2021 Annual Groundwater Monitoring Report

Review of 2021 ANNUAL GROUNDWATER MONITORING REPORT:
Content satisfactory

Contractor anticipated actions approved by NMOCD and are as follows;

1. Continue quarterly monitoring well gauging, groundwater purging, and sampling for BTEX for all monitor wells on-site and in addition, chloride from MW-2
2. Conduct monthly manual recovery of PSH from MW-1, if applicable
3. Conduct monthly manual recovery of hydrocarbon impacted groundwater from MW-1, MW-3, MW-8, and MW-13
4. Continue AFR events on monitoring well MW-1, MW-3, MW-8 and M13 to enhance recovery of hydrocarbon impacted groundwater
5. Discontinue quarterly MDPE recovery events from MW-1
6. Submit annual groundwater report to NMOCD no later than March 31,2023.

Plains All American Pipeline, L.P.

14-Inch Vac to Jal Legacy
Plains SRS No. 2009-092
Lea County, New Mexico
NMOCD Reference No. 1R-2162
NMOCD Incident No. nAPP2109729126

Terracon Project No. AR217010
March 25, 2022

Prepared for:

PLAINS ALL AMERICAN PIPELINE, L.P.

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

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

Terracon

March 25, 2022

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

Attn: Mrs. Camille Bryant
Telephone: (432) 758-8008
Email: CJBryant@paalp.com

Re: 2021 Annual Groundwater Monitoring Report
14-Inch Vac to Jal Legacy
U/L "F", Sec. 25, T25S, R37E
Lea County, New Mexico
NMOCD Reference No. 1R-2162
NMOCD Incident No. nAPP2109729126
Plains All American Pipeline, L.P. SRS No. 2009-092
Terracon Project No. AR217010

Dear Mrs. Bryant:

Terracon is pleased to submit one electronic copy of the 2021 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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1.0 INTRODUCTION

1.1 Site Description

The legal description of the 14-Inch Vac to Jal Legacy release site is Unit Letter "F" (SE/NW), Section 25, Township 25 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Concho Resources, Inc. The geographic coordinates of the release site are 32.102541º North latitude and 103.119411º West longitude. A "Topographic Map" depicting the site's location is provided as Exhibit 1 in Appendix A.

Site Name	14-Inch Vac to Jal Legacy
Site Location	Latitude 32.102541º North, Longitude 103.119411º West
General Site Description	The site consists of 14 groundwater monitoring wells located in, and adjacent to, a pipeline right-of-way surrounding land used for oil and gas production.
Landowner	Concho Resources, Inc.

1.2 Background Information

Based on information provided by the client, on April 9, 2009, Plains Pipeline, L.P. (Plains) discovered a crude oil release from a 14-inch steel pipeline. During initial response activities, Plains installed a temporary clamp to mitigate the release. Approximately 250 barrels (bbls) of crude oil were released, with no recovery. Plains notified the New Mexico Oil Conservation Division (NMOCD) Hobbs District 1 Office of the release, and a "Release Notification and Corrective Action" (Form C-141) was submitted. The cause of the release was attributed to external corrosion of the pipeline.

Subsequent to initial response activities on April 9, 2009, excavation of the crude oil impacted soil commenced at the site. To facilitate remediation activities, the excavation was divided into two management sections: Main Excavation and West Excavation. Approximately 18,000 cubic yards (cy) of impacted soil were excavated from the two excavation areas, stockpiled on-site up a non-permeable plastic liner to mitigate the potential leaching of contaminants into the vadose zone. Final dimensions of the Main Excavation were approximately 400 feet (ft.) in length, approximately 200 ft. in width, and 5 ft. to 14 ft. in depth. Final dimensions of the West Excavation were approximately 150 ft. in length, approximately 105 ft. in width, and approximately 10 ft. in depth. Due to safety concerns associated with excavating near and supporting two 14-inch diameter pipelines that bisect the release site, Plains requested and received NMOCD approval to leave the soil beneath and adjacent to the pipelines in-situ.

On July 2 and 3, 2009, three soil borings (SB-1, SB-2, and SB-3) were drilled at the release site to evaluate the vertical extent of soil impact. While advancing the soil borings, groundwater was encountered at approximately 64 ft. below ground surface (bgs). On July 2, 2009, monitoring well MW-1 was constructed and completed using SB-1. For soil borings SB-2 and SB-3, temporary casing was installed on July 2, 2009 to allow a preliminary groundwater sample to be collected for analysis. Following sample collection, the temporary casing was removed, and each boring was plugged with cement and bentonite, pursuant to NMOCD and New Mexico Office of the State Engineer (NMOSE) standards.

On December 10, 2009, two soil borings (SB-4 and SB-5) were drilled up-gradient of the excavation to evaluate the potential groundwater impact from an up-gradient, off-site source. While advancing soil borings SB-4 and SB-5, groundwater was encountered at approximately 64 ft. bgs. Temporary casing was installed in each boring to allow a preliminary groundwater sample to be collected for analysis. Following sample collection, the temporary casing was removed, and each boring was plugged with cement and bentonite, pursuant to NMOCD and NMOSE standards.

From May 6 through May 8, 2013, five additional monitoring wells (MW-2 through MW-6) were installed to evaluate the status of the groundwater at the site. These monitoring wells were advanced to a total depth of approximately 80 ft. bgs. Monitoring well MW-2 is located approximately 380 ft. to the northwest (up-gradient) of monitoring well MW-1. Monitoring well MW-3 is located approximately 200 ft. to the northeast (cross-gradient) of monitoring well MW-1. Monitoring well MW-4 is located approximately 100 ft. Monitoring well MW-5 is located approximately 208 ft. to the west-northwest (cross-gradient) of monitoring well MW-1. Monitoring well MW-6 is located approximately 150 ft. to the southeast (down-gradient) of monitoring well MW-1.

Phase separated hydrocarbons (PSH) were not observed in monitoring wells MW-2 through MW-6. Laboratory analytical results of soil samples collected during the installation of the monitoring wells indicated benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH), and chloride concentrations were less than NMOCD regulatory standards in each of the submitted samples.

From June 25 through June 26, 2014, three additional monitoring wells (MW-7, MW-8, and MW-9) were installed to further monitor the down- and cross-gradient migration of the dissolved-phase plume. These monitoring wells were installed to total depths of approximately 80 ft. bgs. Monitoring well MW-7 is located approximately 45 ft. to the southeast (down-gradient) of monitoring well MW-1. Monitoring well MW-8 is located approximately 180 ft. to the east-northeast (cross-gradient) of monitoring well MW-1. Monitoring well MW-9 is located approximately 150 ft. to the southeast (down-gradient) of monitoring well MW-1.

PSH was not observed in monitoring wells MW-7 through MW-9. Laboratory analytical results of soil samples collected during the installation of the monitor wells indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory standards in each of the submitted samples.

The 14-Inch Vac to Jal Legacy release site is located approximately 1,147 ft. to the south-southeast of a documented groundwater remediation site (Arco South Justis Unit F-230). It is believed that elevated BTEX concentrations observed in samples collected from monitor well MW-2 are as a result of its downgradient position of this site. Information regarding this site can be found in the NMOCD imaging system.

Based on laboratory analytical results of groundwater samples collected from monitoring well MW-5, which is located approximately 260 ft. to the west-southwest (cross-gradient) of the release point, and the absence of elevated chloride concentrations in the soil columns of monitoring wells MW-2 through MW-6, Plains requested permission to cease monitoring of total dissolved solids (TDS) and chloride in the *2013 Annual Monitoring Report*, dated March 2014. The request was subsequently approved by the NMOCD, with the caveat that a chloride sample would be collected from monitoring well MW-2 on a quarterly basis. Quarterly chloride monitoring of monitoring well MW-2 commenced in November 2014.

On October 18, 2016, Terracon assumed project management responsibilities and oversight of groundwater monitoring activities at the 14-Vac to Jal Legacy project site. At the time, there were a total of nine monitoring wells located at the site. Monitoring wells MW-2 through MW-9 were gauged and sampled on a quarterly schedule and monitoring well MW-1 was not sampled due to the presence of PSH.

On February 20, 2018, five additional monitoring wells MW-10 through MW-14 were installed to evaluate the status of the groundwater at the site. These monitoring wells were advanced to a total depth of approximately 80 ft. bgs. Monitoring well MW-10 is located approximately 210 ft. to the north-northwest (up-gradient) of monitoring well MW-1. Monitoring well MW-11 is located approximately 350 ft. to the north-northeast (up-gradient and cross-gradient) of monitoring well MW-1. Monitoring well MW-12 is located approximately 260 ft. to the east-northeast (cross-gradient) of monitoring well MW-1. Monitoring well MW-13 is located approximately 260 ft. to the east (cross-gradient) of monitoring well MW-1. Monitoring well MW-14 is located approximately 225 ft. to the southeast (down-gradient) of monitoring well MW-1. A “Site Diagram” depicting monitoring well locations is provided as Exhibit 2 in Appendix A.

On November 9, 2018, West Company professionally surveyed all site monitoring wells.

During May of 2020, due to COVID-19, manual recovery events were reduced from a frequency of once per week to once per month. The monthly frequency of manual recovery events persisted in 2021.

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. In accordance with the approved scope of work, Terracon conducted quarterly groundwater monitoring events on March 8-9 (1Q21), June 9-10 (2Q21), September 20-21 (3Q20), and December 7-8, 2021 (4Q21).

Quarterly groundwater monitoring events were conducted on January 8-9, June 9-10, September 20-21, and December 7-8, 2021. Monitoring event activities included measuring the static water levels in all the site's monitoring wells, checking for the presence of PSH, and purging and collecting groundwater samples from wells not exhibiting a measurable thickness of PSH.

2.0 GROUNDWATER REMEDIATION PROGRAM

2.1 Groundwater Monitoring

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 analysis 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 (BTEX) using Environmental Protection Agency (EPA) SW-846 Method 8021. Groundwater samples collected from monitoring well MW-2 were also analyzed for chloride using EPA Method E300. Purged water was placed into a polystyrene aboveground storage tank (AST) and disposed of at an NMOCD-approved disposal facility.

A yearly monitoring event for polycyclic aromatic hydrocarbons (PAH) was conducted December 8th, 2020. Based on the sampling criteria provided by NMOCD, only monitoring well MW-2 which was analyzed for PAHs during 2019 and monitor wells MW-10 through MW-14 were subject to annual PAH monitoring due to their lack of sampling since installation. PAH sample requirements were met on monitoring wells MW-3 through MW-9 in June 2013 and May 2014, respectively. However, all monitor wells sampled during the 4th quarter were inadvertently analyzed for PAHs. The resulting analysis indicated that none of the on-site monitor wells sampled during the 4th quarter 2020 exceeded PAH Action Levels established by New Mexico Administrative Code (NMAC) 20.6.2. In order to adhere to requirements of PAH sampling of two consecutive years of PAH concentrations below action levels set forth by the NMOCD, monitor wells MW-3 through MW-9 were intended to be analyzed for PAHs during the 4th quarter sampling event in 2021. The groundwater samples collected during the 4th quarter monitoring event did not get analyzed for

PAH. Plains requests NMOCD approval to analyze PAHs during the 1st quarter of 2022. A summary of PAH analysis can be found as Table 5 in Appendix B.

Groundwater elevation gauging data collected during the respective quarterly monitoring events were used to construct groundwater gradient maps, which are included as Exhibits 3 through 6 in Appendix A. The groundwater flow direction was relatively consistent to the southeast for each quarter of 2021. Groundwater elevation and PSH thickness data is summarized in Table 1 in Appendix B.

3.0 LABORATORY ANALYTICAL METHODS

The groundwater samples collected were analyzed for BTEX using EPA SW-846 Method 8021B and chloride using EPA Method 300. Laboratory results from the analysis of groundwater samples collected from the monitoring wells are summarized in Table 2 in Appendix B and presented as 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 Analytical Results

Laboratory analytical results from 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 0.12 ft. (1Q21), 0.05 ft. (2Q21), 0.32 ft. (3Q21), and 0.07 ft. (4Q21) were observed during the quarterly monitoring events.

4.1.2 Monitoring Well MW-2

- Laboratory analytical results indicated benzene concentrations exceeded the NMOCD regulatory standard during the four quarterly monitoring events. The detected benzene concentrations ranged from 0.0112 milligrams per liter (mg/L) for the 3rd quarter to 0.0276 mg/L for the 4th quarter.
- Laboratory analytical results indicated that toluene (0.00313 mg/L), ethylbenzene (0.000940 J mg/kg), and total xylenes (0.00399 mg/L) were detected above laboratory SDLs during the 1st quarter, but below NMOCD criteria.

- Laboratory analytical results indicated chloride concentrations exceeded the NMOCD regulatory standard during each quarterly monitoring event. The detected chloride concentrations ranged from 9,940 mg/L for the 1st quarter to 10,900 mg/L for the 3rd quarter.

4.1.3 Monitoring Well MW-3

- Laboratory analytical results indicated benzene concentrations exceeded the NMOCD regulatory standard during the 1st, 2nd, and 3rd quarter monitoring events. The detected benzene concentrations ranged from 0.0401 mg/L for the 2nd quarter to 0.190 mg/L for the 3rd quarter.
- Laboratory analytical results indicated the concentrations of ethylbenzene were below the respective laboratory sample detection limit (SDLs) for each of the four quarters.
- Laboratory analytical results indicated that toluene (0.00216 mg/L) and total xylenes (0.00183 J mg/L) were detected above laboratory SDLs during the 1st quarter, but below NMOCD criteria.

4.1.4 Monitoring Well MW-4

- Laboratory analytical results indicated benzene concentrations were below the laboratory SDLs for each monitoring event except for the 4th quarter. The detected concentration of benzene (0.00568 mg/L) exceeded the laboratory SDLs but was below the NMOCD regulatory standard.
- Laboratory analytical results indicated the concentrations of toluene, ethylbenzene and total xylenes were below the respective laboratory SDLs for each of the four quarters.

4.1.5 Monitoring Well MW-5

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events with the exception of the 1st quarter. Benzene (0.000440 J mg/L), toluene (0.000940 J mg/L), ethylbenzene (0.000770 J mg/L), and total xylenes (0.000800 J mg/L) were detected above laboratory SDLs but below NMOCD criteria.

4.1.6 Monitoring Well MW-6

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events with the exception of the 1st quarter. Toluene (0.00105 J mg/L) and total xylenes (0.00110 J mg/L) were detected above laboratory SDLs but below NMOCD criteria.

4.1.7 Monitoring Wells MW-7, MW-8, MW-9, MW-12, and MW-13

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events.

4.1.8 Monitoring Well MW-10

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events with the exception of the 1st quarter. Benzene (0.00153 J mg/L) was detected above laboratory SDLs but below NMOCD criteria.

4.1.9 Monitoring Well MW-11

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events with the exception of the 1st quarter. Total xylenes (0.00499 mg/L) were detected above laboratory SDLs but below NMOCD criteria.

4.1.10 Monitoring Well MW-14

- Laboratory analytical results indicated BTEX concentrations were below the respective laboratory SDLs for each constituent during the four quarterly monitoring events with the exception of the 2nd quarter. Benzene (0.00232 mg/L) and toluene (0.00491 mg/L) were detected above laboratory SDLs but below NMOCD criteria.

5.0 CORRECTIVE ACTION

5.1 Product Recovery

Monthly gauging and manual recovery events were conducted on monitor well MW-1 during the 2021 reporting period. Approximately 0.57 gallons of PSH were recovered from monitoring well MW-1 via quarterly manual recovery and the average PSH thickness was 0.29 ft. PSH recovery data is summarized in Table 3a in Appendix B.

Aggressive Fluid Recovery (AFR) events were performed on monitoring wells MW-1, MW-3, MW-8, and MW-13. The method utilizes a hose which is lowered into a well's fluid column and then connected to a vacuum truck to recover both groundwater impacted with dissolve phase hydrocarbons and PSH. The exact amount of PSH recovered cannot be determined, due to the emulsification of the PSH and groundwater. A calculated amount was determined based on the volume of PSH in the well measured prior to the AFR event and then recorded as minimum recovery. AFR events were performed quarterly. A summary of AFR recovery events is included as Table 4 in Appendix B.

A recovery event was conducted on monitor well MW-1 using a mobile dual phase extraction (MDPE) unit on March 3, 2021. The MDPE event was conducted over a period of 12 hours resulting in the recovery of 4.17 gallons of PSH in the vapor phase and 7.00 gallons in the liquid phase. Due limited PSH recovery during the MDPE events and the observed effectiveness of AFR events, MDPE recovery events were ceased after March 2021. A summary of MDPE recovery event is included in Appendix D.

5.2 Groundwater Recovery

For monitoring well MW-1, an estimated 5,923 gallons (141.02 bbls) of hydrocarbon impacted groundwater were recovered via combination of manual recovery and AFR events conducted in 2021.

For monitoring well MW-3, an estimated 4,783 gallons (113.88 bbls) of hydrocarbon impacted groundwater were recovered via combination of manual recovery and AFR events conducted in 2021.

For monitoring well MW-4, an estimated 68 gallons (1.62 bbls) of hydrocarbon impacted groundwater were recovered via manual recovery in 2021.

For monitoring well MW-8, an estimated 4,600 gallons (109.52 bbls) of hydrocarbon impacted groundwater were recovered via combination of manual recovery, with a Tornado pump, and AFR events conducted in 2021.

For monitoring well MW-13, an estimated 4,408 gallons (104.95 bbls) of hydrocarbon impacted groundwater were recovered via combination of manual recovery and AFR events conducted in 2021.

For 2021, an approximate total of 19,782 gallons (471 bbls) of hydrocarbon impacted groundwater were recovered from the site via combination of manual recovery and AFR events during 2021. Recovered fluids were disposed at an NMOCD-approved disposal facility.

For a summary of groundwater recovery data see Tables 3b through 3e in Appendix B.

6.0 SUMMARY OF FINDINGS

The findings of the 2021 Quarterly groundwater monitoring activities are as follows:

- Currently, there are 14 groundwater monitoring wells MW-1 through MW-14 located at the site.
- Quarterly groundwater monitoring events were conducted on March 8-9 (1Q21), June 9-10 (2Q21), September 20-21 (3Q20), and December 7-8, 2021 (4Q21).
- The groundwater flow direction remained relatively consistent to the southeast for the four quarters.
- Monitoring well MW-1 was not sampled due to PSH being gauged in the well during the four quarterly monitoring events.
- Monitoring well MW-2 through MW-14 were sampled during the four quarterly monitoring events.
- The chloride concentrations in monitoring well MW-2 (up-gradient) exceeded the NMOCD regulatory standard during the four quarterly monitoring events.
- The concentrations of BTEX in monitoring wells MW-7, MW-8, MW-9, MW-12, and MW-13 were below the laboratory SDLs during the four quarterly monitoring events.
- The benzene concentrations in monitoring wells MW-2 and MW-3 exceeded the NMOCD regulatory standard during one or more of the monitoring events. Benzene was detected above laboratory SDLs but below NMOCD action levels in monitor wells MW-4, MW-5, MW-10, and MW-14 during one or more of the monitoring events.
- Toluene concentrations were detected above laboratory SDLs but below NMOCD action levels in monitor wells MW-3, MW-5, MW-6 and MW-14 during one or more of the monitoring events.
- Ethylbenzene concentrations were detected above laboratory SDLs but below NMOCD action levels in monitor well MW-2 and MW-5 during the 1st monitoring event.
- Total xylene concentrations were reported above the laboratory SDLs but below the NMOCD action levels in monitor wells MW-2, MW-3, MW-5, MW-6 and MW-11 during one or more of the quarterly monitoring events.
- The average PSH thickness in monitoring well MW-1 for 2021 was 0.29 ft.
- Monitoring well MW-1 had an approximate total of 0.57 gallons of PSH recovered via manual recovery and AFR events.
- An approximate total of 19,782 gallons (471 bbls) of hydrocarbon impacted groundwater were recovered from the site via manual recovery and AFR events.

