # (lab only)
MW-25	Grab	GW		11/2/20	1200	6	X	X	-11
~~[crossed out entry]~~ (2Z)									
MW-7	↓	GW		↓	1245	3	X		-12
MW-12R	↓	GW		↓	1305	3	X		-13
RW-12	↓	GW		↓	1335	3	X		-14
MW-6	↓	GW		↓	1400	3	X		-15
Dup-1	↓	GW		↓	-	3	X		-16
Dup-2	↓	GW		↓	-	3	X		-17
		GW							
		GW							

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

Samples returned via: ___ UPS ___ FedEx ___ Courier

Tracking #

pH ___ Temp ___
Flow ___ Other ___

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	
[signature]	11/2/20	1530			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.3-1=0.2 °C	Bottles Received: 66
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 110320	Time: 0930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK (OK circled)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 12, 2020

Plains All American, LP - GHD

Sample Delivery Group:	L1282813
Samples Received:	11/06/2020
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

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.

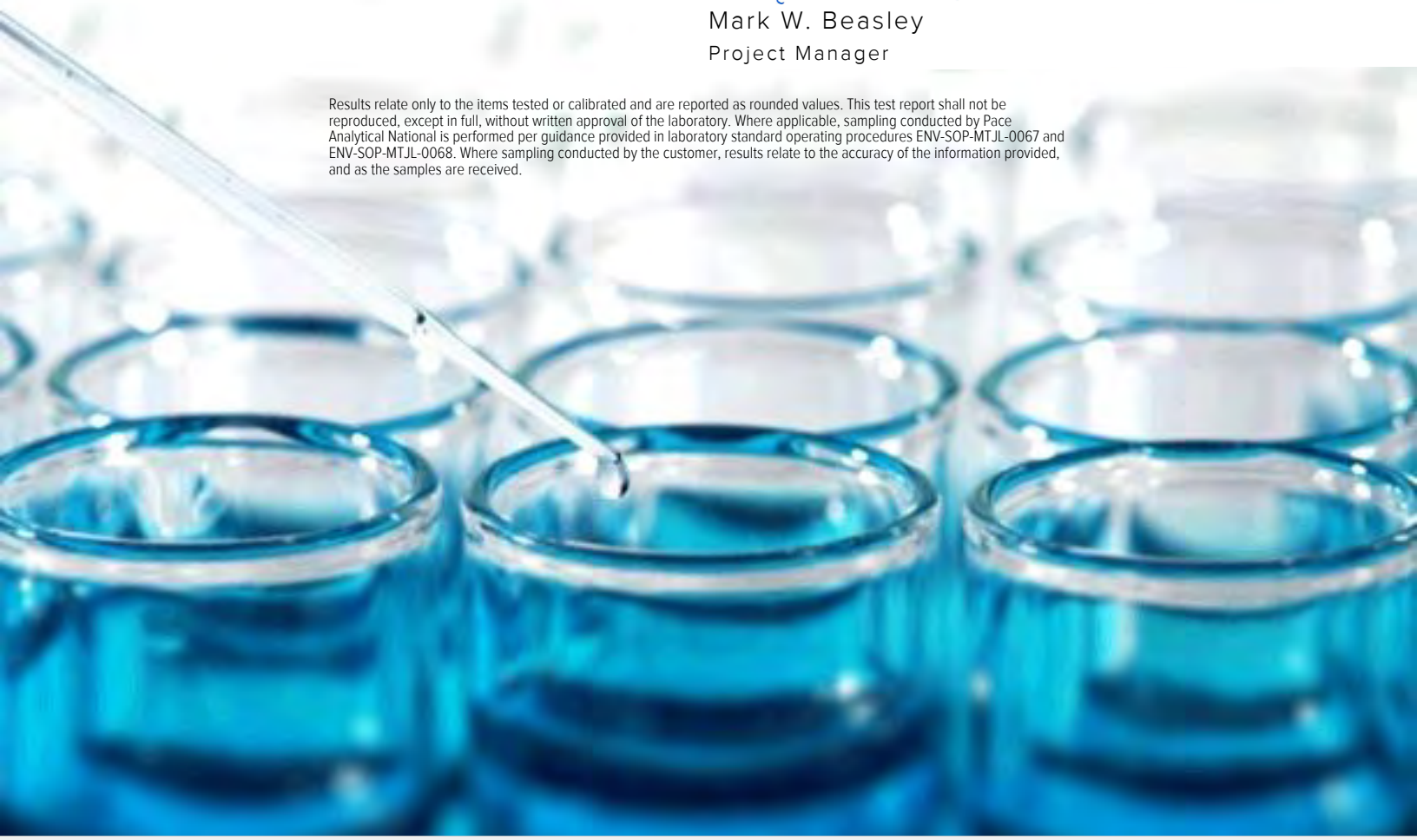


TABLE OF CONTENTS

MW-6 L1282813-01 GW

Collected by: Heath Boyd
Collected date/time: 11/05/20 11:15
Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1574584	1	11/11/20 19:23	11/11/20 19:23	DWR	Mt. Juliet, TN

