2020 Annual Groundwater Monitoring Report

Plains All American Pipeline, L.P.
DCP Plant to Lea Station 6-Inch Section 31
Plains All American Pipeline, L.P. SRS No. 2009-084
Lea County, New Mexico
NMOCD Reference No. 1RP-2166
NMOCD Incident No. nAPP2109734163

APPROVED
By Nelson Velez at 10:34 am, Jan 11, 2022

Review of 2020 ANNUAL GROUNDWATER MONITORING REPORT:
Content satisfactory
Contractor anticipated actions approved by OCD and are as follows;
1. Continue manual PSH recovery from monitoring well MW-1
2. Continue gauging, purging, and sampling quarterly from monitoring well MW-2 through MW-6 for the presence of PSH and BTEX in 2021 and PAHs in the 4th quarter of 2021
3. OCD approves Plains' request to reduce the sampling frequency of monitor wells MW-3 and MW-6 from a quarterly to semi-annual basis
4. Submit annual report to OCD no later than March 31,2022.

Terracon Project No. AR207009
April 7, 2021

Prepared for:

Plains All American Pipeline, L.P.
1106 Griffith Drive
Midland, Texas 79706

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

Terracon

April 7, 2021

Plains All American Pipeline, LP
1106 Griffith Drive
Midland, Texas 79706

Attn: Mrs. Camille Bryant
Telephone: (432) 221-7924
Email: CJBryant@paalp.com

Re: 2020 Annual Groundwater Monitoring Report
DCP Plant to Lea Station 6-Inch Section 31
U/L "K", Sec. 31, T20S, R37E
Lea County, New Mexico
NMOCD Reference No. 1RP-2166
NMOCD Incident No. nAPP2109734163
Plains All American Pipeline, L.P. SRS N0. 2009-084
Terracon Project No. AR207009

Dear Mrs. Bryant:

Terracon is pleased to submit one electronic copy and one CD attached to the cover page of the 2020 Annual Groundwater Monitoring Report for the above-referenced site.

We appreciate the opportunity to perform these services for Plains All American Pipeline, L.P. Please contact either of the undersigned at (806) 300-0140 if you have questions regarding the information provided in the report.

Sincerely,
Terracon

Prepared by:

Brett Dennis
Staff Scientist
Lubbock

Reviewed by:

Erin Loyd, P.G.
Principal
Office Manager – Lubbock

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Certified Xenco Laboratories Analytical Reports:
- 1Q20 Groundwater Report 650194
- 2Q20 Groundwater Report 665692
- 3Q20 Groundwater Report 673153
- 4Q20 Groundwater Report 681863

Certified Pace National Analytical Reports:
- 1Q20 Air Reports L1205597
- 2Q20 Air Reports L1214003, L1223105, L1234657
- 3Q20 Air Reports L1244722, L1252526, & L1267312
- 4Q20 Air Reports L1279579 & L1301754

Appendix D:

Standard of Care, Limitations and Reliance Policies

1.0 INTRODUCTION

1.1 Site Description

The legal description of the DCP Plant to Lea Station 6-Inch Section 31 release site is Unit Letter "K" (NE/SW), Section 31, Township 20 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by The State of New Mexico and administered by the New Mexico State Land Office (NMSLO). The geographic coordinates of the release site are 32.527330º North latitude and 103.29060º West longitude. A "Topographic Map" depicting the site's location is provided as Exhibit 1 in Appendix A.

Site Name	DCP Plant to Lea Station 6-Inch Section 31
Site Location	Latitude 32.527330º North, Longitude 103.29060º West
General Site Description	The site consists of six groundwater monitoring wells located in, and adjacent to, a pipeline right-of-way surrounded by native pasture land.
Landowner	State of New Mexico

1.2 Background Information

Based on information provided by the client, on April 2, 2009, Plains All American Pipeline, L.P. (Plains) discovered a crude oil release from a 6-inch steel pipeline. During initial response activities, Plains installed a temporary clamp on the pipeline to mitigate the release. The crude oil release resulted in a surface stain measuring approximately 6 feet (ft.) in width by 8 ft. in length. Plains initially classified the release as "non-reportable". Upon further investigation, Plains reclassified the release to "reportable" status and notified the New Mexico Oil Conservation Division (NMOCD) Hobbs District 1 Office and submitted a *Release Notification and Corrective Action* (Form C-141) on April 29, 2009. The cause of the release was attributed to external corrosion of the pipeline. The C-141 indicated approximately 20 barrels (bbls) of crude oil were released from the pipeline, with no recovery.

On April 15, 2009, soil boring (SB-1) was advanced to a maximum depth of approximately 10 ft., west of the release point to evaluate the vertical extent of soil impact. During advancement of the soil boring, groundwater was encountered at approximately 77 ft. below ground surface (bgs). Temporary casing was installed in the boring to obtain a preliminary groundwater sample. On April 16, 2009, a groundwater sample (SB-1) was collected from the temporary casing and submitted for laboratory analysis of total dissolved solids (TDS), chlorides, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Following the collection of the groundwater sample, the temporary casing was removed from the soil boring and the soil boring was plugged with cement

and bentonite, as required by the New Mexico Office of the State Engineer (NMOSE). Laboratory analytical results indicated a benzene concentration of 1.915 milligrams per liter (mg/L), a BTEX concentration of 4.7711 mg/L, a chloride concentration of 54.6 mg/L, and a TDS concentration of 788 mg/L. Based on the analytical results of the submitted groundwater sample, Plains notified NMOCD representatives in the Hobbs District Office and the Santa Fe Office of the laboratory-confirmed impact to groundwater at the site.

On June 2, 2009, subsequent excavation of crude oil impacted soil began at the site. Approximately 1,400 cubic yards (cy) were excavated and stockpiled on a plastic liner to mitigate the potential leaching of the contaminants into the vadose zone. The final dimensions of the excavation were approximately 77 ft. in width, approximately 80 ft. in length, and 15 ft. in depth.

On September 21 through September 23, 2009, four monitoring wells (MW-1, MW-2, MW-3, and MW-4), were drilled, completed, and developed to further evaluate the status of the groundwater at the site with NMOCD approval. Soil samples were collected at 5-foot drilling intervals and field screened using a photo-ionization detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX and total petroleum hydrocarbons (TPH) using EPA Methods SW-846 8021b and SW-846 8015M, respectively.

Monitoring well MW-1 was installed on the floor of the excavation, at approximately 15 ft. bgs, to a total depth of approximately 86 ft. bgs. Soil samples collected at 25 ft. bgs, 35 ft. bgs, 45 ft. bgs, 55 ft. bgs, 65 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for all of the submitted soil samples. BTEX concentrations ranged from 0.0359 milligrams per kilogram (mg/kg) for the soil sample collected at 25 ft. bgs to 13.444 mg/kg for the soil sample collected at 55 ft. bgs. The TPH concentrations ranged from 286 mg/kg for the soil sample collected at 25 ft. bgs to 1,538 mg/kg for the soil sample collected at 55 ft. bgs.

Monitoring well MW-2 is located approximately 75 ft. northwest (up-gradient) of the release point. The well was installed to a total depth of approximately 90 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, 60 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

Monitoring well MW-3 is located approximately 75 ft. to the southwest (cross-gradient) of the release point. The monitoring well was installed to a total depth of approximately 90 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs to 0.0025 mg/kg for the soil sample collected at 60 ft. bgs. Analytical results indicated BTEX concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at 15 ft. bgs, 30 ft. bgs, and 45 ft. bgs to 0.0052 mg/kg for the soil

sample collected at 60 ft. bgs. TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.
Monitoring well MW-4 is located approximately 75 ft. to the southeast (down-gradient) of the release point. The monitoring well was installed to a total depth of approximately 89 ft. bgs. Soil samples collected at 15 ft. bgs, 30 ft. bgs, 45 ft. bgs, and 60 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

On January 25, 2011, monitoring well MW-5 was installed to further monitor the down-gradient migration of the phase separated hydrocarbons (PSH) plume. Monitoring well MW-5 is located approximately 60 ft. to the southeast (down-gradient) of the release point. The well was installed to a total depth of approximately 95 ft. bgs. Soil samples collected at 15 ft. bgs, 25 ft. bgs, 45 ft. bgs, 65 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitoring well MW-5.

On September 11, 2013, monitoring well MW-6 was installed to further monitor the down-gradient migration of the PSH plume. Monitoring well MW-6 is located approximately 95 ft. to the east (cross-gradient) of the release point. The well was installed to a total depth of approximately 100 ft. bgs. Soil samples collected at 5 ft. bgs, 40 ft. bgs, and 75 ft. bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitoring well MW-6.

On October 18, 2016, Terracon assumed project management responsibilities and oversight of groundwater monitoring activities at the DCP Plant to Lea Station 6-Inch Section 31 project site. There are a total of six monitoring wells (MW-1 through MW-6) located at the site. Monitoring wells MW-2 through MW-6 are gauged and sampled on a quarterly schedule and monitoring well MW-1 is currently not sampled due to the presence of PSH. A “Site Diagram” depicting monitoring well locations is provided as Exhibit 2 in Appendix A.

On March 6, 2020, a soil vapor extraction (SVE) unit was installed on monitor well MW-1. Previously a mobile dual phase extraction (MDPE) unit was utilized for the extraction of soil vapor. Monthly effluent air samples are collected from the SVE unit to ensure compliance with New Mexico Environment Department (NMED) Air Quality Bureau Action Levels. Results of effluent sample analysis is summarized in Table 3 of Appendix B.

During May of 2020, due to COVID-19, manual recovery events were reduced from a frequency of once per week to once per month.

1.3 Scope of Work

Terracon's scope of work includes project management responsibilities, oversight of groundwater monitoring activities, and preparation of an *Annual Groundwater Monitoring Report* in accordance with the NMOCD letter, dated May 1998, requiring submittal of and *Annual Groundwater Monitoring* Report by April 1st of each year. Groundwater monitoring activities include conducting quarterly events at the site. Quarterly monitoring events include measuring the static water levels in the monitoring wells, checking for the presence of PSH, and the collection of groundwater samples from each of the on-site wells not exhibiting a measurable thickness of PSH. In accordance with the approved scope of work, Terracon conducted the quarterly groundwater monitoring events on January 23, June 24, September 21, and December 18, 2020.

2.0 GROUNDWATER REMEDIATION PROGRAM

2.1 Groundwater Monitoring

Quarterly groundwater monitoring events were conducted on January 23 (1Q2020), June 24 (2Q2020), September 21 (3Q2020), and December 18, 2020 (4Q2020). Quarterly groundwater monitoring events included measuring the static water level in the on-site monitoring wells, checking for the presence of PSH, purging, and the collection of groundwater samples from each of the on-site wells not exhibiting a measurable thickness of PSH.

Groundwater samples were collected utilizing low-flow sampling equipment, including a bladder pump and multi-parameter meter. Prior to sample collection, readings on the multi-parameter meter were recorded for a minimum of four cycles of five minutes each. Each collected sample was placed in laboratory-supplied containers appropriate to the analyses requested and placed on ice in a cooler. The sample coolers and completed chain-of-custody forms were delivered to Xenco Laboratories in Lubbock, Texas for analysis of benzene, toluene, ethylbenzene, and total (BTEX). Purged water was placed into a polystyrene aboveground storage tank (AST) and disposed of at an NMOCD-approved disposal facility.

Based on sampling criteria provided by the NMOCD, groundwater samples collected from the on-site monitor wells were not subject to analysis of polynuclear aromatic hydrocarbons (PAHs). PAH sample requirements were met, as two years of sampling was performed on monitoring well MW-2 through MW-5. However, PAH was inadvertently analyzed during the 4th quarter monitoring event. There were no detections of PAHs above laboratory sample detection limits. Therefore, to adhere to the requirement of two consecutive years of PAH concentrations below action levels monitor wells MW-2 through MW-5 will be analyzed for PAHs during the 4th quarter of 2021. PAH sampling will be completed on monitoring well MW-1 once it no longer contains PSH. Historical PAH data can be bound in Table 5 in Appendix B.

Groundwater elevation gauging data collected during the respective quarterly sampling events were used to construct groundwater gradient maps, which are included as Exhibits 3 through 6 in Appendix A. Groundwater flow direction was relatively consistent during each quarter of 2020 in the southeasterly direction. Groundwater elevation and PSH thickness data is summarized in Table 1 in Appendix B.

3.0 LABORATORY ANALYTICAL METHODS

The groundwater samples collected from the on-site monitoring wells were analyzed for BTEX using EPA SW-846 Method 8021B. Laboratory results from the analysis of groundwater samples collected from the monitor wells are summarized in Table 2 in Appendix B and presented on Exhibits 7 through 10 in Appendix A. Copies of the certified laboratory reports and chain-of-custody documentation are provided in Appendix C.

4.0 GROUNDWATER DATA EVALUATION

4.1 Groundwater Sample Results

Laboratory analytical results from groundwater samples collected during each quarterly monitoring event were compared to NMOCD regulatory standards based on New Mexico Water Quality Control Commission (NMWQCC) groundwater standards found in Section 20.6.2.3103 of the New Mexico Administrative Code (NMAC).

4.1.1 Monitoring Well MW-1

- Monitoring well MW-1 was not sampled due to the presence of PSH. PSH thicknesses of 0.50 ft (1Q2020), 0.13 ft. (2Q20), 1.64 ft (3Q2020), 1.50 ft (4Q2020) were observed during the quarterly monitoring events.

4.1.2 Monitoring Well MW-4

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory sample detection limit (SDL) during the 1st and 4th quarter monitoring events. During both the 2nd and 3rd quarter, benzene was detected above the laboratory SDL but below both the method quantitation limit and NMOCD Action Levels.

4.1.3 Monitoring Wells MW-2, MW-3, MW-5, and MW-6

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDL during each quarterly monitoring event.

5.0 CORRECTIVE ACTION

5.1 Product Recovery

An estimated 1.66 gallons of PSH were recovered from monitoring well MW-1 by manual recovery in 2020. During the last recovery event, the PSH thickness in monitoring well MW-1 measured 1.45 ft. An estimated 42.0 gallons (1.0 bbls) of hydrocarbon impacted groundwater were recovered manually from monitoring well MW-1 for 2020. Since recovery operations began in 2009, an estimated 5,767.93 gallons (137.3 bbls) of PSH have been manually recovered from monitoring well MW-1.

In September 2012, a Mobile Dual-Phase Extraction (MDPE) unit was installed on monitoring well MW-1 by Talon LPE. The MDPE unit was shared with the nearby release site known as DCP Plant to Lea Station 6-Inch #2 (NMOCD Reference #1RP-2136), and the location of the unit was alternated periodically until a Soil Vapor Extraction (SVE) unit was placed on the previously mentioned site on July 19, 2017.

On March 6, 2020, an SVE unit was installed on monitor well MW-1. Monthly effluent air samples are collected from the SVE unit to ensure compliance with New Mexico Environment Department (NMED) Air Quality Bureau (AQB) Action Levels.

During the 2020 reporting period, an average of 5.980 gallons per day of PSH in the vapor phase. The effluent sample collected on June 29, 2020 exhibited concentrations of TPH exceeding NMED AQB Action Level of 10 tons per year. The calculated value of TPH in the previously mentioned sample resulted in 13.55 tons per year. In response, Terracon mobilized to the site and adjusted a dilution valve on the SVE unit to ensure compliance in the future. The emission calculations since installation averaged 6.47 tons per year of TPH. Monitoring well MW-1 SVE air emissions analytical results for BTEX and TPH is summarized in Table 3 of Appendix B.

6.0 SUMMARY OF FINDINGS

The findings of the 2020 Quarterly groundwater monitoring activities are as follows:

- Currently, there are six groundwater monitoring wells (MW-1 through MW-6) located at the site.
- Monitoring well MW-1 was not sampled during each quarterly monitoring event due to the presence of PSH.
- Monitoring well MW-2 through MW-6 were gauged, purged, and sampled during each quarterly monitoring event.
- Benzene, toluene, ethylbenzene and total xylene concentrations were below the respective laboratory SDLs or MQL in groundwater samples collected from monitoring

wells MW-2, MW-3, MW-4, MW-5, and MW-6 during each quarterly monitoring event. All samples collected during the 2020 reporting period were below NMOCD Action Levels

- The groundwater flow direction was relatively consistent to the southeast for each quarterly event. The groundwater gradient averaged 0.002 ft./ft.
- An estimated 1.66 gallons of PSH was recovered manually from monitoring well MW-1.
- From 2012 to 2019, the MDPE unit recovered an estimated cumulative total of 14,983.85 equivalent gallons (356.76 bbls) of PSH.

7.0 ANTICIPATED ACTIONS AND REQUESTS

- Manual PSH recovery will continue on monitoring well MW-1.
- Monitoring well MW-2 through MW-6 will continue to be gauged, purged, and sampled quarterly for the presence of PSH and BTEX in 2021 and PAHs in the 4th quarter of 2021.
- Plains requests to reduce the sampling frequency of monitor wells MW-3 and MW-6 from a quarterly to semi-annual basis. Due to the achievement of at least eight consecutive quarters of BTEX concentrations below laboratory SDLs and the cross-gradient position of monitor wells MW-3 and MW-6 to monitor well MW-1.
- An *Annual Groundwater Monitoring Report* will be prepared detailing field activities and the results of groundwater monitoring activities conducted during the 2020 reporting period.

8.0 DISTRIBUTION

Copy 1: Bradford Billings, Hydrologist, E Spec. A.
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
bradford.billings@state.nm.us

Copy 2: New Mexico Oil Conservation Division
District 1 Office
1625 N. French Drive
Hobbs, New Mexico 88240
emnrd-ocd-district1spills@state.nm.us

Copy 3: Ryan Mann, Remediation Specialist
New Mexico State Land Office
914 N. Linam Street
Hobbs, New Mexico 88240
rmann@slo.state.nm.us

Copy 4: Mrs. Camille Bryant
Plains All American Pipeline, L.P.
1106 Griffith Drive
Midland, Texas 79706
cjbryant@paalp.com

Copy 5: Mr. Jeff Dann
Plains All American Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
jpdann@paalp.c

APPENDIX A

Exhibit 1 – Topographic Map
Exhibit 2 – Site Diagram
Exhibit 3 – 1Q20 Groundwater Gradient Map (01/23/20)
Exhibit 4 – 2Q20 Groundwater Gradient Map (06/24/20)
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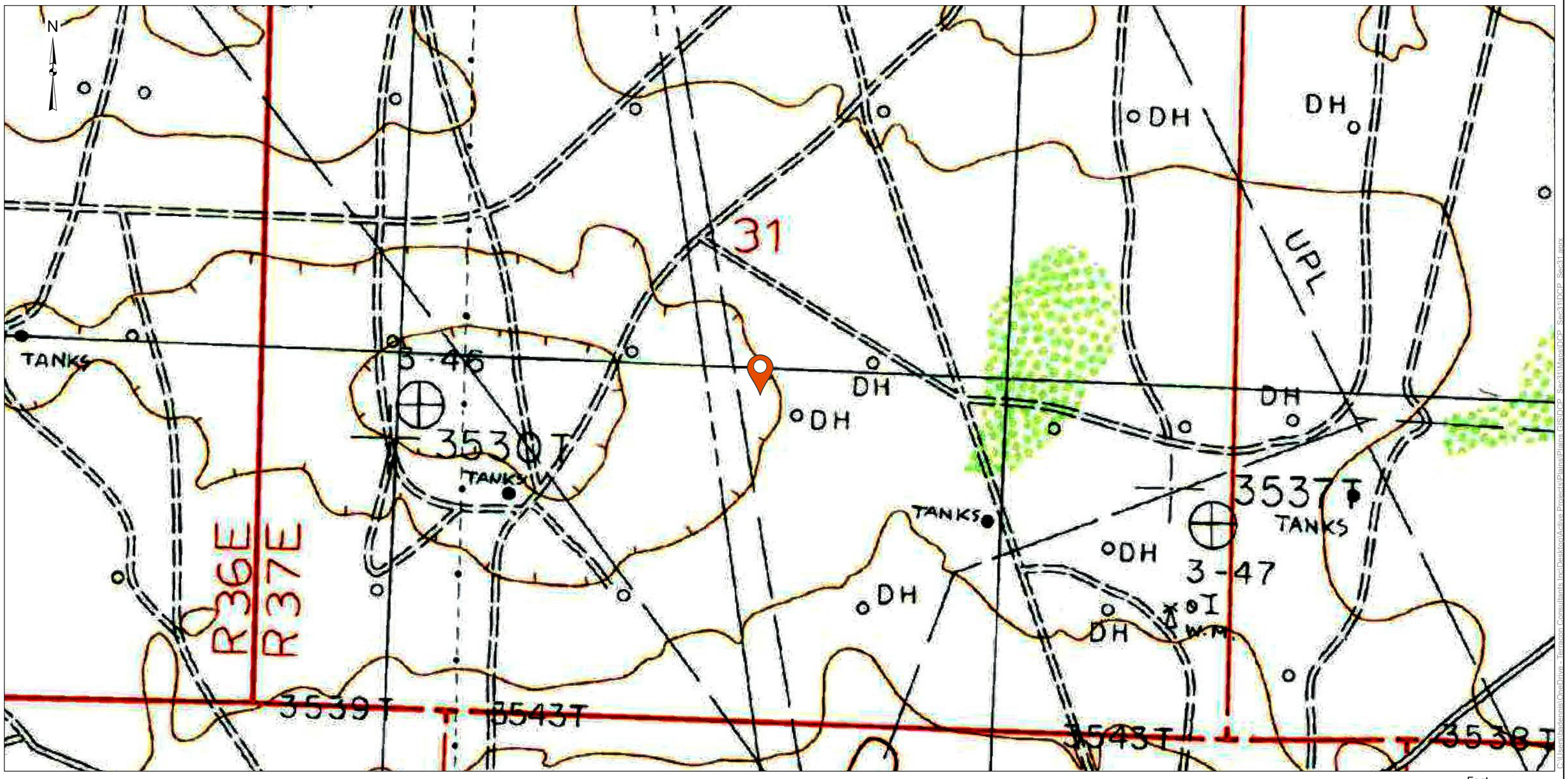
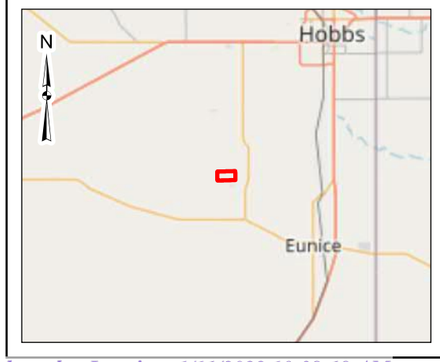




Legend:

Site Location

DATA SOURCES:
USGS Topoview - Monument South, NM 1985

Feet
0 400 800 1,600

Project No.:	AR207009
Date:	Jan 2021
Drawn By:	BAD
Reviewed By:	ELL

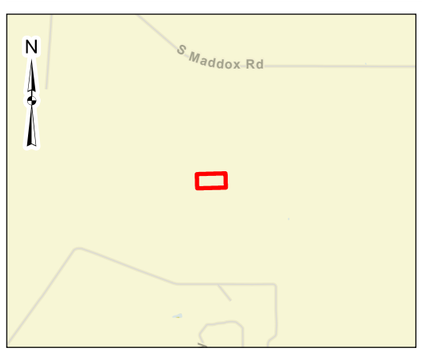
Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

Topographic Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Lea County, New Mexico
GPS: 32.527330, -103.290600

Exhibit

1



Legend:

- Monitor Well (MW)
- Recovery Well w/ Soil Vapor Extraction (SVE) Unit

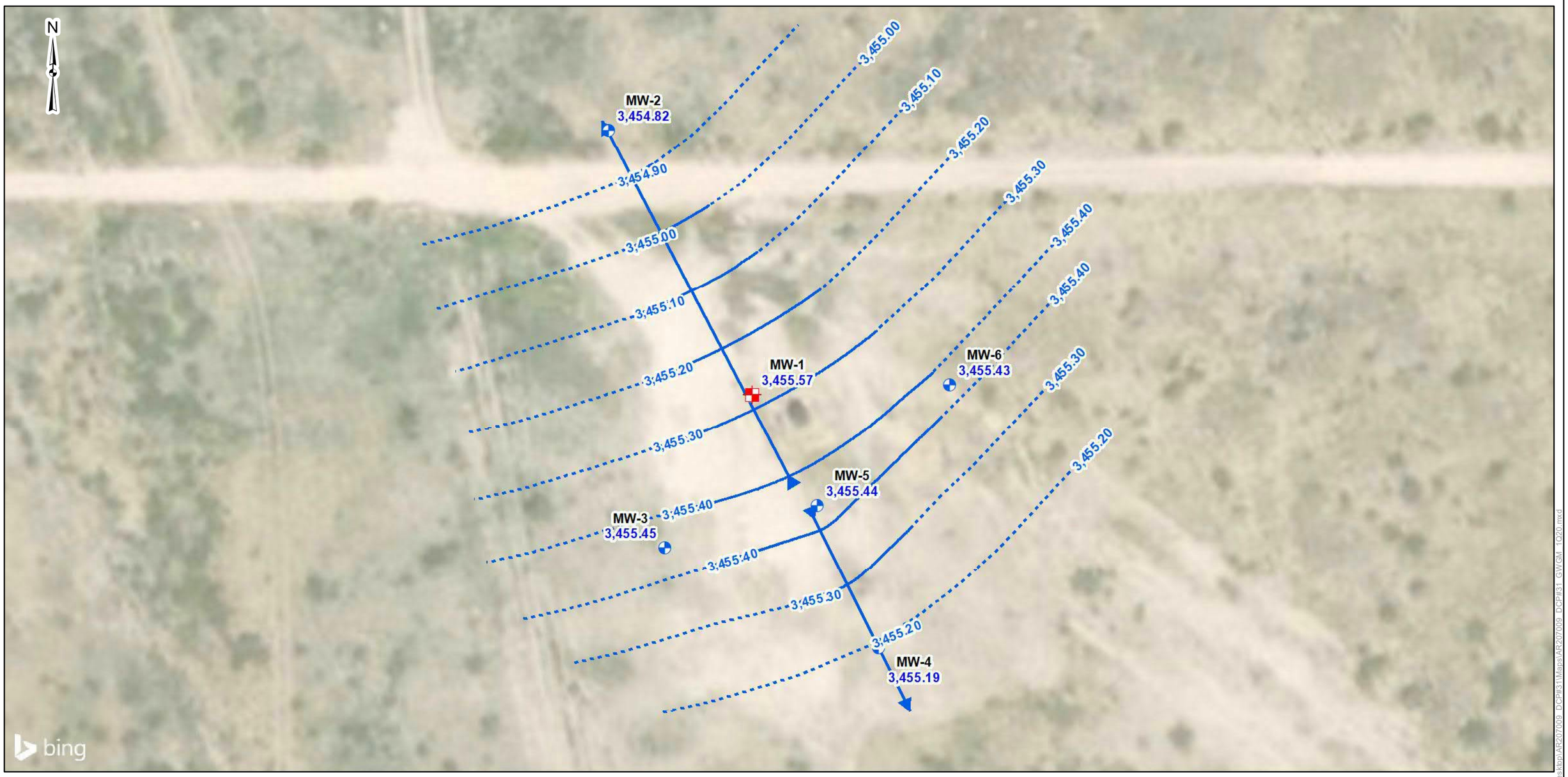
DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