7.0 ANTICIPATED ACTIONS

- Conduct quarterly monitoring well gauging, groundwater purging and sampling for BTEX for all on-site monitor wells and chloride from monitoring well MW-2.
- Monitoring wells MW-3 through MW-9 will be analyzed for PAHs during the 1st quarter of 2022.
- Conduct monthly manual recovery of PSH from monitoring well MW-1, if applicable.
- Conduct monthly manual recovery of hydrocarbon impacted groundwater from monitoring wells MW-1, MW-3, MW-8, and MW-13.
- Continue AFR events on monitoring well MW-1, MW-3, MW-8 and M-13 to enhance recovery of hydrocarbon impacted groundwater.
- Discontinue quarterly MDPE recovery events on 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 2022 reporting period.

8.0 DISTRIBUTION

Copy 1: Bradford Billings, Hydrologist E Spec. A.
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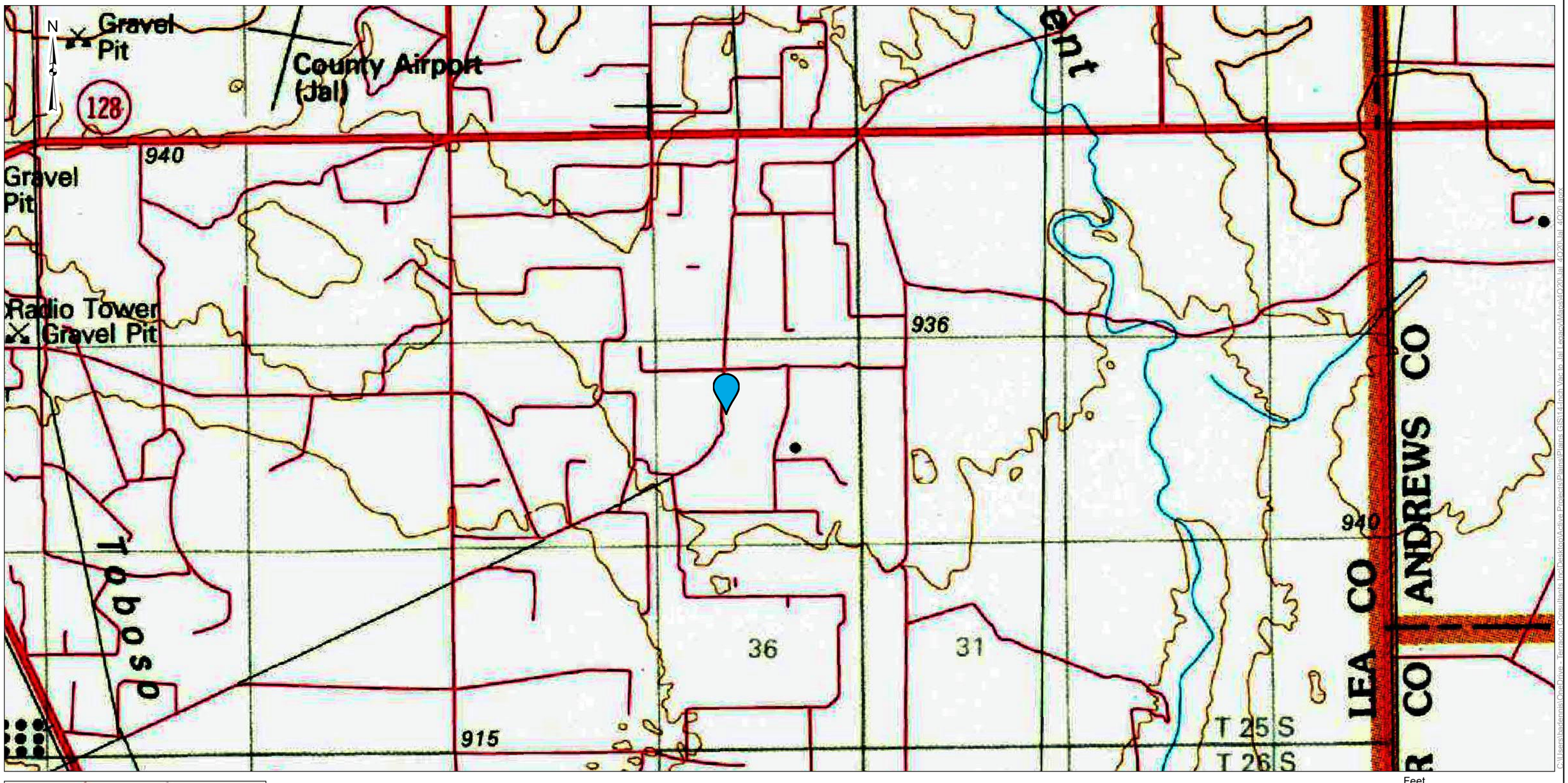
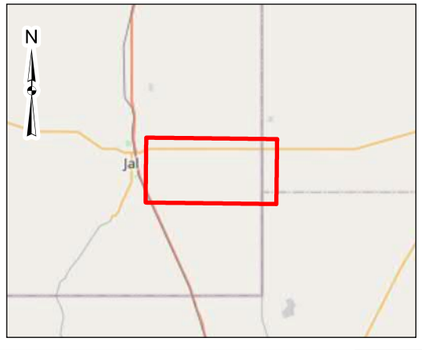
333 Clay Street, Suite 1600
Houston, Texas 77002
jpdann@paalp.com

APPENDIX A

Exhibit 1 – Topographic Map
Exhibit 2 – Site Diagram
Exhibit 3 – 1Q21 Groundwater Gradient Map (01/08-09/21)
Exhibit 4 – 2Q21 Groundwater Gradient Map (06/09-10/21)
Exhibit 5 – 3Q21 Groundwater Gradient Map (09/20-21/21)
Exhibit 6 – 4Q21 Groundwater Gradient Map (12/07-08/21)
Exhibit 7 – 1Q21 Groundwater Contaminant Concentration Map (01/08-09/21)
Exhibit 8 – 2Q21 Groundwater Contaminant Concentration Map (06/09-10/21)
Exhibit 9 – 3Q21 Groundwater Contaminant Concentration Map (09/20-21/21)
Exhibit 10 – 4Q21 Groundwater Contaminant Concentration Map (12/07-08/21)





Legend:

Site Location

Feet

0 1,500 3,000 6,000

DATA SOURCES:
USGS - Topoview - Jal, NM 1978

Project No.:	AR217010
Date:	Jan 2022
Drawn By:	BAD
Reviewed By:	ELL

Terracon

5847 50th Street Lubbock, Texas 79424

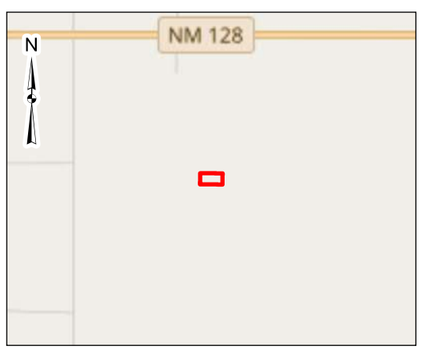
PH. (806) 300-0140 terracon.com

Topographic Map

14-Inch Vac to Jal Legacy
Plains SRS # 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

1



Legend:

- Monitor Well (MW)

Feet

0 55 110 220

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Jan 2022
Drawn By:	BAD
Reviewed By:	ELL

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Site Diagram

14-Inch Vac to Jal Legacy
Plains SRS # 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

2

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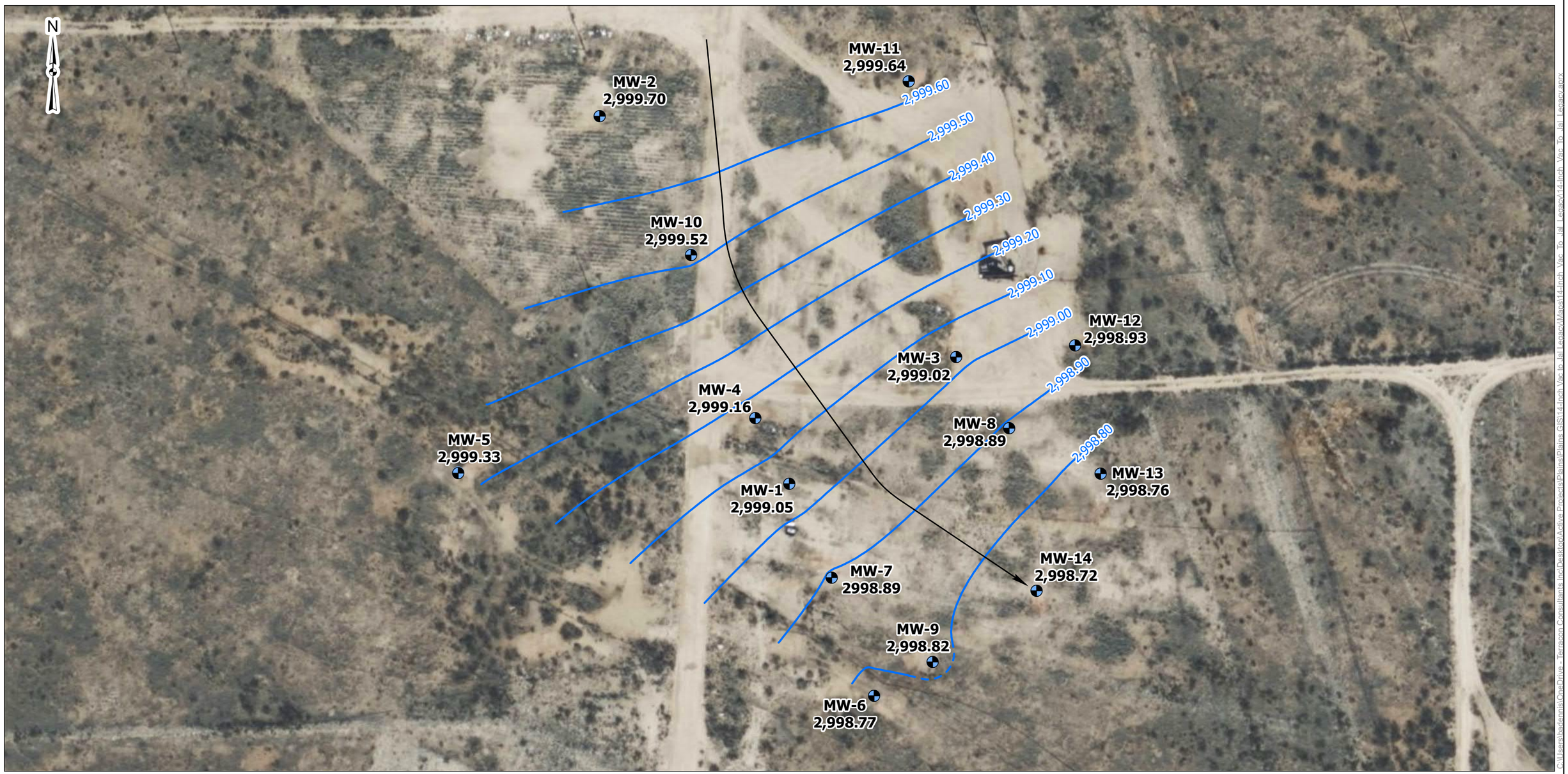

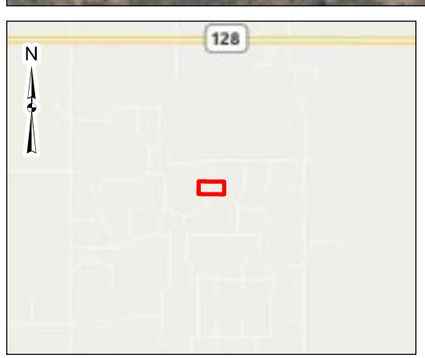

Legend:

- Monitor Well (MW)
- Inferred Groundwater Contour
- Groundwater Contour
- Groundwater Flow Direction

Notes:

- All groundwater elevations measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.10ft.
- Groundwater gradient: 0.0018 ft./ft.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Apr 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon
5847 50th Street Lubbock, Texas 79424
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1Q21 Groundwater Gradient Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

3

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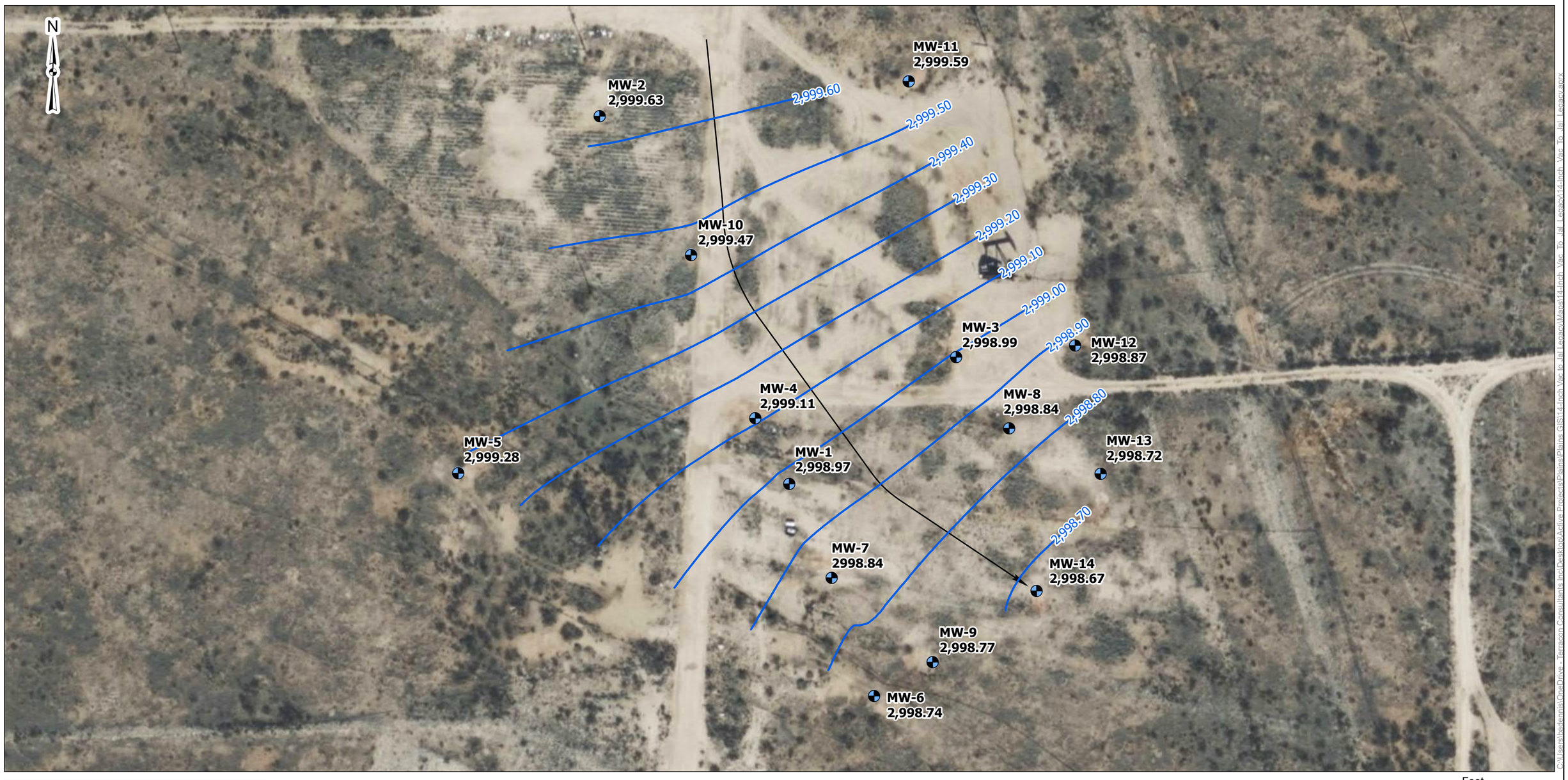

Legend:

- Monitor Well (MW)
- Groundwater Contour
- Groundwater Flow Direction

Notes:

- All groundwater elevations measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.10ft.
- Groundwater gradient: 0.0018 ft./ft.