DUP-02 L1282813-02 GW

Collected by: Heath Boyd
Collected date/time: 11/05/20 00:00
Received date/time: 11/06/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8021B	WG1574584	1	11/11/20 19:45	11/11/20 19:45	DWR	Mt. Juliet, TN

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

Mark W. Beasley
Project Manager

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: 11/12/2020 16:59
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1282813-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1574584

#[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: 11/12/2020 16:59
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1282813-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1574584

#[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: 11/12/2020 16:59
Project Name: Darr Angell #1 SRS Darr Angell #1	Laboratory Job Number: L1282813-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1574584

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

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

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.00438		0.000190	0.000500	0.000500	1	11/11/2020 19:23	WG1574584
Toluene	U		0.000412	0.00100	0.00100	1	11/11/2020 19:23	WG1574584
Ethylbenzene	0.00168		0.000160	0.000500	0.000500	1	11/11/2020 19:23	WG1574584
Total Xylene	0.00321		0.000510	0.00150	0.00150	1	11/11/2020 19:23	WG1574584
(S) a,a,a-Trifluorotoluene(PID)	*100*				*79.0-125*		*11/11/2020 19:23*	WG1574584

DUP-02
Collected date/time: 11/05/20 00:00
L1282813

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	0.00604		0.000190	0.000500	0.000500	1	11/11/2020 19:45	WG1574584
Toluene	U		0.000412	0.00100	0.00100	1	11/11/2020 19:45	WG1574584
Ethylbenzene	0.00199		0.000160	0.000500	0.000500	1	11/11/2020 19:45	WG1574584
Total Xylene	0.00344		0.000510	0.00150	0.00150	1	11/11/2020 19:45	WG1574584
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*79.0-125*		*11/11/2020 19:45*	WG1574584

Method Blank (MB)

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

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

Laboratory Control Sample (LCS)

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

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

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

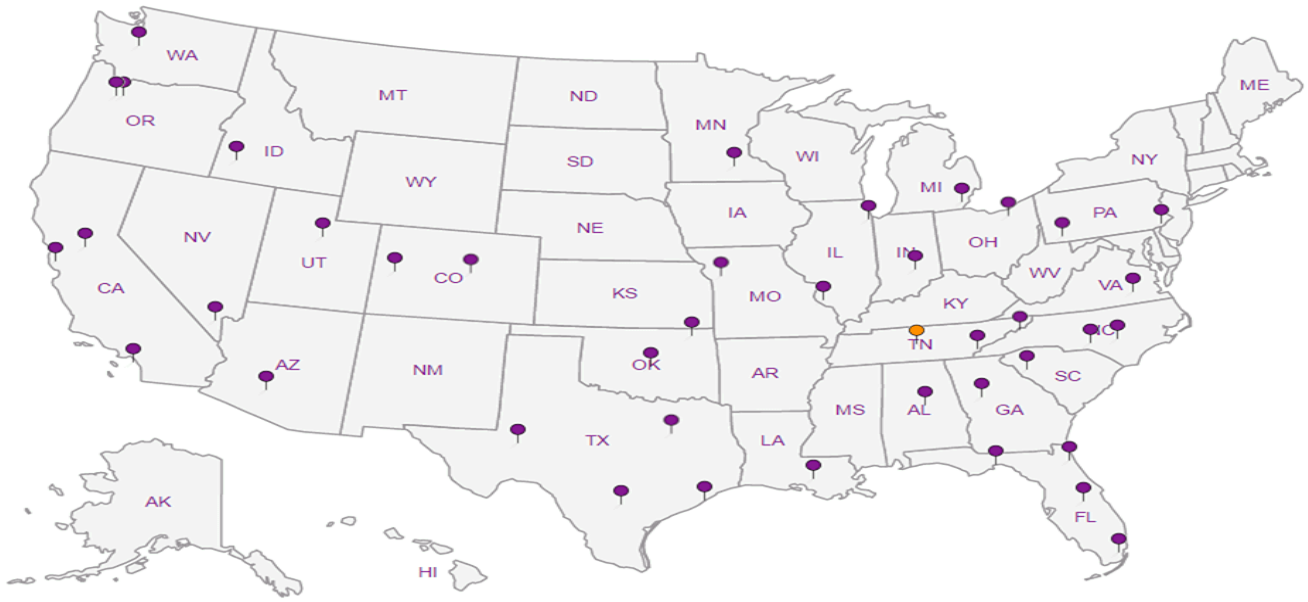
Third Party Federal Accreditations

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	11209885/02	L1282813	11/12/20 16:59	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.co