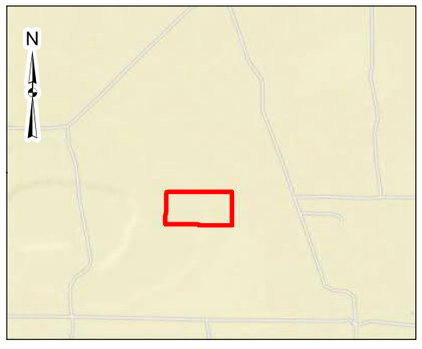
Feet
0 40 80 160

Project No.:	AR207009
Date:	Jan 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

Site Diagram	Exhibit
DCP Plant to Lea Station 6" Sec. 31 Plains SRS # 2009-084 NMOCD Ref. # 1RP-2166 Lea County, New Mexico GPS: 32.527330, -103.290600	2





Groundwater Monitoring Site

- Recovery Well w/ Mobile Dual Phase Extraction (MDPE) Unit
- Monitoring Well (MW)
- Groundwater Contours
- Inferred Groundwater Contour
- Groundwater Flow Direction

Notes:
- All groundwater elevations are measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kriging algorithm.
- MW-1 not honored in interpolation.
- Groundwater contour interval: 0.10 ft.
- Groundwater gradient: 0.002 ft/ft

0 75 150 Feet

Fractional Scale: 1:550

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Project No.:	AR207009
Date:	Apr 2020
Drawn By:	KK
Reviewed By:	ELL

Terracon
5847 50th St. Lubbock, TX 79424
PH. (806) 300-0104 terracon.com

1Q20 Groundwater Gradient Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Plains Pipeline, LP
Lea County, New Mexico
GPS: 32.527330°, -103.290600°

Exhibit

3

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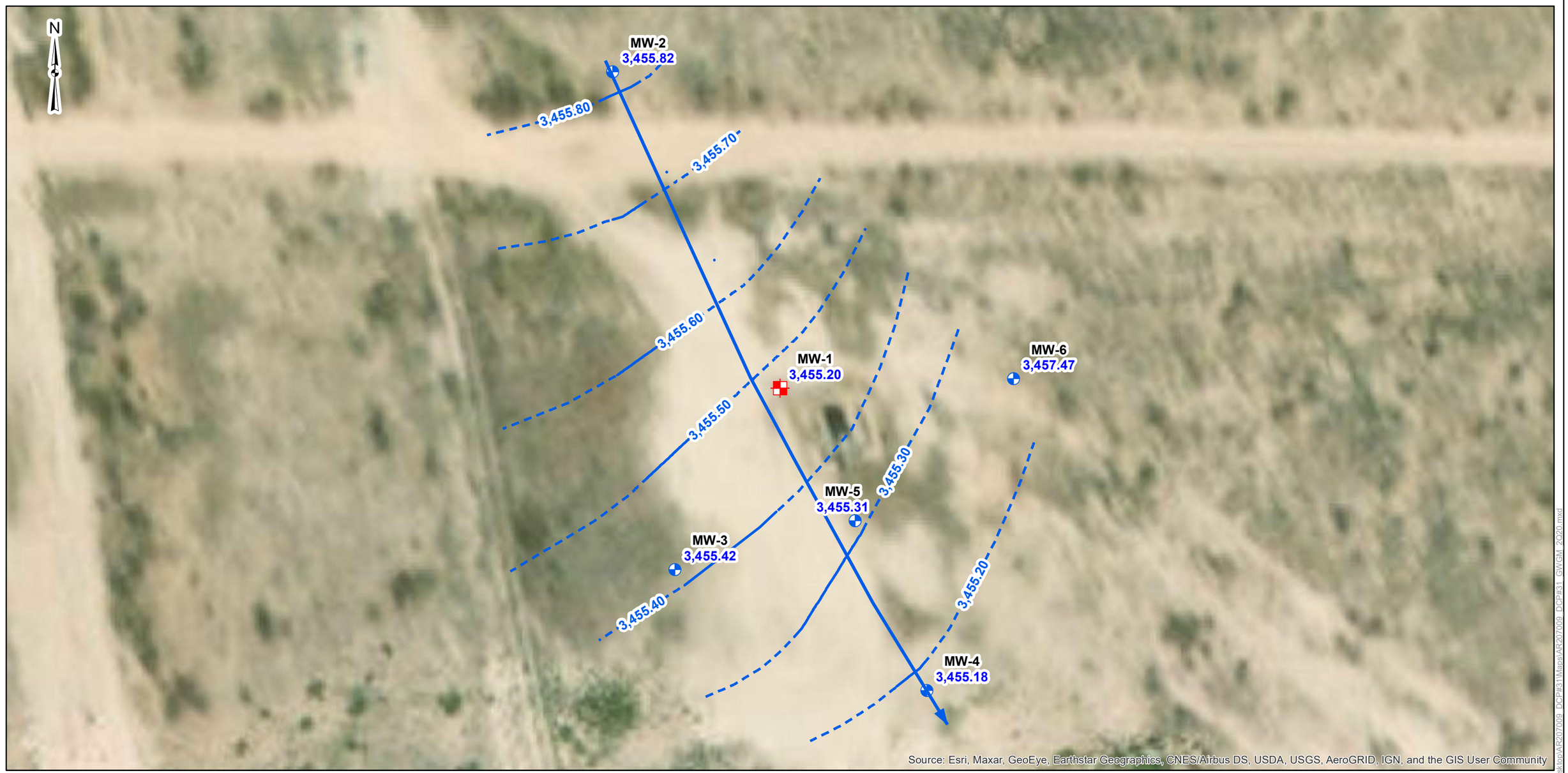

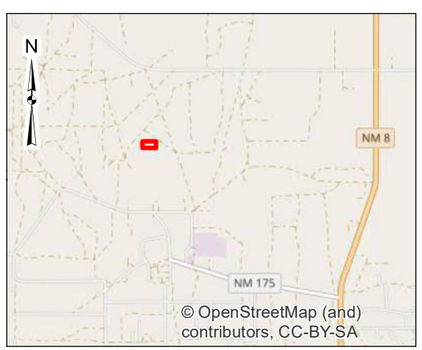

Groundwater Monitoring Site

- Recovery Well w/ Mobile Dual Phase Extraction (MDPE) Unit
- Monitoring Well (MW)
- Inferred Groundwater Contour
- Groundwater Contours
- Groundwater Flow Direction

Notes:
- All groundwater elevations are measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kriging algorithm.
- MW-1 and MW-6 not honored in interpolation.
- Groundwater contour interval: 0.10 ft.
- Groundwater gradient: 0.002 ft/ft

Feet
0 75 150

1:550

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Jul 2020
Drawn By:	KK
Reviewed By:	ELL

Terracon
5827 50th St. Suite 1 Lubbock, TX 79424
PH. (806) 300-0104 terracon.com

2Q20 Groundwater Gradient Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Plains Pipeline, LP
Lea County, New Mexico
GPS: 32.527330 , -103.290600

Exhibit

4

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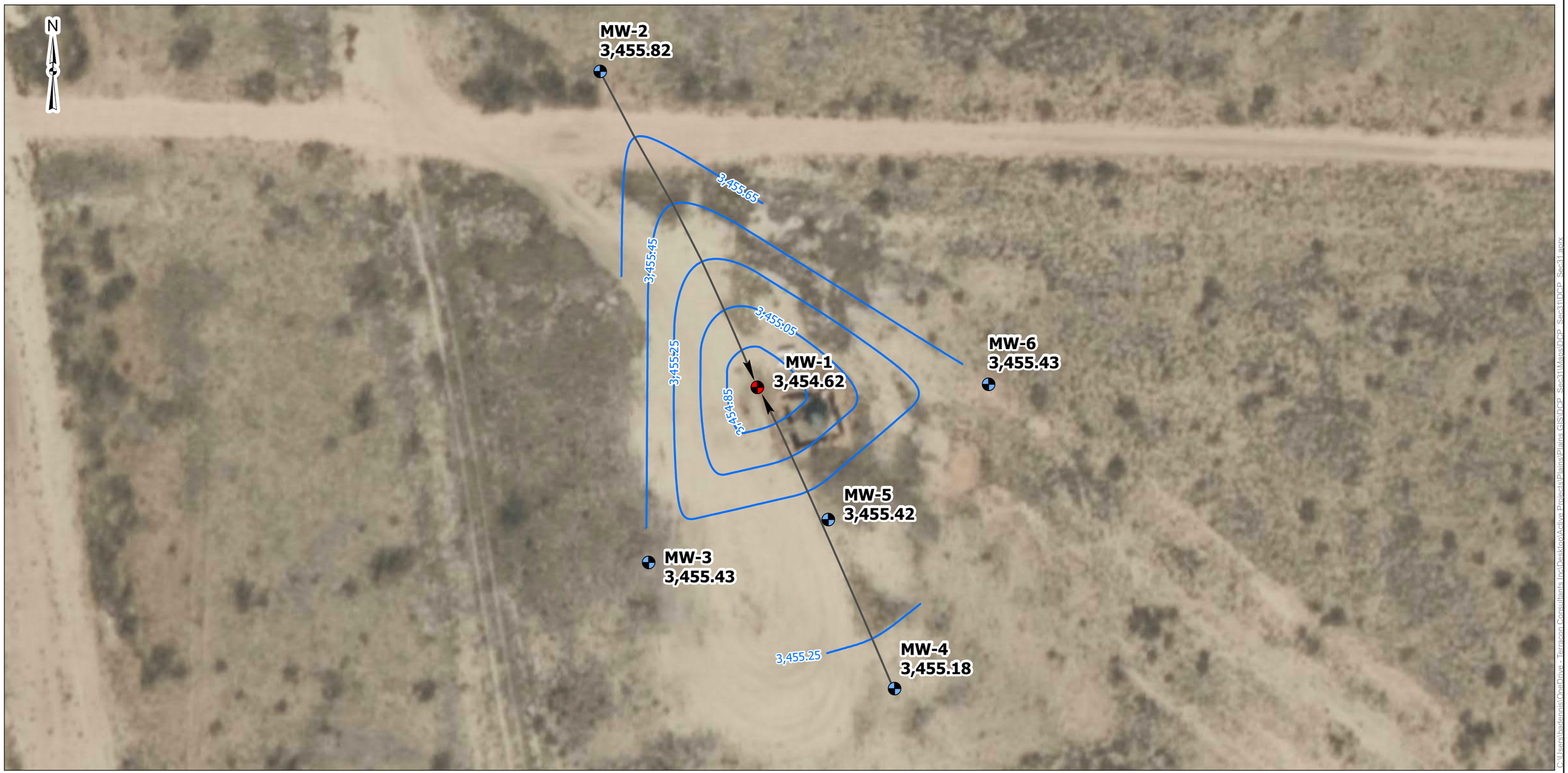

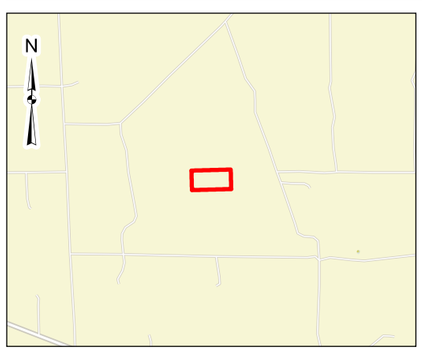

Legend:

- Monitor Well (MW)
- Recovery Well w/ Soil Vapor Extraction (SVE) Unit
- Groundwater Flow Direction
- Groundwater Contour

Notes:
- All groundwater elevations are measured in feet above mean sea level.
- Groundwater contours were interpolated using ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.20 ft.
- Groundwater gradient: 0.008 ft./ft.

Feet
0 25 50 100

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Jan 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

3Q20 Groundwater Gradient Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Lea County, New Mexico
GPS: 32.527330, -103.290600

Exhibit

5

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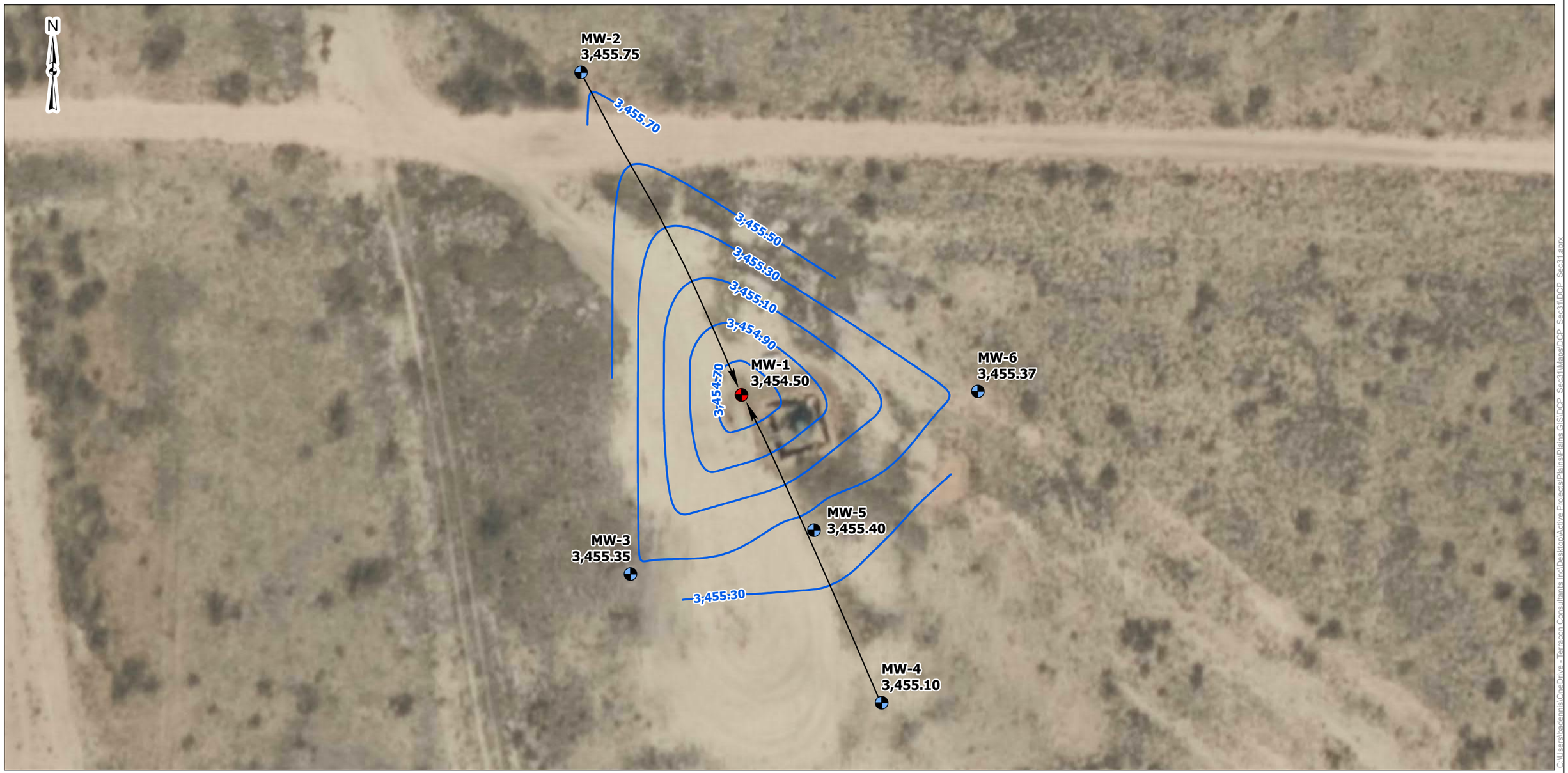

Legend:

- Monitor Well (MW)
- Recovery Well w/ Soil Vapor Extraction (SVE) Unit
- Groundwater Flow Direction
- Groundwater Contour

Notes:

- All groundwater elevations are measured in feet above mean sea level.
- Groundwater contours were interpolated using ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.20 ft.
- Groundwater gradient: 0.008 ft./ft.

Feet: 0 — 25 — 50 — 100

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Jan 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

4Q20 Groundwater Gradient Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Lea County, New Mexico
GPS: 32.527330, -103.290600

Exhibit

6

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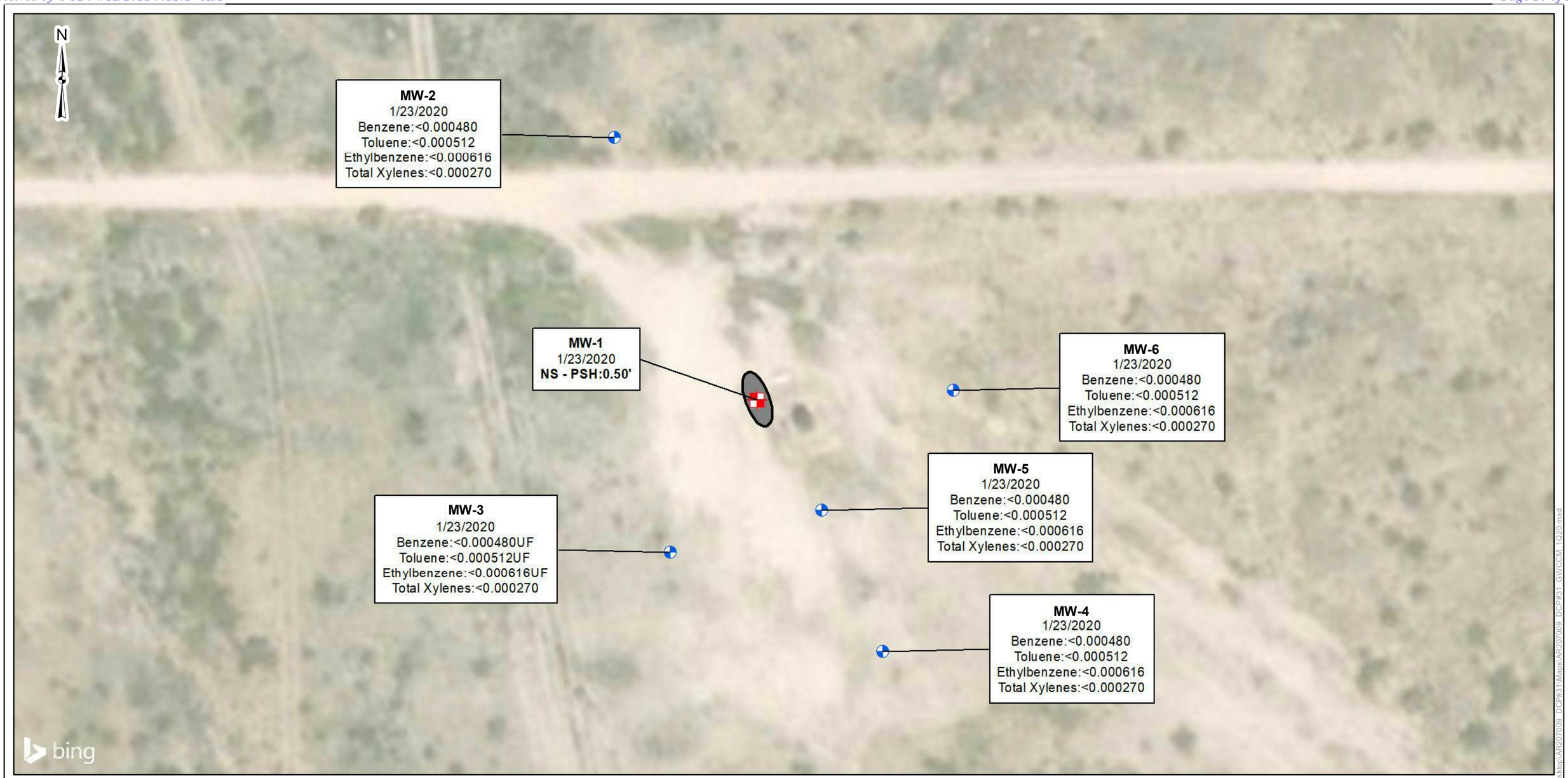

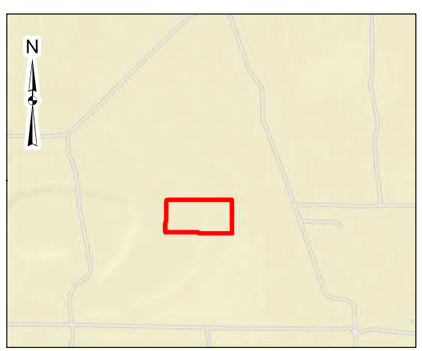

Groundwater Monitoring Site

Recovery Well w/ Mobile Dual Phase Extraction (MDPE) Unit

Monitoring Well (MW)

Free Phase Plume

New Mexico - Oil Conservation Division (NMOCD) Criteria:
B (Benzene) - 0.01 mg/L
T (Toluene) - 0.75 mg/L
E (Ethylbenzene) - 0.75 mg/L
X (Total Xylenes) - 0.62 mg/L
NS: Monitoring well was not sampled due to presence of PSH.
Bold concentrations indicates a concentration above the laboratory sample detection limit (SDL).
Highlighted concentrations indicate a concentration exceeding the NMOCD Delineation and Remediation Limits. PSH thicknesses are measured in tenths of feet.

0 75 150 Feet

Fractional Scale: 1:550

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Project No.:	AR207009
Date:	Apr 2020
Drawn By:	KK
Reviewed By:	ELL

Terracon
5847 50th St. Lubbock, TX 79424
PH. (806) 300-0104 terracon.com

1Q20 Groundwater Contaminant Concentration Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Plains Pipeline, LP
Lea County, New Mexico
GPS: 32.527330°, -103.290600°

Exhibit

7

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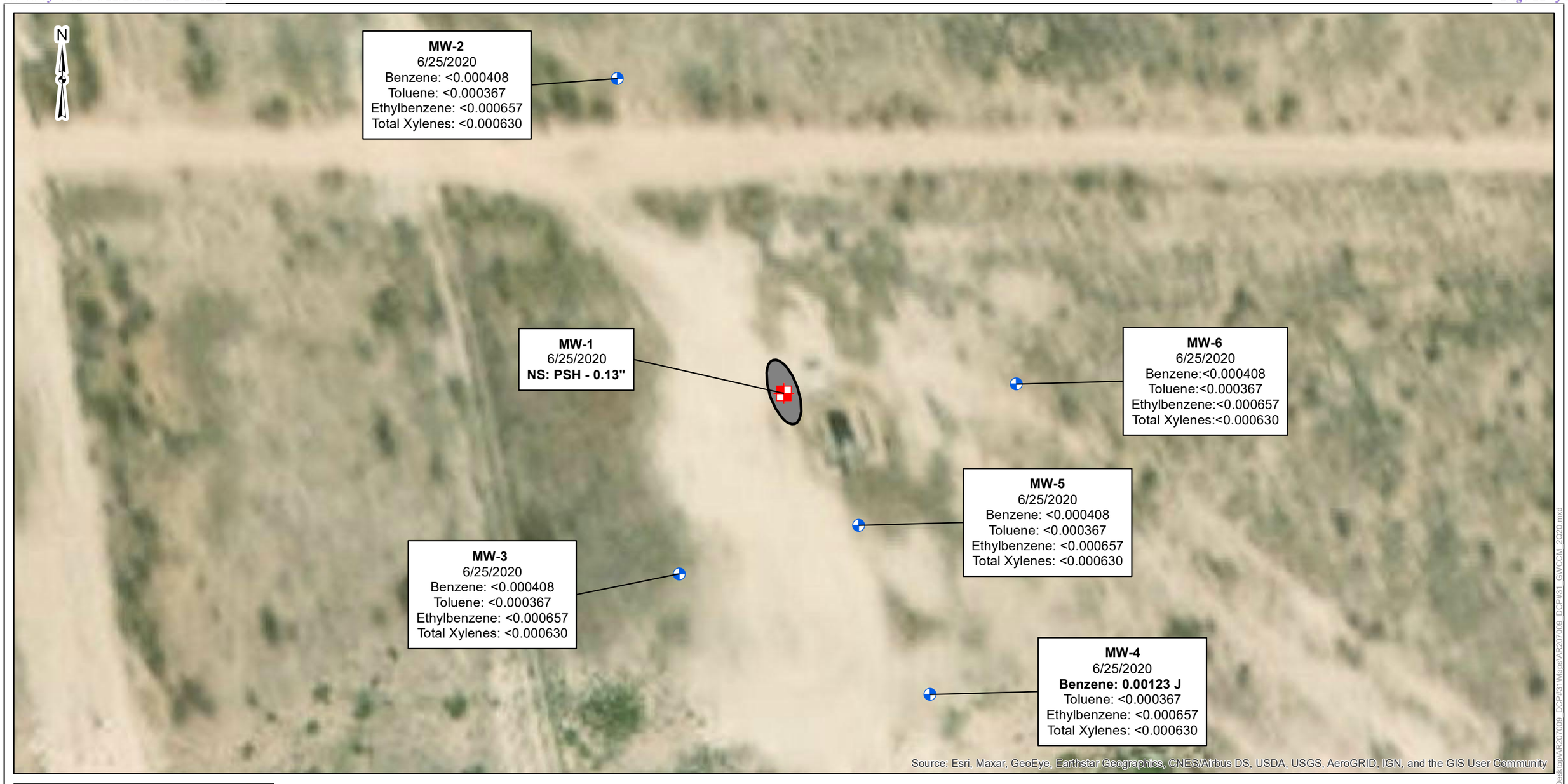


Groundwater Monitoring Site

Recovery Well w/ Mobile Dual Phase Extraction (MDPE) Unit

Monitoring Well (MW)

Free Phase Plume

New Mexico - Oil Conservation Division (NMOCD) Criteria:
B (Benzene) - 0.01 mg/L
T (Toluene) - 0.75 mg/L
E (Ethylbenzene) - 0.75 mg/L
X (Total Xylenes) - 0.62 mg/L
NS: Monitoring well was not sampled due to presence of PSH.
Bold concentrations indicates a concentration above the laboratory sample detection limit (SDL).
Highlighted concentrations indicate a concentration exceeding the RRC Delineation and Remediation Limits. PSH thicknesses are measured in tenths of feet.