Feet

0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Jul 2021
Drawn By:	BAD
Reviewed By:	ELL

Terracon

5847 50th Street Lubbock, Texas 79424

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2Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

4

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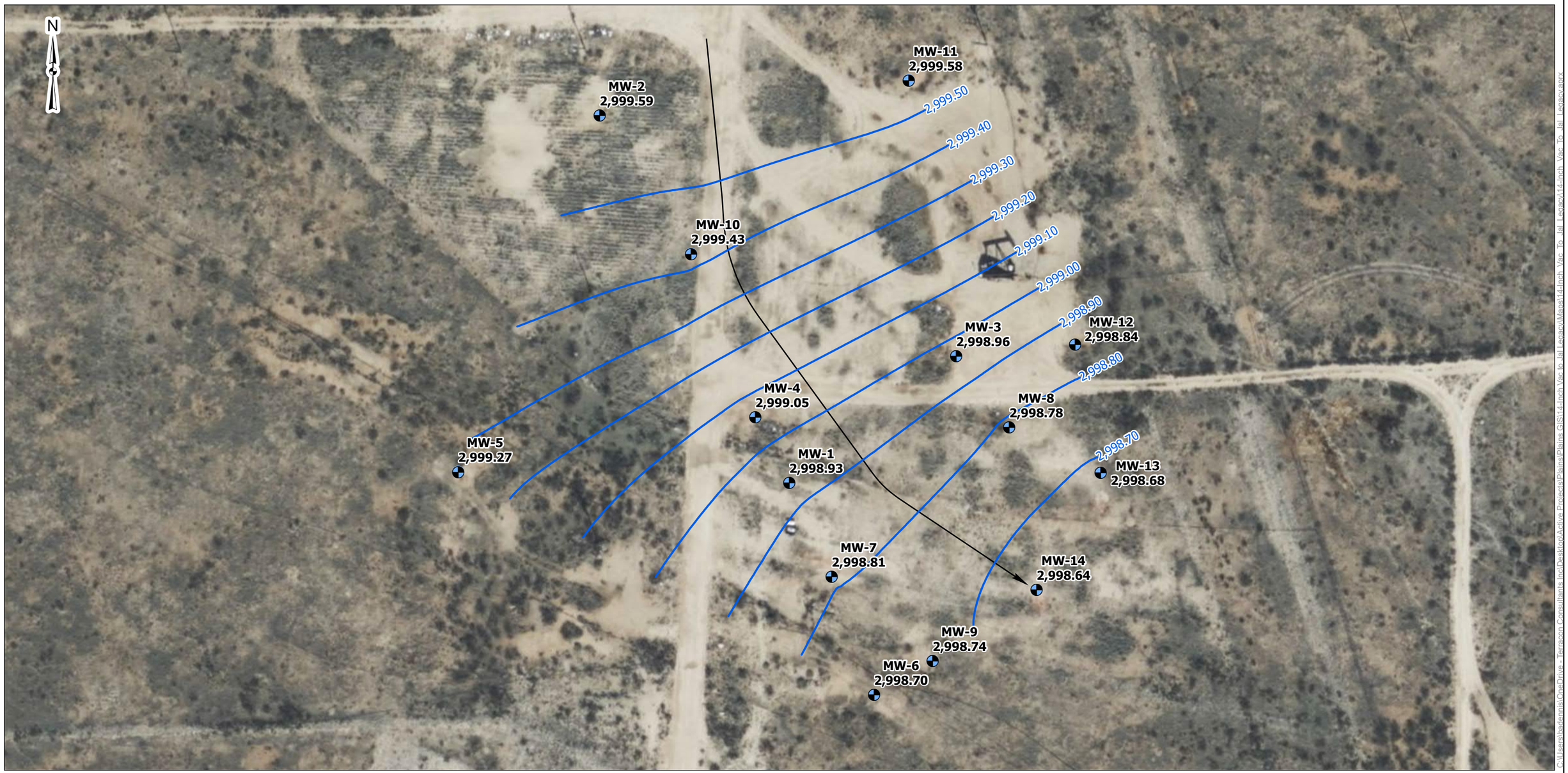

Legend:

- Monitor Well (MW)
- Groundwater Contour
- Groundwater Flow Direction

Notes:

- All groundwater elevations measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.10ft.
- Groundwater gradient: 0.0018 ft./ft.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Nov 2021
Drawn By:	BAD
Reviewed By:	ELL

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

3Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

5

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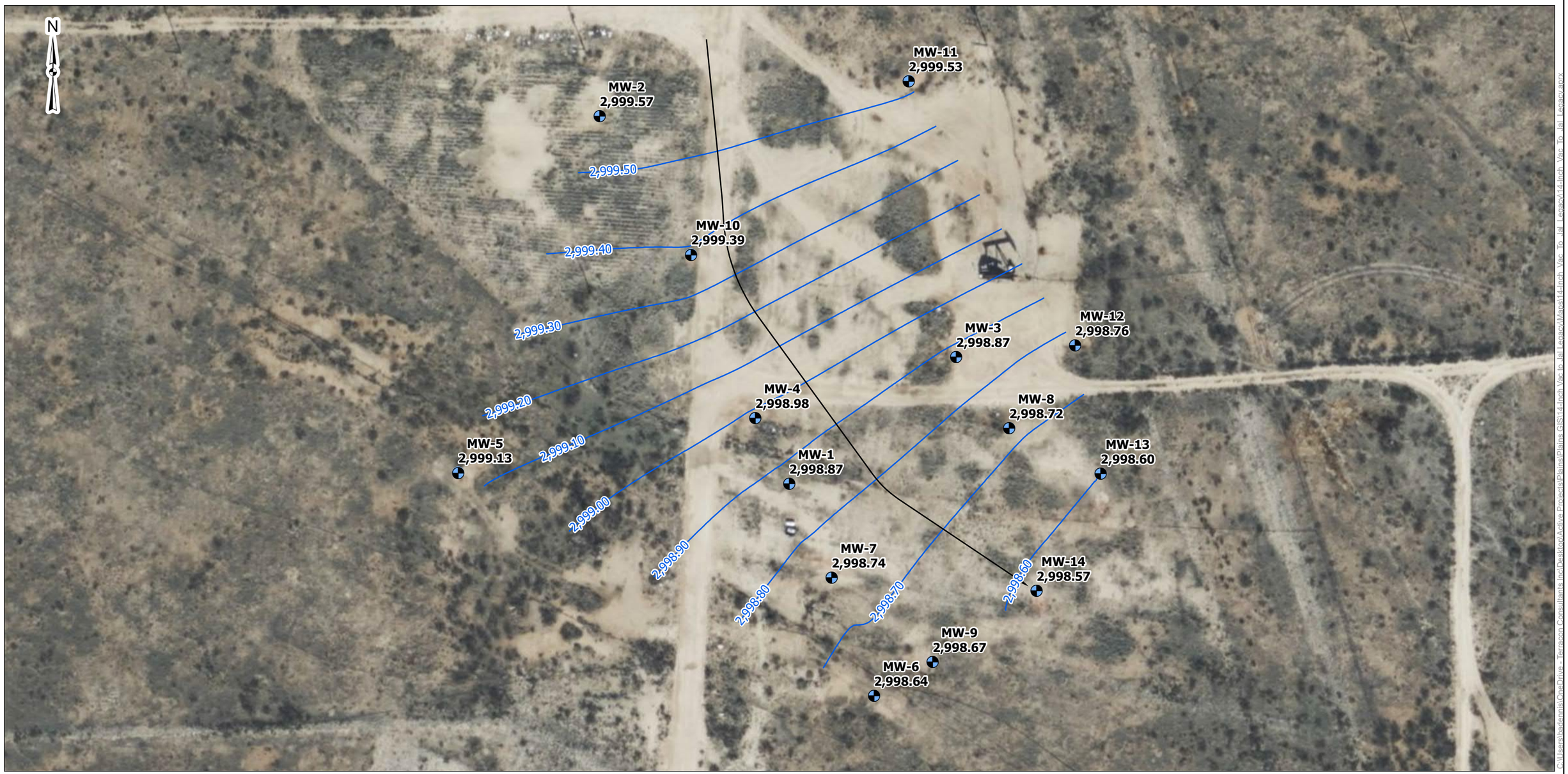

Legend:

- Monitor Well (MW)
- Groundwater Flow Direction
- Groundwater Contour

Notes:

- All groundwater elevations measured in feet above mean sea level.
- Groundwater contours were interpolated with ArcGIS's kringing algorithm.
- Groundwater contour interval: 0.10ft.
- Groundwater gradient: 0.0018 ft./ft.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Jan 2022
Drawn By:	BAD
Reviewed By:	ELL

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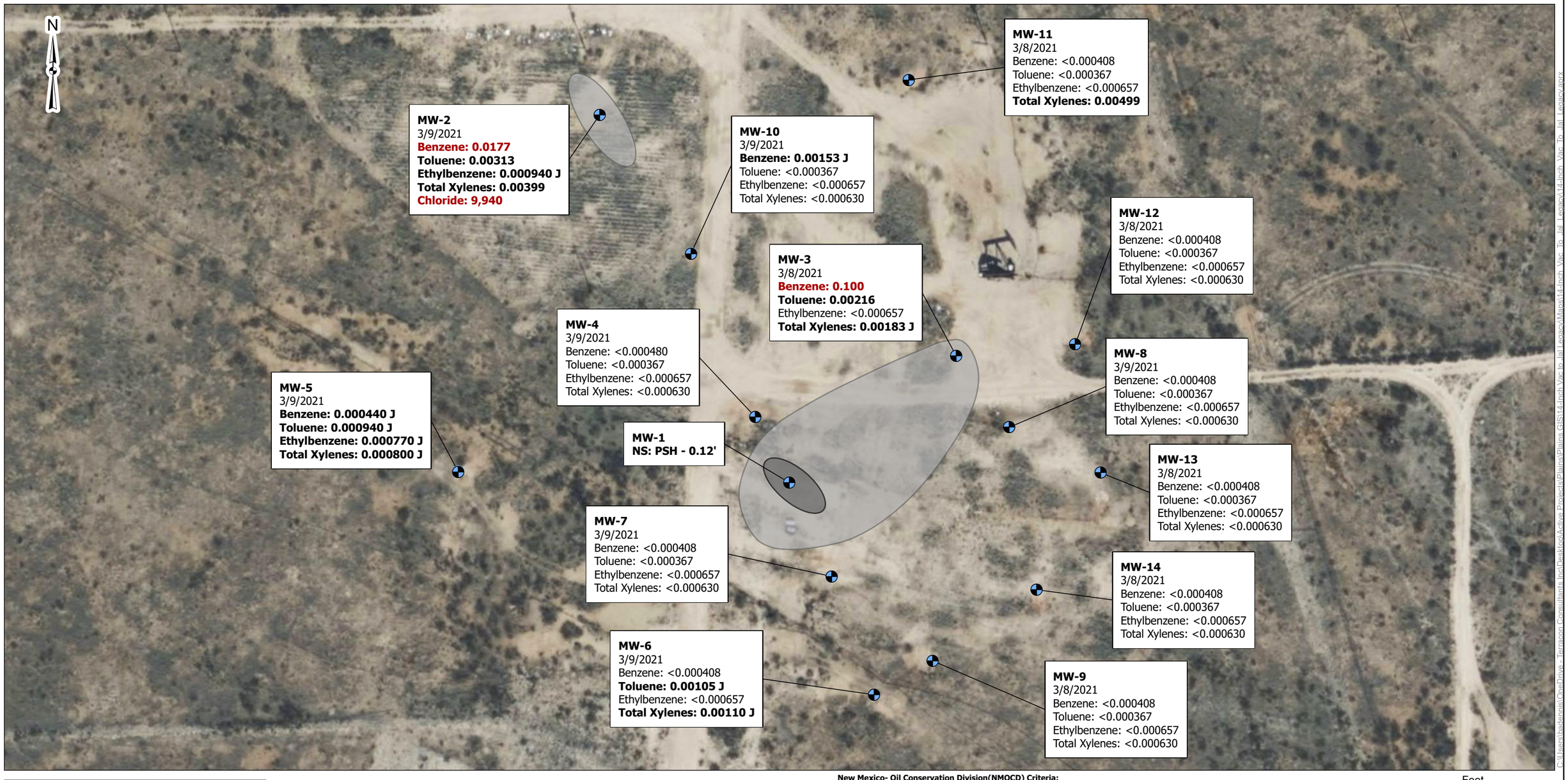
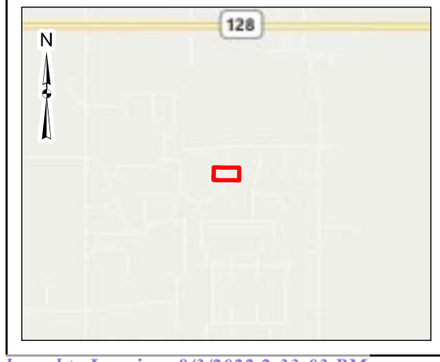
4Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

6





Legend:

- Monitor Well (MW)
- Free Phase Plume
- Dissolved 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
- **Bold** concentrations indicates a concentration above laboratory sample detection limit (SDL).
- **Red text** indicates concentrations exceeding applicable NMOCD criteria
- All concentrations are reported in milligrams per liter (mg/L)
- PSH thickness is measured in tenths of feet.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Apr 2021
Drawn By:	BAD
Reviewed By:	ELL

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1Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

7

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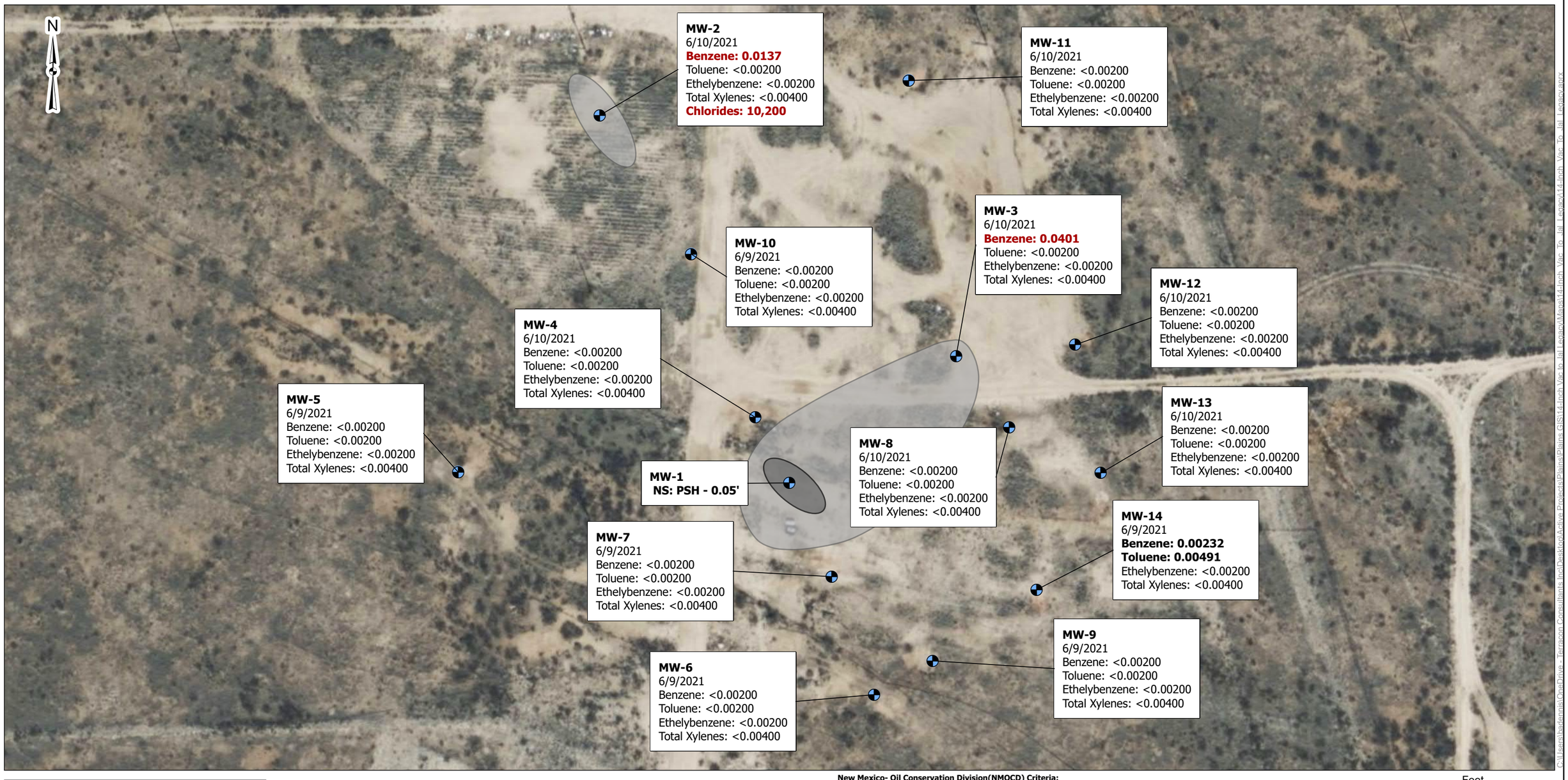

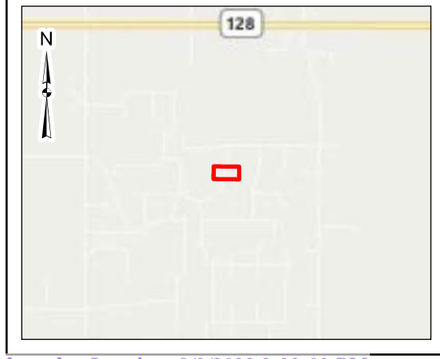

Legend:

- Monitor Well (MW)
- Free Phase Plume
- Dissolved 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
- **Bold** concentrations indicates a concentration above laboratory sample detection limit (SDL).
- **Red text** indicates concentrations exceeding applicable NMOCD criteria
- All concentrations are reported in milligrams per liter (mg/L)
- PSH thickness is measured in tenths of feet.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Jul 2021
Drawn By:	BAD
Reviewed By:	ELL

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2Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

8

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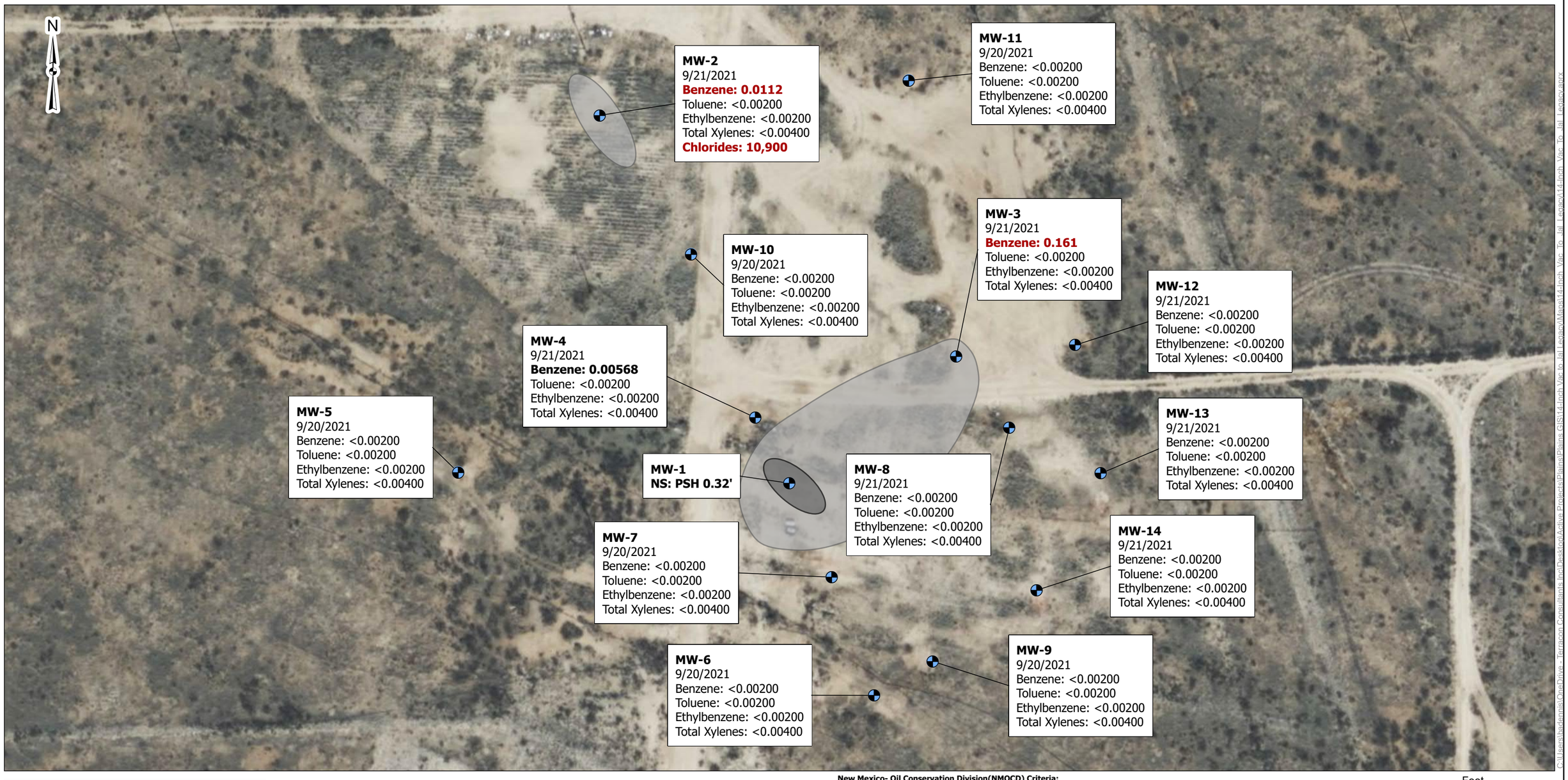

Legend:

- Monitor Well (MW)
- Free Phase Plume
- Dissolved 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
- **Bold** concentrations indicates a concentration above laboratory sample detection limit (SDL).
- **Red text** indicates concentrations exceeding applicable NMOCD criteria
- All concentrations are reported in milligrams per liter (mg/L)
- PSH thickness is measured in tenths of feet.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Nov 2021
Drawn By:	BAD
Reviewed By:	ELL

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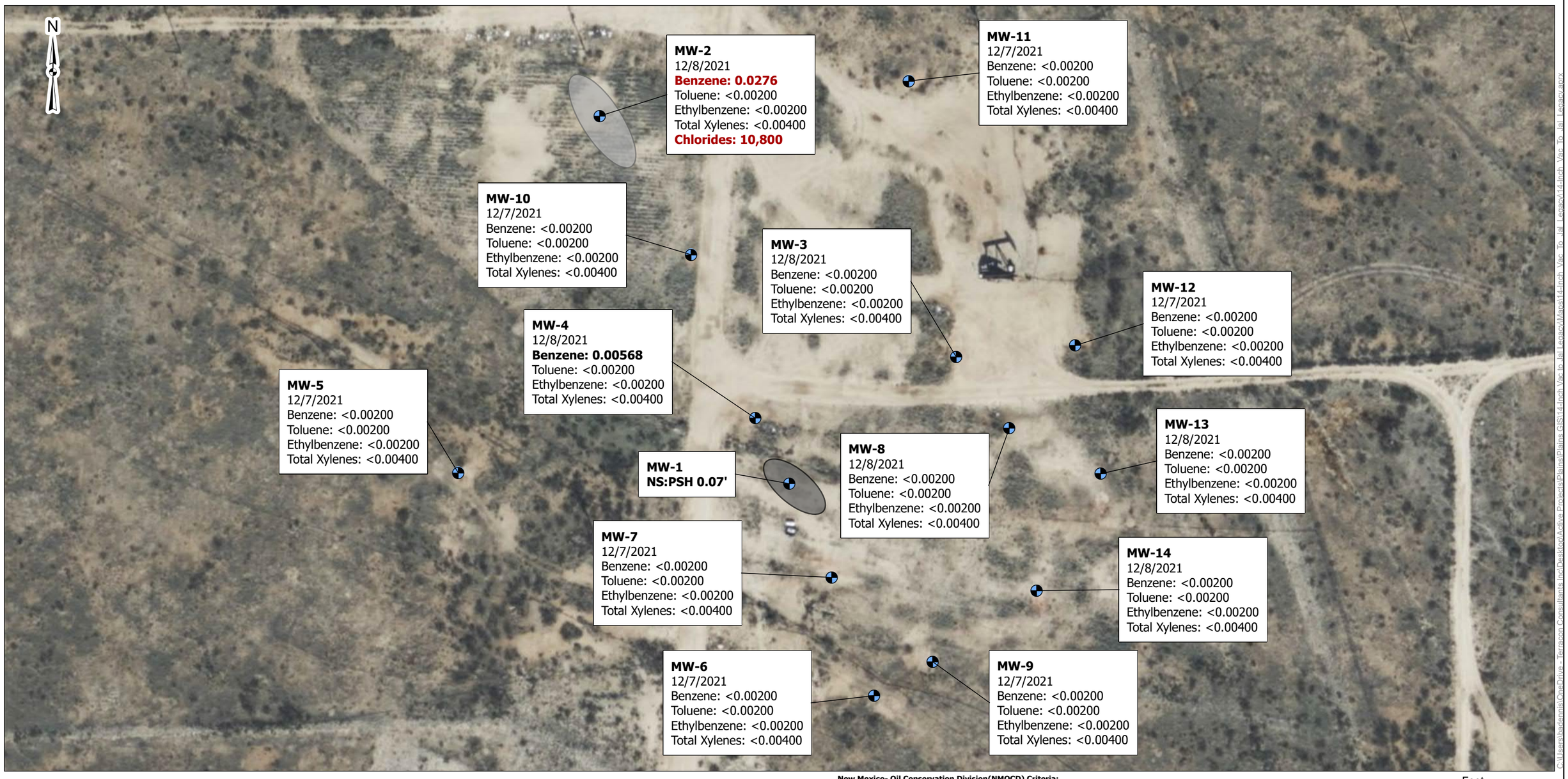
3Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

9



Legend:

- Monitor Well (MW)
- Free Phase Plume
- Dissolved 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
- **Bold** concentrations indicates a concentration above laboratory sample detection limit (SDL).
- **Red text** indicates concentrations exceeding applicable NMOCD criteria
- All concentrations are reported in milligrams per liter (mg/L)
- PSH thickness is measured in tenths of feet.

Feet
0 60 120 240

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR217010
Date:	Jan 2022
Drawn By:	BAD
Reviewed By:	ELL

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4Q21 Groundwater Concentration Map

14-Inch Vac to Jal Legacy
Plains SRS# 2009-092
NMOCD Ref. # 1RP-2162
UL "F", Sec. 25, T25S, R37E
GPS: 32.102541, -103.119411

Exhibit

10

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APPENDIX B

Table 1 – Groundwater Elevation and PSH Thickness Summary
Table 2 – Groundwater BTEX and Chloride Analytical Summary
Table 3a – MW-1 PSH Thickness and Recovery Summary
Table 3b – MW-3 Gauging and BTEX Impacted Groundwater Recovery Summary
Table 3c – MW-4 Gauging and BTEX Impacted Groundwater Recovery Summary
Table 3d – MW-8 Gauging and BTEX Impacted Groundwater Recovery Summary
Table 3e – MW-13 Gauging and BTEX Impacted Groundwater Recovery Summary
Table 4- Quarterly AFR Event Results
Table 5 – Concentrations of PAH in Groundwater Summary

Table 1
Groundwater Elevation & PSH[1] Thickness Summary

14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-092
Terracon Project #: AR217010
NMOCD[2] Refernece#: 1RP-2162
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 (2")	01/27/2020	3,062.62	63.28	63.95	0.67	2,999.24
	06/02/2020		63.37	63.96	0.59	2,999.16
	09/14/2020		63.43	64.15	0.72	2,999.08
	12/08/2020		63.52	63.95	0.43	2,999.04
	03/08/2021		63.55	63.67	0.12	2,999.05
	06/08/2021		63.64	63.69	0.05	2,998.97
	09/20/2021		63.64	63.96	0.32	2,998.93
	12/07/2021		63.74	63.81	0.07	2,998.87
MW-2 (2")	01/27/2020	3,062.56	-	62.78	-	2,999.78
	06/02/2020		-	62.76	-	2,999.80
	09/14/2020		-	62.83	-	2,999.73
	12/08/2020		-	62.87	-	2,999.69
	03/08/2021		-	62.86	-	2,999.70
	06/08/2021		-	62.93	-	2,999.63
	09/20/2021		-	62.97	-	2,999.59
	12/07/2021		-	62.99	-	2,999.57
MW-3 (2")	01/27/2020	3,062.73	-	63.45	-	2,999.28
	06/02/2020		-	63.83	-	2,998.90
	09/14/2020		-	63.64	-	2,999.09
	12/08/2020		-	63.78	-	2,998.95
	03/08/2021		-	63.71	-	2,999.02
	06/08/2021		-	63.74	-	2,998.99
	09/20/2021		-	63.77	-	2,998.96
	12/07/2021		-	63.86	-	2,998.87
MW-4 (4")	01/27/2020	3,062.43	-	63.04	-	2,999.39
	09/14/2020		-	63.21	-	2,999.22
	12/08/2020		-	63.28	-	2,999.15
	03/08/2021		-	63.27	-	2,999.16
	06/08/2021		-	63.32	-	2,999.11
	09/20/2021		-	63.38	-	2,999.05
	12/07/2021		-	63.45	-	2,998.98
MW-5 (2")	01/27/2020	3,063.23	-	63.71	-	2,999.52
	06/02/2020		-	63.78	-	2,999.45
	09/14/2020		-	63.83	-	2,999.40
	12/08/2020		-	63.87	-	2,999.36
	03/08/2021		-	63.90	-	2,999.33
	06/08/2021		-	63.95	-	2,999.28
	09/20/2021		-	63.96	-	2,999.27
	12/07/2021		-	64.10	-	2,999.13
MW-6 (4")	01/27/2020	3,062.60	-	63.62	-	2,998.98
	06/02/2020		-	63.67	-	2,998.93
	09/14/2020		-	63.77	-	2,998.83
	12/08/2020		-	63.82	-	2,998.78
	03/08/2021		-	63.83	-	2,998.77
	06/08/2021		-	63.86	-	2,998.74
	09/20/2021		-	63.90	-	2,998.70
	12/07/2021		-	63.96	-	2,998.64
MW-7 (4")	01/27/2020	3,062.69	-	63.58	-	2,999.11
	06/02/2020		-	63.64	-	2,999.05
	09/14/2020		-	63.72	-	2,998.97
	12/08/2020		-	63.79	-	2,998.90
	03/08/2021		-	63.80	-	2,998.89
	06/08/2021		-	63.85	-	2,998.84
	09/20/2021		-	63.88	-	2,998.81
	12/07/2021		-	63.95	-	2,998.74

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 & PSH[1] Thickness Summary

14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-092
Terracon Project #: AR217010
NMOCD[2] Refernece#: 1RP-2162
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-8 (2")	01/27/2020	3,062.42	-	63.31	-	2,999.11
	06/02/2020		-	63.38	-	2,999.04
	09/14/2020		-	63.48	-	2,998.94
	12/08/2020		-	63.53	-	2,998.89
	03/08/2021		-	63.53	-	2,998.89
	06/08/2021		-	63.58	-	2,998.84
	09/20/2021		-	63.64	-	2,998.78
	12/07/2021		-	63.70	-	2,998.72
MW-9 (4")	01/27/2020	3,062.77	-	63.75	-	2,999.02
	06/02/2020		-	63.80	-	2,998.97
	09/14/2020		-	63.88	-	2,998.89
	12/08/2020		-	63.94	-	2,998.83
	03/08/2021		-	63.95	-	2,998.82
	06/08/2021		-	64.00	-	2,998.77
	09/20/2021		-	64.03	-	2,998.74
	12/07/2021		-	64.10	-	2,998.67
MW-10 (2")	01/27/2020	3,062.50	-	62.78	-	2,999.72
	06/02/2020		-	62.87	-	2,999.63
	09/14/2020		-	62.93	-	2,999.57
	12/08/2020		-	62.97	-	2,999.53
	03/08/2021		-	62.98	-	2,999.52
	06/08/2021		-	63.03	-	2,999.47
	09/20/2021		-	63.07	-	2,999.43
	12/07/2021		-	63.11	-	2,999.39
MW-11 (2")	01/27/2020	3,063.50	-	63.67	-	2,999.83
	06/02/2020		-	63.75	-	2,999.75
	09/14/2020		-	63.80	-	2,999.70
	12/08/2020		-	63.84	-	2,999.66
	03/08/2021		-	63.86	-	2,999.64
	06/08/2021		-	63.91	-	2,999.59
	09/20/2021		-	63.92	-	2,999.58
	12/07/2021		-	63.97	-	2,999.53
MW-12 (2")	01/27/2020	3,062.20	-	63.02	-	2,999.18
	06/02/2020		-	62.91	-	2,999.29
	09/14/2020		-	63.22	-	2,998.98
	12/08/2020		-	63.27	-	2,998.93
	03/08/2021		-	63.27	-	2,998.93
	06/08/2021		-	63.33	-	2,998.87
	09/20/2021		-	63.36	-	2,998.84
	12/07/2021		-	63.44	-	2,998.76
MW-13 (2")	01/27/2020	3,062.71	-	63.72	-	2,998.99
	06/02/2020		-	63.80	-	2,998.91
	09/14/2020		-	63.89	-	2,998.82
	12/08/2020		-	63.93	-	2,998.78
	03/08/2021		-	63.95	-	2,998.76
	06/08/2021		-	63.99	-	2,998.72
	09/20/2021		-	64.03	-	2,998.68
	12/07/2021		-	64.11	-	2,998.60
MW-14 (2")	01/27/2020	3,062.50	-	63.56	-	2,998.94
	06/02/2020		-	63.63	-	2,998.87
	09/14/2020		-	63.01	-	2,999.49
	12/08/2020		-	63.77	-	2,998.73
	03/08/2021		-	63.78	-	2,998.72
	06/08/2021		-	63.83	-	2,998.67
	09/20/2021		-	63.86	-	2,998.64
	12/07/2021		-	63.93	-	2,998.57

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] & Chloride Concentration Analytical Summary

14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-092
Terracon Project #: AR217010
NMOCD[2] Reference #: 1RP-2162
All concentrations are in milligrams per liter (mg/L)

Monitoring Well	Date Sampled	EPA SW 846-8021B							
		Benzene	Toluene	Ethylbenzene	M,P-Xylenes	O-Xylenes	Total Xylenes	Total BTEX	Chloride
NMOCD RRAL CRITERIA[3]		0.01	0.75	0.75	TOTAL XYLENES 0.62			NE[4]	250
MW-1	01/27/2020	Not sampled due to PSH							
	06/04/2020								
	09/15/2020								
	12/08/2020								
	03/09/2021								
	06/09/2021								
	09/20/2021								
	12/07/2021								
MW-2	01/27/2020	**0.0291**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0291**	**8,890**
	06/04/2020	**0.0262**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0262**	**9,770**
	DUP-1	**0.0246**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0246**	**9,750**
	09/15/2020	**0.0223**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.0223**	**10,300**
	12/09/2020	**0.0245**	<0.000367	<0.000657	<0.000630	<0.000642	<0.0006300	**0.0245**	**9,400**
	03/09/2021	**0.0177**	**0.00313**	**0.000940 J**	**0.000910 J**	**0.00308**	**0.00399**	**0.0258**	**9,940**
	06/10/2021	**0.0137**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.0137**	**10,200**
	09/21/2021	**0.0112**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.0122**	**10,900**
	12/08/2021	**0.0276**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.0276**	**10,800**
MW-3	01/27/2020	**0.452**	<0.00256	<0.00308	**0.00300 J**	<0.00135	**0.00300 J**	**0.455**	-
	06/04/2020	**0.0616**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0616**	-
	09/15/2020	**0.216**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.216**	-
	DUP-1	**0.212**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.212**	-
	12/09/2020	**0.164**	<0.000367	<0.000657	<0.000630	<0.000642	<0.0006300	**0.164**	-
	DUP-2	**0.137**	<0.000367	<0.000657	<0.000630	<0.000642	<0.0006300	**0.137**	-
	03/08/2021	**0.100**	**0.00216**	<0.000657	**0.000690 J**	**0.00114 J**	**0.00183 J**	**0.104**	-
	06/10/2021	**0.0401**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.0401**	-
	DUP-2	**0.0471**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.0471**	-
	09/21/2021	**0.161**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.161**	-
	DUP-2	**0.190**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.190**	-
	12/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	DUP-2	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-4	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/04/2020	**0.00150**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.00150**	-
	09/15/2020	**0.00251**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.00251**	-
	12/09/2020	**0.00111 J**	<0.000367	<0.000657	<0.000630	<0.000642	<0.0006300	**0.00111 J**	-
	03/09/2021	<0.000480	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	DUP-2	<0.000480	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	12/08/2021	**0.00568**	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	**0.00611**	-
MW-5	11/26/2019	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/02/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	**0.000830 J**	**0.000830 J**	**0.000690 J**	**0.000710 J**	**0.000900 J**	**0.00161 J**	**0.00396**	-
	03/09/2021	**0.000440 J**	**0.000940 J**	**0.000770 J**	<0.000630	**0.000800 J**	**0.000800 J**	**0.00295**	-
	06/09/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-6	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/02/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	**0.000770 J**	**0.000690 J**	<0.000657	**0.000810 J**	<0.000642	**0.000810 J**	**0.00227**	-
	03/09/2021	<0.000408	**0.00105 J**	<0.000657	<0.000630	**0.00110 J**	**0.00110 J**	**0.00215**	-
	06/09/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-7	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/03/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/09/2021	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/09/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-8	01/27/2020	**0.0692**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0692**	-
	DUP-2	**0.0678**	<0.000512	<0.000616	**0.000500 J**	<0.000270	**0.000500 J**	**0.0683**	-
	06/04/2020	**0.0063**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0063**	-
	DUP-3	**0.0062**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0062**	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/09/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/09/2021	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	DUP-1	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-

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
Bold text indicates a concentration above the laboratory detection limit.
Highlighted text indicates a concentration exceeding the NMOCD RRAL Criteria

Table 2
Groundwater BTEX[1] & Chloride Concentration Analytical Summary

14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-092
Terracon Project #: AR217010
NMOCD[2] Reference #: 1RP-2162
All concentrations are in milligrams per liter (mg/L)

Monitoring Well	Date Sampled	EPA SW 846-8021B							
		Benzene	Toluene	Ethylbenzene	M,P-Xylenes	O-Xylenes	Total Xylenes	Total BTEX	Chloride
NMOCD RRAL CRITERIA[3]		0.01	0.75	0.75	TOTAL XYLENES 0.62			NE[4]	250
MW-9	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/02/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/08/2021	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/09/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-10	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/03/2020	**0.00180**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/14/2020	**0.00250**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	0.00250	-
	12/08/2020	**0.00317**	**0.00145 J**	<0.000657	**0.00135 J**	**0.000760 J**	**0.00211**	**0.00673**	-
	03/09/2021	**0.00153 J**	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	**0.00153 J**	-
	06/09/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-11	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/03/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/08/2021	<0.000408	<0.000367	<0.000657	**0.00299 J**	**0.00200 J**	**0.00499**	**0.00499**	-
	06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/20/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-12	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/03/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	**0.000620**	**0.000630**	<0.000657	<0.000630	<0.000642	<0.000630	**0.00125**	-
	12/09/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/08/2021	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/07/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-13	01/27/2020	**0.0625**	<0.000512	<0.000616	**0.000600 J**	<0.000270	**0.000600 J**	**0.0631**	-
	DUP-1	**0.0629**	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	**0.0629**	-
	06/04/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	DUP-2	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/09/2020	<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	-
	03/08/2021	<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	-
	06/10/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	09/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
MW-14	01/27/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	06/02/2020	<0.000480	<0.000512	<0.000616	<0.000454	<0.000270	<0.000270	<0.000270	-
	09/15/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	12/08/2020	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	03/08/2021	<0.000408	<0.000367	<0.000657	<0.000630	<0.000642	<0.000630	<0.000367	-
	06/09/2021	**0.00232**	**0.00491**	<0.00200	<0.00400	<0.00200	<0.00400	**0.00723**	-
	09/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	DUP-1	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00200	-
	12/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-
	DUP-1	<0.00200	<0.00200	<0.00200	<0.00400	<0.00200	<0.00400	<0.00400	-

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
Bold text indicates a concentration above the laboratory detection limit.
Highlighted text indicates a concentration exceeding the NMOCD RRAL Criteria