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

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: 432-250-7917

Client Project # 11209885/02

Lab Project # PLAINSGHD-11209885

Collected by (print): Heath Boyd

Site/Facility ID # SRS DARR ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y C

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: L1282813

J127

Table:

Acctnum: PLAINSGHD

Template: T167385

Prelogin: P805674

PM: 134 - Mark W. Beasley

PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 40mlAmb-HCl	PAHSIMLVI 40mlAmb-NoPres-WT	Remarks	Sample # (lab only)
MW-6	Grab	GW	DTW	11/5/20	1115	3	X			-01
Dup-02	Grab	GW	DTW	11/5/20	—	3	X			-02
		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 # 9050 0894 0808

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: 11/5/20	Time: 1630	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 2.2 °C Bottles Received: 6
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) K. Hollenbeck	Date: 11/6/20 Time: 9:52

If preservation required by Login: Date/Time

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.

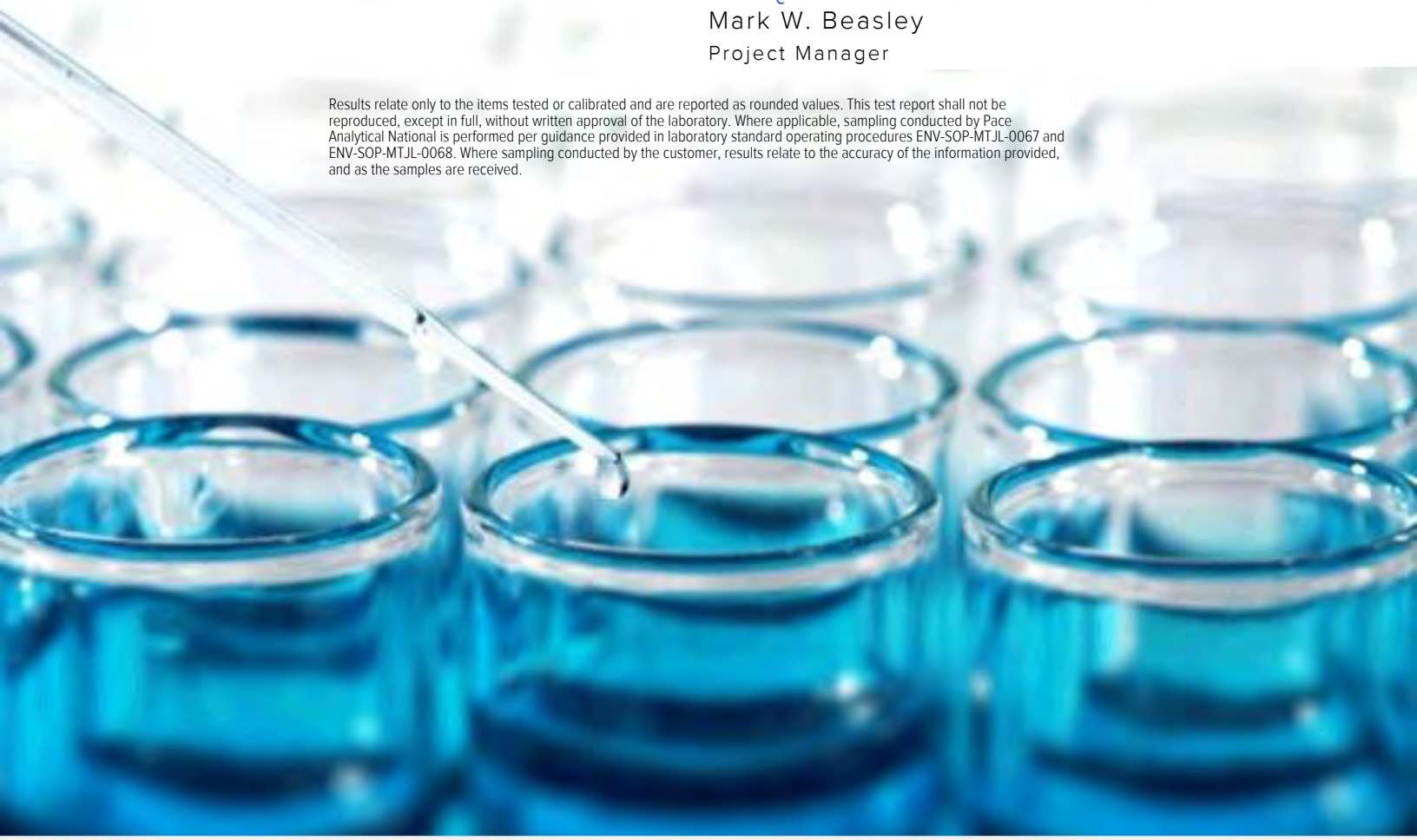


TABLE OF CONTENTS

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

Revised May 2010

Laboratory Review Checklist: Reportable 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]
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: Exception 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