Feet
0 75 150

1:550

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Jul 2020
Drawn By:	KK
Reviewed By:	ELL

Terracon
5827 50th St. Suite 1 Lubbock, TX 79424
PH. (806) 300-0104 terracon.com

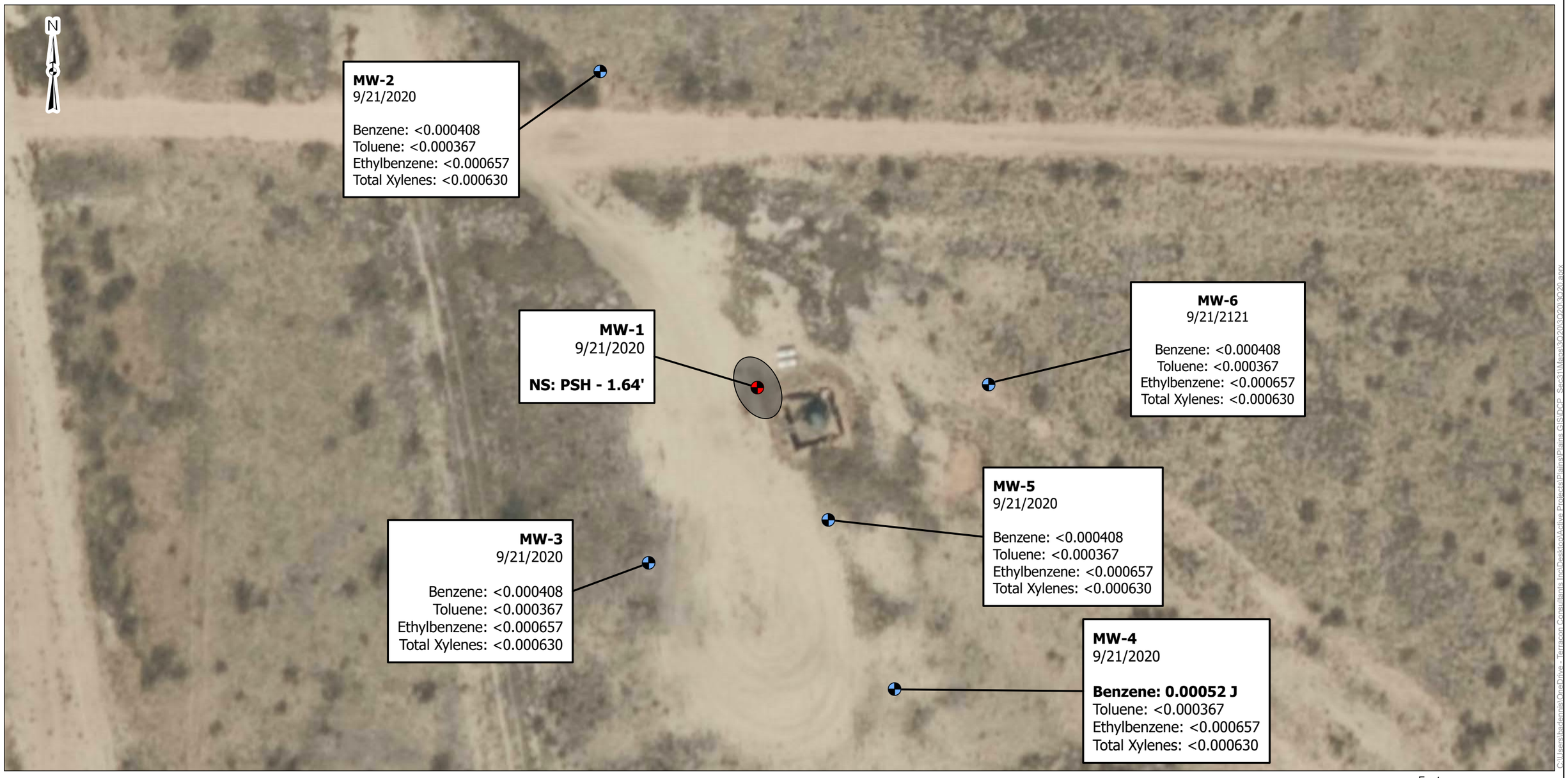
2Q20 Groundwater Contaminant Concentration Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Plains Pipeline, LP
Lea County, New Mexico
GPS: 32.527330 , -103.290600

Exhibit

8

C:\Users\kkamhoi2\OneDrive - Terracon Consultants Inc\Desktop\AR207009_DCP#31\Maps\AR207009_DCP#31_GWCCM_2020.mxd



Legend:

- Monitor Well (MW)
- Recovery Well w/ Soil Vapor Extraction (SVE) Unit
- Free Phase Plume

New Mexico- Oil Conservation Division (NMOCD) Criteria:
B (Benzene) - 0.01mg/L
T (Toluene) - 0.75mg/L
E (Ethylbenzene) - 0.75mg/L
X (Total Xylenes) - 0.62mg/L
NS: Monitoring well was not sampled due to presence of PSH.
Bold concentrations indicates a concentration above the laboratory sample detection limit (SDL).
Highlighted indicate a concentration exceeding the RRC Delineation and Remediation Limits.
PSH thicknesses are measured in tenths of feet.

Feet
0 25 50 100

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Oct 2020
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

3Q20 Groundwater Concentration Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Lea County, New Mexico
GPS: 32.527330, -103.290600

Exhibit

9

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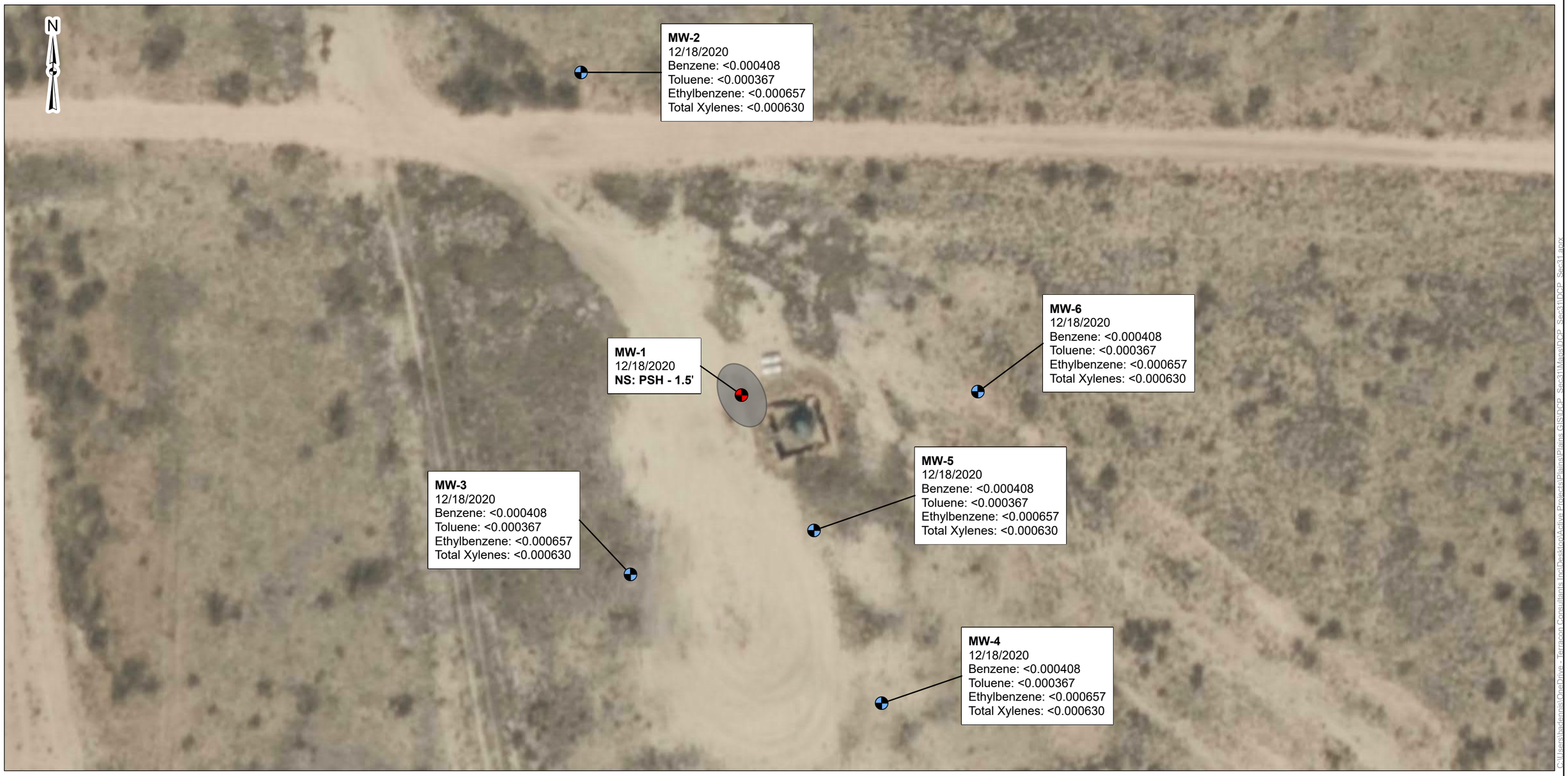

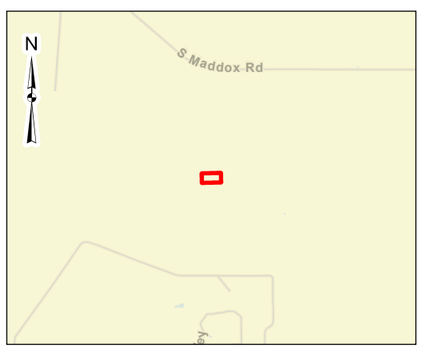

Legend:

- Monitor Well (MW)
- Recovery Well w/ Soil Vapor Extraction (SVE) Unit
- Free Phase Plume

New Mexico- Oil Conservation Division (NMOCD) Criteria:
B (Benzene) - 0.01mg/L
T (Toluene) - 0.75mg/L
E (Ethylbenzene) - 0.75mg/L
X (Total Xylenes) - 0.62mg/L
NS: Monitoring well was not sampled due to presence of PSH.
Bold concentrations indicates a concentration above the laboratory sample detection limit (SDL).
Highlighted indicates a concentration exceeding NMOCD Action Levels.
PSH thicknesses are measured in tenths of feet.

Feet
0 25 50 100

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207009
Date:	Jan 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
PH. (806) 300-0140 terracon.com

4Q20 Groundwater Contaminant Concentration Map

DCP Plant to Lea Station 6" Sec. 31
Plains SRS # 2009-084
NMOCD Ref. # 1RP-2166
Lea County, New Mexico
GPS: 32.527330, -103.290600

Exhibit

10

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APPENDIX B

Table 1 – Groundwater Elevation and PSH Thickness Summary
Table 2 – Groundwater BTEX Concentration Analytical Summary
Table 3 – Air Emission Analytical Summary - BTEX and TPH
Table 4 – MW-1 PSH Thickness & BTEX Recovery Summary
Table 5 – Historical Concentrations of PAH in Groundwater Summary

Table 1
Groundwater Elevation and PSH[1] Thickness Summary

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-084
Terracon Project#: AR207009
NMOCD[2] Reference #: 1RP-2166
All measurements are in feet above mean sea level

Monitoring Well (Well Diameter ")	Date Gauged	Top of Casing (TOC)[3] Elevation	Depth to PSH Below TOC (feet)	Depth to Water Below TOC (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation
MW-1 (4")	12/22/2016	3,539.59	83.05	86.01	2.96	3,456.10
	03/01/2017		83.39	84.91	1.52	3,455.97
	06/27/2017		83.28	85.65	2.37	3,455.95
	05/24/2018		83.65	84.58	0.93	3,455.80
	06/28/2018		83.67	84.68	1.01	3,455.77
	07/31/2018		83.77	84.42	0.65	3,455.72
	08/17/2018		83.73	84.56	0.83	3,455.74
	09/20/2018		83.77	84.38	0.61	3,455.73
	11/21/2018		83.82	84.19	0.37	3,455.71
	02/21/2019		83.76	84.42	0.66	3,455.73
	05/23/2019		83.93	84.09	0.16	3,455.64
	09/06/2019		-	84.20	-	-
	11/11/2019		84.11	84.16	0.05	3,455.47
	01/23/2020		83.95	84.45	0.50	3,455.57
	06/24/2020		84.37	84.50	0.13	3,455.20
	09/21/2020		84.72	86.36	1.64	3,454.62
	12/18/2020		84.87	86.37	1.50	3,454.50
MW-2 (2")	02/10/2016	3,539.37	-	83.10	-	3,456.27
	05/03/2016		-	83.10	-	3,456.27
	08/04/2016		-	83.08	-	3,456.29
	12/22/2016		-	83.21	-	3,456.16
	03/01/2017		-	83.17	-	3,456.20
	06/27/2017		-	83.28	-	3,456.09
	09/21/2017		-	83.16	-	3,456.21
	11/14/2017		-	83.31	-	3,456.06
	01/15/2018		-	83.31	-	3,456.06
	04/16/2018		-	83.22	-	3,456.15
	05/24/2018		-	83.40	-	3,455.97
	06/28/2018		-	83.29	-	3,456.08
	07/31/2018		-	83.26	-	3,456.11
	08/17/2018		-	83.33	-	3,456.04
	09/20/2018		-	83.32	-	3,456.05
	11/21/2018		-	83.34	-	3,456.03
	02/21/2019		-	83.35	-	3,456.02
	05/23/2019		-	83.44	-	3,455.93
	09/06/2019		-	83.83	-	3,455.54
	11/11/2019		-	83.49	-	3,455.88
	01/23/2020		-	84.55	-	3,454.82
	06/24/2020		-	83.55	-	3,455.82
	09/21/2020		-	83.55	-	3,455.82
	12/18/2020		-	83.62	-	3,455.75
MW-3 (2")	02/10/2016	3,539.28	-	83.48	-	3,455.80
	05/03/2016		-	83.45	-	3,455.83
	08/04/2016		-	83.44	-	3,455.84
	12/22/2016		-	83.51	-	3,455.77
	03/01/2017		-	83.49	-	3,455.79
	06/27/2017		-	83.61	-	3,455.67
	09/21/2017		-	83.51	-	3,455.77
	11/14/2017		-	83.62	-	3,455.66
	01/15/2018		-	83.69	-	3,455.59
	04/16/2018		-	83.62	-	3,455.66
	05/24/2018		-	83.70	-	3,455.58
	06/28/2018		-	83.63	-	3,455.65
	07/31/2018		-	83.66	-	3,455.62
	08/17/2018		-	83.69	-	3,455.59
	09/20/2018		-	83.72	-	3,455.56
	11/21/2018		-	83.73	-	3,455.55
	02/21/2019		-	83.69	-	3,455.59
	05/23/2019		-	83.78	-	3,455.50
	09/06/2019		-	83.86	-	3,455.42
	11/11/2019		-	83.89	-	3,455.39
	01/23/2020		-	83.83	-	3,455.45
	06/24/2020		-	83.86	-	3,455.42
	09/21/2020		-	83.85	-	3,455.43
	12/18/2020		-	83.93	-	3,455.35

Notes:
1. PSH: Phase Separated Hydrocarbons
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top of Casing

* Elevations based on the North American Vertical Datum of 1988.

** Corrected groundwater elevations were extrapolated using a PSH specific gravity of 0.85, if PSH was gauged in the monitoring well.

Table 1
Groundwater Elevation and PSH[1] Thickness Summary

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-084
Terracon Project#: AR207009
NMOCD[2] Reference #: 1RP-2166
All measurements are in feet above mean sea level

Monitoring Well (Well Diameter ")	Date Gauged	Top of Casing (TOC)[3] Elevation	Depth to PSH Below TOC (feet)	Depth to Water Below TOC (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation
MW-4 (2")	02/10/2016	3,540.07	-	84.50	-	3,455.57
	05/03/2016		-	84.47	-	3,455.60
	08/04/2016		-	84.48	-	3,455.59
	12/22/2016		-	84.54	-	3,455.53
	03/01/2017		-	84.53	-	3,455.54
	06/27/2017		-	84.63	-	3,455.44
	09/21/2017		-	84.54	-	3,455.53
	11/14/2017		-	84.71	-	3,455.36
	01/15/2018		-	84.71	-	3,455.36
	04/16/2018		-	84.64	-	3,455.43
	05/24/2018		-	84.73	-	3,455.34
	06/28/2018		-	84.65	-	3,455.42
	07/31/2018		-	84.71	-	3,455.36
	08/17/2018		-	84.74	-	3,455.33
	09/20/2018		-	84.76	-	3,455.31
	11/21/2018		-	84.74	-	3,455.33
	02/21/2019		-	84.72	-	3,455.35
	05/23/2019		-	84.82	-	3,455.25
	09/06/2019		-	84.89	-	3,455.18
	11/11/2019		-	84.84	-	3,455.23
	01/23/2020		-	84.88	-	3,455.19
	06/24/2020		-	84.89	-	3,455.18
	09/21/2020		-	84.89	-	3,455.18
	12/18/2020		-	84.97	-	3,455.10
MW-5 (4")	02/10/2016	3,539.90	-	84.14	-	3,455.76
	05/03/2016		-	84.10	-	3,455.80
	08/04/2016		-	84.12	-	3,455.78
	12/22/2016		-	84.18	-	3,455.72
	03/01/2017		-	84.16	-	3,455.74
	06/27/2017		-	84.28	-	3,455.62
	09/21/2017		-	84.16	-	3,455.74
	11/14/2017		-	85.40	-	3,454.50
	01/15/2018		-	84.32	-	3,455.58
	04/16/2018		-	84.28	-	3,455.62
	05/24/2018		-	84.37	-	3,455.53
	06/28/2018		-	84.29	-	3,455.61
	07/31/2018		-	84.30	-	3,455.60
	08/17/2018		-	84.31	-	3,455.59
	09/20/2018		-	84.54	-	3,455.36
	11/21/2018		-	84.28	-	3,455.62
	02/21/2019		-	84.35	-	3,455.55
	05/23/2019		-	84.45	-	3,455.45
	09/06/2019		-	84.51	-	3,455.39
	11/11/2019		-	84.49	-	3,455.41
	01/23/2020		-	84.46	-	3,455.44
	06/24/2020		-	84.59	-	3,455.31
	09/21/2020		-	84.48	-	3,455.42
	12/18/2020		-	84.50	-	3,455.40
MW-6 (2")	02/10/2016	3540.82	-	85.00	-	3,455.82
	05/03/2016		-	84.96	-	3,455.86
	08/04/2016		-	85.03	-	3,455.79
	12/22/2016		-	85.05	-	3,455.77
	03/01/2017		-	85.06	-	3,455.76
	06/27/2017		-	85.14	-	3,455.68
	09/21/2017		-	85.04	-	3,455.78
	11/14/2017		-	85.23	-	3,455.59
	01/15/2018		-	85.18	-	3,455.64
	04/16/2018		-	85.13	-	3,455.69
	05/24/2018		-	85.23		3,455.59
	06/28/2018		-	85.16	-	3,455.66
	07/31/2018		-	85.20	-	3,455.62
	08/17/2018		-	85.19	-	3,455.63
	09/20/2018		-	85.22	-	3,455.60
	11/21/2018		-	85.21	-	3,455.61
	02/21/2019		-	85.22	-	3,455.60
	05/23/2019		-	85.32	-	3,455.50
	09/06/2019		-	85.36	-	3,455.46
	11/11/2019		-	84.31	-	3,456.51
	01/23/2020		-	85.39	-	3,455.43
	06/24/2020		-	83.35	-	3,457.47
	09/21/2020		-	85.39	-	3,455.43
	12/18/2020		-	85.45	-	3,455.37

Notes:
1. PSH: Phase Separated Hydrocarbons
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top of Casing
* Elevations based on the North American Vertical Datum of 1988.
** Corrected groundwater elevations were extrapolated using a PSH specific gravity of 0.85, if PSH was gauged in the monitoring well.

Table 2
Groundwater BTEX[1] Concentration Analytical Summary

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-084
NMOCD[2] Reference #: 1RP-2166
Terracon Project #: AR207009
All concentrations are in milligrams per liter (mg/L)

Monitoring Well	Date Sampled	EPA SW846-8021B						
		Benzene	Toluene	Ethylbenzene	M,P-Xylenes	O-Xylenes	Total Xylenes	Total BTEX
NMOCD RRAL CRITERIA[3]		0.01	0.75	0.75	TOTAL XYLENES 0.62			NE[4]
MW-1	02/10/2016	Not Sampled due to presense of PSH						
	05/03/2016							
	08/04/2016							
	12/22/2016							
	03/08/2017							
	06/27/2017							
	09/21/2017							
	11/14/2017							
	01/15/2018							
	04/16/2018							
	08/17/2018							
	11/21/2018							
	02/21/2019							
	05/23/2019							
	09/06/2019							
	11/12/2019							
	01/23/2020							
	06/25/2020							
	09/21/2020							
	12/18/2020							
MW-2	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	05/03/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	12/22/2016	<0.00100	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/27/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	01/15/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	04/16/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	08/17/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/21/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	02/21/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	05/23/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	09/06/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/12/2019	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	01/23/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	06/25/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	09/21/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	12/18/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
MW-3	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	05/03/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	12/22/2016	0.00110	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	0.00110
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/27/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	01/15/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	04/16/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	08/17/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/21/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	02/21/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	05/23/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	09/06/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/12/2019	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	01/23/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	06/25/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	09/21/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	12/18/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367

Notes:
1. BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. RRAL Criteria: Recommended Remediation Action Level Criteria
4. NE: Not Established
J: The target analyte was positively identified below the quantitation limit and above the detection limit

Table 2
Groundwater BTEX[1] Concentration Analytical Summary

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-084
NMOCD[2] Reference #: 1RP-2166
Terracon Project #: AR207009
All concentrations are in milligrams per liter (mg/L)

Monitoring Well	Date Sampled	EPA SW846-8021B						
		Benzene	Toluene	Ethylbenzene	M,P-Xylenes	O-Xylenes	Total Xylenes	Total BTEX
NMOCD RRAL CRITERIA[3]		0.01	0.75	0.75	TOTAL XYLENES 0.62			NE[4]
MW-4	02/10/2016	0.0021	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0021
	05/03/2016	0.00205	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00205
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	12/22/2016	<0.00100	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/27/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	01/15/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	04/16/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	08/17/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/21/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	02/21/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	05/23/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	09/06/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/12/2019	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	01/23/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	06/25/2020	**0.00123 J**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.00123 J**
	09/21/2020	**0.000520 J**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.000520 J**
	12/18/2020	<0.000480	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
MW-5	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	05/03/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	12/22/2016	<0.00100	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/27/2017	0.00318	0.00191	<0.00200	<0.00200	<0.00200	<0.00200	0.00509
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	01/15/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	04/16/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	08/17/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/21/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	02/21/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	DUP-1	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	05/23/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	DUP-1	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	09/06/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	DUP-1	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/12/2019	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	DUP-1	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	01/23/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	DUP-1	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	06/25/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	DUP-1	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	09/21/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	DUP-1	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	12/18/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	DUP-1	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
MW-6	02/10/2016	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
	05/03/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	08/04/2016	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	12/22/2016	<0.00100	<0.00100	<0.00100	<0.00200	<0.00100	<0.00200	<0.00200
	03/08/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/27/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	09/21/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	11/14/2017	<0.00200	<0.00150	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	01/15/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	04/16/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	08/17/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/21/2018	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	02/21/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	05/23/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	09/06/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	11/12/2019	<0.000214	<0.000500	<0.000146	<0.000330	<0.000192	<0.000192	<0.000146
	01/23/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270
	06/25/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	09/21/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367
	12/18/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367

Notes:
1. BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. RRAL Criteria: Recommended Remediation Action Level Criteria
4. NE: Not Established
J: The target analyte was positively identified below the quantitation limit and above the detection limit

TABLE 3
Air Emission Analytical Summary - BTEX[1] and TPH[2]

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS#: 2009-084
NMOCD Reference #: 1RP-2166
Terracon Project No. AR207009

Sample I.D.	Sample Date	Laboratory	BTEX / TPH (mg/m³)	Emission Mass[3] (tons/year)	Emission Volume (gal/day)
New Mexico Environment Department (NMED) Air Quality Burea (AQB) Action Level requiring an Air Permit				**10**	
EF-1 (20200331)	03/31/20	Pace	Benzene - 3.96	0.003	0.002
			Toluene - 8.80	0.006	0.004
			Ethylbenzene - ND	N/A	N/A
			Total Xylene - 17.6	0.012	0.009
			Total BTEX - 6.2	0.004	0.003
			TPH - GRO - N/A	N/A	N/A
EFF-1 (20200430)	04/30/20	Pace	Benzene - 12.8	0.009	0.007
			Toluene - 16.7	0.011	0.009
			Ethylbenzene - 1.87	0.001	0.001
			Total Xylene - 41.6	0.028	0.021
			Total BTEX - 17.2	0.012	0.009
			TPH - GRO - 6,490	4.420	4.087
EFF-1 (20200528)	05/28/20	Pace	Benzene - 27.8	0.019	0.014
			Toluene - 36.0	0.025	0.018
			Ethylbenzene - 3.20	0.002	0.002
			Total Xylene - 101	0.069	0.052
			Total BTEX - 29.2	0.020	0.015
			TPH - GRO - 12,500	8.509	7.872
EFF-1 (20200629)	06/29/20	Pace	Benzene - 42.8	0.029	0.022
			Toluene - 77.2	0.053	0.040
			Ethylbenzene - 9.70	0.007	0.005
			Total Xylene - 169	0.115	0.086
			Total BTEX - 72.4	0.049	0.037
			TPH - GRO - 19,900	**13.550**	12.53
EFF-1 (20200729)	07/29/20	Pace	Benzene - 26.3	0.018	0.013
			Toluene - 46.7	0.032	0.024
			Ethylbenzene - 4.30	0.003	0.002
			Total Xylene - 65.5	0.045	0.034
			Total BTEX - 25.4	0.017	0.013
			TPH - GRO - 9,250	6.297	5.825
EFF-1 (20200819)	08/19/20	Pace	Benzene - 13.1	0.009	0.007
			Toluene - 17.9	0.012	0.009
			Ethylbenzene - ND	-	-
			Total Xylene - 16.0	0.010	0.008
			Total BTEX - 6.00	0.004	0.003
			TPH - GRO - 5,580	3.800	3.51
EFF-1 (09282020)	09/28/20	Pace	Benzene - 21.3	0.014	0.011
			Toluene - 31.1	0.021	0.016
			Ethylbenzene - 3.10	0.002	0.002
			Total Xylene - 64.9	0.044	0.033
			Total BTEX - 120.4	0.082	0.062
			TPH - GRO - 9,250	6.297	5.82
EFF-1 (10292020)	10/29/20	Pace	Benzene - 18.2	0.012	0.009
			Toluene - 28.1	0.019	0.014
			Ethylbenzene - 2.90	0.002	0.001
			Total Xylene - 32.9	0.022	0.017
			Total BTEX - 82.1	0.056	0.042
			TPH - GRO - 7,230	4.922	4.55
EFF-1 (12312020)	12/31/20	Pace	Benzene - 15.6	0.011	0.008
			Toluene - 26.2	0.018	0.013
			Ethylbenzene - 2.51	0.002	0.001
			Total Xylene - 54.3	0.037	0.028
			Total BTEX - 98.6	0.067	0.050
			TPH - GRO - 5,780	3.935	3.64
			Year to Date Average:	6.466	5.980

Notes:

1. BTEX: Benzene, toluene, ethylbenzene, total xylene analyzed by EPA Method 8021B

2. TPH: Total petroleum hydrocarbons analyzed by EPA Method 8015

3. Emission Mass calculated assuming flowrate 1.1073 (m^3/min) and constituent concentration were constant for the entirety of a year.