TABLE 3a
MW-1 PSH[1] Thickness and Recovery Summary

14-inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #2009-092
Terracon Project #: AR217010
NMOCD[2] REFERENCE #: 1RP-2162
All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[3] Elevation*	Depth to PSH Below TOC (feet)	Depth to Water Below TOC (feet)	PSH Thickness (feet)	Total Fluid Recovery (gallons)	PSH Recovered (gallons)
MW-1	01/02/2020	3,062.62	63.28	63.90	0.62	3.0	0.101
	01/09/2020		63.31	63.90	0.59	1,050.0	0.096
	01/30/2020		63.31	64.04	0.73	3.0	0.119
	02/04/2020		63.36	63.98	0.62	3.0	0.101
	02/13/2020		63.34	63.88	0.54	1,680.0	0.088
	02/18/2020		63.28	63.49	0.21	5.0	0.034
	02/26/2020		63.40	63.80	0.40	3.0	0.065
	03/06/2020		63.25	63.96	0.71	5.0	0.116
	03/12/2020		63.21	63.94	0.73	5.0	0.119
	03/17/2020		63.21	63.94	0.73	1,176.0	0.119
	03/18/2020		63.39	63.95	0.56	5.0	0.091
	05/15/2020		63.32	64.00	0.68	5.0	0.111
	05/19/2020		63.39	64.05	0.66	1,176.0	0.108
	06/29/2020		63.39	63.93	0.54	5.0	0.088
	07/29/2020		63.42	64.07	0.65	5.0	0.106
	08/12/2020		63.38	64.28	0.90	1,470.0	0.147
	08/17/2020		63.72	64.31	0.59	5.0	0.096
	10/28/2020		63.49	64.08	0.59	4.0	0.096
	11/12/2020		63.52	64.02	0.50	1,176.0	0.081
	11/23/2020		63.50	64.05	0.55	4.0	0.090
	12/30/2020		63.35	64.09	0.74	3.5	0.121
	01/29/2021		63.56	63.89	0.33	3.0	0.054
	02/25/2021		63.59	63.84	0.25	1,260.0	0.041
	03/25/2021		63.57	63.89	0.32	5.0	0.052
	04/28/2021		63.30	63.79	0.49	5.0	0.080
	05/20/2021		63.61	63.78	0.17	1,470.0	0.028
	06/29/2021		63.64	63.79	0.15	5.0	0.024
	07/28/2021		63.69	63.77	0.08	5.0	0.013
	08/12/2021		63.70	63.75	0.05	1,575.0	0.008
	08/24/2021		-	-	-	5.0	-
	10/26/2021		63.08	64.05	0.97	5.0	0.158
	11/11/2021		63.75	63.96	0.21	1,575.0	0.034
	11/30/2021		63.73	63.86	0.13	5.0	0.021
	12/21/2021		63.76	64.15	0.39	5.0	0.064
				2021 Average PSH Thickness	**0.30**	**5,923.0**	**0.58**

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 3b
MW-3 Gauging and BTEX[1] Impacted Groundwater Recovery Summary
14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #2009-092
Terracon Project #: AR217010
NMOCD[2] REFERENCE #: 1RP-2162
All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[3] Elevation*	Groundwater Recovered (gallons)
MW-3	01/02/2020	3,062.73	65.0
	01/07/2020		1,470.0
	01/30/2020		5.0
	02/04/2020		3.0
	02/11/2020		1,260.0
	02/18/2020		5.0
	02/26/2020		3.0
	03/06/2020		5.0
	03/12/2020		5.0
	03/18/2020		5.0
	05/15/2020		5.0
	05/20/2020		1,344.0
	06/29/2020		5.0
	07/29/2020		5.0
	08/10/2020		1,260.0
	08/17/2020		5.0
	10/28/2020		5.0
	11/09/2020		1,596.0
	1123/2020		3.0
	12/30/2020		3.0
	01/29/2021		3.0
	02/24/2021		1,050.0
	03/25/2021		5.0
	04/28/2021		5.0
	05/19/2021		1,260.0
	06/29/2021		5.0
	07/28/2021		5.0
	08/11/2021		1,575.0
	08/24/2021		5.0
	10/26/2021		5.0
	11/10/2021		855.0
	11/30/2021		5.0
	12/21/2021		5.0
2021 Total GW[4] Recovered			**4,783.0**

Notes:
1. BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top Of Casing
4. GW: Groundwater
* 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

Table 3c

MW-4 Gauging and BTEX[1] Impacted Groundwater Recovery Summary

14-Inch Vac to Jal Legacy

Lea County, New Mexico

Plains Pipeline, L.P. SRS #2009-092

Terracon Project #: AR217010

NMOCD[2] REFERENCE #: 1RP-2162

All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[3] Elevation*	Groundwater Recovered (gallons)
MW-4	01/02/2020	3,062.43	65.0
	01/09/2020		100.0
	01/30/2020		5.0
	02/04/2020		3.0
	02/13/2020		30.0
	02/18/2020		5.0
	02/26/2020		3.0
	03/06/2020		5.0
	03/12/2020		5.0
	03/18/2020		5.0
	05/15/2020		5.0
	05/20/2020		5.0
	06/29/2020		5.0
	07/29/2020		5.0
	08/13/2020		5.0
	08/17/2020		5.0
	10/28/2020		5.0
	11/23/2020		3.0
	12/30/2020		3.0
	01/29/2021		3.0
	02/23/2021		10.0
	03/25/2021		5.0
	04/28/2021		5.0
	05/17/2021		5.0
	06/29/2021		5.0
	07/28/2021		5.0
	08/12/2021		5.0
	08/24/2021		5.0
	10/26/2021		5.0
	11/11/2021		5.0
	11/30/2021		5.0
	12/21/2021		5.0
2021 Total GW[4] Recovered			**68.0**

Notes:

1. BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top Of Casing
4. GW: Groundwater

* 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 3d

MW-8 Gauging and BTEX[1] Impacted Groundwater Recovery Summary

14-Inch Vac to Jal Legacy

Lea County, New Mexico

Plains Pipeline, L.P. SRS #2009-092

Terracon Project #: AR217010

NMOCD[2] REFERENCE #: 1RP-2162

All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[3] Elevation*	Groundwater Recovered (gallons)
MW-8	01/02/2020	3,062.42	65.0
	01/30/2020		5.0
	02/04/2020		3.0
	02/18/2020		5.0
	02/26/2020		3.0
	03/06/2020		5.0
	03/12/2020		5.0
	03/18/2020		5.0
	05/15/2020		5.0
	05/21/2020		1470.0
	06/29/2020		5.0
	07/29/2020		5.0
	08/13/2020		1344.0
	08/17/2020		5.0
	10/28/2020		5.0
	11/11/2020		840.0
	11/23/2020		3.0
	12/30/2020		3.0
	01/29/2021		3.0
	02/22/2021		1,176
	03/25/2021		5.0
	04/28/2021		5.0
	05/18/2021		1,176
	06/29/2021		5.0
	07/28/2021		5.0
	08/10/2021		1125.0
	08/24/2021		5.0
	10/26/2021		5.0
	11/09/2021		1080.0
	11/30/2021		5.0
	12/21/2021		5.0
2021 Total GW[4] Recovered			**4,600.0**

Notes:

1. BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top Of Casing
4. GW: Groundwater

* 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 3e
MW-13 Gauging and BTEX[1] Impacted Groundwater Recovery Summary
14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #2009-092
Terracon Project #: AR217010
NMOCD[2] REFERENCE #: 1RP-2162
All measurements are in feet above mean sea level

Monitoring Well	Date	Top of Casing (TOC)[3] Elevation*	Groundwater Recovered (gallons)
MW-13	01/02/2020	3,062.71	65.0
	01/09/2020		100.0
	01/30/2020		5.0
	02/04/2020		3.0
	02/13/2020		60.0
	02/18/2020		5.0
	02/26/2020		3.0
	03/06/2020		5.0
	03/12/2020		5.0
	03/18/2020		5.0
	05/15/2020		5.0
	05/18/2020		1,260.0
	06/29/2020		5.0
	07/29/2020		5.0
	08/11/2020		1,260.0
	08/17/2020		5.0
	10/28/2020		5.0
	11/10/2020		1,470.0
	11/23/2020		3.0
	12/30/2020		3.0
	01/29/2021		3.0
	02/23/2021		1,260.0
	03/25/2021		5.0
	04/28/2021		5.0
	05/17/2021		1,260.0
	06/29/2021		5.0
	07/28/2021		5.0
	08/09/2021		1260.0
	08/24/2021		5.0
	10/26/2021		5.0
	11/08/2021		585.0
	11/30/2021		5.0
	12/21/2021		5.0
2021 Total GW[4] Recovered			**4,408.0**

Notes:
1. BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes
2. NMOCD: New Mexico Oil Conservation Division
3. TOC: Top Of Casing
4. GW: Groundwater
* 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

TABLE 4
Quarterly AFR[1] Event Results

14-inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #2009-092
Terracon Project #: AR217010
NMOCD[2] REFERENCE #: 1RP-2162

Monitoring Well	Date	Targeted Constituent	Fluid Volume (gallons)	Notes
MW-1	01/09/2020	PSH/BTEX	1,050	Vac Truck, 285 gallons removed from buffalo tank
MW-3	01/07/2020	BTEX	1,470	Vac Truck
MW-4	01/09/2020	BTEX	100	Tornado pump
MW-8	01/08/2020	BTEX	1,470	Vac Truck
MW-13	01/09/2020	BTEX	100	Tornado pump
MW-1	02/13/2020	PSH/BTEX	1,680	Vac Truck, 120 gallons removed from buffalo tank
MW-3	02/11/2020	BTEX	1,260	Vac Truck
MW-4	02/13/2020	BTEX	30	Tornado pump
MW-8	02/12/2020	BTEX	1,260	Vac Truck
MW-13	02/13/2020	BTEX	60	Tornado pump
MW-1	03/17/2020	PSH/BTEX	1,176	Vac Truck
MW-3	03/18/2020	BTEX	N/A	Vac truck broke down, then could not reschedule due to COVID-19
MW-4	03/17/2020	BTEX	0	Tornado pump not performed this month
MW-8	03/19/2020	BTEX	N/A	Vac truck broke down, then could not reschedule due to COVID-19
MW-13	03/17/2020	BTEX	0	Tornado pump not performed this month
		1Q20 Total Recovered	9,656	
MW-1	05/19/2020	PSH/BTEX	1,176	Vac Truck
MW-3	05/20/2020	BTEX	1,344	Vac Truck
MW-8	05/21/2020	BTEX	1,470	Vac Truck
MW-13	05/18/2020	BTEX	1,260	Vac Truck
		2Q20 Total Recovered	5,250	
MW-1	08/12/2020	PSH/BTEX	1,470	Vac Truck
MW-3	08/10/2020	BTEX	1,260	Vac Truck
MW-8	08/13/2020	BTEX	1,344	Vac Truck
MW-13	08/11/2020	BTEX	1,260	Vac Truck
		3Q20 Total Recovered	5,334	
MW-1	11/12/2020	PSH/BTEX	1,176	Vac Truck
MW-3	11/09/2020	BTEX	1,596	Vac Truck
MW-8	11/11/2020	BTEX	840	Vac Truck
MW-13	11/10/2020	BTEX	1,470	Vac Truck
		4Q20 Total Recovered	5,082	
		2020 Total Recovered	25,322	
MW-1	02/25/2021	PSH/BTEX	1,260	Vac Truck
MW-3	02/24/2021	BTEX	1,050	Vac Truck
MW-8	02/22/2021	BTEX	1,176	Vac Truck
MW-13	02/23/2021	BTEX	1,260	Vac Truck
		1Q21 Total Recovered	4,746	
MW-1	02/25/2021	PSH/BTEX	1,470	Vac Truck
MW-3	02/24/2021	BTEX	1,260	Vac Truck
MW-8	02/22/2021	BTEX	1,176	Vac Truck
MW-13	02/23/2021	BTEX	1,260	Vac Truck
		2Q21 Total Recovered	5,166	
MW-1	08/12/2021	PSH/BTEX	1,470	Vac Truck
MW-3	08/11/2021	BTEX	1,470	Vac Truck
MW-8	08/10/2021	BTEX	1,050	Vac Truck
MW-13	08/09/2021	BTEX	1,176	Vac Truck
		1Q21 Total Recovered	5,166	
MW-1	11/11/2021	PSH/BTEX	1,470	Vac Truck
MW-3	11/10/2021	BTEX	798	Vac Truck
MW-8	11/09/2021	BTEX	1,008	Vac Truck
MW-13	11/08/2021	BTEX	546	Vac Truck
		2Q21 Total Recovered	3,822	
		2021 Total Recovered	18,900	

Notes:

1. AFR: Aggressive Fluid Recovery
2. NMOCD: New Mexico Oil Conservation Division
3. PSH: Phase Separated Hydrocarbons
4. BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes

Table 6
Concentrations of PAH[1] in Groundwater Summary

14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains Pipeline, L.P. SRS #: 2009-092
Terracon Project #: AR217011
NMOCD2 Reference#: 1RP-2162

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

Monitoring Well	Date Sampled	EPA 8310																
		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	11/25/2019	Well Not Sampled due to PSH Presence																
	12/8/2020																	
MW-2	6/7/2013	N/A	<0.00021	<0.005	<0.005	<0.00017	<0.005	<0.00039	<0.005	<0.00053	<0.005	<0.005	N/A	<0.00026	<0.00032	<0.005	<0.00029	<0.00029
	5/12/2014	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053
	11/25/2019	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053
	12/9/2020	**0.000242 J**	<0.0000588	<0.000103	<0.0000868	<0.0000893	<0.000139	<0.0000733	<0.000117	<0.000120	<0.000161	<0.0000784	NA	<0.000162	<0.000104	<0.0000942	<0.0000877	<0.000134
MW-3	6/7/2013	N/A	<0.00021	<0.005	<0.005	<0.00017	<0.005	<0.00039	<0.005	<0.00054	<0.005	<0.005	N/A	<0.00026	<0.00032	<0.005	<0.00029	<0.00029
	5/12/2014	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
	11/25/2019	Well Not Sampled																
	12/9/2020	<0.000101	<0.0000594	<0.000104	<0.0000877	<0.0000902	<0.000140	<0.0000741	<0.000118	<0.000121	<0.000163	<0.0000792	NA	<0.000164	<0.000105	<0.0000951	<0.0000886	<0.000136
MW-4	6/7/2013	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053	N/A	<0.000053	<0.000053	<0.000053	<0.000053	<0.000053
	5/12/2014	N/A	<0.00021	<0.005	<0.005	<0.00017	<0.005	<0.00040	<0.005	<0.00054	<0.005	<0.005	N/A	<0.00027	<0.00032	<0.005	<0.00029	<0.00030
	11/25/2019	Well Not Sampled																
	12/9/2020	<0.000103	<0.0000604	<0.000106	<0.0000892	<0.0000917	<0.000142	<0.0000753	<0.000120	<0.000123	<0.000165	<0.0000805	N/A	<0.000166	<0.000107	<0.0000967	<0.0000901	<0.000138
MW-5	6/7/2013	N/A	<0.00021	<0.005	<0.005	<0.00017	<0.005	<0.00039	<0.005	<0.00054	<0.005	<0.005	N/A	<0.00026	<0.00032	<0.005	<0.00029	<0.00029
	5/12/2014	N/A	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	N/A	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052
	11/25/2019	Well Not Sampled																
	12/8/2020	<0.000100	<0.0000589	<0.000103	<0.0000869	<0.0000894	<0.000139	<0.0000734	<0.000117	<0.000120	<0.000161	<0.0000785	N/A	<0.000162	<0.000104	<0.0000943	<0.0000878	<0.000135
MW-6	6/7/2013	N/A	<0.00021	<0.005	<0.005	<0.00017	<0.005	<0.00040	<0.005	<0.00055	<0.005	<0.005	N/A	<0.00027	<0.00033	<0.005	<0.00030	<0.00030
	5/12/2014	N/A	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	N/A	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052
	11/25/2019	Well Not Sampled																
	12/8/2020	<0.000117	<0.0000689	<0.000121	<0.000102	<0.000105	<0.000162	<0.0000858	<0.000137	<0.000140	<0.000189	<0.0000918	N/A	<0.000190	<0.000122	<0.000110	<0.000103	<0.000157
MW-7	7/2/2014	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	11/25/2019	Well Not Sampled																
	12/8/2020	<0.000133	<0.0000778	<0.000136	<0.000115	<0.000118	<0.000183	<0.0000969	<0.000154	<0.000158	<0.000213	<0.000104	N/A	<0.000214	<0.000137	<0.000124	<0.000116	<0.000178
MW-8	7/2/2014	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	11/25/2019	Well Not Sampled																
	12/9/2020	<0.000114	<0.0000667	<0.000117	<0.0000984	<0.000101	<0.000157	<0.0000831	<0.000132	<0.000136	<0.000183	<0.0000889	N/A	<0.000184	<0.000118	<0.000107	<0.0000994	<0.000152
MW-9	7/2/2014	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	N/A	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	11/25/2019	Well Not Sampled																
	12/8/2020	<0.000116	<0.0000679	<0.000119	<0.000100	<0.000103	<0.000160	<0.0000846	<0.000135	<0.000138	<0.000186	<0.0000904	N/A	<0.000187	<0.000120	<0.000109	<0.000101	<0.000155
MW-10	11/25/2019	<1.16	N/A	<2.09	<1.12	<0.811	N/A	N/A	N/A	N/A	<1.38	N/A	N/A	<0.740	<1.09	N/A	<0.771	<1.38
	12/8/2020	<0.000110	<0.0000646	<0.000113	<0.0000954	<0.0000981	<0.000152	<0.0000805	<0.000128	<0.000132	<0.000177	<0.0000861	N/A	<0.000178	<0.000114	<0.000103	<0.0000963	<0.000148
MW-11	11/25/2019	<1.16	N/A	<2.09	<1.12	<0.811	N/A	N/A	N/A	N/A	<1.38	N/A	N/A	<0.740	<1.09	N/A	<0.771	<1.38
	12/8/2020	<0.000100	<0.0000587	<0.000103	<0.0000866	<0.0000891	<0.000138	<0.0000731	<0.000116	<0.000119	<0.000161	<0.0000781	N/A	<0.000162	<0.000104	<0.0000939	<0.0000874	<0.000134
MW-12	11/25/2019	<1.16	N/A	<2.09	<1.12	<0.811	N/A	N/A	N/A	N/A	<1.38	N/A	N/A	<0.740	<1.09	N/A	<0.771	<1.38
	12/9/2020	<0.0000997	<0.0000585	<0.000102	<0.0000863	<0.0000888	<0.000138	<0.0000729	<0.000116	<0.000119	<0.000160	<0.0000779	N/A	<0.000161	<0.000103	<0.0000936	<0.0000872	<0.000134
MW-13	11/25/2019	<1.16	N/A	<2.09	<1.12	<0.811	N/A	N/A	N/A	N/A	<1.38	N/A	N/A	<0.740	<1.09	N/A	<0.771	<1.38
	12/9/2020	<0.000115	<0.0000674	<0.000118	<0.0000994	<0.000102	<0.000159	<0.0000840	<0.000134	<0.000137	<0.000184	<0.0000898	N/A	<0.000186	<0.000119	<0.000108	<0.000100	<0.000154
MW-14	11/25/2019	<1.16	N/A	<2.09	<1.12	<0.811	N/A	N/A	N/A	N/A	<1.38	N/A	N/A	<0.740	<1.09	N/A	<0.771	<1.38
	12/8/2020	<0.000107	<0.0000627	<0.000110	<0.0000925	<0.0000952	<0.000148	<0.0000781	<0.000124	<0.000128	<0.000172	<0.0000835	N/A	<0.000173	<0.000111	<0.000100	<0.0000935	<0.000143

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 Laboratory Analytical Reports

eurofins | Environment Testing Xenco

Analytical Report 691132

for

Terracon-Midland

Project Manager: Brett Dennis

14" Vac to Jal Legacy (SRS#2009-0921)

AR217010

03.23.2021

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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 (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

eurofins | Environment Testing Xenco

03.23.2021

Project Manager: **Brett Dennis**
Terracon-Midland
10400 State Hwy 191
Midland, TX 79707

Reference: Eurofins Xenco, LLC Report No(s): **691132**
14" Vac to Jal Legacy (SRS#2009-0921)
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) 691132. 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. 691132 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

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Sample Cross Reference 691132

Terracon-Midland, Midland, TX

14" Vac to Jal Legacy (SRS#2009-0921)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	03.09.2021 14:20		691132-001
MW-3	W	03.08.2021 11:45		691132-002
MW-4	W	03.09.2021 10:40		691132-003
MW-5	W	03.09.2021 11:45		691132-004
MW-6	W	03.09.2021 08:30		691132-005
MW-7	W	03.09.2021 09:40		691132-006
MW-8	W	03.08.2021 13:55		691132-007
MW-9	W	03.08.2021 17:05		691132-008
MW-10	W	03.09.2021 12:45		691132-009
MW-11	W	03.08.2021 10:45		691132-010
MW-12	W	03.08.2021 13:00		691132-011
MW-13	W	03.08.2021 14:50		691132-012
MW-14	W	03.08.2021 15:45		691132-013
DUP-1	W	03.08.2021 14:51		691132-014
DUP-2	W	03.09.2021 10:41		691132-015

CASE NARRATIVE

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Client Name: Terracon-Midland

Project Name: 14" Vac to Jal Legacy (SRS#2009-0921)

Project ID:	*AR217010*	Report Date:	*03.23.2021*
Work Order Number(s):	*691132*	Date Received:	*03.10.2021*

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-3153573 BTEX by EPA 8021

Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7723268-1-BLK.