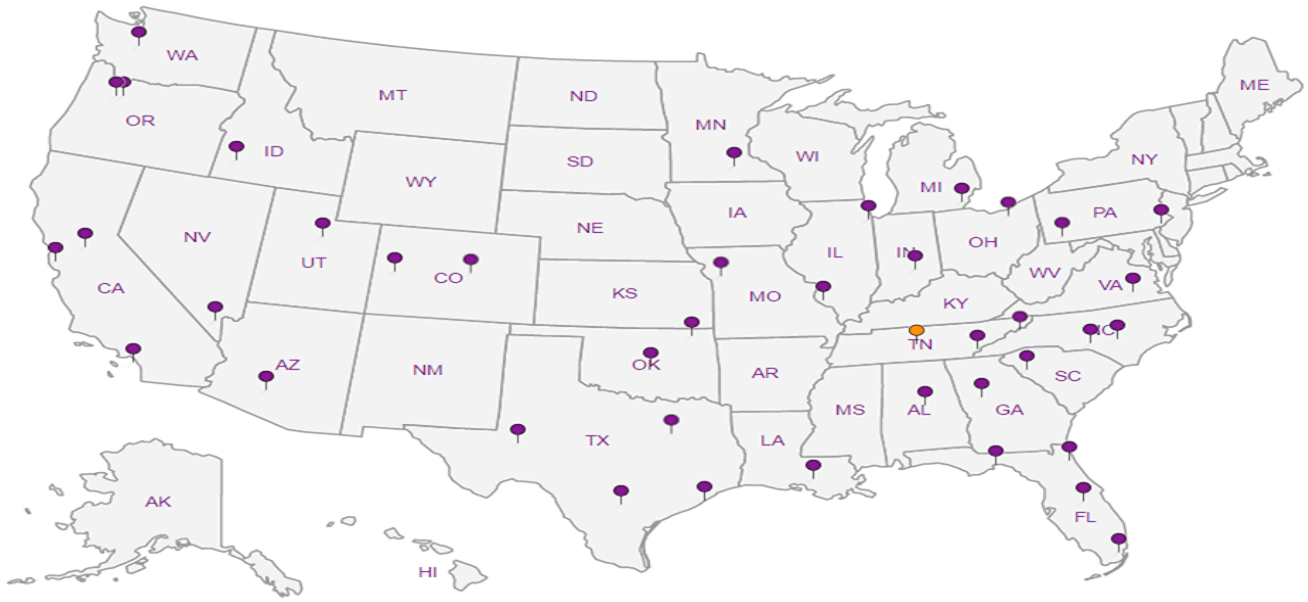
Third Party Federal Accreditations

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

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

Quote #

Date Results Needed

Immediately Packed on Ice N X Y ___

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

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 # 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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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 22846

CONDITIONS

Operator:	OGRID:
PLAINS MARKETING L.P. 333 Clay St, Ste 1600 Houston, TX 77002	34053
	Action Number: 22846
	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 quarterly groundwater gauging and sampling according to the schedule approved by the NMOCD 2. Sample monitor wells MW-2 (if there is sufficient water), MW-11R, MW-16R, MW-21R, MW-24, and MW-25 for PAH during the fourth quarter of 2021. Additionally, any wells that cease to have LNAPL will be sampled for PAH compounds 3. Terminate sampling from monitor wells MW-4, MW-6, MW-7, MW-12R, MW-17R, MW-18R, MW-19R, MW-20R, MW-22 and recovery well RW-12 for PAH 4. Continue remediation of the soil profile and groundwater by operating the trailer mounted automated remediation system on targeted wells 5. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022.	1/11/2022