4. SVE Emission: Soil Vapor Extraction

NA: Indicates constituant was not analyzed

< = Constituent not detected above laboratory sample detection limit (SDL)

Bold denotes concentrations that could potentially be in violation of applicable NMED AQB criteria.

TABLE 4
MW-1 SVE[1] System Operation and PSH[2] Thickness & Recovery Summary

DCP Plant to Lea Station 6-Inch Sec. 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #2009-084
Terracon Project #: AR207009
NMOCD[3] REFERENCE #: 1RP-2166
All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[4] Elevation*	Depth to PSH Below TOC (feet)	Depth to Water Below TOC (feet)	PSH Thickness (feet)	PID[5] Reading	SVE[6] Unit Hours of Operation	Total Fluid Recovery (gallons)	PSH Recovered (gallons)
MW-1	01/03/2018	3,540.25	80.67	82.89	2.22	-	-	-	0.36
	01/09/2018		80.44	82.00	1.56	-	-	-	0.25
	02/06/2018		80.61	82.55	1.94	-	-	-	0.32
	02/23/2018		80.62	82.63	2.01	-	-	-	0.33
	02/28/2018		80.64	80.66	0.02	-	-	-	0.00
	03/08/2018		80.65	82.64	1.99	-	-	-	0.32
	03/21/2018		80.66	82.70	2.04	-	-	-	0.33
	03/27/2018		80.65	82.70	2.05	-	-	-	0.33
	04/04/2018		80.68	82.73	2.05	-	-	-	0.33
	04/13/2018		80.68	82.70	2.02	-	-	-	0.33
	05/01/2018		80.63	82.62	1.99	-	-	-	0.32
	05/10/2018		80.59	82.92	2.33	-	-	-	0.38
	05/17/2018		80.70	83.06	2.36	-	-	-	0.38
	05/21/2018		80.05	82.23	2.18	-	-	-	0.36
	05/31/2018		80.62	82.58	1.96	-	-	-	0.32
	06/07/2018		80.59	82.21	1.62	-	-	-	0.26
	06/12/2018		80.69	82.77	2.08	-	-	-	0.34
	06/22/2018		80.70	82.75	2.05	-	-	-	0.33
	06/28/2018		80.80	82.80	2.00	-	-	-	0.33
	07/10/2018		80.79	82.87	2.08	-	-	-	0.34
	07/19/2018		80.76	82.99	2.23	-	-	-	0.36
	07/24/2018		80.71	83.02	2.31	-	-	-	0.38
	08/02/2018		80.68	82.93	2.25	-	-	-	0.37
	08/08/2018		80.70	82.92	2.22	-	-	-	0.36
	09/06/2018		80.70	83.04	2.34	-	-	-	0.38
	09/13/2018		80.69	83.15	2.46	-	-	-	0.40
	09/28/2018		81.69	82.92	1.23	-	-	-	0.20
	10/10/2018		80.63	-	-	-	-	-	-
	10/16/2018		80.76	83.00	2.24	-	-	-	0.37
	10/24/2018		80.73	82.06	1.33	-	-	-	0.22
	10/25/2018		80.74	82.11	1.37	-	-	0.2	0.22
	11/06/2018		80.91	82.66	1.75	-	-	-	0.29
	11/14/2018		80.69	82.27	1.58	-	-	-	0.26
	12/20/2018		81.85	83.52	1.67	-	-	-	0.27
	02/06/2019		80.73	81.74	1.01	-	-	-	0.16
	02/14/2019		80.85	82.45	1.60	-	-	-	0.26
	02/21/2019		80.81	81.70	0.89	-	-	-	0.15
	05/14/2019		84.17	-	-	-	-	4.0	-
	06/14/2019		84.23	84.48	0.25	-	-	2.9	0.04
	06/27/2019		84.22	84.66	0.44	-	-	2.6	0.07
	07/10/2019		84.11	84.54	0.43	-	-	3.0	0.07
	07/29/2019		84.32	84.40	0.08	-	-	3.0	0.01
	09/13/2019		84.25	84.41	0.16	-	-	-	0.03
	10/17/2019		-	84.23	-	-	-	2.0	-
	11/01/2019		-	-	-	-	-	-	-
	11/06/2019		-	-	-	-	-	-	-
	11/20/2019		-	-	-	-	-	-	-
	12/11/2019		84.35	84.47	0.12	-	-	3.0	0.02
	12/20/2019		84.99	85.09	0.10	-	-	3.0	0.02
	01/10/2020		84.36	84.70	0.34	-	-	3.0	0.06
	02/07/2020		84.26	84.40	0.14	-	-	3.0	0.02
	02/20/2020		84.11	84.33	0.22	-	-	3.0	0.04
	03/02/2020		84.00	84.29	0.29	-	-	3.0	0.05
	03/06/2020		-	-	-	525.0	0	-	-
	03/16/2020		83.62	84.67	1.05	1,582.0	11.0	-	0.17
	03/30/2020		84.00	84.22	0.22	380.0	20.0	3.0	0.04
	04/16/2020		-	-	-	1,192.0	144.0	-	-
	04/30/2020		-	-	-	757.0	159.0	-	-
	05/28/2020		-	-	-	1,314.0	159.0	-	-
	06/18/2020		84.30	85.00	0.70	-	160.0	5.0	0.11
	06/29/2020		-	-	-	855.9	160.0	-	-
	07/29/2020		84.35	85.45	1.10	932.3	160.0	3.0	0.18
	08/19/2020		84.39	85.47	1.08	855.9	160.0	5.0	0.18
	09/28/2020		84.52	85.41	0.89	475.2	163.0	3.0	0.15
	10/14/2020		84.35	85.45	1.10	932.3	160.0	3.0	0.18
	10/29/2020		84.66	86.29	1.63	729.1	164.0	4.0	0.27
	11/12/2020		-	-	-	952.2	164.0	-	-
	12/30/2020		84.88	86.33	1.45	618.7	164.0	4.0	0.24
2020 Average PSH Thickness					**0.79**	**2020 Total Recovered**		**42.0**	**1.66**

Notes:
1. SVE: Soil Vapor Extraction
2. PSH: Phase Separated Hydrocarbons
3. NMOCD: New Mexico Oil Conservation Division
4. TOC: Top Of Casing
5. PID: Photoionization Detector
6. SVE: Soil Vapor Extraction

* Elevations based on the North American Vertical Datum of 1988.
** Corrected groundwater elevations were extrapolated using a PSH specific gravity of 0.85, if

Table 5
Historical Concentrations of PAH[1] in Groundwater Summary

DCP Plant to Lea Station 6-Inch Section 31
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-084
Terracon Project #: AR197011
NMOCD[2] Reference#: 1RP-2166

All concentrations are in milligrams per liter (mg/L)[3]

Monitoring Well	Date Sampled	EPA SW846-8270C, 3510																
		Naphthalene	Benzo(a)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)Pyrene	Phenanthrene	Pyrene
NMWQCC Groundwater Criteria[4]		0.03	0.0007	NE[5]														
MW-1	12/10/2009	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	<0.05	<0.05	<0.05	N/A	<0.05
	12/18/2020	Well Not Sampled																
MW-2	9/29/2009	N/A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N/A	<0.005	<0.005	<0.005	<0.005	<0.005
	12/18/2020	<0.000101	<0.0000592	<0.000104	<0.0000873	<0.0000898	<0.000139	<0.0000737	<0.000117	<0.000120	<0.000162	N/A	<0.0000788	<0.000163	<0.000105	<0.0000947	<0.0000882	<0.000135
MW-3	9/29/2009	N/A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N/A	<0.005	<0.005	<0.005	<0.005	<0.005
	12/16/2011	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	N/A	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111
	11/9/2012	<0.00031	<0.00019	<0.00035	<0.00033	<0.00016	<0.00024	<0.00036	<0.00049	<0.00028	<0.00022	<0.00019	N/A	<0.00024	<0.00030	<0.00032	<0.00027	<0.00027
	12/18/2020	<0.000100	<0.0000590	<0.000103	<0.0000870	<0.0000895	<0.000139	<0.0000735	<0.000117	<0.000120	<0.000161	N/A	<0.0000785	<0.000162	<0.000104	<0.0000944	<0.0000879	<0.000135
MW-4	9/29/2009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N/A	<0.005	<0.005	<0.005	<0.005	<0.005
	12/21/2011	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	N/A	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102
	12/18/2020	<0.000116	<0.0000679	<0.000119	<0.000100	<0.000103	<0.000160	<0.0000846	<0.000135	<0.000138	<0.000186	N/A	<0.0000904	<0.000187	<0.000120	<0.000109	<0.000101	<0.000155
MW-5	3/25/2011	N/A	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	N/A	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
	11/9/2012	<0.00032	<0.00020	<0.00037	<0.00034	<0.00016	<0.00025	<0.00038	<0.00051	<0.00029	<0.00023	<0.00020	N/A	<0.00025	<0.00031	<0.00034	<0.00028	<0.00028
	12/23/2013	0.000535	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049	N/A	<0.000049	<0.000049	<0.000049	<0.000049	<0.000049
	12/18/2020	<0.000110	<0.0000644	<0.000113	<0.0000950	<0.0000978	<0.000152	<0.0000802	<0.000128	<0.000131	<0.000176	N/A	<0.0000858	<0.000177	<0.000114	<0.000103	<0.0000960	<0.000147
MW-6	5/13/2014	N/A	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	N/A	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051
	12/18/2020	<0.000101	<0.0000590	<0.000103	<0.0000870	<0.0000895	<0.000139	<0.0000735	<0.000117	<0.000120	<0.000161	N/A	<0.0000786	<0.000163	<0.000104	<0.0000944	<0.0000879	<0.000135

Notes:
1. PAH: Polycyclic Aromatic Hydrocarbons
2. NMOCD: New Mexico Oil Conservation Division
3. mg/L milligrams per liter
4. NMWQCC Groundwater Criteria: Recommended Remediation Action Level Criteria
5. NE: Not Established

J: The target analyte was positively identified below the quantitation limit and above the detection limit
Bold text indicates a concentration above the laboratory detection limit.
Highlighted text indicates a concentration exceeding the NMOCD RRAL Criteria

APPENDIX C

Certified Xenco Laboratories Analytical Reports:
1Q20 Groundwater Report 650194
2Q20 Groundwater Report 665692
3Q20 Groundwater Report 673153
4Q20 Groundwater Report 681863
Certified Pace National Analytical Reports:
1Q20 Air Reports L1205597
2Q20 Air Reports L1214003, L1223105, L1234657
3Q20 Air Reports L1244722, L1252526, & L1267312
4Q20 Air Reports L1279579 & L1301754

Analytical Report 650194

for

Terracon-Lubbock

Project Manager: Paige Gaona

DCP Plant to Lea Station 6'' Sec 31

AR197009

30-JAN-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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30-JAN-20

Project Manager: **Paige Gaona**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **650194**
DCP Plant to Lea Station 6'' Sec 31
Project Address: SRS #2009-084

Paige Gaona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650194. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650194 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 650194

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	01-21-20 10:45		650194-001
MW-3	W	01-21-20 13:40		650194-002
MW-4	W	01-21-20 12:45		650194-003
MW-5	W	01-21-20 14:29		650194-004
MW-6	W	01-21-20 11:53		650194-005
DUP-1	W	01-21-20 14:34		650194-006

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: DCP Plant to Lea Station 6'' Sec 31

Project ID: *AR197009*
Work Order Number(s): *650194*

Report Date: *30-JAN-20*
Date Received: *01/24/2020*

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3114899 BTEX-MTBE by EPA 8021B

Lab Sample ID 650194-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 650194-002, -003, -004, -005, -006. The Laboratory Control Sample for m,p-Xylenes, o-Xylene and RPDs were within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene, Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 650194-002 SD.

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 650194-002, -003, -004, -005, -006

Certificate of Analytical Results
650194
Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-2** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-001 Date Collected: 01.21.20 10.45 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114888 Date Prep: 01.28.20 12.00

Prep seq: 7695366

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.29.20 01:44	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.29.20 01:44	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.29.20 01:44	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.29.20 01:44	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.29.20 01:44	U	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.29.20 01:44	U	
Total BTEX		<0.000270		0.000270	mg/L	01.29.20 01:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	94	66 - 120	%		
4-Bromofluorobenzene	95	67 - 120	%		

Sample Id: **MW-3** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-002 Date Collected: 01.21.20 13.40 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.29.20 19:08	UF	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.29.20 19:08	UF	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.29.20 19:08	UF	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.29.20 19:08	UXF	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.29.20 19:08	UXF	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.29.20 19:08	U	
Total BTEX		<0.000270		0.000270	mg/L	01.29.20 19:08	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	96	66 - 120	%		
4-Bromofluorobenzene	92	67 - 120	%		

Certificate of Analytical Results
650194
Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-4** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-003 Date Collected: 01.21.20 12.45 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.30.20 04:34	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.30.20 04:34	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.30.20 04:34	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.30.20 04:34	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.30.20 04:34	U	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.30.20 04:34	U	
Total BTEX		<0.000270		0.000270	mg/L	01.30.20 04:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	92	66 - 120	%		
4-Bromofluorobenzene	91	67 - 120	%		

Sample Id: **MW-5** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-004 Date Collected: 01.21.20 14.29 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.30.20 05:01	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.30.20 05:01	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.30.20 05:01	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.30.20 05:01	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.30.20 05:01	U	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.30.20 05:01	U	
Total BTEX		<0.000270		0.000270	mg/L	01.30.20 05:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	96	66 - 120	%		
4-Bromofluorobenzene	90	67 - 120	%		

Certificate of Analytical Results
650194
Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-6** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-005 Date Collected: 01.21.20 11.53 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.30.20 05:28	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.30.20 05:28	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.30.20 05:28	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.30.20 05:28	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.30.20 05:28	U	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.30.20 05:28	U	
Total BTEX		<0.000270		0.000270	mg/L	01.30.20 05:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	94	66 - 120	%		
4-Bromofluorobenzene	89	67 - 120	%		

Sample Id: **DUP-1** Matrix: Ground Water Sample Depth:

Lab Sample Id: 650194-006 Date Collected: 01.21.20 14.34 Date Received: 01.24.20 11.10

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.30.20 05:54	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.30.20 05:54	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.30.20 05:54	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.30.20 05:54	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.30.20 05:54	U	1
Total Xylenes	1330-20-7	<0.000270		0.000270	mg/L	01.30.20 05:54	U	
Total BTEX		<0.000270		0.000270	mg/L	01.30.20 05:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	93	66 - 120	%		
4-Bromofluorobenzene	91	67 - 120	%		

Certificate of Analytical Results
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Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec 31

Sample Id: **7695366-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7695366-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114888 Date Prep: 01.28.20 12.00

Prep seq: 7695366

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.29.20 00:24	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.29.20 00:24	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.29.20 00:24	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.29.20 00:24	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.29.20 00:24	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	92	66 - 120	%		
4-Bromofluorobenzene	93	67 - 120	%		

Sample Id: **7695479-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7695479-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3114899 Date Prep: 01.29.20 15.00

Prep seq: 7695479

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000480	0.00100	0.000480	mg/L	01.29.20 18:42	U	1
Toluene	108-88-3	<0.000512	0.00100	0.000512	mg/L	01.29.20 18:42	U	1
Ethylbenzene	100-41-4	<0.000616	0.00100	0.000616	mg/L	01.29.20 18:42	U	1
m,p-Xylenes	179601-23-1	<0.000454	0.00200	0.000454	mg/L	01.29.20 18:42	U	1
o-Xylene	95-47-6	<0.000270	0.00100	0.000270	mg/L	01.29.20 18:42	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
a,a,a-Trifluorotoluene	94	66 - 120	%		
4-Bromofluorobenzene	93	67 - 120	%		

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were 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.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Work Orders : 650194,

Project ID: AR197009

Lab Batch #: 3114888 **Sample:** 7695366-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/28/20 22:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0778	0.100	78	66-120	
4-Bromofluorobenzene	0.0852	0.100	85	67-120	

Lab Batch #: 3114888 **Sample:** 7695366-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/28/20 23:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0816	0.100	82	66-120	
4-Bromofluorobenzene	0.0852	0.100	85	67-120	

Lab Batch #: 3114888 **Sample:** 7695366-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/29/20 00:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0920	0.100	92	66-120	
4-Bromofluorobenzene	0.0932	0.100	93	67-120	

Lab Batch #: 3114888 **Sample:** 650194-001 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 01/29/20 02:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0808	0.100	81	66-120	
4-Bromofluorobenzene	0.0863	0.100	86	67-120	

Lab Batch #: 3114888 **Sample:** 650194-001 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 01/29/20 02:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0809	0.100	81	66-120	
4-Bromofluorobenzene	0.0876	0.100	88	67-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Work Orders : 650194,

Project ID: AR197009

Lab Batch #: 3114899 **Sample:** 7695479-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/29/20 16:54

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0852	0.100	85	66-120	
4-Bromofluorobenzene	0.0826	0.100	83	67-120	

Lab Batch #: 3114899 **Sample:** 7695479-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/29/20 17:21

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0854	0.100	85	66-120	
4-Bromofluorobenzene	0.0855	0.100	86	67-120	

Lab Batch #: 3114899 **Sample:** 7695479-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 01/29/20 18:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0939	0.100	94	66-120	
4-Bromofluorobenzene	0.0932	0.100	93	67-120	

Lab Batch #: 3114899 **Sample:** 650194-002 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 01/29/20 19:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0832	0.100	83	66-120	
4-Bromofluorobenzene	0.0859	0.100	86	67-120	

Lab Batch #: 3114899 **Sample:** 650194-002 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 01/29/20 20:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	0.0619	0.100	62	66-120	**
4-Bromofluorobenzene	0.0586	0.100	59	67-120	**

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Work Order #: 650194 **Project ID:** AR197009

Analyst: MIT **Date Prepared:** 01/28/2020 **Date Analyzed:** 01/28/2020

Lab Batch ID: 3114888 **Sample:** 7695366-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000480	0.100	0.0923	92	0.100	0.0963	96	4	74-120	20	
Toluene	<0.000512	0.100	0.0945	95	0.100	0.0948	95	0	74-120	20	
Ethylbenzene	<0.000616	0.100	0.0893	89	0.100	0.0889	89	0	74-120	20	
m,p-Xylenes	<0.000454	0.200	0.175	88	0.200	0.175	88	0	73-120	25	
o-Xylene	<0.000270	0.100	0.0867	87	0.100	0.0870	87	0	73-120	25	

Analyst: MIT **Date Prepared:** 01/29/2020 **Date Analyzed:** 01/29/2020

Lab Batch ID: 3114899 **Sample:** 7695479-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000480	0.100	0.0952	95	0.100	0.100	100	5	74-120	20	
Toluene	<0.000512	0.100	0.0951	95	0.100	0.0974	97	2	74-120	20	
Ethylbenzene	<0.000616	0.100	0.0907	91	0.100	0.0931	93	3	74-120	20	
m,p-Xylenes	<0.000454	0.200	0.178	89	0.200	0.183	92	3	73-120	25	
o-Xylene	<0.000270	0.100	0.0879	88	0.100	0.0903	90	3	73-120	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Work Order # : 650194 **Project ID:** AR197009

Lab Batch ID: 3114888 **QC- Sample ID:** 650194-001 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 01/29/2020 **Date Prepared:** 01/28/2020 **Analyst:** MIT

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000480	0.100	0.100	100	0.100	0.0934	93	7	15-147	25	
Toluene	<0.000512	0.100	0.0958	96	0.100	0.0950	95	1	11-147	25	
Ethylbenzene	<0.000616	0.100	0.0908	91	0.100	0.0899	90	1	10-149	25	
m,p-Xylenes	<0.000454	0.200	0.153	77	0.200	0.146	73	5	62-124	25	
o-Xylene	<0.000270	0.100	0.0879	88	0.100	0.0880	88	0	62-124	25	

Lab Batch ID: 3114899 **QC- Sample ID:** 650194-002 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 01/29/2020 **Date Prepared:** 01/29/2020 **Analyst:** MIT

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000480	0.100	0.0959	96	0.100	0.0705	71	31	15-147	25	F
Toluene	<0.000512	0.100	0.0958	96	0.100	0.0678	68	34	11-147	25	F
Ethylbenzene	<0.000616	0.100	0.0900	90	0.100	0.0634	63	35	10-149	25	F
m,p-Xylenes	<0.000454	0.200	0.176	88	0.200	0.116	58	41	62-124	25	XF
o-Xylene	<0.000270	0.100	0.0875	88	0.100	0.0609	61	36	62-124	25	XF

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Received by OCD: 4/12/2021 9:11:27 AM

650194

650194

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Paige Gaona

Sampler's Name: Aaron Adams

Project Number: AR197009

Project Name: DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084)

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact:
PO/SO #:
Sampler's Signature: [signature]

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1R4 3.0 / 4.0
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA				ANALYSIS REQUESTED: BTEX (EPA Method 8021B)							Lab Sample ID
GW	02/21/19	1045		X	MW-2			6				X							1
GW	02/21/19	1340		X	MW-3			6				X							2
GW	02/21/19	1245		X	MW-4			6				X							3
GW	02/21/19	1429		X	MW-5			6				X							4
GW	02/21/19	1153		X	MW-6			6				X							5
GW	02/21/19	1434		X	DUP-1			6				X							6
					**********END OF COC**********														

TURNAROUND TIME: ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	1/24/2020	11:10	[signature]	1/24/2020	11:10
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

NOTES:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. PAIGE.GAONA@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM
5. AARON.ADAMS@TERRACON.COM

Matrix: WW - Wastewater, W - Water, S - Soil, A - Air Bag, SL - Sludge
Container: VOA - 40 ml vial, A/G - Amber Glass 1L, P/O - Plastic or other

Lubbock Office ■ 5827 50th Street ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ Resourceful ■ Reliable

Released to Imaging: 1/11/2022 10:38:19 AM

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.24.2020 11.10.00 AM

Work Order #: 650194

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 01.24.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 01.29.2020
Jessica Kramer

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Analytical Report 665692

for

Terracon-Lubbock

Project Manager: Paige Gaona

DCP Plant to Lea Station 6'' Sec. 31

AR207009

07.06.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.06.2020

Project Manager: **Paige Gaona**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **665692**
DCP Plant to Lea Station 6'' Sec. 31
Project Address: SRS #2009-084

Paige Gaona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 665692. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 665692 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 665692

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	06.25.2020 10:30		665692-001
MW-6	W	06.25.2020 11:20		665692-002
MW-3	W	06.25.2020 12:09		665692-003
MW-4	W	06.25.2020 12:50		665692-004
MW-5	W	06.25.2020 13:33		665692-005
DUP-1	W	06.25.2020 13:38		665692-006

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: DCP Plant to Lea Station 6'' Sec. 31

Project ID: *AR207009*
Work Order Number(s): *665692*

Report Date: *07.06.2020*
Date Received: *06.26.2020*

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results

665692

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id: **MW-2** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-001 Date Collected: 06.25.2020 10:30 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 14:05	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 14:05	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 14:05	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 14:05	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 14:05	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 14:05	U	
Total BTEX		<0.000367		0.000367	mg/L	07.01.2020 14:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	112	70 - 130	%		

Sample Id: **MW-6** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-002 Date Collected: 06.25.2020 11:20 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 14:27	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 14:27	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 14:27	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 14:27	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 14:27	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 14:27	U	
Total BTEX		<0.000367		0.000367	mg/L	07.01.2020 14:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	117	70 - 130	%		

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665692

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id: **MW-3** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-003 Date Collected: 06.25.2020 12:09 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 14:49	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 14:49	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 14:49	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 14:49	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 14:49	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 14:49	U	
Total BTEX		<0.000367		0.000367	mg/L	07.01.2020 14:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

Sample Id: **MW-4** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-004 Date Collected: 06.25.2020 12:50 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00123**	0.00200	0.000408	mg/L	07.01.2020 15:11	J	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 15:11	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 15:11	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 15:11	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 15:11	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 15:11	U	
Total BTEX		**0.00123**		0.000367	mg/L	07.01.2020 15:11	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	124	70 - 130	%		

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Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id: **MW-5** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-005 Date Collected: 06.25.2020 13:33 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 15:32	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 15:32	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 15:32	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 15:32	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 15:32	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 15:32	U	
Total BTEX		<0.000367		0.000367	mg/L	07.01.2020 15:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	96	70 - 130	%		
4-Bromofluorobenzene	128	70 - 130	%		

Sample Id: **DUP-1** Matrix: Ground Water Sample Depth:

Lab Sample Id: 665692-006 Date Collected: 06.25.2020 13:38 Date Received: 06.26.2020 11:53

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3130541 Date Prep: 06.30.2020 15:00

Subcontractor: SUB: T104704400-TX Prep seq: 7706593

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 15:54	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 15:54	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 15:54	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 15:54	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 15:54	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	07.01.2020 15:54	U	
Total BTEX		<0.000367		0.000367	mg/L	07.01.2020 15:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		

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665692

Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec. 31

Sample Id:	**7706593-1-BLK**	Matrix:	Water	Sample Depth:	
Lab Sample Id:	7706593-1-BLK	Date Collected:		Date Received:	
Analytical Method:	BTEX by EPA 8021B			Prep Method:	5030B
Analyst:	AMF	% Moist:		Tech:	AMF
Seq Number:	3130541	Date Prep:	06.30.2020 15:00		
Subcontractor:	SUB: T104704400-TX	Prep seq:	7706593		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	07.01.2020 07:56	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	07.01.2020 07:56	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	07.01.2020 07:56	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	07.01.2020 07:56	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	07.01.2020 07:56	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were 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.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec. 31

Report Date: 07062020

Work Orders : 665692 **Project ID:** AR207009

Lab Batch #: 3130541 **Sample:** 7706593-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07.01.2020 05:54 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3130541 **Sample:** 7706593-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07.01.2020 06:15 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3130541 **Sample:** 665432-014 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 07.01.2020 06:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3130541 **Sample:** 665432-014 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 07.01.2020 06:55 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3130541 **Sample:** 7706593-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 07.01.2020 07:56 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	70-130	
4-Bromofluorobenzene	0.0327	0.0300	109	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec. 31

Work Order #: 665692 **Project ID:** AR207009

Analyst: AMF **Date Prepared:** 06.30.2020 **Date Analyzed:** 07.01.2020

Lab Batch ID: 3130541 **Sample:** 7706593-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.110	110	0.100	0.117	117	6	70-130	25	
Toluene	<0.000367	0.100	0.103	103	0.100	0.109	109	6	70-130	25	
Ethylbenzene	<0.000657	0.100	0.103	103	0.100	0.110	110	7	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.205	103	0.200	0.216	108	5	70-130	25	
o-Xylene	<0.000642	0.100	0.109	109	0.100	0.110	110	1	70-130	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

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Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec. 31

Report Date: 07062020

Work Order # : 665692 **Project ID:** AR207009

Lab Batch ID: 3130541 **QC- Sample ID:** 665432-014 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 07.01.2020 **Date Prepared:** 06.30.2020 **Analyst:** AMF

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.116	116	0.100	0.117	117	1	70-130	25	
Toluene	<0.000367	0.100	0.107	107	0.100	0.109	109	2	70-130	25	
Ethylbenzene	<0.000657	0.100	0.108	108	0.100	0.110	110	2	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.213	107	0.200	0.218	109	2	70-130	25	
o-Xylene	<0.000642	0.100	0.110	110	0.100	0.111	111	1	70-130	25	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

665692

CHAIN OF CUSTODY RECORD 665692

Terracon

Office Location Lubbock

Project Manager: Paige Gaona

Sampler's Name: Aaron Adams

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact:
PO/SO #:
Sampler's Signature: Aaron Adams

Project Number: AR207009

Project Name: DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084)

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (C): 12.3/12.1 IR4

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	BTEX (EPA Method 8021B)	Lab Sample ID
GW	06/25/20	1030		X	MW-2			3	X	1
GW	06/25/20	1220		X	MW-6			3	X	2
GW	06/25/20	1209		X	MW-3			3	X	3
GW	06/25/20	1250		X	MW-4			3	X	4
GW	06/25/20	1353		X	MW-5			3	X	5
GW	06/25/20	1338		X	DUP-1			3	X	6
					**********END OF COC**********					

TURNAROUND TIME: ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Aaron Adams	6-26-2020	11:12	Teddy Rand Lee	6/26/2020	1112

NOTES:

E-MAIL RESULTS TO:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. PAIGE.GAONA@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM
5. AARON.ADAMS@TERRACON.COM

Matrix: SW-Wastewater, W-Water, S-Soil, L-Liquid, A-Air Bag, C-Charcoal Tube, O-Other
Containers: VOA-40 ml vial, AG-Amber glass 1L, 250 ml-wide mouth, P/O-Plastic or other

Inter-Office Shipment

IOS Number : 66299

Date/Time: 06.29.2020
Lab# From: **Lubbock**
Lab# To: **Midland**

Created by: Randall Lee
Delivery Priority:
Air Bill No.: 7708 2647 1733

Please send report to: Jessica Kramer
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
665692-001	W	MW-2	06.25.2020 10:30	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	
665692-002	W	MW-6	06.25.2020 11:20	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	
665692-003	W	MW-3	06.25.2020 12:09	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	
665692-004	W	MW-4	06.25.2020 12:50	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	
665692-005	W	MW-5	06.25.2020 13:33	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	
665692-006	W	DUP-1	06.25.2020 13:38	SW8021B	BTEX by EPA 8021B	07.02.2020	07.09.2020	JKR	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By: Teddy Randall Lee
Randall Lee

Date Relinquished: 06.29.2020

Received By: Brianna Teel
Brianna Teel

Date Received: 06.30.2020

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 66299

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-8

Sent By: Randall Lee **Date Sent:** 06.29.2020 03.55 PM

Received By: Brianna Teel **Date Received:** 06.30.2020 10.45 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 06.30.2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 06.26.2020 11.53.35 AM

Work Order #: 665692

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	12.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Test sent to Midland
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 06.26.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 06.29.2020
Jessica Kramer

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Analytical Report 673153

for

Terracon-Lubbock

Project Manager: Brett Dennis

DCP Plant to Lea Station 6'' Sec 31

AR207009

09.25.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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09.25.2020

Project Manager: **Brett Dennis**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **673153**
DCP Plant to Lea Station 6'' Sec 31
Project Address: SRS #2009-084

Brett Dennis:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673153. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 673153 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 673153

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	09.21.2020 13:43		673153-001
MW-3	W	09.21.2020 15:36		673153-002
MW-4	W	09.21.2020 14:59		673153-003
MW-5	W	09.21.2020 16:21		673153-004
MW-6	W	09.21.2020 14:23		673153-005
DUP-1	W	09.21.2020 16:26		673153-006

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: DCP Plant to Lea Station 6'' Sec 31

Project ID: *AR207009*
Work Order Number(s): *673153*

Report Date: *09.25.2020*
Date Received: *09.22.2020*

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3138010 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 673153-006.