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Terracon-Midland, Midland, TX

14" Vac to Jal Legacy (SRS#2009-0921)

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

Lab Sample Id: 691132-001 Date Collected: 03.09.2021 14:20 Date Received: 03.10.2021 09:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist:

Seq Number: 3153274 Date Prep: 03.10.2021 17:00 Tech: CHE

Prep seq: 7723019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**9940**	50.0	2.10	mg/L	03.10.2021 18:06		100

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.0177**	0.00200	0.000408	mg/L	03.14.2021 13:15		1
Toluene	108-88-3	**0.00313**	0.00200	0.000367	mg/L	03.14.2021 13:15		1
Ethylbenzene	100-41-4	**0.000940**	0.00200	0.000657	mg/L	03.14.2021 13:15	J	1
m,p-Xylenes	179601-23-1	**0.000910**	0.00400	0.000630	mg/L	03.14.2021 13:15	J	1
o-Xylene	95-47-6	**0.00308**	0.00200	0.000642	mg/L	03.14.2021 13:15		1
Total Xylenes	1330-20-7	**0.00399**		0.000630	mg/L	03.14.2021 13:15		
Total BTEX		**0.0258**		0.000367	mg/L	03.14.2021 13:15		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	70 - 130	%		
4-Bromofluorobenzene	119	70 - 130	%		

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Terracon-Midland, Midland, TX

14" Vac to Jal Legacy (SRS#2009-0921)

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

Lab Sample Id: 691132-002 Date Collected: 03.08.2021 11:45 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.100**	0.00200	0.000408	mg/L	03.14.2021 13:40		1
Toluene	108-88-3	**0.00216**	0.00200	0.000367	mg/L	03.14.2021 13:40		1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.14.2021 13:40	U	1
m,p-Xylenes	179601-23-1	**0.000690**	0.00400	0.000630	mg/L	03.14.2021 13:40	J	1
o-Xylene	95-47-6	**0.00114**	0.00200	0.000642	mg/L	03.14.2021 13:40	J	1
Total Xylenes	1330-20-7	**0.00183**		0.000630	mg/L	03.14.2021 13:40	J	
Total BTEX		**0.104**		0.000367	mg/L	03.14.2021 13:40		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	70 - 130	%		
4-Bromofluorobenzene	112	70 - 130	%		

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

Lab Sample Id: 691132-003 Date Collected: 03.09.2021 10:40 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.21.2021 22:06	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.21.2021 22:06	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.21.2021 22:06	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.21.2021 22:06	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.21.2021 22:06	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.21.2021 22:06	U	
Total BTEX		<0.000367		0.000367	mg/L	03.21.2021 22:06	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

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

Lab Sample Id: 691132-004 Date Collected: 03.09.2021 11:45 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.000440**	0.00200	0.000408	mg/L	03.14.2021 14:44	J	1
Toluene	108-88-3	**0.000940**	0.00200	0.000367	mg/L	03.14.2021 14:44	J	1
Ethylbenzene	100-41-4	**0.000770**	0.00200	0.000657	mg/L	03.14.2021 14:44	J	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.14.2021 14:44	U	1
o-Xylene	95-47-6	**0.000800**	0.00200	0.000642	mg/L	03.14.2021 14:44	J	1
Total Xylenes	1330-20-7	**0.000800**		0.000630	mg/L	03.14.2021 14:44	J	
Total BTEX		**0.00295**		0.000367	mg/L	03.14.2021 14:44		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	70 - 130	%		
4-Bromofluorobenzene	114	70 - 130	%		

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

Lab Sample Id: 691132-005 Date Collected: 03.09.2021 08:30 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.14.2021 15:09	U	1
Toluene	108-88-3	**0.00105**	0.00200	0.000367	mg/L	03.14.2021 15:09	J	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.14.2021 15:09	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.14.2021 15:09	U	1
o-Xylene	95-47-6	**0.00110**	0.00200	0.000642	mg/L	03.14.2021 15:09	J	1
Total Xylenes	1330-20-7	**0.00110**		0.000630	mg/L	03.14.2021 15:09	J	
Total BTEX		**0.00215**		0.000367	mg/L	03.14.2021 15:09		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	110	70 - 130	%		

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Sample Id: **MW-7** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-006 Date Collected: 03.09.2021 09:40 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 18:39	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 18:39	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 18:39	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 18:39	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 18:39	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 18:39	U	
Total BTEX		<0.000367		0.000367	mg/L	03.16.2021 18:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		

Sample Id: **MW-8** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-007 Date Collected: 03.08.2021 13:55 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 18:59	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 18:59	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 18:59	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 18:59	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 18:59	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 18:59	U	
Total BTEX		<0.000367		0.000367	mg/L	03.16.2021 18:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	105	70 - 130	%		

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Sample Id: **MW-9** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-008 Date Collected: 03.08.2021 17:05 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 19:20	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 19:20	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 19:20	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 19:20	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 19:20	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 19:20	U	
Total BTEX		<0.000367		0.000367	mg/L	03.16.2021 19:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

Sample Id: **MW-10** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-009 Date Collected: 03.09.2021 12:45 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00153**	0.00200	0.000408	mg/L	03.16.2021 19:41	J	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 19:41	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 19:41	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 19:41	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 19:41	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 19:41	U	
Total BTEX		**0.00153**		0.000367	mg/L	03.16.2021 19:41	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		

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Sample Id: **MW-11** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-010 Date Collected: 03.08.2021 10:45 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 20:01	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 20:01	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 20:01	U	1
m,p-Xylenes	179601-23-1	**0.00299**	0.00400	0.000630	mg/L	03.16.2021 20:01	J	1
o-Xylene	95-47-6	**0.00200**	0.00200	0.000642	mg/L	03.16.2021 20:01	J	1
Total Xylenes	1330-20-7	**0.00499**		0.000630	mg/L	03.16.2021 20:01		
Total BTEX		**0.00499**		0.000367	mg/L	03.16.2021 20:01		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

Sample Id: **MW-12** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-011 Date Collected: 03.08.2021 13:00 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 20:22	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 20:22	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 20:22	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 20:22	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 20:22	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 20:22	U	
Total BTEX		<0.000367		0.000367	mg/L	03.16.2021 20:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

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Sample Id: **MW-13** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-012 Date Collected: 03.08.2021 14:50 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 20:43	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 20:43	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 20:43	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 20:43	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 20:43	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.16.2021 20:43	U	
Total BTEX		<0.000367		0.000367	mg/L	03.16.2021 20:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	104	70 - 130	%		

Sample Id: **MW-14** Matrix: Ground Water Sample Depth:

Lab Sample Id: 691132-013 Date Collected: 03.08.2021 15:45 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3154054 Date Prep: 03.16.2021 14:05 Tech: KTL

Prep seq: 7723439

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.17.2021 12:12	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.17.2021 12:12	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.17.2021 12:12	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.17.2021 12:12	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.17.2021 12:12	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.17.2021 12:12	U	
Total BTEX		<0.000367		0.000367	mg/L	03.17.2021 12:12	U	

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

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

Lab Sample Id: 691132-014 Date Collected: 03.08.2021 14:51 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3154054 Date Prep: 03.16.2021 14:05 Tech: KTL

Prep seq: 7723439

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.17.2021 12:33	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.17.2021 12:33	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.17.2021 12:33	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.17.2021 12:33	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.17.2021 12:33	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.17.2021 12:33	U	
Total BTEX		<0.000367		0.000367	mg/L	03.17.2021 12:33	U	

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

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

Lab Sample Id: 691132-015 Date Collected: 03.09.2021 10:41 Date Received: 03.10.2021 09:00

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

Analyst: KTL % Moist:

Seq Number: 3154054 Date Prep: 03.16.2021 14:05 Tech: KTL

Prep seq: 7723439

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.17.2021 12:53	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.17.2021 12:53	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.17.2021 12:53	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.17.2021 12:53	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.17.2021 12:53	U	1
Total Xylenes	1330-20-7	<0.000630		0.000630	mg/L	03.17.2021 12:53	U	
Total BTEX		<0.000367		0.000367	mg/L	03.17.2021 12:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

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Certificate of Analytical Results
691132
Terracon-Midland, Midland, TX
14" Vac to Jal Legacy (SRS#2009-0921)

Sample Id: **7723019-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7723019-1-BLK Date Collected: Date Received:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist:

Seq Number: 3153274 Date Prep: 03.10.2021 17:00 Tech: CHE

Prep seq: 7723019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.0210	0.500	0.0210	mg/L	03.10.2021 16:58	U	1

Sample Id: **7723268-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7723268-1-BLK Date Collected: Date Received:

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

Analyst: KTL % Moist:

Seq Number: 3153573 Date Prep: 03.13.2021 09:00 Tech: KTL

Prep seq: 7723268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.14.2021 05:27	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.14.2021 05:27	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.14.2021 05:27	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.14.2021 05:27	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.14.2021 05:27	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	59	70 - 130	%		**

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Certificate of Analytical Results
691132
Terracon-Midland, Midland, TX
14" Vac to Jal Legacy (SRS#2009-0921)

Sample Id: **7723436-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7723436-1-BLK Date Collected: Date Received:

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

Analyst: KTL % Moist:

Seq Number: 3153881 Date Prep: 03.16.2021 10:45 Tech: KTL

Prep seq: 7723436

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.16.2021 13:48	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.16.2021 13:48	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.16.2021 13:48	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.16.2021 13:48	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.16.2021 13:48	U	1

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

Sample Id: **7723439-1-BLK** Matrix: Water Sample Depth:

Lab Sample Id: 7723439-1-BLK Date Collected: Date Received:

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

Analyst: KTL % Moist:

Seq Number: 3154054 Date Prep: 03.16.2021 14:05 Tech: KTL

Prep seq: 7723439

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000408	0.00200	0.000408	mg/L	03.17.2021 11:50	U	1
Toluene	108-88-3	<0.000367	0.00200	0.000367	mg/L	03.17.2021 11:50	U	1
Ethylbenzene	100-41-4	<0.000657	0.00200	0.000657	mg/L	03.17.2021 11:50	U	1
m,p-Xylenes	179601-23-1	<0.000630	0.00400	0.000630	mg/L	03.17.2021 11:50	U	1
o-Xylene	95-47-6	<0.000642	0.00200	0.000642	mg/L	03.17.2021 11:50	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	70 - 130	%		
4-Bromofluorobenzene	114	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: 14" Vac to Jal Legacy (SRS#2009-0921)

Report Date: 03232021

Work Orders : 691132 **Project ID:** AR217010

Lab Batch #: 3153573 **Sample:** 7723268-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.14.2021 03:18 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0226	0.0300	75	70-130	

Lab Batch #: 3153573 **Sample:** 7723268-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.14.2021 03:44 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0264	0.0300	88	70-130	

Lab Batch #: 3153573 **Sample:** 690996-006 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03.14.2021 04:09 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	70-130	
4-Bromofluorobenzene	0.0254	0.0300	85	70-130	

Lab Batch #: 3153573 **Sample:** 690996-006 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03.14.2021 04:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0355	0.0300	118	70-130	
4-Bromofluorobenzene	0.0271	0.0300	90	70-130	

Lab Batch #: 3153573 **Sample:** 7723268-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.14.2021 05:27 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0176	0.0300	59	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: 14" Vac to Jal Legacy (SRS#2009-0921)

Report Date: 03232021

Work Orders : 691132 **Project ID:** AR217010

Lab Batch #: 3153881 **Sample:** 7723436-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.16.2021 11:47 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0304	0.0300	101	70-130	

Lab Batch #: 3153881 **Sample:** 7723436-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.16.2021 12:08 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3153881 **Sample:** 690671-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.16.2021 12:28 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3153881 **Sample:** 690671-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.16.2021 12:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3153881 **Sample:** 7723436-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.16.2021 13:48 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	70-130	
4-Bromofluorobenzene	0.0326	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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Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy (SRS#2009-0921)

Report Date: 03232021

Work Orders : 691132 **Project ID:** AR217010

Lab Batch #: 3154054 **Sample:** 7723439-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.17.2021 09:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

Lab Batch #: 3154054 **Sample:** 7723439-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.17.2021 10:10 **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	0.0305	0.0300	102	70-130	

Lab Batch #: 3154054 **Sample:** 691132-013 S / MS **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03.17.2021 10:30 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3154054 **Sample:** 691132-013 SD / MSD **Batch:** 1 **Matrix:** Ground Water

Units: mg/L **Date Analyzed:** 03.17.2021 10:51 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0296	0.0300	99	70-130	

Lab Batch #: 3154054 **Sample:** 7723439-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 03.17.2021 11:50 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0343	0.0300	114	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: 14" Vac to Jal Legacy (SRS#2009-0921)

Work Order #: 691132 **Project ID:** AR217010

Analyst: KTL **Date Prepared:** 03.13.2021 **Date Analyzed:** 03.14.2021

Lab Batch ID: 3153573 **Sample:** 7723268-1-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	0.0941	94	0.100	0.103	103	9	70-130	25	
Toluene	<0.000367	0.100	0.0900	90	0.100	0.0981	98	9	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0879	88	0.100	0.0965	97	9	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.180	90	0.200	0.199	100	10	70-130	25	
o-Xylene	<0.000642	0.100	0.0873	87	0.100	0.0985	99	12	70-130	25	

Analyst: KTL **Date Prepared:** 03.16.2021 **Date Analyzed:** 03.16.2021

Lab Batch ID: 3153881 **Sample:** 7723436-1-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	0.103	103	0.100	0.0997	100	3	70-130	25	
Toluene	<0.000367	0.100	0.101	101	0.100	0.0960	96	5	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0986	99	0.100	0.0947	95	4	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.198	99	0.200	0.190	95	4	70-130	25	
o-Xylene	<0.000642	0.100	0.0975	98	0.100	0.0941	94	4	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: 14" Vac to Jal Legacy (SRS#2009-0921)

Work Order #: 691132 **Project ID:** AR217010

Analyst: KTL **Date Prepared:** 03.16.2021 **Date Analyzed:** 03.17.2021

Lab Batch ID: 3154054 **Sample:** 7723439-1-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	0.105	105	0.100	0.0997	100	5	70-130	25	
Toluene	<0.000367	0.100	0.0964	96	0.100	0.0959	96	1	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0920	92	0.100	0.0933	93	1	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.181	91	0.200	0.187	94	3	70-130	25	
o-Xylene	<0.000642	0.100	0.0904	90	0.100	0.0938	94	4	70-130	25	

Analyst: CHE **Date Prepared:** 03.10.2021 **Date Analyzed:** 03.10.2021

Lab Batch ID: 3153274 **Sample:** 7723019-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	<0.0210	25.0	25.1	100	25.0	25.1	100	0	90-110	20	

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: 14" Vac to Jal Legacy (SRS#2009-0921)

Report Date: 03232021
Project ID: AR217010

Work Order # : 691132
Lab Batch ID: 3153573 **QC- Sample ID:** 690996-006 S **Batch #:** 1 **Matrix:** Ground Water
Date Analyzed: 03.14.2021 **Date Prepared:** 03.13.2021 **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	0.00131	0.100	0.0998	98	0.100	0.107	106	7	70-130	25	
Toluene	<0.000367	0.100	0.0976	98	0.100	0.103	103	5	70-130	25	
Ethylbenzene	0.00156	0.100	0.0952	94	0.100	0.101	99	6	70-130	25	
m,p-Xylenes	0.00146	0.200	0.195	97	0.200	0.207	103	6	70-130	25	
o-Xylene	0.000850	0.100	0.0954	95	0.100	0.101	100	6	70-130	25	

Lab Batch ID: 3153881 **QC- Sample ID:** 690671-001 S **Batch #:** 1 **Matrix:** Water
Date Analyzed: 03.16.2021 **Date Prepared:** 03.16.2021 **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	0.00465	5	0.100	0.0821	82	179	70-130	25	XF
Toluene	<0.000367	0.100	0.00382	4	0.100	0.0702	70	179	70-130	25	XF
Ethylbenzene	<0.000657	0.100	0.00335	3	0.100	0.0536	54	176	70-130	25	XF
m,p-Xylenes	<0.000630	0.200	0.00702	4	0.200	0.104	52	175	70-130	25	XF
o-Xylene	<0.000642	0.100	0.00389	4	0.100	0.0548	55	173	70-130	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.

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Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal Legacy (SRS#2009-0921)

Report Date: 03232021

Work Order # : 691132 **Project ID:** AR217010

Lab Batch ID: 3154054 **QC- Sample ID:** 691132-013 S **Batch #:** 1 **Matrix:** Ground Water

Date Analyzed: 03.17.2021 **Date Prepared:** 03.16.2021 **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	0.0949	95	0.100	0.100	100	5	70-130	25	
Toluene	<0.000367	0.100	0.0951	95	0.100	0.0959	96	1	70-130	25	
Ethylbenzene	<0.000657	0.100	0.0923	92	0.100	0.0938	94	2	70-130	25	
m,p-Xylenes	<0.000630	0.200	0.183	92	0.200	0.185	93	1	70-130	25	
o-Xylene	<0.000642	0.100	0.0917	92	0.100	0.0912	91	1	70-130	25	

Lab Batch ID: 3153274 **QC- Sample ID:** 691110-009 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03.10.2021 **Date Prepared:** 03.10.2021 **Analyst:** CHE

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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
Chloride	233	500	770	107	500	770	107	0	90-110	20	

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.