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Certificate of Analytical Results

673153

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-2** Matrix: Water Sample Depth:

Lab Sample Id: 673153-001 Date Collected: 09.21.2020 13:43 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 19:59	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 19:59	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 19:59	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 19:59	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 19:59	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 19:59	U	
Total BTEX		<0.000367		0.000367	mg/L	09.23.2020 19:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	70 - 130	%		
4-Bromofluorobenzene	129	70 - 130	%		

Sample Id: **MW-3** Matrix: Water Sample Depth:

Lab Sample Id: 673153-002 Date Collected: 09.21.2020 15:36 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 20:20	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 20:20	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 20:20	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 20:20	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 20:20	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 20:20	U	
Total BTEX		<0.000367		0.000367	mg/L	09.23.2020 20:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	119	70 - 130	%		

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673153

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-4** Matrix: Water Sample Depth:

Lab Sample Id: 673153-003 Date Collected: 09.21.2020 14:59 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.000520**	0.00200	0.000408	mg/L	09.23.2020 20:40	J	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 20:40	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 20:40	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 20:40	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 20:40	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 20:40	U	
Total BTEX		**0.000520**		0.000367	mg/L	09.23.2020 20:40	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	115	70 - 130	%		

Sample Id: **MW-5** Matrix: Water Sample Depth:

Lab Sample Id: 673153-004 Date Collected: 09.21.2020 16:21 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 21:01	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 21:01	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 21:01	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 21:01	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 21:01	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 21:01	U	
Total BTEX		<0.000367		0.000367	mg/L	09.23.2020 21:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	116	70 - 130	%		

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673153
Terracon-Lubbock, Lubbock, TX
DCP Plant to Lea Station 6" Sec 31

Sample Id: **MW-6** Matrix: Water Sample Depth:

Lab Sample Id: 673153-005 Date Collected: 09.21.2020 14:23 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 21:22	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 21:22	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 21:22	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 21:22	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 21:22	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 21:22	U	
Total BTEX		<0.000367		0.000367	mg/L	09.23.2020 21:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	70 - 130	%		
4-Bromofluorobenzene	118	70 - 130	%		

Sample Id: **DUP-1** Matrix: Water Sample Depth:

Lab Sample Id: 673153-006 Date Collected: 09.21.2020 16:26 Date Received: 09.22.2020 08:50

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: AMF % Moist: Tech: AMF

Seq Number: 3138010 Date Prep: 09.23.2020 16:00

Subcontractor: SUB: T104704400-20-21 Prep seq: 7711998

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 21:43	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 21:43	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 21:43	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 21:43	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 21:43	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	09.23.2020 21:43	U	
Total BTEX		<0.000367		0.000367	mg/L	09.23.2020 21:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	131	70 - 130	%		**

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Certificate of Analytical Results

673153

Terracon-Lubbock, Lubbock, TX

DCP Plant to Lea Station 6" Sec 31

Sample Id:	**7711998-1-BLK**	Matrix:	Water	Sample Depth:	
Lab Sample Id:	7711998-1-BLK	Date Collected:		Date Received:	
Analytical Method:	BTEX by EPA 8021B			Prep Method:	5030B
Analyst:	AMF	% Moist:		Tech:	AMF
Seq Number:	3138010	Date Prep:	09.23.2020 16:00		
Subcontractor:	SUB: T104704400-20-21	Prep seq:	7711998		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	09.23.2020 19:34	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	09.23.2020 19:34	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	09.23.2020 19:34	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	09.23.2020 19:34	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	09.23.2020 19:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	82	70 - 130	%		
4-Bromofluorobenzene	117	70 - 130	%		

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were 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.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Report Date: 09252020

Work Orders : 673153 **Project ID:** AR207009

Lab Batch #: 3138010 **Sample:** 7711998-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 09.23.2020 17:25 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0376	0.0300	125	70-130	

Lab Batch #: 3138010 **Sample:** 7711998-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 09.23.2020 17:45 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0355	0.0300	118	70-130	

Lab Batch #: 3138010 **Sample:** 673153-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 09.23.2020 18:06 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0382	0.0300	127	70-130	

Lab Batch #: 3138010 **Sample:** 673153-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 09.23.2020 18:27 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0386	0.0300	129	70-130	

Lab Batch #: 3138010 **Sample:** 7711998-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 09.23.2020 19:34 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	70-130	
4-Bromofluorobenzene	0.0352	0.0300	117	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Work Order #: 673153 **Project ID:** AR207009

Analyst: AMF **Date Prepared:** 09.23.2020 **Date Analyzed:** 09.23.2020

Lab Batch ID: 3138010 **Sample:** 7711998-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.117	117	0.100	0.107	107	9	70-130	25	
Toluene	<0.000367	0.100	0.119	119	0.100	0.108	108	10	70-130	25	
Ethylbenzene	<0.000657	0.100	0.115	115	0.100	0.104	104	10	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.245	123	0.200	0.221	111	10	70-130	25	
o-Xylene	<0.000642	0.100	0.123	123	0.100	0.111	111	10	70-130	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

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Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6'' Sec 31

Report Date: 09252020

Work Order # : 673153 **Project ID:** AR207009

Lab Batch ID: 3138010 **QC- Sample ID:** 673153-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 09.23.2020 **Date Prepared:** 09.23.2020 **Analyst:** AMF

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.120	120	0.100	0.118	118	2	70-130	25	
Toluene	<0.000367	0.100	0.121	121	0.100	0.119	119	2	70-130	25	
Ethylbenzene	<0.000657	0.100	0.117	117	0.100	0.114	114	3	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.250	125	0.200	0.243	122	3	70-130	25	
o-Xylene	<0.000642	0.100	0.123	123	0.100	0.120	120	2	70-130	25	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Terracon

CHAIN OF CUSTODY RECORD 673153

Office Location	Lubbock
Project Manager	Brett Dennis
Sampler's Name	Aaron Adams
Laboratory:	Xenco
Address:	6701 Aberdeen, Lubbock, Texas 79424
Phone:	
Contact:	
SRS #:	2009-084
Sampler's Signature	[signature]

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 5.4/5.5 TR

Page 1 of 1

Project Number: AR207009
Project Name: DCP Sec. 31

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	BTEX (EPA Method 8021)	Lab Sample ID
GW	11/21/2018 *	13:43		X	MW 2			3	X	673153-001
GW	11/21/2018	15:36		X	MW-3			3	X	-002
GW	11/21/2018	14:59		X	MW-4			3	X	-003
GW	11/21/2018	16:21		X	MW-5			3	X	-004
GW	11/21/2018	14:20		X	MW-6			3	X	-005
GW	11/21/2018	16:26		X	Dup-1			3	X	-006

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24 Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	9-22-2020	8:50am	Teddy Roulette [signature]	9/24/20	0850

NOTES: Bill directly to Plains Pipeline

e-mail results to:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. BRETT.DENNIS@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM

Matrix: WW-Wastewater, W-Water, S-Soil, L-Liquid, A-Air Bag, C-Charcoal tube, SL-Sludge
Container: VOA-40 ml vial, A/G-Amber Glass 1L, 250 ml-Glass wide mouth, P/O-Plastic or other

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ Resourceful ■ Reliable

* All sample dates were 9/21/2020.
Times match samples.
MT 9/22/2020

Inter-Office Shipment

IOS Number : 70751

Date/Time: 09.22.2020
Created by: Michael J Turner
Please send report to: Jessica Kramer
Lab# From: **Lubbock**
Delivery Priority:
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To: **Midland**
Air Bill No.:
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
673153-001	W	MW-2	09.21.2020 13:43	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	
673153-002	W	MW-3	09.21.2020 15:36	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	
673153-003	W	MW-4	09.21.2020 14:59	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	
673153-004	W	MW-5	09.21.2020 16:21	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	
673153-005	W	MW-6	09.21.2020 14:23	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	
673153-006	W	DUP-1	09.21.2020 16:26	SW8021B	BTEX by EPA 8021B	09.28.2020	10.05.2020	JKR	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 09.22.2020

Received By: Jessica Kramer

Date Received: 09.23.2020

Cooler Temperature: 2.6

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 70751

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used :

Sent By: Michael J Turner **Date Sent:** 09.22.2020 09.17 AM

Received By: Jessica Kramer **Date Received:** 09.23.2020 10.32 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Jessica Kramer
Jessica Kramer

Date: 09.23.2020

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 09.22.2020 08.50.00 AM

Work Order #: 673153

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : ir-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 09.22.2020

Checklist reviewed by: Jessica Kramer Date: 09.25.2020

Jessica Kramer

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Analytical Report 681863

for

Terracon-Lubbock

Project Manager: Brett Dennis

DCP Sec. 31

AR207009

01.06.2021

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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01.06.2021

Project Manager: **Brett Dennis**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **681863**
DCP Sec. 31
Project Address:

Brett Dennis:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 681863. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 681863 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 681863

Terracon-Lubbock, Lubbock, TX

DCP Sec. 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	12.18.2020 11:30		681863-001
MW-3	W	12.18.2020 13:11		681863-002
MW-4	W	12.18.2020 12:38		681863-003
MW-5	W	12.18.2020 13:42		681863-004
MW-6	W	12.18.2020 14:04		681863-005
DUP-1	W	12.18.2020 00:00		681863-006

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: DCP Sec. 31

Project ID: *AR207009*
Work Order Number(s): *681863*

Report Date: *01.06.2021*
Date Received: *12.18.2020*

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3146400 PAHs by SW846 8270D SIM

Surrogate 2-Fluorobiphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 681863-005.
Surrogate Terphenyl-D14 recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7717820-1-BLK,681863-003,681863-004,681863-005,681863-006,681863-001,681863-002.

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Certificate of Analytical Results
681863
Terracon-Lubbock, Lubbock, TX
DCP Sec. 31

Sample Id: **MW-2** Matrix: Water Sample Depth:

Lab Sample Id: 681863-001 Date Collected: 12.18.2020 11:30 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:28 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000825	0.000189	0.0000825	mg/L	01.03.2021 21:34	U	1
2-Methylnaphthalene	91-57-6	<0.0000947	0.000189	0.0000947	mg/L	01.03.2021 21:34	U	1
Acenaphthene	83-32-9	<0.000104	0.000189	0.000104	mg/L	01.03.2021 21:34	U	1
Acenaphthylene	208-96-8	<0.0000873	0.000189	0.0000873	mg/L	01.03.2021 21:34	U	1
Anthracene	120-12-7	<0.0000898	0.000189	0.0000898	mg/L	01.03.2021 21:34	U	1
Benzo(a)anthracene	56-55-3	<0.000139	0.000189	0.000139	mg/L	01.03.2021 21:34	U	1
Benzo(a)pyrene	50-32-8	<0.0000592	0.000189	0.0000592	mg/L	01.03.2021 21:34	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000737	0.000189	0.0000737	mg/L	01.03.2021 21:34	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000117	0.000189	0.000117	mg/L	01.03.2021 21:34	U	1
Benzo(k)fluoranthene	207-08-9	<0.000120	0.000189	0.000120	mg/L	01.03.2021 21:34	U	1
Chrysene	218-01-9	<0.000162	0.000189	0.000162	mg/L	01.03.2021 21:34	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000788	0.000189	0.0000788	mg/L	01.03.2021 21:34	U	1
Fluoranthene	206-44-0	<0.000163	0.000189	0.000163	mg/L	01.03.2021 21:34	U	1
Fluorene	86-73-7	<0.000105	0.000189	0.000105	mg/L	01.03.2021 21:34	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.0000947	0.000189	0.0000947	mg/L	01.03.2021 21:34	U	1
Naphthalene	91-20-3	<0.000101	0.000377	0.000101	mg/L	01.03.2021 21:34	U	1
Phenanthrene	85-01-8	<0.0000882	0.000189	0.0000882	mg/L	01.03.2021 21:34	U	1
Pyrene	129-00-0	<0.000135	0.000189	0.000135	mg/L	01.03.2021 21:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	141	54 - 146	%		
Nitrobenzene-d5	87	46 - 151	%		
Terphenyl-D14	155	51 - 139	%		**

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Certificate of Analytical Results
681863
Terracon-Lubbock, Lubbock, TX
DCP Sec. 31

Sample Id: **MW-2** Matrix: Water Sample Depth:

Lab Sample Id: 681863-001 Date Collected: 12.18.2020 11:30 Date Received: 12.18.2020 16:43

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: KTL % Moist:

Seq Number: 3145810 Date Prep: 12.22.2020 17:00 Tech: KTL

Subcontractor: SUB: T104704400-20-21 Prep seq: 7717742

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 02:24	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 02:24	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 02:24	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 02:24	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 02:24	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 02:24	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 02:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Certificate of Analytical Results
681863
Terracon-Lubbock, Lubbock, TX
DCP Sec. 31

Sample Id: **MW-3** Matrix: Water Sample Depth:

Lab Sample Id: 681863-002 Date Collected: 12.18.2020 13:11 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:31 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000822	0.000188	0.0000822	mg/L	01.03.2021 21:51	U	1
2-Methylnaphthalene	91-57-6	<0.0000943	0.000188	0.0000943	mg/L	01.03.2021 21:51	U	1
Acenaphthene	83-32-9	<0.000103	0.000188	0.000103	mg/L	01.03.2021 21:51	U	1
Acenaphthylene	208-96-8	<0.0000870	0.000188	0.0000870	mg/L	01.03.2021 21:51	U	1
Anthracene	120-12-7	<0.0000895	0.000188	0.0000895	mg/L	01.03.2021 21:51	U	1
Benzo(a)anthracene	56-55-3	<0.000139	0.000188	0.000139	mg/L	01.03.2021 21:51	U	1
Benzo(a)pyrene	50-32-8	<0.0000590	0.000188	0.0000590	mg/L	01.03.2021 21:51	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000735	0.000188	0.0000735	mg/L	01.03.2021 21:51	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000117	0.000188	0.000117	mg/L	01.03.2021 21:51	U	1
Benzo(k)fluoranthene	207-08-9	<0.000120	0.000188	0.000120	mg/L	01.03.2021 21:51	U	1
Chrysene	218-01-9	<0.000161	0.000188	0.000161	mg/L	01.03.2021 21:51	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000785	0.000188	0.0000785	mg/L	01.03.2021 21:51	U	1
Fluoranthene	206-44-0	<0.000162	0.000188	0.000162	mg/L	01.03.2021 21:51	U	1
Fluorene	86-73-7	<0.000104	0.000188	0.000104	mg/L	01.03.2021 21:51	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.0000944	0.000188	0.0000944	mg/L	01.03.2021 21:51	U	1
Naphthalene	91-20-3	<0.000100	0.000376	0.000100	mg/L	01.03.2021 21:51	U	1
Phenanthrene	85-01-8	<0.0000879	0.000188	0.0000879	mg/L	01.03.2021 21:51	U	1
Pyrene	129-00-0	<0.000135	0.000188	0.000135	mg/L	01.03.2021 21:51	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	141	54 - 146	%		
Nitrobenzene-d5	86	46 - 151	%		
Terphenyl-D14	150	51 - 139	%		**

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Certificate of Analytical Results

681863

Terracon-Lubbock, Lubbock, TX

DCP Sec. 31

Sample Id:	**MW-3**	Matrix:	Water	Sample Depth:	
Lab Sample Id:	681863-002	Date Collected:	12.18.2020 13:11	Date Received:	12.18.2020 16:43
Analytical Method:	BTEX by EPA 8021			Prep Method:	5030B
Analyst:	KTL	% Moist:			
Seq Number:	3145810	Date Prep:	12.22.2020 17:00	Tech:	KTL
Subcontractor:	SUB: T104704400-20-21	Prep seq:	7717742		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 02:50	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 02:50	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 02:50	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 02:50	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 02:50	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 02:50	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 02:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		

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Certificate of Analytical Results
681863
Terracon-Lubbock, Lubbock, TX
DCP Sec. 31

Sample Id: **MW-4** Matrix: Water Sample Depth:

Lab Sample Id: 681863-003 Date Collected: 12.18.2020 12:38 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:34 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000946	0.000216	0.0000946	mg/L	01.03.2021 22:09	U	1
2-Methylnaphthalene	91-57-6	<0.000109	0.000216	0.000109	mg/L	01.03.2021 22:09	U	1
Acenaphthene	83-32-9	<0.000119	0.000216	0.000119	mg/L	01.03.2021 22:09	U	1
Acenaphthylene	208-96-8	<0.000100	0.000216	0.000100	mg/L	01.03.2021 22:09	U	1
Anthracene	120-12-7	<0.000103	0.000216	0.000103	mg/L	01.03.2021 22:09	U	1
Benzo(a)anthracene	56-55-3	<0.000160	0.000216	0.000160	mg/L	01.03.2021 22:09	U	1
Benzo(a)pyrene	50-32-8	<0.0000679	0.000216	0.0000679	mg/L	01.03.2021 22:09	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000846	0.000216	0.0000846	mg/L	01.03.2021 22:09	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000135	0.000216	0.000135	mg/L	01.03.2021 22:09	U	1
Benzo(k)fluoranthene	207-08-9	<0.000138	0.000216	0.000138	mg/L	01.03.2021 22:09	U	1
Chrysene	218-01-9	<0.000186	0.000216	0.000186	mg/L	01.03.2021 22:09	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000904	0.000216	0.0000904	mg/L	01.03.2021 22:09	U	1
Fluoranthene	206-44-0	<0.000187	0.000216	0.000187	mg/L	01.03.2021 22:09	U	1
Fluorene	86-73-7	<0.000120	0.000216	0.000120	mg/L	01.03.2021 22:09	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000109	0.000216	0.000109	mg/L	01.03.2021 22:09	U	1
Naphthalene	91-20-3	<0.000116	0.000433	0.000116	mg/L	01.03.2021 22:09	U	1
Phenanthrene	85-01-8	<0.000101	0.000216	0.000101	mg/L	01.03.2021 22:09	U	1
Pyrene	129-00-0	<0.000155	0.000216	0.000155	mg/L	01.03.2021 22:09	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	138	54 - 146	%		
Nitrobenzene-d5	83	46 - 151	%		
Terphenyl-D14	155	51 - 139	%		**

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Certificate of Analytical Results
681863
Terracon-Lubbock, Lubbock, TX
DCP Sec. 31

Sample Id: **MW-4** Matrix: Water Sample Depth:

Lab Sample Id: 681863-003 Date Collected: 12.18.2020 12:38 Date Received: 12.18.2020 16:43

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: KTL % Moist:

Seq Number: 3145810 Date Prep: 12.22.2020 17:00 Tech: KTL

Subcontractor: SUB: T104704400-20-21 Prep seq: 7717742

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 03:16	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 03:16	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 03:16	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 03:16	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 03:16	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 03:16	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 03:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		

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Sample Id: **MW-5** Matrix: Water Sample Depth:

Lab Sample Id: 681863-004 Date Collected: 12.18.2020 13:42 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:37 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000898	0.000205	0.0000898	mg/L	01.03.2021 22:27	U	1
2-Methylnaphthalene	91-57-6	<0.000103	0.000205	0.000103	mg/L	01.03.2021 22:27	U	1
Acenaphthene	83-32-9	<0.000113	0.000205	0.000113	mg/L	01.03.2021 22:27	U	1
Acenaphthylene	208-96-8	<0.0000950	0.000205	0.0000950	mg/L	01.03.2021 22:27	U	1
Anthracene	120-12-7	<0.0000978	0.000205	0.0000978	mg/L	01.03.2021 22:27	U	1
Benzo(a)anthracene	56-55-3	<0.000152	0.000205	0.000152	mg/L	01.03.2021 22:27	U	1
Benzo(a)pyrene	50-32-8	<0.0000644	0.000205	0.0000644	mg/L	01.03.2021 22:27	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000802	0.000205	0.0000802	mg/L	01.03.2021 22:27	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000128	0.000205	0.000128	mg/L	01.03.2021 22:27	U	1
Benzo(k)fluoranthene	207-08-9	<0.000131	0.000205	0.000131	mg/L	01.03.2021 22:27	U	1
Chrysene	218-01-9	<0.000176	0.000205	0.000176	mg/L	01.03.2021 22:27	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000858	0.000205	0.0000858	mg/L	01.03.2021 22:27	U	1
Fluoranthene	206-44-0	<0.000177	0.000205	0.000177	mg/L	01.03.2021 22:27	U	1
Fluorene	86-73-7	<0.000114	0.000205	0.000114	mg/L	01.03.2021 22:27	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000103	0.000205	0.000103	mg/L	01.03.2021 22:27	U	1
Naphthalene	91-20-3	<0.000110	0.000410	0.000110	mg/L	01.03.2021 22:27	U	1
Phenanthrene	85-01-8	<0.0000960	0.000205	0.0000960	mg/L	01.03.2021 22:27	U	1
Pyrene	129-00-0	<0.000147	0.000205	0.000147	mg/L	01.03.2021 22:27	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	133	54 - 146	%		
Nitrobenzene-d5	81	46 - 151	%		
Terphenyl-D14	145	51 - 139	%		**

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Sample Id: **MW-5** Matrix: Water Sample Depth:

Lab Sample Id: 681863-004 Date Collected: 12.18.2020 13:42 Date Received: 12.18.2020 16:43

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: KTL % Moist:

Seq Number: 3145810 Date Prep: 12.22.2020 17:00 Tech: KTL

Subcontractor: SUB: T104704400-20-21 Prep seq: 7717742

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 03:42	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 03:42	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 03:42	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 03:42	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 03:42	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 03:42	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 03:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

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Sample Id: **MW-6** Matrix: Water Sample Depth:

Lab Sample Id: 681863-005 Date Collected: 12.18.2020 14:04 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:40 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000822	0.000188	0.0000822	mg/L	01.03.2021 22:45	U	1
2-Methylnaphthalene	91-57-6	<0.0000944	0.000188	0.0000944	mg/L	01.03.2021 22:45	U	1
Acenaphthene	83-32-9	<0.000103	0.000188	0.000103	mg/L	01.03.2021 22:45	U	1
Acenaphthylene	208-96-8	<0.0000870	0.000188	0.0000870	mg/L	01.03.2021 22:45	U	1
Anthracene	120-12-7	<0.0000895	0.000188	0.0000895	mg/L	01.03.2021 22:45	U	1
Benzo(a)anthracene	56-55-3	<0.000139	0.000188	0.000139	mg/L	01.03.2021 22:45	U	1
Benzo(a)pyrene	50-32-8	<0.0000590	0.000188	0.0000590	mg/L	01.03.2021 22:45	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000735	0.000188	0.0000735	mg/L	01.03.2021 22:45	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000117	0.000188	0.000117	mg/L	01.03.2021 22:45	U	1
Benzo(k)fluoranthene	207-08-9	<0.000120	0.000188	0.000120	mg/L	01.03.2021 22:45	U	1
Chrysene	218-01-9	<0.000161	0.000188	0.000161	mg/L	01.03.2021 22:45	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000786	0.000188	0.0000786	mg/L	01.03.2021 22:45	U	1
Fluoranthene	206-44-0	<0.000163	0.000188	0.000163	mg/L	01.03.2021 22:45	U	1
Fluorene	86-73-7	<0.000104	0.000188	0.000104	mg/L	01.03.2021 22:45	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.0000944	0.000188	0.0000944	mg/L	01.03.2021 22:45	U	1
Naphthalene	91-20-3	<0.000101	0.000376	0.000101	mg/L	01.03.2021 22:45	U	1
Phenanthrene	85-01-8	<0.0000879	0.000188	0.0000879	mg/L	01.03.2021 22:45	U	1
Pyrene	129-00-0	<0.000135	0.000188	0.000135	mg/L	01.03.2021 22:45	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	149	54 - 146	%		**
Nitrobenzene-d5	91	46 - 151	%		
Terphenyl-D14	147	51 - 139	%		**

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Sample Id: **MW-6** Matrix: Water Sample Depth:

Lab Sample Id: 681863-005 Date Collected: 12.18.2020 14:04 Date Received: 12.18.2020 16:43

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: KTL % Moist:

Seq Number: 3145810 Date Prep: 12.22.2020 17:00 Tech: KTL

Subcontractor: SUB: T104704400-20-21 Prep seq: 7717742

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 04:08	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 04:08	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 04:08	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 04:08	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 04:08	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 04:08	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 04:08	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	109	70 - 130	%		

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Sample Id: **DUP-1** Matrix: Water Sample Depth:

Lab Sample Id: 681863-006 Date Collected: 12.18.2020 00:00 Date Received: 12.18.2020 16:43

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: DNE % Moist:

Seq Number: 3146400 Date Prep: 12.24.2020 09:43 Tech: DNE

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000985	0.000225	0.0000985	mg/L	01.03.2021 23:03	U	1
2-Methylnaphthalene	91-57-6	<0.000113	0.000225	0.000113	mg/L	01.03.2021 23:03	U	1
Acenaphthene	83-32-9	<0.000124	0.000225	0.000124	mg/L	01.03.2021 23:03	U	1
Acenaphthylene	208-96-8	<0.000104	0.000225	0.000104	mg/L	01.03.2021 23:03	U	1
Anthracene	120-12-7	<0.000107	0.000225	0.000107	mg/L	01.03.2021 23:03	U	1
Benzo(a)anthracene	56-55-3	<0.000167	0.000225	0.000167	mg/L	01.03.2021 23:03	U	1
Benzo(a)pyrene	50-32-8	<0.0000707	0.000225	0.0000707	mg/L	01.03.2021 23:03	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000880	0.000225	0.0000880	mg/L	01.03.2021 23:03	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000140	0.000225	0.000140	mg/L	01.03.2021 23:03	U	1
Benzo(k)fluoranthene	207-08-9	<0.000144	0.000225	0.000144	mg/L	01.03.2021 23:03	U	1
Chrysene	218-01-9	<0.000193	0.000225	0.000193	mg/L	01.03.2021 23:03	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000941	0.000225	0.0000941	mg/L	01.03.2021 23:03	U	1
Fluoranthene	206-44-0	<0.000195	0.000225	0.000195	mg/L	01.03.2021 23:03	U	1
Fluorene	86-73-7	<0.000125	0.000225	0.000125	mg/L	01.03.2021 23:03	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000113	0.000225	0.000113	mg/L	01.03.2021 23:03	U	1
Naphthalene	91-20-3	<0.000120	0.000450	0.000120	mg/L	01.03.2021 23:03	U	1
Phenanthrene	85-01-8	<0.000105	0.000225	0.000105	mg/L	01.03.2021 23:03	U	1
Pyrene	129-00-0	<0.000161	0.000225	0.000161	mg/L	01.03.2021 23:03	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	118	54 - 146	%		
Nitrobenzene-d5	69	46 - 151	%		
Terphenyl-D14	155	51 - 139	%		**

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Sample Id:	**DUP-1**	Matrix:	Water	Sample Depth:	
Lab Sample Id:	681863-006	Date Collected:	12.18.2020 00:00	Date Received:	12.18.2020 16:43
Analytical Method:	BTEX by EPA 8021			Prep Method:	5030B
Analyst:	KTL	% Moist:			
Seq Number:	3145810	Date Prep:	12.22.2020 17:00	Tech:	KTL
Subcontractor:	SUB: T104704400-20-21	Prep seq:	7717742		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 04:33	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 04:33	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 04:33	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 04:33	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 04:33	U	1
Xylenes, Total	1330-20-7	<0.000630		0.000630	mg/L	12.23.2020 04:33	U	
Total BTEX		<0.000367		0.000367	mg/L	12.23.2020 04:33	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	110	70 - 130	%		

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Sample Id:	**7717742-1-BLK**	Matrix:	Water	Sample Depth:	
Lab Sample Id:	7717742-1-BLK	Date Collected:		Date Received:	
Analytical Method:	BTEX by EPA 8021			Prep Method:	5030B
Analyst:	KTL	% Moist:			
Seq Number:	3145810	Date Prep:	12.22.2020 17:00	Tech:	KTL
Subcontractor:	SUB: T104704400-20-21	Prep seq:	7717742		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	12.23.2020 01:58	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	12.23.2020 01:58	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	12.23.2020 01:58	U	1
m_p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	12.23.2020 01:58	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	12.23.2020 01:58	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	73	70 - 130	%		

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Sample Id: **7717820-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7717820-1-BLK Date Collected: Date Received:

Analytical Method: PAHs by SW846 8270D SIM Prep Method: SW3511

Analyst: EKL % Moist:

Seq Number: 3146400 Date Prep: 12.23.2020 17:42 Tech: EKL

Prep seq: 7717820

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
1-Methylnaphthalene	90-12-0	<0.0000795	0.000182	0.0000795	mg/L	12.28.2020 11:08	U	1
2-Methylnaphthalene	91-57-6	<0.0000913	0.000182	0.0000913	mg/L	12.28.2020 11:08	U	1
Acenaphthene	83-32-9	<0.000100	0.000182	0.0001000	mg/L	12.28.2020 11:08	U	1
Acenaphthylene	208-96-8	<0.0000842	0.000182	0.0000842	mg/L	12.28.2020 11:08	U	1
Anthracene	120-12-7	<0.0000866	0.000182	0.0000866	mg/L	12.28.2020 11:08	U	1
Benzo(a)anthracene	56-55-3	<0.000134	0.000182	0.000134	mg/L	12.28.2020 11:08	U	1
Benzo(a)pyrene	50-32-8	<0.0000571	0.000182	0.0000571	mg/L	12.28.2020 11:08	U	1
Benzo(b)fluoranthene	205-99-2	<0.0000711	0.000182	0.0000711	mg/L	12.28.2020 11:08	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000113	0.000182	0.000113	mg/L	12.28.2020 11:08	U	1
Benzo(k)fluoranthene	207-08-9	<0.000116	0.000182	0.000116	mg/L	12.28.2020 11:08	U	1
Chrysene	218-01-9	<0.000156	0.000182	0.000156	mg/L	12.28.2020 11:08	U	1
Dibenz(a,h)anthracene	53-70-3	<0.0000760	0.000182	0.0000760	mg/L	12.28.2020 11:08	U	1
Fluoranthene	206-44-0	<0.000157	0.000182	0.000157	mg/L	12.28.2020 11:08	U	1
Fluorene	86-73-7	<0.000101	0.000182	0.000101	mg/L	12.28.2020 11:08	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.0000913	0.000182	0.0000913	mg/L	12.28.2020 11:08	U	1
Naphthalene	91-20-3	<0.0000972	0.000364	0.0000972	mg/L	12.28.2020 11:08	U	1
Phenanthrene	85-01-8	<0.0000850	0.000182	0.0000850	mg/L	12.28.2020 11:08	U	1
Pyrene	129-00-0	<0.000130	0.000182	0.000130	mg/L	12.28.2020 11:08	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
2-Fluorobiphenyl	143	54 - 146	%		
Nitrobenzene-d5	114	46 - 151	%		
Terphenyl-D14	152	51 - 139	%		**

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were 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.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Form 2 - Surrogate Recoveries

Project Name: DCP Sec. 31

Report Date: 01062021

Work Orders : 681863 **Project ID:** AR207009

Lab Batch #: 3145810 **Sample:** 7717742-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.22.2020 23:23 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	70-130	
4-Bromofluorobenzene	0.0272	0.0300	91	70-130	

Lab Batch #: 3145810 **Sample:** 7717742-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.22.2020 23:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3145810 **Sample:** 681863-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.23.2020 00:14 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3145810 **Sample:** 681863-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.23.2020 00:40 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3145810 **Sample:** 7717742-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.23.2020 01:58 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	70-130	
4-Bromofluorobenzene	0.0218	0.0300	73	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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Form 2 - Surrogate Recoveries

Project Name: DCP Sec. 31

Report Date: 01062021

Work Orders : 681863 **Project ID:** AR207009

Lab Batch #: 3146400 **Sample:** 7717820-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.28.2020 10:33 **SURROGATE RECOVERY STUDY**

PAHs by SW846 8270D SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.652	0.500	130	54-146	
Nitrobenzene-d5	0.589	0.500	118	46-151	
Terphenyl-D14	0.626	0.500	125	51-139	

Lab Batch #: 3146400 **Sample:** 7717820-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.28.2020 10:51 **SURROGATE RECOVERY STUDY**

PAHs by SW846 8270D SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.582	0.500	116	54-146	
Nitrobenzene-d5	0.524	0.500	105	46-151	
Terphenyl-D14	0.595	0.500	119	51-139	

Lab Batch #: 3146400 **Sample:** 7717820-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12.28.2020 11:08 **SURROGATE RECOVERY STUDY**

PAHs by SW846 8270D SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.714	0.500	143	54-146	
Nitrobenzene-d5	0.569	0.500	114	46-151	
Terphenyl-D14	0.758	0.500	152	51-139	**

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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BS / BSD Recoveries

Project Name: DCP Sec. 31

Work Order #: 681863 **Project ID:** AR207009

Analyst: KTL **Date Prepared:** 12.22.2020 **Date Analyzed:** 12.22.2020

Lab Batch ID: 3145810 **Sample:** 7717742-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0919	92	0.100	0.0959	96	4	70-130	25	
Toluene	<0.000367	0.100	0.0838	84	0.100	0.0971	97	15	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0924	92	0.100	0.0976	98	5	70-130	25	
m_p-Xylenes	<0.000630	0.200	0.185	93	0.200	0.198	99	7	70-130	25	
o-Xylene	<0.000642	0.100	0.0921	92	0.100	0.104	104	12	70-130	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

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BS / BSD Recoveries

Project Name: DCP Sec. 31

Work Order #: 681863 **Project ID:** AR207009

Analyst: EKL **Date Prepared:** 12.23.2020 **Date Analyzed:** 12.28.2020

Lab Batch ID: 3146400 **Sample:** 7717820-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PAHs by SW846 8270D SIM Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1-Methylnaphthalene	<0.0000795	0.0182	0.0222	122	0.0182	0.0200	110	10	70-126	30	
2-Methylnaphthalene	<0.0000913	0.0182	0.0190	104	0.0182	0.0170	93	11	74-121	30	
Acenaphthene	<0.000100	0.0182	0.0205	113	0.0182	0.0185	102	10	75-127	30	
Acenaphthylene	<0.0000842	0.0182	0.0218	120	0.0182	0.0195	107	11	78-133	30	
Anthracene	<0.0000866	0.0182	0.0211	116	0.0182	0.0187	103	12	73-145	30	
Benzo(a)anthracene	<0.000134	0.0182	0.0196	108	0.0182	0.0177	97	10	77-131	30	
Benzo(a)pyrene	<0.0000571	0.0182	0.0177	97	0.0182	0.0159	87	11	56-163	30	
Benzo(b)fluoranthene	<0.0000711	0.0182	0.0184	101	0.0182	0.0163	90	12	74-138	30	
Benzo(g,h,i)perylene	<0.000113	0.0182	0.0164	90	0.0182	0.0150	82	9	77-127	30	
Benzo(k)fluoranthene	<0.000116	0.0182	0.0218	120	0.0182	0.0204	112	7	67-142	30	
Chrysene	<0.000156	0.0182	0.0201	110	0.0182	0.0183	101	9	66-126	30	
Dibenz(a,h)anthracene	<0.0000760	0.0182	0.0170	93	0.0182	0.0155	85	9	71-142	30	
Fluoranthene	<0.000157	0.0182	0.0211	116	0.0182	0.0187	103	12	78-138	30	
Fluorene	<0.000101	0.0182	0.0209	115	0.0182	0.0187	103	11	79-128	30	
Indeno(1,2,3-c,d)Pyrene	<0.0000913	0.0182	0.0170	93	0.0182	0.0156	86	9	76-140	30	
Naphthalene	<0.0000972	0.0182	0.0200	110	0.0182	0.0185	102	8	72-122	30	
Phenanthrene	<0.0000850	0.0182	0.0202	111	0.0182	0.0182	100	10	76-129	30	
Pyrene	<0.000130	0.0182	0.0226	124	0.0182	0.0202	111	11	74-138	30	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

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Form 3 - MS / MSD Recoveries

Project Name: DCP Sec. 31

Report Date: 01062021
Project ID: AR207009

Work Order # : 681863
Lab Batch ID: 3145810
QC- Sample ID: 681863-001 S
Batch #: 1
Matrix: Water
Date Analyzed: 12.23.2020
Date Prepared: 12.22.2020
Analyst: KTL
Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000408	0.100	0.0956	96	0.100	0.0952	95	0	70-130	25	
Toluene	<0.000367	0.100	0.0989	99	0.100	0.0991	99	0	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0995	100	0.100	0.0978	98	2	70-130	25	
m_p-Xylenes	<0.000630	0.200	0.201	101	0.200	0.199	100	1	70-130	25	
o-Xylene	<0.000642	0.100	0.103	103	0.100	0.101	101	2	70-130	25	

Matrix Spike Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200*|(C-F) / (C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A) / E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

681863

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact:
SRS #: 2009 084
Sampler's Signature: [signature]

Office Location: Lubbock
Project Manager: Brett Dennis
Sampler's Name: Aaron Adams

Project Number: AR207009
Project Name: DCP Sec. 31

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 8.6/8.5 7 on ice
Page 1 of 1

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	40 ml VOA	60 ml VOA	BTEX (EPA Method 8021)	PAHs (EPA Method 8270 SIM)	Lab Sample ID
GW	12/18/2020	11:20		X	MW-2			3	2	X	X	681863-001
GW	12/18/2020	13:11		X	MW-3			3	2	X	X	-002
GW	12/18/2020	12:38		X	MW-4			3	2	X	X	-003
GW	12/18/2020	13:42		X	MW-5			3	2	X	X	-004
GW	12/18/2020	14:04		X	MW-6			3	2	X	X	-005
GW	12/18/2020	-		X	Dup-1			3	2	X	X	-006

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	12-18-20	16:43	[signature]	12/18/2020	16:43

NOTES: Bill directly to Plains Pipeline

e-mail results to:
brett.dennis@terracon.com
erin.loyd@terracon.com
algroves@paalp.com

Matrix: WW-Wastewater, W-Water, S-Soil, L-Liquid, A-Air Bag, C-Charcoal tube, SL-Sludge
Container: VOA-40 ml vial, A/G-Amber glass 1L, 250 ml-Glass wide mouth, P/O-Plastic or other

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ Resourceful ■ Reliable

Inter-Office Shipment

IOS Number : 75272

Date/Time:	12.18.2020	Created by:	Michael J Turner	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	772425886310	E-Mail:	jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
681863-001	W	MW-2	12.18.2020 11:30	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 11:30**	JKR	ACNP ACNPY ANTH BZ	
681863-002	W	MW-3	12.18.2020 13:11	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 13:11**	JKR	ACNP ACNPY ANTH BZ	
681863-003	W	MW-4	12.18.2020 12:38	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 12:38**	JKR	ACNP ACNPY ANTH BZ	
681863-004	W	MW-5	12.18.2020 13:42	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 13:42**	JKR	ACNP ACNPY ANTH BZ	
681863-005	W	MW-6	12.18.2020 14:04	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 14:04**	JKR	ACNP ACNPY ANTH BZ	
681863-006	W	DUP-1	12.18.2020 00:00	SIM_PAH_D	PAHs by 8270D SIM	12.25.2020	**12.25.2020 00:00**	JKR	ACNP ACNPY ANTH BZ	

Inter Office Shipment or Sample Comments:

Relinquished By: 
Michael J Turner

Date Relinquished: 12.18.2020

Received By: 
Sandra Torres

Date Received: 12.19.2020

Cooler Temperature: 3.9

Inter-Office Shipment

IOS Number : 75297

Date/Time: 12.21.2020
Created by: Michael J Turner
Please send report to: Jessica Kramer
Lab# From: **Lubbock**
Delivery Priority:
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To: **Midland**
Air Bill No.:
E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
681863-001	W	MW-2	12.18.2020 11:30	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	
681863-002	W	MW-3	12.18.2020 13:11	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	
681863-003	W	MW-4	12.18.2020 12:38	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	
681863-004	W	MW-5	12.18.2020 13:42	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	
681863-005	W	MW-6	12.18.2020 14:04	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	
681863-006	W	DUP-1	12.18.2020 00:00	SW8021B	BTEX by EPA 8021	12.25.2020	01.01.2021	JKR	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 12.21.2020

Received By: Brianna Teel

Date Received:

Cooler Temperature:

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 75272

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-188

Sent By: Michael J Turner **Date Sent:** 12.18.2020 04.56 PM

Received By: Sandra Torres **Date Received:** 12.19.2020 09.30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Sandra Torres Date: 12.19.2020

Sandra Torres

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 75297

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used :

Sent By: Michael J Turner **Date Sent:** 12.21.2020 09.28 AM

Received By: **Date Received:**

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**Yes**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: _____
Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.18.2020 04.43.00 PM

Work Order #: 681863

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	8.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	PAH to Xenco Stafford. BTEX to Xenco Midland
#18 Water VOC samples have zero headspace?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 12.18.2020

Checklist reviewed by: Jessica Kramer Date: 12.22.2020

Jessica Kramer

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 10, 2020

Plains All American Pipeline - Terracon

Sample Delivery Group:	L1205597
Samples Received:	04/02/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Paige Gaona 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
Project Manager

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

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SAMPLE SUMMARY

EF-1 (20200331) L1205597-01 Air

Collected by: Aaron Adams
Collected date/time: 03/31/20 13:20
Received date/time: 04/02/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1455611	2000	04/04/20 13:46	04/04/20 13:46	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.

Chris McCord
Project Manager

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	1240	3960		2000	WG1455611
Toluene	108-88-3	92.10	400	1510	2330	8780		2000	WG1455611
Ethylbenzene	100-41-4	106	400	1730	ND	ND		2000	WG1455611
m&p-Xylene	1330-20-7	106	800	3470	4060	17600		2000	WG1455611
o-Xylene	95-47-6	106	400	1730	1440	6240		2000	WG1455611
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*91.7*				WG1455611

Method Blank (MB)

(MB) R3515742-3 04/04/20 11:12

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
(S) 1,4-Bromofluorobenzene	*93.2*			*60.0-140*

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

(LCS) R3515742-1 04/04/20 09:48 • (LCSD) R3515742-2 04/04/20 10:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.38	3.48	90.1	92.8	70.0-130			2.92	25
Toluene	3.75	3.42	3.42	91.2	91.2	70.0-130			0.000	25
Ethylbenzene	3.75	3.52	3.59	93.9	95.7	70.0-130			1.97	25
m&p-Xylene	7.50	7.20	7.34	96.0	97.9	70.0-130			1.93	25
o-Xylene	3.75	3.61	3.67	96.3	97.9	70.0-130			1.65	25
(S) 1,4-Bromofluorobenzene				*95.8*	*96.3*	*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 Pipeline - Terracon	AR207009	L1205597	04/10/20 18:32	8 of 11

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Paige Gaona

Sampler's Names: Aaron Adams

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9
Lubbock, TX 79424

Phone: (806) 794-1296
Contact: 806-300-0140
PO/SO #:
Sampler's Signature

Project Number: AR207009

Project Name: DCP Sec. 31

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

1205597

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: Tedlar bag	BTEX (EPA Method 8021B)	Lab Sample ID
A	03/31/20	1320		X	EF-1 (20200331)			1	x	-01

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date:	Time:		Date:	Time:
Relinquished by (Signature)			Received by (Signature)	4/3/20	8:30
Relinquished by (Signature)			Received by (Signature)	4/2/20	
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:

E-MAIL RESULTS TO:
CJBRYANT@PAALP.COM
ERIN.LOYD@TERRACON.COM
PAIGE.GAONA@TERRACON
ALGROVES@PAALP.COM

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

NCF

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: TERRLTX	1205597	
Cooler Received/Opened On: 4/3/20 Temperature:	Amb	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Kelsey Stephenson

Pace Analytical®
National Center for Testing & Innovation

Login #: 12 05597	Client: TERRLTX	Date: 4/2/20	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 / Courie
	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:	X	Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH: Amb / 2 Tedlars
					Carrier: FedEx
					Tracking# 3914 8609 1107

Login Comments: COC is missing. EFF-1 DCP #2 and EFF-1 DCP Sec 31.

Client informed by:		Call	x	Email		Voice Mail		Date: 4/2/20	Time: 16:24
TSR Initials: CM	Client Contact: Paige Goana								

Login Instructions:

COCs attached.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

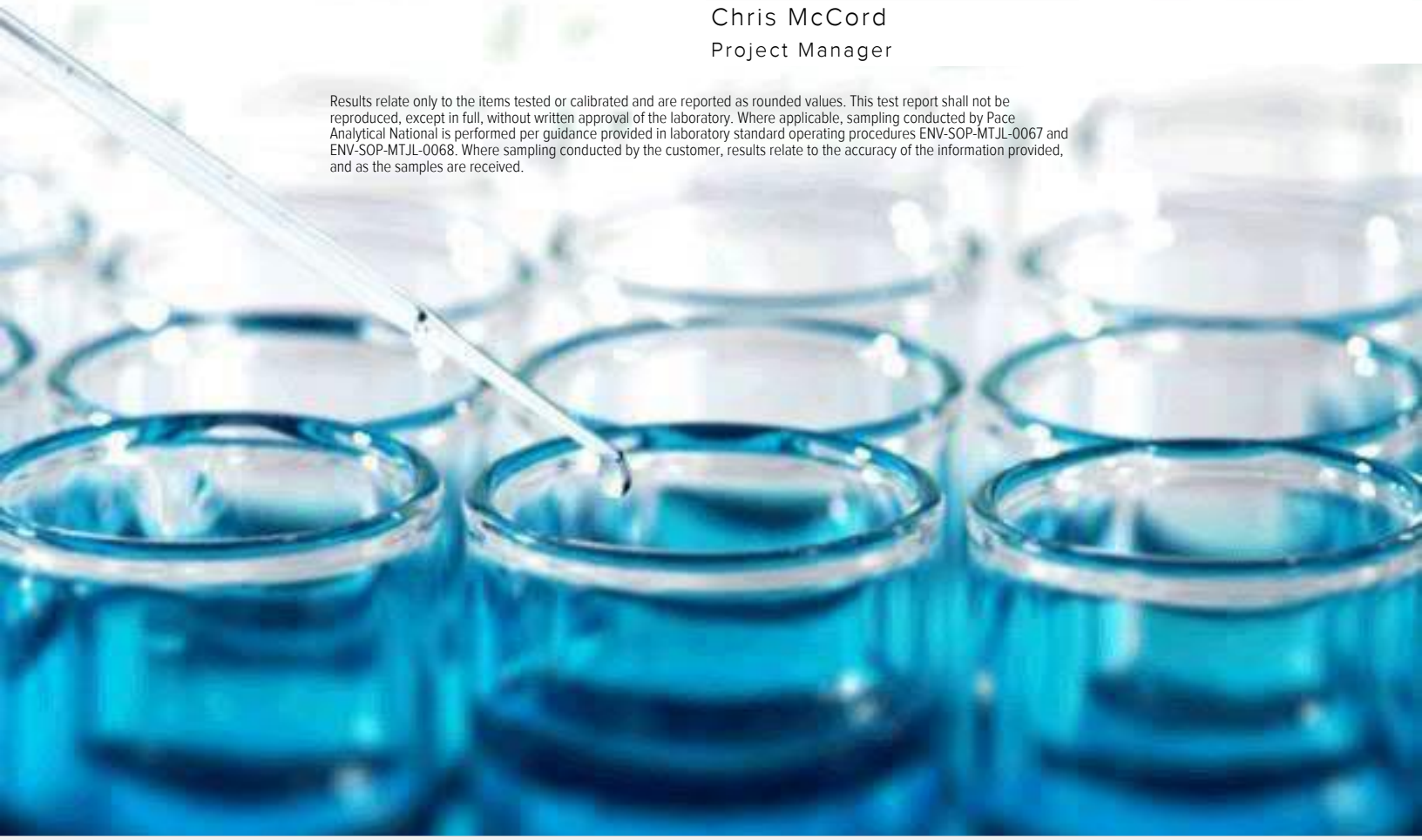
May 05, 2020

Plains All American Pipeline - Terracon

Sample Delivery Group:	L1214003
Samples Received:	05/01/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Paige Gaona
	5827 50th St.
	Suite 1
	Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
Project Manager



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Sr: Sample Results 5

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Qc: Quality Control Summary 6

Volatile Organic Compounds (MS) by Method M18-Mod 6

Gl: Glossary of Terms 7

Al: Accreditations & Locations 8

Sc: Sample Chain of Custody 9

SAMPLE SUMMARY

EFF-1 (20200430) L1214003-01 Air

Collected by	Collected date/time	Received date/time
Aaron Adams	04/30/20 12:00	05/01/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1469209	2000	05/02/20 00:07	05/02/20 00:07	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.

Chris McCord
Project Manager

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	4020	12800		2000	WG1469209
Toluene	108-88-3	92.10	400	1510	4440	16700		2000	WG1469209
Ethylbenzene	100-41-4	106	400	1730	431	1870		2000	WG1469209
m&p-Xylene	1330-20-7	106	800	3470	9590	41600		2000	WG1469209
o-Xylene	95-47-6	106	400	1730	3960	17200		2000	WG1469209
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG1469209
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	1570000	6490000		2000	WG1469209
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*83.5*				WG1469209

Method Blank (MB)

(MB) R3524215-3 05/01/20 07:25

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	*93.1*			*60.0-140*

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

(LCS) R3524215-1 05/01/20 06:10 • (LCSD) R3524215-2 05/01/20 06:48

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	3.48	3.62	92.8	96.5	70.0-130			3.94	25
Benzene	3.75	3.34	3.51	89.1	93.6	70.0-130			4.96	25
Toluene	3.75	3.38	3.56	90.1	94.9	70.0-130			5.19	25
Ethylbenzene	3.75	3.34	3.57	89.1	95.2	70.0-130			6.66	25
m&p-Xylene	7.50	6.69	7.15	89.2	95.3	70.0-130			6.65	25
o-Xylene	3.75	3.31	3.55	88.3	94.7	70.0-130			7.00	25
TPH (GC/MS) Low Fraction	203	196	210	96.6	103	70.0-130			6.90	25
(S) 1,4-Bromofluorobenzene				*93.8*	*96.8*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
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RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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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.
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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.