CHAIN OF CUSTODY RECORD 691137

Terracon

Laboratory: Xenco Laboratories
Address: 1211 West Florida Avenue, Midland, TX 79701
Phone: (432) 563-1800
Contact: Jessica Kramer
PO/SO #:

Office Location: Lubbock
Project Manager: Brett Dennis
Sampler's Name: Kimble Thrash
Sampler's Signature:

Project Number: AR217010
Project Name: 14" Vac to Jal Legacy (SRS # 2009-092)

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.2/1.7
Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	500 ml Poly			BTEX (EPA Method 80218)	Chloride (Total) (EPA 300)						Lab Sample ID
GW	03/09/21	1420		X	MW-2			X	X			3	1						
GW	03/08/21	1145		X	MW-3			X				3							
GW	03/09/21	1040		X	MW-4			X				3							
GW	03/09/21	1145		X	MW-5			X				3							
GW	03/09/21	0830		X	MW-6			X				3							
GW	03/09/21	0940		X	MW-7			X				3							
GW	03/08/21	1355		X	MW-8			X				3							
GW	03/08/21	1705		X	MW-9			X				3							
GW	03/09/21	1245		X	MW-10			X				3							
GW	03/08/21	1045		X	MW-11			X				3							

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

	Date	Time		Date	Time
Relinquished by (Signature)	3/9/21	2100	Received by (Signature)	3/9/21	2100
Relinquished by (Signature)	3/10/21	0900	Received by (Signature)	3/10/21	0900
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:
E-MAIL RESULTS TO:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. MAOCHOA@PAALP.COM
4. BRETT.DENNIS@TERRACON.COM
5. ERIN.LOYD@TERRACON.COM
6. KATHRASH@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 _____

CHAIN OF CUSTODY RECORD 691132

Terracon

Office Location: Lubbock

Project Manager: Brett Dennis

Sampler's Name: Kimble Thrash

Sampler's Signature:

Laboratory: Xenco Laboratories
Address: 1211 West Florida Avenue, Midland, TX 79701
Phone: (432) 563-1800
Contact: Jessica Kramer
PO/SO #:

Project Number: AR217010

Project Name: 14" Vac to Jal Legacy (SRS # 2009-092)

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.2/1.7

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	500 ml Poly			BTEX (EPA Method 80218)	Chloride (Total) (EPA 300)							Lab Sample ID
GW	03/08/21	1300		X	MW-12			X				3								
GW	03/08/21	1450		X	MW-13			X				3								
GW	03/08/21	1545		X	MW-14			X				3								
GW	03/08/21	1451		X	DUP-1			X				3								
GW	03/09/21	1041		X	DUP-2			X				3								
					**********END OF COC**********															

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	3/9/21	2100	Received by (Signature)	3/9/21	2100
Relinquished by (Signature)	3/10/21	0900	Received by (Signature)	3/10/21	0900
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:

E-MAIL RESULTS TO:
1. CJBRYANT@PAALP.COM
2. ALGROVES@PAALP.COM
3. MAOCHOA@PAALP.COM
4. BRETT.DENNIS@TERRACON.COM
5. ERIN.LOYD@TERRACON.COM
6. KATHRASH@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 _____

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Midland

Date/ Time Received: 03.10.2021 09.00.00 AM

Work Order #: 691132

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

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.7
#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)?	**N/A**
#18 Water VOC samples have zero headspace?	**Yes**

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

Analyst: JKR PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel Date: 03.10.2021

Brianna Teel

Checklist reviewed by: John Builes Date: 03.12.2021

John Builes

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-998-1
Client Project/Site: 14" Vac to Jal Legacy

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Brett Dennis

Jkramer

Authorized for release by:
6/16/2021 3:09:15 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

Jessica Kramer
Project Manager
6/16/2021 3:09:15 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Laboratory Job ID: 820-998-1

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Job ID: 820-998-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-998-1

Receipt
The samples were received on 6/11/2021 10:04 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

Client Sample ID: MW-5
Lab Sample ID: 820-998-1
Date Collected: 06/09/21 09:55
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 19:22	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 19:22	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*06/14/21 19:22*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*		*06/14/21 19:22*	*1*

Client Sample ID: MW-6
Lab Sample ID: 820-998-2
Date Collected: 06/09/21 10:39
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 19:47	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 19:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 19:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 19:47	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 19:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 19:47	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*06/14/21 19:47*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*		*06/14/21 19:47*	*1*

Client Sample ID: MW-14
Lab Sample ID: 820-998-3
Date Collected: 06/09/21 11:23
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00232**		0.00200		mg/L			06/14/21 20:12	1
Toluene	**0.00491**		0.00200		mg/L			06/14/21 20:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 20:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 20:12	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 20:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 20:12	1
Total BTEX	**0.00723**		0.00400		mg/L			06/14/21 20:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*06/14/21 20:12*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*		*06/14/21 20:12*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Client Sample ID: MW-9

Lab Sample ID: 820-998-4
Matrix: Water
Date Collected: 06/09/21 12:05
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 20:37	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 20:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 20:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 20:37	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 20:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 20:37	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*06/14/21 20:37*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*06/14/21 20:37*	*1*

Client Sample ID: MW-7

Lab Sample ID: 820-998-5
Matrix: Water
Date Collected: 06/09/21 12:45
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 21:02	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 21:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 21:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 21:02	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 21:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 21:02	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*06/14/21 21:02*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*		*06/14/21 21:02*	*1*

Client Sample ID: MW-10

Lab Sample ID: 820-998-6
Matrix: Water
Date Collected: 06/09/21 13:20
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 21:28	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 21:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 21:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 21:28	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 21:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 21:28	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*06/14/21 21:28*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*06/14/21 21:28*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

Client Sample ID: MW-11 Lab Sample ID: 820-998-7

Date Collected: 06/10/21 08:57 **Matrix: Water**
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 21:53	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 21:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 21:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 21:53	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 21:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 21:53	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*06/14/21 21:53*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*06/14/21 21:53*	*1*

Client Sample ID: MW-12 Lab Sample ID: 820-998-8

Date Collected: 06/10/21 09:39 **Matrix: Water**
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 22:18	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 22:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 22:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 22:18	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 22:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 22:18	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/14/21 22:18*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*		*06/14/21 22:18*	*1*

Client Sample ID: MW-2 Lab Sample ID: 820-998-9

Date Collected: 06/10/21 10:39 **Matrix: Water**
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0137**		0.00200		mg/L			06/14/21 22:43	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 22:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 22:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 22:43	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 22:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 22:43	1
Total BTEX	**0.0137**		0.00400		mg/L			06/14/21 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*		*06/14/21 22:43*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*06/14/21 22:43*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10200**		50.0		mg/L			06/15/21 17:44	100

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

Client Sample ID: MW-4
Lab Sample ID: 820-998-10
Date Collected: 06/10/21 11:17
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/15/21 13:45	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 13:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 13:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 13:45	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 13:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 13:45	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/15/21 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*		*06/15/21 13:45*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*		*06/15/21 13:45*	*1*

Client Sample ID: MW-13
Lab Sample ID: 820-998-11
Date Collected: 06/10/21 11:58
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/15/21 14:10	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 14:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 14:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 14:10	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 14:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 14:10	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/15/21 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/15/21 14:10*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*		*06/15/21 14:10*	*1*

Client Sample ID: MW-8
Lab Sample ID: 820-998-12
Date Collected: 06/10/21 12:29
Matrix: Water
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/15/21 14:35	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 14:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 14:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 14:35	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 14:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 14:35	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/15/21 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*06/15/21 14:35*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*		*06/15/21 14:35*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Client Sample ID: MW-3

Lab Sample ID: 820-998-13
Matrix: Water
Date Collected: 06/10/21 13:05
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0401**		0.00200		mg/L			06/15/21 15:01	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 15:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 15:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 15:01	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 15:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 15:01	1
Total BTEX	**0.0401**		0.00400		mg/L			06/15/21 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*06/15/21 15:01*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*		*06/15/21 15:01*	*1*

Client Sample ID: DUP-1

Lab Sample ID: 820-998-14
Matrix: Water
Date Collected: 06/10/21 00:00
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/15/21 15:25	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 15:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 15:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 15:25	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 15:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 15:25	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/15/21 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*06/15/21 15:25*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*		*06/15/21 15:25*	*1*

Client Sample ID: DUP-2

Lab Sample ID: 820-998-15
Matrix: Water
Date Collected: 06/10/21 00:00
Date Received: 06/11/21 10:04

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0471**		0.00200		mg/L			06/15/21 15:51	1
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 15:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 15:51	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 15:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 15:51	1
Total BTEX	**0.0471**		0.00400		mg/L			06/15/21 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*		*06/15/21 15:51*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*		*06/15/21 15:51*	*1*

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
820-998-1	MW-5	110	103										
820-998-2	MW-6	111	104										
820-998-3	MW-14	108	102										
820-998-4	MW-9	111	106										
820-998-5	MW-7	106	104										
820-998-6	MW-10	113	105										
820-998-7	MW-11	110	106										
820-998-8	MW-12	109	103										
820-998-9	MW-2	116	106										
820-998-10	MW-4	127	92										
820-998-10 MS	MW-4	99	104										
820-998-10 MSD	MW-4	107	107										
820-998-11	MW-13	109	104										
820-998-12	MW-8	108	100										
820-998-13	MW-3	97	100										
820-998-14	DUP-1	110	104										
820-998-15	DUP-2	124	112										
LCS 880-4074/3	Lab Control Sample	104	104										
LCS 880-4105/3	Lab Control Sample	115	98										
LCSD 880-4074/4	Lab Control Sample Dup	99	107										
LCSD 880-4105/4	Lab Control Sample Dup	107	110										
MB 880-4074/8	Method Blank	71	84										
MB 880-4105/8	Method Blank	73	86										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-4074/8
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*		*06/14/21 12:59*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*		*06/14/21 12:59*	*1*

Lab Sample ID: LCS 880-4074/3
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09419		mg/L		94	70 - 130		
Toluene			0.100	0.1038		mg/L		104	70 - 130		
Ethylbenzene			0.100	0.1078		mg/L		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.1914		mg/L		96	70 - 130		
o-Xylene			0.100	0.09672		mg/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-4074/4
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09313		mg/L		93	70 - 130	1	20
Toluene			0.100	0.1006		mg/L		101	70 - 130	3	20
Ethylbenzene			0.100	0.1055		mg/L		106	70 - 130	2	20
m-Xylene & p-Xylene			0.200	0.1875		mg/L		94	70 - 130	2	20
o-Xylene			0.100	0.09438		mg/L		94	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-4105/8
Matrix: Water
Analysis Batch: 4105

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/15/21 13:19	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-4105/8
Matrix: Water
Analysis Batch: 4105

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200		mg/L			06/15/21 13:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/15/21 13:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/15/21 13:19	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/15/21 13:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/15/21 13:19	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/15/21 13:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*		*06/15/21 13:19*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*		*06/15/21 13:19*	*1*

Lab Sample ID: LCS 880-4105/3
Matrix: Water
Analysis Batch: 4105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09731		mg/L		97	70 - 130		
Toluene			0.100	0.1083		mg/L		108	70 - 130		
Ethylbenzene			0.100	0.1111		mg/L		111	70 - 130		
m-Xylene & p-Xylene			0.200	0.1945		mg/L		97	70 - 130		
o-Xylene			0.100	0.09867		mg/L		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-4105/4
Matrix: Water
Analysis Batch: 4105

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09988		mg/L		100	70 - 130	3	20
Toluene			0.100	0.09359		mg/L		94	70 - 130	15	20
Ethylbenzene			0.100	0.1096		mg/L		110	70 - 130	1	20
m-Xylene & p-Xylene			0.200	0.1957		mg/L		98	70 - 130	1	20
o-Xylene			0.100	0.09940		mg/L		99	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 820-998-10 MS
Matrix: Water
Analysis Batch: 4105

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.100	0.09835		mg/L		98	70 - 130		
Toluene	<0.00200	U	0.100	0.09233		mg/L		92	70 - 130		

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-998-10 MS
Matrix: Water
Analysis Batch: 4105

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.1092		mg/L		109	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1946		mg/L		97	70 - 130
o-Xylene	<0.00200	U	0.100	0.09741		mg/L		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 820-998-10 MSD
Matrix: Water
Analysis Batch: 4105

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.09646		mg/L		96	70 - 130	2	25
Toluene	<0.00200	U	0.100	0.1048		mg/L		104	70 - 130	13	25
Ethylbenzene	<0.00200	U	0.100	0.1097		mg/L		110	70 - 130	0	25
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1956		mg/L		98	70 - 130	1	25
o-Xylene	<0.00200	U	0.100	0.09835		mg/L		98	70 - 130	1	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-4120/3
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			06/15/21 14:49	1

Lab Sample ID: LCS 880-4120/4
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	23.77		mg/L		95	90 - 110

Lab Sample ID: LCSD 880-4120/5
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	25.0	23.31		mg/L		93	90 - 110	2	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

GC VOA

Analysis Batch: 4074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-998-1	MW-5	Total/NA	Water	8021B	
820-998-2	MW-6	Total/NA	Water	8021B	
820-998-3	MW-14	Total/NA	Water	8021B	
820-998-4	MW-9	Total/NA	Water	8021B	
820-998-5	MW-7	Total/NA	Water	8021B	
820-998-6	MW-10	Total/NA	Water	8021B	
820-998-7	MW-11	Total/NA	Water	8021B	
820-998-8	MW-12	Total/NA	Water	8021B	
820-998-9	MW-2	Total/NA	Water	8021B	
MB 880-4074/8	Method Blank	Total/NA	Water	8021B	
LCS 880-4074/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-4074/4	Lab Control Sample Dup	Total/NA	Water	8021B	

Analysis Batch: 4105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-998-10	MW-4	Total/NA	Water	8021B	
820-998-11	MW-13	Total/NA	Water	8021B	
820-998-12	MW-8	Total/NA	Water	8021B	
820-998-13	MW-3	Total/NA	Water	8021B	
820-998-14	DUP-1	Total/NA	Water	8021B	
820-998-15	DUP-2	Total/NA	Water	8021B	
MB 880-4105/8	Method Blank	Total/NA	Water	8021B	
LCS 880-4105/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-4105/4	Lab Control Sample Dup	Total/NA	Water	8021B	
820-998-10 MS	MW-4	Total/NA	Water	8021B	
820-998-10 MSD	MW-4	Total/NA	Water	8021B	

HPLC/IC

Analysis Batch: 4120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-998-9	MW-2	Total/NA	Water	300.0	
MB 880-4120/3	Method Blank	Total/NA	Water	300.0	
LCS 880-4120/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-4120/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Client Sample ID: MW-5
Date Collected: 06/09/21 09:55
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 19:22	MR	XEN MID

Client Sample ID: MW-6
Date Collected: 06/09/21 10:39
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 19:47	MR	XEN MID

Client Sample ID: MW-14
Date Collected: 06/09/21 11:23
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 20:12	MR	XEN MID

Client Sample ID: MW-9
Date Collected: 06/09/21 12:05
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 20:37	MR	XEN MID

Client Sample ID: MW-7
Date Collected: 06/09/21 12:45
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 21:02	MR	XEN MID

Client Sample ID: MW-10
Date Collected: 06/09/21 13:20
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 21:28	MR	XEN MID

Client Sample ID: MW-11
Date Collected: 06/10/21 08:57
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 21:53	MR	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Client Sample ID: MW-12
Date Collected: 06/10/21 09:39
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 22:18	MR	XEN MID

Client Sample ID: MW-2
Date Collected: 06/10/21 10:39
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 22:43	MR	XEN MID
Total/NA	Analysis	300.0		100	0 mL	1.0 mL	4120	06/15/21 17:44	CH	XEN MID

Client Sample ID: MW-4
Date Collected: 06/10/21 11:17
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 13:45	MR	XEN MID

Client Sample ID: MW-13
Date Collected: 06/10/21 11:58
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 14:10	MR	XEN MID

Client Sample ID: MW-8
Date Collected: 06/10/21 12:29
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 14:35	MR	XEN MID

Client Sample ID: MW-3
Date Collected: 06/10/21 13:05
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 15:01	MR	XEN MID

Client Sample ID: DUP-1
Date Collected: 06/10/21 00:00
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 15:25	MR	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Client Sample ID: DUP-2
Date Collected: 06/10/21 00:00
Date Received: 06/11/21 10:04

Lab Sample ID: 820-998-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4105	06/15/21 15:51	MR	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-998-1
Project/Site: 14" Vac to Jal Legacy

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8021B		Water	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14" Vac to Jal Legacy

Job ID: 820-998-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
820-998-1	MW-5	Water	06/09/21 09:55	06/11/21 10:04	
820-998-2	MW-6	Water	06/09/21 10:39	06/11/21 10:04	
820-998-3	MW-14	Water	06/09/21 11:23	06/11/21 10:04	
820-998-4	MW-9	Water	06/09/21 12:05	06/11/21 10:04	
820-998-5	MW-7	Water	06/09/21 12:45	06/11/21 10:04	
820-998-6	MW-10	Water	06/09/21 13:20	06/11/21 10:04	
820-998-7	MW-11	Water	06/10/21 08:57	06/11/21 10:04	
820-998-8	MW-12	Water	06/10/21 09:39	06/11/21 10:04	
820-998-9	MW-2	Water	06/10/21 10:39	06/11/21 10:04	
820-998-10	MW-4	Water	06/10/21 11:17	06/11/21 10:04	
820-998-11	MW-13	Water	06/10/21 11:58	06/11/21 10:04	
820-998-12	MW-8	Water	06/10/21 12:29	06/11/21 10:04	
820-998-13	MW-3	Water	06/10/21 13:05	06/11/21 10:04	
820-998-14	DUP-1	Water	06/10/21 00:00	06/11/21 10:04	
820-998-15	DUP-2	Water	06/10/21 00:00	06/11/21 10:04	

Loc: 820
998

820-998 Chain of Custody

RECORD

Terracon

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

Office Location: Lubbock
Phone: (806) 794-1296
Contact: Brett Dennis
Project Manager: Brett Dennis
PO/SO #:
Sampler's Name: Aaron Adams
Sampler's Signature:

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 2.1/2.06

Page 1 of 2

Project Number: AR217010
Project Name: 14" Vac to Jal Legacy (SRS # 2009-092)

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			REQUESTED: BTEX (EPA Method 8021B)	Chloride (Total) (EPA 300)						Lab Sample ID
GW	06/09/21	9:55		X	MW-5			3				X							820-998-1
GW	06/09/21	10:39		X	MW-6			3				X							2
GW	06/09/21	11:23		X	MW-14			3				X							3
GW	06/09/21	12:05		X	MW-9			3				X							4
GW	06/09/21	12:45		X	MW-7			3				X							5
GW	06/09/21	13:20		X	MW-10			3				X							6
GW	06/10/21	8:57		X	MW-11			3				X							7
GW	06/10/21	9:39		X	MW-12			3				X							8
GW	06/10/21	10:39		X	MW-2			3	1			X	X						9
GW	06/10/21	11:17		X	MW-4			3				X							10

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:
	6-11-2021	10:04		6/11/21	10:04

NOTES:
E-MAIL RESULTS TO:

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 _____

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR217010
Project Name: 14" Vac to Jal Legacy (SRS # 2009-092)

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 2.1/2.06

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			BTEX (EPA Method 8021B)	Chloride (Total) (EPA 300)						Lab Sample ID
GW	06/10/21	11:58		X	MW-13			3				X							820-998-11
GW	06/10/21	12:29		X	MW-8			3				X							12
GW	06/10/21	13:05		X	MW-3			3				X							13
GW	06/10/21			X	DUP-1			3				X							14
GW	06/10/21			X	DUP-2			3				X							15

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:
	6-11-2021	10:04		6/11/21	10:04

NOTES:

E-MAIL RESULTS TO:

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 _____

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 820-1387.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-998-1
Address: 1211 W Florida Ave,	Due Date Requested: 6/17/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: 14" Vac to Jal Legacy (SRS#2009-092)-AR217010	Project #: 82000284			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B/5030B BTEX	300_ORGFM_28D/ Chloride	Special Instructions/Note:
MW-5 (820-998-1)	6/9/21	09:55 Central		Water	X		
MW-6 (820-998-2)	6/9/21	10:39 Central		Water	X		
MW-14 (820-998-3)	6/9/21	11:23 Central		Water	X		
MW-9 (820-998-4)	6/9/21	12:05 Central		Water	X		
MW-7 (820-998-5)	6/9/21	12:45 Central		Water	X		
MW-10 (820-998-6)	6/9/21	13:20 Central		Water	X		
MW-11 (820-998-7)	6/10/21	08:57 Central		Water	X		
MW-12 (820-998-8)	6/10/21	09:39 Central		Water	X		
MW-2 (820-998-9)	6/10/21	10:39 Central		Water	X	X	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by:	Date/Time: 6/11/21 12:04		Received by	Date/Time: 6-14-21 11:00 am	
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No: | Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-998-1

Login Number: 998 **List Source: Eurofins Xenco, Lubbock**
List Number: 1
Creator: Turner, Michael

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-998-1

Login Number: 998 **List Source: Eurofins Xenco, Midland**
List Number: 2 **List Creation: 06/14/21 10:19 AM**
Creator: Copeland, Tatiana

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-2838-1
Laboratory Sample Delivery Group: AR217010
Client Project/Site: 14-Inch Vac to Jal Legacy

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Brett Dennis

Jkramer

Authorized for release by:
12/16/2021 3:03:40 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Jacqueline Gartner (Water Microbiology).