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* 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 Pipeline - Terracon	AR207009	L1214003	05/05/20 11:08	8 of 10

G119

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Paige Gaona

Sampler's Names: Aaron Adams

Laboratory: ESC
Address: 12065 Lebanon Rd
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Contact: 806-300-0140
PO/SO #:

Sampler's Signature: Aaron Adams

Project Number: AR207009

Project Name: DCP Sec. 31

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: Tedlar bag				ANALYSIS REQUESTED: BTEX (EPA Method 8021B)	TPH 8015 Extended						Lab Sample ID
A	04/30/20	1200		X	EFF-1 (20200430)			1				x	x						L1214003-01

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Aaron Adams	4-30-2020	4:45 pm	Carol Kemp	5/1/20	8:45

NOTES:

E-MAIL RESULTS TO:
CJBRYANT@PAALP.COM
ERIN.LOYD@TERRACON.COM
PAIGE.GAONA@TERRACON
ALGROVES@PAALP.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

Amb

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: ~~Lt~~ TERRLTX	L121400 3	
Cooler Received/Opened On: 5 / 1 / 20 Temperature:	Amb	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?			
COC Signed / Accurate?			
Bottles arrive intact?			
Correct bottles used?			
Sufficient volume sent?			
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 02, 2020

Terracon - Lubbock, TX

Sample Delivery Group:	L1223105
Samples Received:	05/29/2020
Project Number:	AR207009
Description:	DCP Sec. 31

Report To: Paige Gaona
5847 50th St.
Lubbock, TX 79424

Entire Report Reviewed By:

Jason Romer
Project Manager

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Qc: Quality Control Summary 10

Volatile Organic Compounds (MS) by Method TO-15 10

Gl: Glossary of Terms 11

Al: Accreditations & Locations 12

Sc: Sample Chain of Custody 13

EFF-1 (20200528) L1223105-01 Air

Collected by: Paige Gaona
Collected date/time: 05/28/20 12:30
Received date/time: 05/29/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1484085	2000	05/29/20 14:33	05/29/20 14:33	CAW	Mt. Juliet, TN

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

Jason Romer
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container.

Lab Sample ID	Project Sample ID	Method
L1223105-01	EFF-1 (20200528)	TO-15

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.

Jason Romer
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 11:34
Project Name: DCP Sec. 31	Laboratory Job Number: L1223105-01
Reviewer Name: Jason Romer	Prep Batch Number(s): WG1484085

#[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			1
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Revised May 2010

Laboratory Review Checklist: Supporting Data

ONE LAB. NATIONWIDE.

Laboratory Name: Pace Analytical National	LRC Date: 06/02/2020 11:34
Project Name: DCP Sec. 31	Laboratory Job Number: L1223105-01
Reviewer Name: Jason Romer	Prep Batch Number(s): WG1484085

#[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: 06/02/2020 11:34
Project Name: DCP Sec. 31	Laboratory Job Number: L1223105-01
Reviewer Name: Jason Romer	Prep Batch Number(s): WG1484085

ER #[1]	Description
1	TO-15 WG1484085 L1223105-01: Analysis was performed from an improper container.

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 TO-15

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	8690	27800		2000	WG1484085
Ethylbenzene	100-41-4	106	400	1730	729	3160		2000	WG1484085
Toluene	108-88-3	92.10	400	1510	9550	36000		2000	WG1484085
m&p-Xylene	1330-20-7	106	800	3470	16600	72000		2000	WG1484085
o-Xylene	95-47-6	106	400	1730	6730	29200		2000	WG1484085
Xylenes, Total	1330-20-7	106.16	1200	5210	23300	101000		2000	WG1484085
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	2370000	9790000		2000	WG1484085
TPH-GRO (C5-C10)	8006-61-9	101	400000	1650000	3020000	12500000		2000	WG1484085
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1484085

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

Method Blank (MB)

(MB) R3532980-3 05/29/20 07:34

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
Toluene	U		0.0870	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
Xylenes, Total	U		0.135	0.600
TPH-GRO (C5-C10)	U		39.7	200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*94.0*			*60.0-140*

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

(LCS) R3532980-1 05/29/20 06:06 • (LCSD) R3532980-2 05/29/20 06:50

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	4.05	4.03	108	107	70.0-130			0.495	25
Toluene	3.75	4.01	4.00	107	107	70.0-130			0.250	25
Ethylbenzene	3.75	4.03	4.01	107	107	70.0-130			0.498	25
m&p-Xylene	7.50	8.01	8.04	107	107	70.0-130			0.374	25
o-Xylene	3.75	3.90	3.89	104	104	70.0-130			0.257	25
Xylenes, Total	11.3	11.9	11.9	105	105	70.0-130			0.000	25
TPH (GC/MS) Low Fraction	203	212	212	104	104	70.0-130			0.000	25
TPH-GRO (C5-C10)	293	299	300	102	102	70.0-130			0.334	25
(S) 1,4-Bromofluorobenzene				*97.2*	*97.4*	*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.
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:
Terracon - Lubbock, TX	AR207009	L1223105	06/02/20 11:34	12 of 17

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Paige Gaona

Sampler's Names: Paige Gaona

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact: 806-300-0140
PO/SO #:
Sampler's Signature

Project Number: AR207009
Project Name: DCP Sec. 31

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1
D136

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: Total 1oz				BTEX (EPA Method 8021B)	TPH 8015 extended						Lab Sample ID
A	05/28/20	1230		X	EFF-1 (20200528)			1				x	x						1223105-01

TURNAROUND TIME: ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	3.45	5/28/20			
				5/29/20	0900

NOTES:

E-MAIL RESULTS TO:
CJBRYANT@PAALP.COM
ERIN.LOYD@TERRACON.COM
PAIGE.GAONA@TERRACON
ALGROVES@PAALP.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

AMB

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	TERRACON	1223105
Cooler Received/Opened On: 5 / 20 / 20	Temperature:	Ac
Received By: joey brent		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Method: TO-15 Instrument: AIRMS5
Laboratory: Pace Analytical - National Matrix: air
Date: 19-Feb-20

DCS Full List Study

Analyte	Result (ppbv)	Conc/TV	% Rec	MDL (ppbv)
1,1,1-Trichloroethane	0.1774321	0.19	93%	0.0665
1,1,2,2-Tetrachloroethane	0.1829994	0.19	96%	0.0576
1,1,2-Trichloroethane	0.1846284	0.19	97%	0.0287
1,1,2-Trichlorotrifluoroethane	0.194383	0.19	102%	0.0687
1,1-Dichloroethane	0.1864587	0.19	98%	0.0514
1,1-Dichloroethene	0.1585912	0.19	83%	0.049
1,1-DIFLUOROETHANE	0.232045	0.19	122%	0.0325
1,2,3-TRIMETHYLBENZENE	0.182866	0.19	96%	0.0325
1,2,4-Trichlorobenzene	0.1713116	0.19	90%	0.148
1,2,4-Trimethylbenzene	0.1744547	0.19	92%	0.0483
1,2-Dibromoethane	0.1603244	0.19	84%	0.0185
1,2-Dichlorobenzene	0.2020523	0.19	106%	0.0603
1,2-Dichloroethane	0.1806403	0.19	95%	0.0616
1,2-Dichloropropane	0.1772389	0.19	93%	0.0599
1,2-Dichlorotetrafluoroethane	0.1706286	0.19	90%	0.0458
1,3,5-Trimethylbenzene	0.1704482	0.19	90%	0.0631
1,3-Butadiene	0.2116338	0.19	111%	0.0563
1,3-Dichlorobenzene	0.153701	0.19	81%	0.0597
1,4-Dichlorobenzene	0.1495967	0.19	79%	0.0557
1,4-Dioxane	0.2635595	0.19	139%	0.0554
2,2,4-Trimethylpentane	0.196511	0.19	103%	0.0456
2-Butanone (MEK)	0.2116884	0.19	111%	0.0493
2-Chlorotoluene	0.1781749	0.19	94%	0.0605
2-Propanol	0.1978158	0.19	104%	0.0882
4-Ethyltoluene	0.1493678	0.19	79%	0.0666
4-Methyl-2-Pentanone (MIBK)	0.2026842	0.19	107%	0.065
Acetone	0.3543713	0.31	114%	0.0569
ACETONITRILE	1.0195043	0.95	107%	0.235
ACROLEIN	0.547786	0.63	87%	0.463
ACRYLONITRILE	0.2250914	0.19	118%	0.226
Allyl Chloride	0.2102532	0.19	111%	0.0546
Benzene	0.1838874	0.19	97%	0.046
Benzyl Chloride	0.1536139	0.19	81%	0.0598
Bromodichloromethane	0.1736225	0.19	91%	0.0436
BROMOETHANE	0.2059552	0.19	108%	0.216
Bromoform	0.1737244	0.19	91%	0.0786
Bromomethane	0.2708657	0.19	143%	0.0609

Trichlorofluoromethane	0.1797262	0.19	95%	0.0673
Vinyl Acetate	0.2305951	0.19	121%	0.0639
Vinyl Bromide	0.1990514	0.19	105%	0.0727
Vinyl Chloride	0.2582345	0.19	136%	0.0457

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

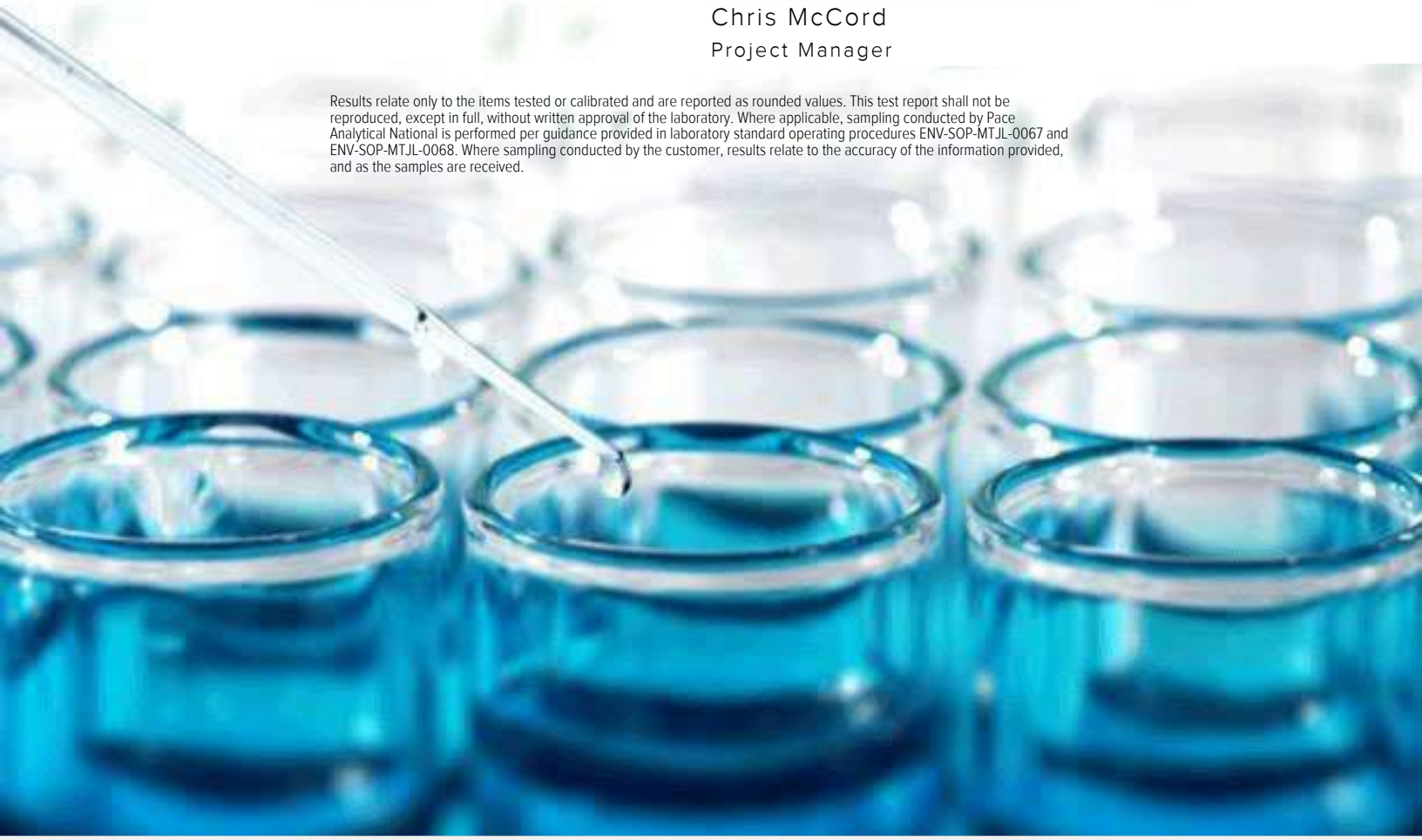
July 06, 2020

Plains All American Pipeline - Terracon

Sample Delivery Group:	L1234657
Samples Received:	06/30/2020
Project Number:	AR207009
Description:	DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084)
Site:	SRS# 2009-084
Report To:	Paige Gaona 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
Project Manager



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SAMPLE SUMMARY

EFF-1 (06292020) L1234657-01 Air

Collected by	Collected date/time	Received date/time
Aaron Adams	06/29/20 13:10	06/30/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1502376	4000	07/01/20 23:03	07/01/20 23:03	CAW	Mt. Juliet, TN

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

Chris McCord
Project Manager

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	13400	42800		4000	WG1502376
Toluene	108-88-3	92.10	800	3010	20500	77200		4000	WG1502376
Ethylbenzene	100-41-4	106	800	3470	2230	9670		4000	WG1502376
m&p-Xylene	1330-20-7	106	1600	6940	39000	169000		4000	WG1502376
o-Xylene	95-47-6	106	800	3470	16700	72400		4000	WG1502376
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	ND	ND		4000	WG1502376
TPH (GC/MS) Low Fraction	8006-61-9	101	800000	3300000	4820000	19900000		4000	WG1502376
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1502376

Method Blank (MB)

(MB) R3545265-3 07/01/20 10:08

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	*85.6*			*60.0-140*

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

(LCS) R3545265-1 07/01/20 08:40 • (LCSD) R3545265-2 07/01/20 09:25

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	4.38	4.42	117	118	70.0-130			0.909	25
Benzene	3.75	4.50	4.53	120	121	70.0-130			0.664	25
Toluene	3.75	4.54	4.45	121	119	70.0-130			2.00	25
Ethylbenzene	3.75	4.50	4.54	120	121	70.0-130			0.885	25
m&p-Xylene	7.50	9.11	9.17	121	122	70.0-130			0.656	25
o-Xylene	3.75	4.42	4.45	118	119	70.0-130			0.676	25
TPH (GC/MS) Low Fraction	203	238	241	117	119	70.0-130			1.25	25
(S) 1,4-Bromofluorobenzene				*97.0*	*97.6*	*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.

B106

CHAIN OF CUSTODY RECORD L123465

Terracon

Office Location Lubbock

Project Manager: Paige Gaona

Sampler's Name: Aaron Adams

Project Number: AR207009

Project Name: DCP Plant to Lea Station 6" Sec. 31 (SRS # 2009-084)

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact:
PO/SO #:
Sampler's Signature

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: Tedlar				ANALYSIS REQUESTED: BTEX (EPA Method 8021B)	TPH 8015 Extended						Lab Sample ID
A	06/29/20	1310		X	EFF-1 (06292020)			1				X	X						-01
					**********END OF COC**********														

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1

TURNAROUND TIME: [X] Normal [ ] 48-Hour Rush [ ] 24-Hour Rush
TRRP Laboratory Review Checklist [ ] Yes [ ] No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Aaron Adams	6-29-2020	5:00 pm			
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date: 6/30/2	Time: 8:4

NOTES:

E-MAIL RESULTS TO:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. PAIGE.GAONA@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM
5. AARON.ADAMS@TERRACON.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other

AMB
RAD SCREEN: <0.5 mR/hr

Cont=1

Fedex Tracking 3943 4237 4213

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: TERRLTX	L1274657	
Cooler Received/Opened On: 6 / 30 / 20 Temperature:		
Received By: Monica Rifenberrick		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Method: TO-15 Instrument: AIRMS1
Laboratory: Pace Analytical - National Matrix: AIR
Date: 14-May-20

DCS TO-15 Study

Analyte	Result (ppbv)	Conc/TV	% Rec	MDL (ppbv)
1,1,1-Trichloroethane	0.1708	0.19	90%	0.0736
1,1,2,2-Tetrachloroethane	0.1715	0.19	90%	0.0743
1,1,2-Trichloroethane	0.1604	0.19	84%	0.0775
1,1,2-Trichlorotrifluoroethane	0.179	0.19	94%	0.0793
1,1-Dichloroethane	0.1628	0.19	86%	0.0723
1,1-Dichloroethene	0.1593	0.19	84%	0.0762
1,1-DIFLUOROETHANE	0.1862	0.19	98%	0.129
1,2,3-TRIMETHYLBENZENE	0.1493	0.19	79%	0.0805
1,2,4-Trichlorobenzene	0.1665	0.19	88%	0.148
1,2,4-Trimethylbenzene	0.1406	0.19	74%	0.0764
1,2-DIBROMO-3-CHLOROPROPANE	0.166	0.19	87%	
1,2-Dibromoethane	0.1616	0.19	85%	0.0721
1,2-Dichlorobenzene	0.178	0.19	94%	0.128
1,2-Dichloroethane	0.166	0.19	87%	0.07
1,2-Dichloropropane	0.1684	0.19	89%	0.076
1,2-Dichlorotetrafluoroethane	0.1696	0.19	89%	0.089
1,3,5-Trimethylbenzene	0.1468	0.19	77%	0.0779
1,3-Butadiene	0.1887	0.19	99%	0.104
1,3-Dichlorobenzene	0.165	0.19	87%	0.182
1,4-Dichlorobenzene	0.1608	0.19	85%	0.0557
1,4-Dioxane	0.1809	0.19	95%	0.0833
2,2,4-Trimethylpentane	0.1622	0.19	85%	0.133
2-Butanone (MEK)	0.1757	0.19	92%	0.0814
2-Chlorotoluene	0.1584	0.19	83%	0.0828
2-Propanol	0.1684	0.19	89%	0.264
4-Ethyltoluene	0.1496	0.19	79%	0.0783
4-Methyl-2-Pentanone (MIBK)	0.1511	0.19	80%	0.0765
Acetone	0.1999	0.19	105%	0.584
ACETONITRILE	0.7827	0.95	82%	
ACROLEIN	0.1736	0.19	91%	
ACRYLONITRILE	0.1701	0.19	90%	
Allyl Chloride	0.1632	0.19	86%	0.114
Benzene	0.1726	0.19	91%	0.0715
Benzyl Chloride	0.1521	0.19	80%	0.0598
Bromodichloromethane	0.1679	0.19	88%	0.0702
BROMOETHANE	0.1754	0.19	92%	
Bromoform	0.1553	0.19	82%	0.0732

Bromomethane	0.1857	0.19	98%	0.0982
BUTANE	0.1893	0.19	100%	
Carbon Disulfide	0.1735	0.19	91%	0.102
Carbon Tetrachloride	0.1749	0.19	92%	0.0732
Chlorobenzene	0.1676	0.19	88%	0.0832
Chlorodibromomethane	0.1587	0.19	84%	0.0727
CHLORODIFLUOROMETHANE	0.1678	0.19	88%	0.131
Chloroethane	0.1884	0.19	99%	0.0996
Chloroform	0.1673	0.19	88%	0.0717
Chloromethane	0.1794	0.19	94%	0.103
CHLOROPENTAFLUOROETHANE	0.2118	0.19	111%	
cis-1,2-Dichloroethene	0.169	0.19	89%	0.0784
Cyclohexane	0.1627	0.19	86%	0.0753
Dichlorodifluoromethane	0.1678	0.19	88%	0.137
DI-ISOPROPYL ETHER	0.161	0.19	85%	
Ethanol	0.2244	0.19	118%	0.265
ETHYL ACETATE	0.1744	0.19	92%	0.1
ETHYL TERT-BUTYL ETHER	0.1551	0.19	82%	
Ethylbenzene	0.1654	0.19	87%	0.0835
Heptane	0.1451	0.19	76%	0.104
Hexachloro-1,3-Butadiene	0.1755	0.19	92%	0.105
ISOPENTANE	0.2017	0.19	106%	
Isopropylbenzene	0.1472	0.19	77%	0.0777
M&P-Xylene	0.3051	0.38	80%	0.135
METHYL ACETATE	0.1757	0.19	92%	
Methyl Butyl Ketone	0.1465	0.19	77%	0.133
METHYL CYCLOHEXANE	0.1409	0.19	74%	0.0813
Methyl Methacrylate	0.1547	0.19	81%	0.0876
Methyl Tert-Butyl Ether	0.1701	0.19	90%	0.0647
Methylene Chloride	0.1919	0.19	101%	0.0979
Naphthalene	0.1576	0.19	83%	0.35
n-Butylbenzene	0.1537	0.19	81%	0.0817
n-DECANE	0.1511	0.19	80%	
n-Hexane	0.16	0.19	84%	0.206
n-OCTANE	0.1577	0.19	83%	
NONANE	0.1632	0.19	86%	
n-Propylbenzene	0.1629	0.19	86%	0.0773
O-Xylene	0.1527	0.19	80%	0.0828
PENTANE	0.1906	0.19	100%	
P-ISOPROPYLTOLUENE	0.1458	0.19	77%	
Propene	0.2241	0.19	118%	0.0932
sec-Butylbenzene	0.1553	0.19	82%	0.0775
Styrene	0.1359	0.19	72%	0.0788
TERT-AMYL ETHYL ETHER	0.1586	0.19	83%	0.0778
TERT-AMYL METHYL ETHER	0.1602	0.19	84%	

TERT-BUTYL ALCOHOL	0.1597	0.19	84%	0.0581
tert-Butylbenzene	0.1489	0.19	78%	0.0738
Tetrachloroethene	0.1718	0.19	90%	0.0814
Tetrahydrofuran	0.1718	0.19	90%	0.0734
Toluene	0.1607	0.19	85%	0.087
TPH (GC/MS) Low Fraction	54.361	68.75	79%	39.7
Trans-1,2-Dichloroethene	0.1684	0.19	89%	0.0673
trans-1,3-Dichloropropene	0.1497	0.19	79%	0.0728
Trichloroethene	0.1656	0.19	87%	0.068
Trichlorofluoromethane	0.1703	0.19	90%	0.0819
Vinyl Acetate	0.1563	0.19	82%	0.116
Vinyl Bromide	0.1772	0.19	93%	0.0852
Vinyl Chloride	0.1701	0.19	90%	0.0949

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 06, 2020

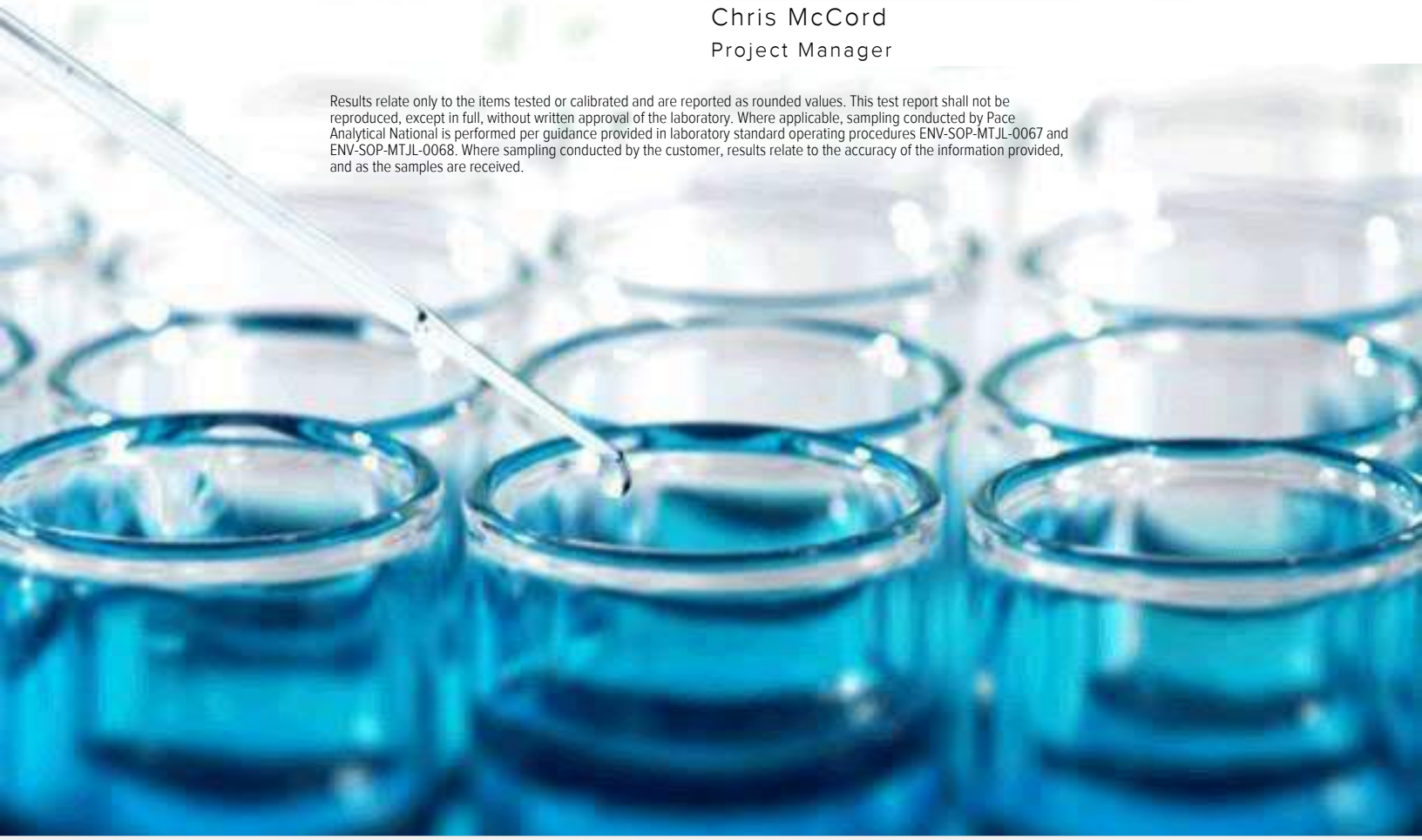
Plains All American Pipeline - Terracon

Sample Delivery Group:	L1244722
Samples Received:	07/30/2020
Project Number:	AR207009
Description:	DCP Sec. 31
Site:	SRS# 2009-084
Report To:	Paige Gaona 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
Project Manager

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



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SAMPLE SUMMARY

EFF-1 (07292020) L1244722-01 Air

Collected by	Collected date/time	Received date/time
Aaron Adams	07/29/20 11:20	07/30/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1517727	4000	07/30/20 17:53	07/30/20 17:53	CAW	Mt. Juliet, TN

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

Chris McCord
Project Manager

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	8230	26300		4000	WG1517727
Toluene	108-88-3	92.10	800	3010	12400	46700		4000	WG1517727
Ethylbenzene	100-41-4	106	800	3470	999	4330		4000	WG1517727
m&p-Xylene	1330-20-7	106	1600	6940	15100	65500		4000	WG1517727
o-Xylene	95-47-6	106	800	3470	5850	25400		4000	WG1517727
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	ND	ND		4000	WG1517727
TPH (GC/MS) Low Fraction	8006-61-9	101	800000	3300000	2240000	9250000		4000	WG1517727
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.7*				WG1517727

Method Blank (MB)

(MB) R3555023-3 07/30/20 10:35

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	*90.2*			*60.0-140*

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

(LCS) R3555023-1 07/30/20 09:18 • (LCSD) R3555023-2 07/30/20 09:57

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	3.78	3.71	101	98.9	70.0-130			1.87	25
Benzene	3.75	3.78	3.82	101	102	70.0-130			1.05	25
Toluene	3.75	3.79	3.84	101	102	70.0-130			1.31	25
Ethylbenzene	3.75	3.90	3.84	104	102	70.0-130			1.55	25
m&p-Xylene	7.50	7.83	7.80	104	104	70.0-130			0.384	25
o-Xylene	3.75	3.87	3.81	103	102	70.0-130			1.56	25
TPH (GC/MS) Low Fraction	203	214	212	105	104	70.0-130			0.939	25
(S) 1,4-Bromofluorobenzene				*98.3*	*98.2*	*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 Pipeline - Terracon	AR207009	L1244722	08/06/20 23:08	8 of 10

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock
Project Manager: Paige Gaona
Sampler's Names: Aaron Adams

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact: 806-300-0140
PO/SO #:
Sampler's Signature: Aaron Adams

Project Number: AR207009
Project Name: DCP Sec. 31

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1
124122

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers				BTEX (EPA Method 8021B)	TPH 8015 Extended						Lab Sample ID
A	07/29/20	1120		X	EFF-1 (07292020)			1				x	x						-61

TURNAROUND TIME: ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Aaron Adams	7-29-2020	5:04pm			
				7/30	9:00

NOTES:

E-MAIL RESULTS TO:
CJBRYANT@PAALP.COM
ERIN.LOYD@TERRACON.COM
PAIGE.GAONA@TERRACON
ALGROVES@PAALP.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

C141

RAD SCREEN

3952 9552 1907

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	TerrLTx	124722
Cooler Received/Opened On:	7/30/20 Temperature:	AM6
Received By:	LUCAS GREEN	
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 30, 2020

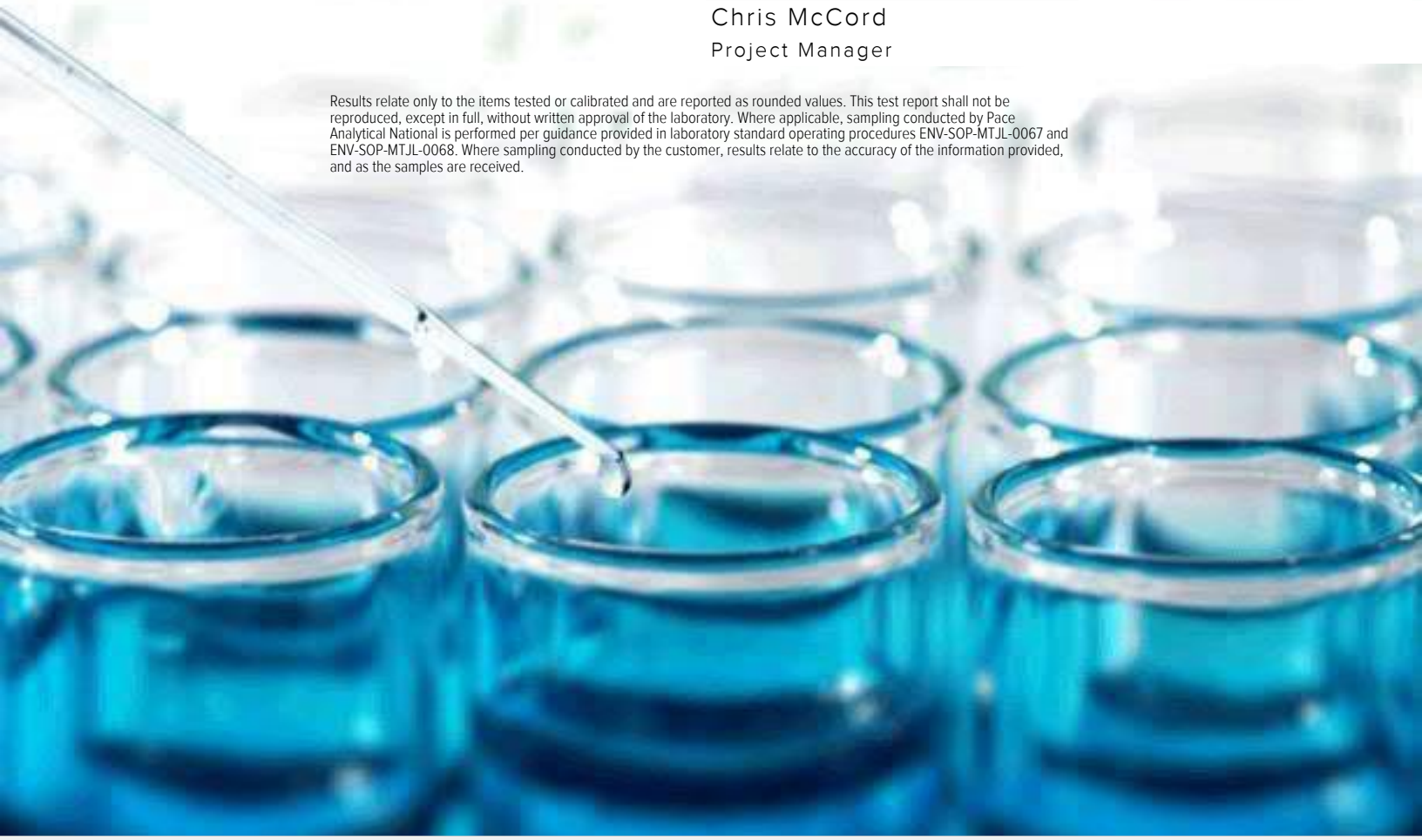
Plains All American Pipeline - Terracon

Sample Delivery Group:	L1267312
Samples Received:	09/29/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Brett Dennis 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
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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Volatile Organic Compounds (MS) by Method M18-Mod 6
Gl: Glossary of Terms 7
Al: Accreditations & Locations 8
Sc: Sample Chain of Custody 9

SAMPLE SUMMARY

EFF-1 (09282020) L1267312-01 Air

Collected by	Collected date/time	Received date/time
Aaron Adams	09/28/20 13:37	09/29/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1551095	2000	09/30/20 07:08	09/30/20 07:08	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.

Chris McCord
Project Manager

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	6660	21300		2000	WG1551095
Toluene	108-88-3	92.10	400	1510	8260	31100		2000	WG1551095
Ethylbenzene	100-41-4	106	400	1730	723	3130		2000	WG1551095
m&p-Xylene	1330-20-7	106	800	3470	10600	46000		2000	WG1551095
o-Xylene	95-47-6	106	400	1730	4360	18900		2000	WG1551095
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	2240000	9250000		2000	WG1551095
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.4*				WG1551095

Method Blank (MB)

(MB) R3575991-3 09/29/20 20:03

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	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	*97.4*			*60.0-140*

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

(LCS) R3575991-1 09/29/20 18:48 • (LCSD) R3575991-2 09/29/20 19:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.72	3.70	99.2	98.7	70.0-130			0.539	25
Toluene	3.75	3.73	3.70	99.5	98.7	70.0-130			0.808	25
Ethylbenzene	3.75	3.76	3.72	100	99.2	70.0-130			1.07	25
m&p-Xylene	7.50	7.72	7.59	103	101	70.0-130			1.70	25
o-Xylene	3.75	3.86	3.80	103	101	70.0-130			1.57	25
TPH (GC/MS) Low Fraction	203	209	216	103	106	70.0-130			3.29	25
(S) 1,4-Bromofluorobenzene				*100*	*99.6*	*60.0-140*				

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

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Abbreviations and Definitions

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RDL	Reported Detection Limit.
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Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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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

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ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
Plains All American Pipeline - Terracon	AR207009	L1267312	09/30/20 20:15	8 of 9

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: ESC
Address: 12065 Lebanon Rd
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Contact:
SRS #: 2009-084

Office Location: Lubbock
Project Manager: Brett Dennis
Sampler's Name: Aaron Adams
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

E112

Project Number: AR207009
Project Name: DCP Sec. 31

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: tedlar bag				BTEX (EPA Method 8021)	TPH 8015 extended						Lab Sample ID
A	9/28/2020	13:37		X	EFF-1 (09282020)			X				X	X						126731.2-01

NFE

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date:	Time:		Date:	Time:
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)	9-24	9:00

NOTES: Bill directly to Plains Pipeline

e-mail results to:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. BRETT.DENNIS@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM
5. AARON.ADAMS@TERRACON.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

3972 8818 9620

Amb

RAD SCREEN: <0.5 mR/hr

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 25, 2020

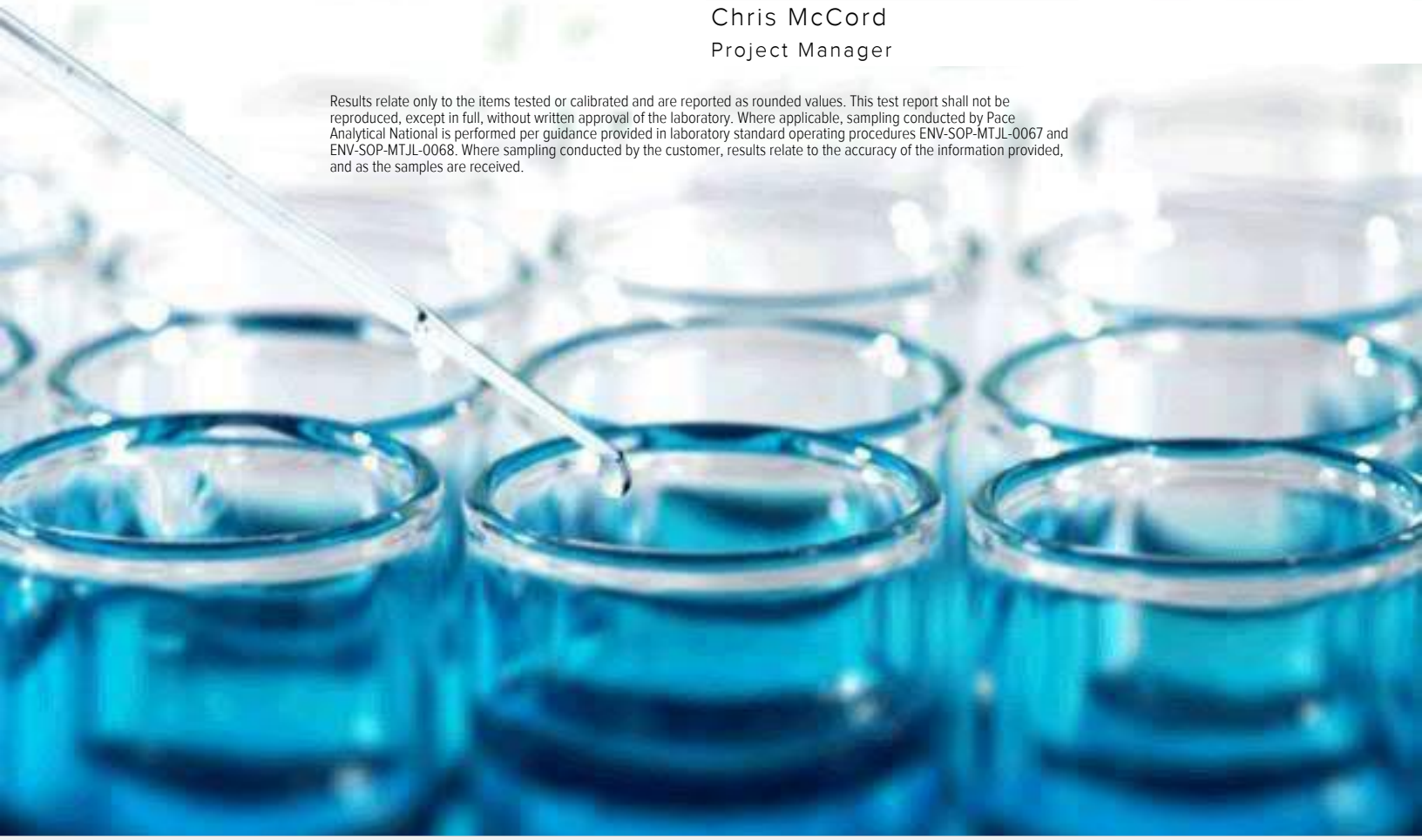
Plains All American Pipeline - Terracon

Sample Delivery Group:	L1252526
Samples Received:	08/20/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Paige Gaona 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
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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Sc: Sample Chain of Custody 9

SAMPLE SUMMARY

EFF-1 (08192020) L1252526-01 Air

Collected by	Collected date/time	Received date/time
Aaron Adams	08/19/20 11:38	08/20/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1529304	2000	08/20/20 22:29	08/20/20 22:29	MBF	Mt. Juliet, TN

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

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

Chris McCord
Project Manager

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	4100	13100		2000	WG1529304
Toluene	108-88-3	92.10	400	1510	4760	17900		2000	WG1529304
Ethylbenzene	100-41-4	106	400	1730	ND	ND		2000	WG1529304
m&p-Xylene	1330-20-7	106	800	3470	3680	16000		2000	WG1529304
o-Xylene	95-47-6	106	400	1730	1380	5980		2000	WG1529304
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG1529304
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	1350000	5580000		2000	WG1529304
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1529304

Method Blank (MB)

(MB) R3562057-3 08/20/20 09:56

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	*101*			*60.0-140*

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

(LCS) R3562057-1 08/20/20 08:40 • (LCSD) R3562057-2 08/20/20 09:19

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	4.08	4.20	109	112	70.0-130			2.90	25
Benzene	3.75	4.14	4.15	110	111	70.0-130			0.241	25
Toluene	3.75	3.96	3.92	106	105	70.0-130			1.02	25
Ethylbenzene	3.75	3.86	3.90	103	104	70.0-130			1.03	25
m&p-Xylene	7.50	7.45	7.45	99.3	99.3	70.0-130			0.000	25
o-Xylene	3.75	3.87	3.87	103	103	70.0-130			0.000	25
TPH (GC/MS) Low Fraction	203	245	246	121	121	70.0-130			0.407	25
(S) 1,4-Bromofluorobenzene				*104*	*106*	*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.

B118

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Paige Gaona

Sampler's Names: Aaron Adams

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9, Lubbock, TX 79424
Phone: (806) 794-1296
Contact: 806-300-0140
PO/SO #:
Sampler's Signature

ANALYSIS REQUESTED: BTEX (EPA Method 8021B) x; BTEX 8015 Extended x

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1

L1252526

Project Number: AR207009
Project Name: DCP Sec. 31

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: Tedlar				Lab Sample ID
A	08/19/20	1138		X	EFF-1 (08192020)			1				-01

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

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	5:30pm				
				8/20/20	915

NOTES:
E-MAIL RESULTS TO:
CJBRYANT@PAALP.COM
ERIN.LOYD@TERRACON.COM
PAIGE.GAONA@TERRACON
ALGROVES@PAALP.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

Amb

Fed Ex #: 3951 9116 6796

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 05, 2020

Plains All American Pipeline - Terracon

Sample Delivery Group:	L1279579
Samples Received:	10/30/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Brett Dennis 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:

Chris McCord
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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Gl: Glossary of Terms 7
Al: Accreditations & Locations 8
Sc: Sample Chain of Custody 9

SAMPLE SUMMARY

EFF-1 (10292020) L1279579-01 Air

Collected by	Collected date/time	Received date/time
	10/29/20 11:25	10/30/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG1568323	2000	10/30/20 15:06	10/30/20 15:06	CAW	Mt. Juliet, TN

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

Chris McCord
Project Manager

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	5710	18200		2000	WG1568323
Toluene	108-88-3	92.10	400	1510	7450	28100		2000	WG1568323
Ethylbenzene	100-41-4	106	400	1730	673	2920		2000	WG1568323
m&p-Xylene	1330-20-7	106	800	3470	6950	30100		2000	WG1568323
o-Xylene	95-47-6	106	400	1730	2770	12000		2000	WG1568323
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	1750000	7230000	J4	2000	WG1568323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1568323

Method Blank (MB)

(MB) R3588072-3 10/30/20 10:07

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	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	*100*			*60.0-140*

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

(LCS) R3588072-1 10/30/20 08:41 • (LCSD) R3588072-2 10/30/20 09:24

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	4.36	4.46	116	119	70.0-130			2.27	25
Toluene	3.75	4.08	4.18	109	111	70.0-130			2.42	25
Ethylbenzene	3.75	4.14	4.21	110	112	70.0-130			1.68	25
m&p-Xylene	7.50	7.94	8.05	106	107	70.0-130			1.38	25
o-Xylene	3.75	4.05	4.15	108	111	70.0-130			2.44	25
TPH (GC/MS) Low Fraction	203	265	263	131	130	70.0-130	J4		0.758	25
(S) 1,4-Bromofluorobenzene				*103*	*103*	*60.0-140*				

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Abbreviations and Definitions

MDL	Method Detection 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.
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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
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

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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.

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: ESC
Address: 12065 Lebanon Rd
Mt. Juliet, TN 37122

Office Location: Lubbock
Phone: (800) 767-5859
Contact:
Project Manager: Brett Dennis
SRS #: 2009-084
Sampler's Name: Aaron Adams
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

E003

Project Number: AR207009
Project Name: DCP Sec. 31

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: tedlar bag				BTEX (EPA Method 8021)	TPH 8015 extended						Lab Sample ID
A	10/29/2020	11:25		X	EFF-1 (10292020)			X				X	X						1279574-01

NFE

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	10-29-2020	5:09pm			
				10-30	9:00

NOTES: Bill directly to Plains Pipeline

e-mail results to:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. BRETT.DENNIS@TERRACON.COM
4. ERIN.LOYD@TERRACON.COM
5. AARON.ADAMS@TERRACON.COM

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

Amb 48176 16783646

RAD SCREEN: <0.5 mR/hr

Sample Receipt Checklist

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

Pace Analytical®
National Center for Testing & Innovation

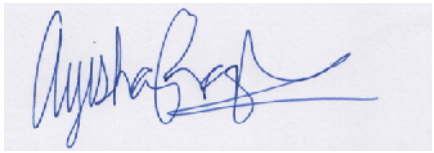
ANALYTICAL REPORT

January 05, 2021

Plains All American Pipeline - Terracon

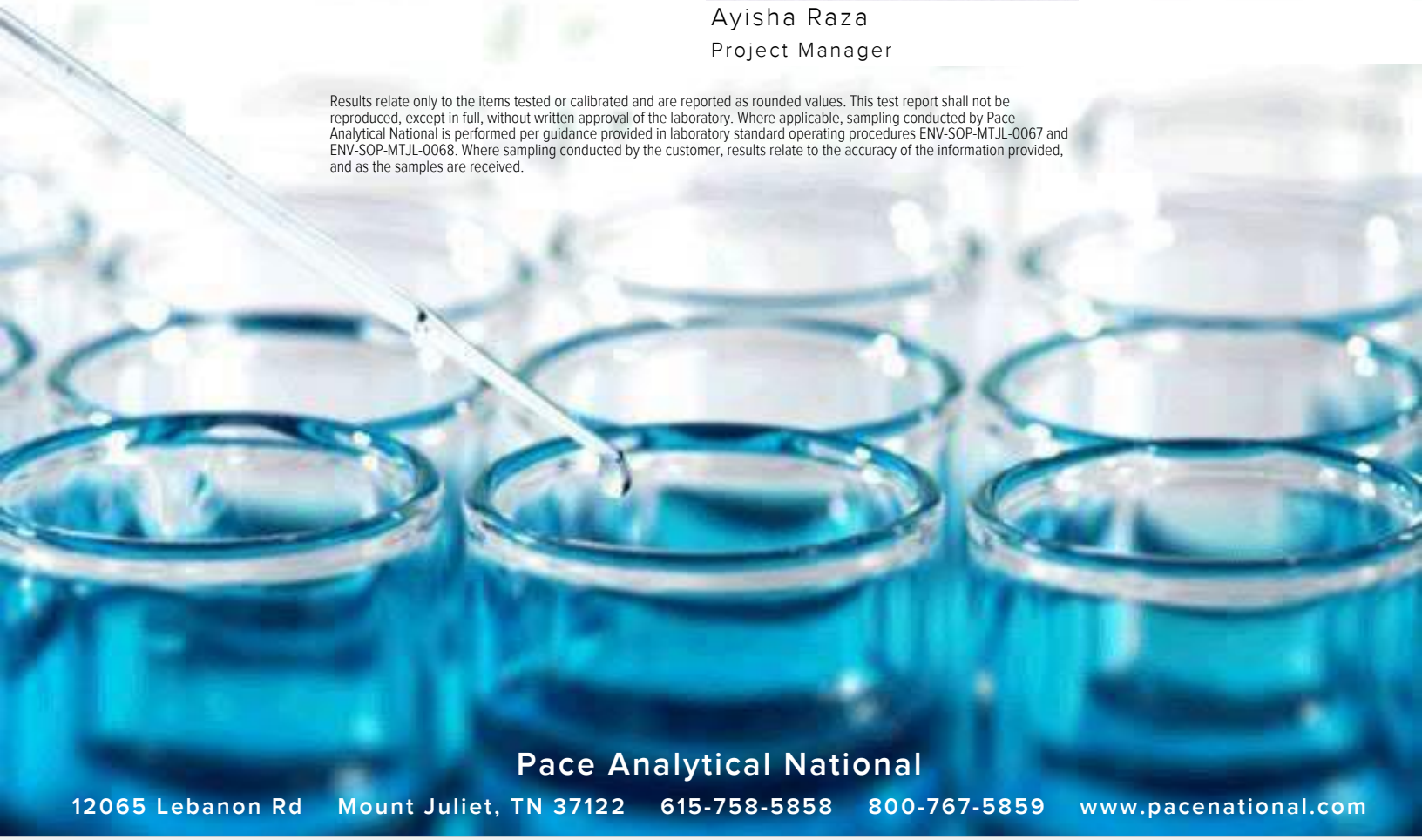
Sample Delivery Group:	L1301754
Samples Received:	12/31/2020
Project Number:	AR207009
Description:	DCP Section 31 (SRS# 2009-084)
Site:	SRS# 2009-084
Report To:	Brett Dennis 5827 50th St. Suite 1 Lubbock, TX 79424

Entire Report Reviewed By:



Ayisha Raza
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.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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Al: Accreditations & Locations 8
Sc: Sample Chain of Custody 9

SAMPLE SUMMARY

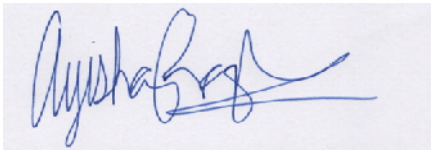
EFF-1 L1301754-01 Air

			Collected by	Collected date/time	Received date/time
			Brett Dennis	12/30/20 13:30	12/31/20 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1599572	400	12/31/20 23:46	12/31/20 23:46	GLN	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1599879	10000	01/01/21 16:07	01/01/21 16:07	GLN	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.



Ayisha Raza
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

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	4890	15600		400	WG1599572
Ethylbenzene	100-41-4	106	80.0	347	580	2510		400	WG1599572
Toluene	108-88-3	92.10	200	753	6950	26200		400	WG1599572
m&p-Xylene	1330-20-7	106	160	694	9040	39200		400	WG1599572
o-Xylene	95-47-6	106	80.0	347	3490	15100		400	WG1599572
TPH (GC/MS) Low Fraction	8006-61-9	101	80000	330000	1400000	5780000		400	WG1599572
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.4*				WG1599879

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

Method Blank (MB)

(MB) R3608741-3 12/31/20 10:36

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Ethylbenzene	U		0.0835	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
Toluene	U		0.0870	0.500
TPH (GC/MS) Low Fraction	U		39.7	200

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

(LCS) R3608741-1 12/31/20 09:13 • (LCSD) R3608741-2 12/31/20 09:56

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	4.34	4.38	116	117	70.0-130			0.917	25
Ethylbenzene	3.75	4.30	4.39	115	117	70.0-130			2.07	25
m&p-Xylene	7.50	8.71	8.82	116	118	70.0-130			1.25	25
o-Xylene	3.75	4.29	4.33	114	115	70.0-130			0.928	25
Toluene	3.75	4.29	4.31	114	115	70.0-130			0.465	25
TPH (GC/MS) Low Fraction	203	230	233	113	115	70.0-130			1.30	25

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.
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	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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]	KY90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-20-18
Maine	TN00003	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	998093910
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 Pipeline - Terracon	AR207009	L1301754	01/05/21 14:24	8 of 9

D196

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Pace
Address: 12065 Lebanon Rd
Mt. Juliet, TN 37122

Office Location: Lubbock
Phone: (800) 767-5859
Contact:
Project Manager: Brett Dennis
SRS #: 2009-084
Sampler's Name: Brett Dennis
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

C1301754

Project Number: AR207009
Project Name: DCP Sec. 31 (SRS# 2009-084)

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: tedlar bag	BTEX (EPA Method 8021)	TPH 8015 extended	Chloride (EPA Method 300)	Hold	Lab Sample ID
A	12/30/2020	13:30		X	EFF-1			1	X	X			-01

NFE

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	12/30/20	16:17		12/31	0945

NOTES: Bill directly to Plains Pipeline

e-mail results to:
brett.dennis@terracon.com
algroves@paalp.com

OK

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

Sample Receipt Checklist

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

AMB

RAD SCREEN: <0.5 mR/hr

COC SP

APPENDIX D

Terracon Standard of Care, Limitation, and Reliance

Standard of Care

Terracon's services will be performed in a manner consistent with generally-accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal and were not intended to be in strict conformance with ASTM E1903-11.

Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this confirmation sampling. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Plains All American Pipeline LP; and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Plains All American Pipeline LP and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Master Services Agreement (026450-04810-PMLP.2.17), dated August 3, 2011, between Terracon and Plains All American Pipeline LP. The limitation of liability defined in the Terms and Conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

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

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

CONDITIONS

Action 23655

CONDITIONS

Operator:	OGRID:
PLAINS MARKETING L.P. 333 Clay St, Ste 1600 Houston, TX 77002	34053
	Action Number: 23655
	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 anticipated actions approved by OCD and are as follows; 1. Continue manual PSH recovery from monitoring well MW-1 2. Continue gauging, purging, and sampling quarterly from monitoring well MW-2 through MW-6 for the presence of PSH and BTEX in 2021 and PAHs in the 4th quarter of 2021 3. OCD approves Plains' request to reduce the sampling frequency of monitor wells MW-3 and MW-6 from a quarterly to semi-annual basis 4. Submit annual report to OCD no later than March 31,2022.	1/11/2022