Jessica Kramer
Project Manager
12/16/2021 3:03:40 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Laboratory Job ID: 820-2838-1
SDG: AR217010

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Job ID: 820-2838-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-2838-1

Receipt
The samples were received on 12/9/2021 11:38 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-10

Lab Sample ID: 820-2838-1
Matrix: Water
Date Collected: 12/07/21 10:08
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 13:39	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*	*S1+*	*70 - 130*		*12/10/21 13:39*	*1*
1,4-Difluorobenzene (Surr)	*146*	*S1+*	*70 - 130*		*12/10/21 13:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-5

Lab Sample ID: 820-2838-2
Matrix: Water
Date Collected: 12/07/21 10:54
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:06	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*		*12/10/21 14:06*	*1*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*		*12/10/21 14:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-6

Lab Sample ID: 820-2838-3
Matrix: Water
Date Collected: 12/07/21 11:30
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:32	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*		*12/10/21 14:32*	*1*
1,4-Difluorobenzene (Surr)	*135*	*S1+*	*70 - 130*		*12/10/21 14:32*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-6
Lab Sample ID: 820-2838-3
Date Collected: 12/07/21 11:30
Matrix: Water
Date Received: 12/09/21 11:38

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-7
Lab Sample ID: 820-2838-4
Date Collected: 12/07/21 12:21
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:58	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*		*12/10/21 14:58*	*1*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*		*12/10/21 14:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-9
Lab Sample ID: 820-2838-5
Date Collected: 12/07/21 13:43
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 15:25	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*	*S1+*	*70 - 130*		*12/10/21 15:25*	*1*
1,4-Difluorobenzene (Surr)	*137*	*S1+*	*70 - 130*		*12/10/21 15:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-11
Lab Sample ID: 820-2838-6
Date Collected: 12/07/21 14:26
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-11

Lab Sample ID: 820-2838-6
Date Collected: 12/07/21 14:26
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 15:51	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*		*12/10/21 15:51*	*1*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*		*12/10/21 15:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-12

Lab Sample ID: 820-2838-7
Date Collected: 12/07/21 15:08
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 17:36	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*183*	*S1+*	*70 - 130*		*12/10/21 17:36*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*12/10/21 17:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-13

Lab Sample ID: 820-2838-8
Date Collected: 12/08/21 09:49
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:03	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*		*12/10/21 18:03*	*1*
1,4-Difluorobenzene (Surr)	*131*	*S1+*	*70 - 130*		*12/10/21 18:03*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-13
Date Collected: 12/08/21 09:49
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-8
Matrix: Water

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-8
Date Collected: 12/08/21 10:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-9
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:29	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*		*12/10/21 18:29*	*1*
1,4-Difluorobenzene (Surr)	*145*	*S1+*	*70 - 130*		*12/10/21 18:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-2
Date Collected: 12/08/21 11:02
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-10
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0276**		0.00200		mg/L			12/10/21 18:56	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:56	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*188*	*S1+*	*70 - 130*		*12/10/21 18:56*	*1*
1,4-Difluorobenzene (Surr)	*151*	*S1+*	*70 - 130*		*12/10/21 18:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0276**		0.00400		mg/L			12/14/21 10:16	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10800**		50.0		mg/L			12/15/21 20:52	100

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-14

Lab Sample ID: 820-2838-11
Matrix: Water
Date Collected: 12/08/21 11:48
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*163*	*S1+*	*70 - 130*		*12/10/21 19:22*	*1*
1,4-Difluorobenzene (Surr)	*135*	*S1+*	*70 - 130*		*12/10/21 19:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-3

Lab Sample ID: 820-2838-12
Matrix: Water
Date Collected: 12/08/21 13:17
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 19:48	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*189*	*S1+*	*70 - 130*		*12/10/21 19:48*	*1*
1,4-Difluorobenzene (Surr)	*150*	*S1+*	*70 - 130*		*12/10/21 19:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Matrix: Water
Date Collected: 12/08/21 13:55
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 20:15	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*178*	*S1+*	*70 - 130*		*12/10/21 20:15*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*		*12/10/21 20:15*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Date Collected: 12/08/21 13:55
Matrix: Water
Date Received: 12/09/21 11:38

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: DUP 1

Lab Sample ID: 820-2838-14
Date Collected: 12/08/21 00:00
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 20:41	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*169*	*S1+*	*70 - 130*		*12/10/21 20:41*	*1*
1,4-Difluorobenzene (Surr)	*140*	*S1+*	*70 - 130*		*12/10/21 20:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: DUP 2

Lab Sample ID: 820-2838-15
Date Collected: 12/08/21 00:00
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 21:07	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*171*	*S1+*	*70 - 130*		*12/10/21 21:07*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*		*12/10/21 21:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-2838-1	MW-10	179 S1+	146 S1+
820-2838-2	MW-5	160 S1+	132 S1+
820-2838-3	MW-6	160 S1+	135 S1+
820-2838-4	MW-7	173 S1+	138 S1+
820-2838-5	MW-9	179 S1+	137 S1+
820-2838-6	MW-11	144 S1+	125
820-2838-7	MW-12	183 S1+	105
820-2838-8	MW-13	159 S1+	131 S1+
820-2838-9	MW-8	175 S1+	145 S1+
820-2838-10	MW-2	188 S1+	151 S1+
820-2838-11	MW-14	163 S1+	135 S1+
820-2838-12	MW-3	189 S1+	150 S1+
820-2838-13	MW-4	178 S1+	143 S1+
820-2838-14	DUP 1	169 S1+	140 S1+
820-2838-15	DUP 2	171 S1+	143 S1+
890-1683-B-2 MS	Matrix Spike	147 S1+	116
890-1683-B-2 MSD	Matrix Spike Duplicate	130	138 S1+
LCS 880-14446/3	Lab Control Sample	143 S1+	115
LCSD 880-14446/4	Lab Control Sample Dup	126	107
MB 880-14446/8	Method Blank	87	123

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14446/8
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*12/10/21 11:28*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*		*12/10/21 11:28*	*1*

Lab Sample ID: LCS 880-14446/3
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1117		mg/L		112	70 - 130		
Toluene			0.100	0.1084		mg/L		108	70 - 130		
Ethylbenzene			0.100	0.1102		mg/L		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2419		mg/L		121	70 - 130		
o-Xylene			0.100	0.1124		mg/L		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-14446/4
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1041		mg/L		104	70 - 130	7	20
Toluene			0.100	0.09888		mg/L		99	70 - 130	9	20
Ethylbenzene			0.100	0.1002		mg/L		100	70 - 130	9	20
m-Xylene & p-Xylene			0.200	0.2195		mg/L		110	70 - 130	10	20
o-Xylene			0.100	0.1040		mg/L		104	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-1683-B-2 MS
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.100	0.1150		mg/L		115	70 - 130		
Toluene	<0.00200	U	0.100	0.1050		mg/L		105	70 - 130		

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-1683-B-2 MS
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.1075		mg/L		107	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2374		mg/L		119	70 - 130
o-Xylene	<0.00200	U	0.100	0.1158		mg/L		116	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-1683-B-2 MSD
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1091		mg/L		109	70 - 130	5	25
Toluene	<0.00200	U	0.100	0.1051		mg/L		105	70 - 130	0	25
Ethylbenzene	<0.00200	U	0.100	0.1087		mg/L		109	70 - 130	1	25
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2361		mg/L		118	70 - 130	1	25
o-Xylene	<0.00200	U	0.100	0.1127		mg/L		113	70 - 130	3	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14928/3
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			12/15/21 17:32	1

Lab Sample ID: LCS 880-14928/4
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.00		mg/L		100	90 - 110

Lab Sample ID: LCSD 880-14928/5
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	25.0	25.22		mg/L		101	90 - 110	1	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-9212-A-10 MS
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	169		125	298.4		mg/L		104	90 - 110		

Lab Sample ID: 880-9212-A-10 MSD
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	169		125	300.5		mg/L		106	90 - 110	1	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

GC VOA

Analysis Batch: 14446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-1	MW-10	Total/NA	Water	8021B	
820-2838-2	MW-5	Total/NA	Water	8021B	
820-2838-3	MW-6	Total/NA	Water	8021B	
820-2838-4	MW-7	Total/NA	Water	8021B	
820-2838-5	MW-9	Total/NA	Water	8021B	
820-2838-6	MW-11	Total/NA	Water	8021B	
820-2838-7	MW-12	Total/NA	Water	8021B	
820-2838-8	MW-13	Total/NA	Water	8021B	
820-2838-9	MW-8	Total/NA	Water	8021B	
820-2838-10	MW-2	Total/NA	Water	8021B	
820-2838-11	MW-14	Total/NA	Water	8021B	
820-2838-12	MW-3	Total/NA	Water	8021B	
820-2838-13	MW-4	Total/NA	Water	8021B	
820-2838-14	DUP 1	Total/NA	Water	8021B	
820-2838-15	DUP 2	Total/NA	Water	8021B	
MB 880-14446/8	Method Blank	Total/NA	Water	8021B	
LCS 880-14446/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-14446/4	Lab Control Sample Dup	Total/NA	Water	8021B	
890-1683-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
890-1683-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 14761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-1	MW-10	Total/NA	Water	Total BTEX	
820-2838-2	MW-5	Total/NA	Water	Total BTEX	
820-2838-3	MW-6	Total/NA	Water	Total BTEX	
820-2838-4	MW-7	Total/NA	Water	Total BTEX	
820-2838-5	MW-9	Total/NA	Water	Total BTEX	
820-2838-6	MW-11	Total/NA	Water	Total BTEX	
820-2838-7	MW-12	Total/NA	Water	Total BTEX	
820-2838-8	MW-13	Total/NA	Water	Total BTEX	
820-2838-9	MW-8	Total/NA	Water	Total BTEX	
820-2838-10	MW-2	Total/NA	Water	Total BTEX	
820-2838-11	MW-14	Total/NA	Water	Total BTEX	
820-2838-12	MW-3	Total/NA	Water	Total BTEX	
820-2838-13	MW-4	Total/NA	Water	Total BTEX	
820-2838-14	DUP 1	Total/NA	Water	Total BTEX	
820-2838-15	DUP 2	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 14928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-10	MW-2	Total/NA	Water	300.0	
MB 880-14928/3	Method Blank	Total/NA	Water	300.0	
LCS 880-14928/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-14928/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-9212-A-10 MS	Matrix Spike	Total/NA	Water	300.0	
880-9212-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-10
Date Collected: 12/07/21 10:08
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 13:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-5
Date Collected: 12/07/21 10:54
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-6
Date Collected: 12/07/21 11:30
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-7
Date Collected: 12/07/21 12:21
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-9
Date Collected: 12/07/21 13:43
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 15:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-11
Date Collected: 12/07/21 14:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 15:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-12
Date Collected: 12/07/21 15:08
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 17:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-13
Date Collected: 12/08/21 09:49
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-8
Date Collected: 12/08/21 10:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-2
Date Collected: 12/08/21 11:02
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID
Total/NA	Analysis	300.0		100			14928	12/15/21 20:52	CH	XEN MID

Client Sample ID: MW-14
Date Collected: 12/08/21 11:48
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 19:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-3
Date Collected: 12/08/21 13:17
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 19:48	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Matrix: Water
Date Collected: 12/08/21 13:55
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 20:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: DUP 1

Lab Sample ID: 820-2838-14
Matrix: Water
Date Collected: 12/08/21 00:00
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 20:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: DUP 2

Lab Sample ID: 820-2838-15
Matrix: Water
Date Collected: 12/08/21 00:00
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 21:07	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
820-2838-1	MW-10	Water	12/07/21 10:08	12/09/21 11:38
820-2838-2	MW-5	Water	12/07/21 10:54	12/09/21 11:38
820-2838-3	MW-6	Water	12/07/21 11:30	12/09/21 11:38
820-2838-4	MW-7	Water	12/07/21 12:21	12/09/21 11:38
820-2838-5	MW-9	Water	12/07/21 13:43	12/09/21 11:38
820-2838-6	MW-11	Water	12/07/21 14:26	12/09/21 11:38
820-2838-7	MW-12	Water	12/07/21 15:08	12/09/21 11:38
820-2838-8	MW-13	Water	12/08/21 09:49	12/09/21 11:38
820-2838-9	MW-8	Water	12/08/21 10:26	12/09/21 11:38
820-2838-10	MW-2	Water	12/08/21 11:02	12/09/21 11:38
820-2838-11	MW-14	Water	12/08/21 11:48	12/09/21 11:38
820-2838-12	MW-3	Water	12/08/21 13:17	12/09/21 11:38
820-2838-13	MW-4	Water	12/08/21 13:55	12/09/21 11:38
820-2838-14	DUP 1	Water	12/08/21 00:00	12/09/21 11:38
820-2838-15	DUP 2	Water	12/08/21 00:00	12/09/21 11:38

Loc: 820
2838

820-2838 Chain of Custody

terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact:
Project Manager: Brett Dennis
SRS #: 2009-092
Sampler's Name: Aaron Adams
Sampler's Signature:

REQUESTED

TEMP OF COOLER WHEN RECEIVED (°C): 4.6/4.5 IR4

Project Number: AR217010
Project Name: 14-Inch Vac to Jal Legacy

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			BTEX (EPA Method 8021)	Chloride (EPA Method 300)						Lab Sample ID
GW	12/7/2021	10:08		X	MW-10			3				X							
GW	12/7/2021	10:54		X	MW-5			3				X							
GW	12/7/2021	11:30		X	MW-6			3				X							
GW	12/7/2021	12:21		X	MW-7			3				X							
GW	12/7/2021	13:43		X	MW-9			3				X							
GW	12/7/2021	14:26		X	MW-11			3				X							
GW	12/7/2021	15:08		X	MW-12			3				X							
GW	12/8/2021	9:49		X	MW-13			3				X							
GW	12/8/2021	10:26		X	MW-8			3				X							
GW	12/8/2021	11:02		X	MW-2			3	1			X	X						
GW	12/8/2021	11:48		X	MW-14			3				X							
GW	12/8/2021	13:17		X	MW-3			3				X							
GW	12/8/2021	13:55		X	MW-4			3				X							
GW	12/8/2021	-		X	DUP-1			3				X							

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:
	12-8-21	1802		12-8-21	
	12-9-21	11:30	Todd Randall	12/9/21	1130

NOTES: **Bill directly to Plains Pipeline**

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

2838

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact:
Project Manager: Brett Dennis
SRS #: 2009-092
Sampler's Name: Aaron Adams
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.6/4.5

Page 1 of 1

Project Number: AR217010
Project Name: 14-Inch Vac to Jal Legacy

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			BTEX (EPA Method 8021)							Lab Sample ID
GW	12/8/2021			X	DUP-2			3				X							

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:
	12-8-21	1802		12-8-21	
	12-9-21	11:39 am	Teddy Rodriguez	12/9/21	1138

NOTES: **Bill directly to Plains Pipeline**

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

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 820-2747 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-2838-1
Address: 1211 W Florida Ave,	Due Date Requested: 12/15/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: General Waters	Project #: 82000284			
Site	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH4-5, Z other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B/5030B (MOD) BTEX	Total_BTEX_GCV	300_ORGFM_28D/ Chloride	Special Instructions/Note:
MW-10 (820-2838-1)	12/7/21	10 08 Central		Water	X	X		
MW-5 (820-2838-2)	12/7/21	10 54 Central		Water	X	X		
MW-6 (820-2838-3)	12/7/21	11 30 Central		Water	X	X		
MW-7 (820-2838-4)	12/7/21	12 21 Central		Water	X	X		
MW-9 (820-2838-5)	12/7/21	13 43 Central		Water	X	X		
MW-11 (820-2838-6)	12/7/21	14 26 Central		Water	X	X		
MW-12 (820-2838-7)	12/7/21	15 06 Central		Water	X	X		
MW-13 (820-2838-8)	12/8/21	09 49 Central		Water	X	X		
MW-8 (820-2838-9)	12/8/21	10 26 Central		Water	X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Holly Taylor	12/9/21 1700			12-10-21 11 21	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 5.1 / 5.2 .10 IR8

Ver: 06/08/2021

6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone. 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 820-2747.2
Client Contact: Shipping/Receiving	Phone.	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 2 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-2838-1
Address: 1211 W. Florida Ave	Due Date Requested: 12/15/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: General Waters	Project #: 82000284			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	8021B/8030B (MOD) BTEX	Total_BTEX_GCV	300_ORGFM_28D/ Chloride	Special Instructions/Note:
MW-2 (820-2838-10)	12/8/21	11 02 Central		Water		X	X	X	
MW-14 (820-2838-11)	12/8/21	11 48 Central		Water		X	X		
MW-3 (820-2838-12)	12/8/21	13 17 Central		Water		X	X		
MW-4 (820-2838-13)	12/8/21	13 55 Central		Water		X	X		
DUP 1 (820-2838-14)	12/8/21	Central		Water		X	X		
DUP 2 (820-2838-15)	12/8/21	Central		Water		X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date.	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Holly Taylor	12/9/21 1700		Jessica R	12-10-21 1121	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No — Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 5.1 /5.2 .10 IR8

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-2838-1
SDG Number: AR217010

Login Number: 2838
List Number: 1
Creator: Taylor, Holly

List Source: Eurofins Xenco, Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-2838-1
SDG Number: AR217010

Login Number: 2838
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Xenco, Midland
List Creation: 12/10/21 11:30 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received 3 days after it was sampled
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-2838-1
Laboratory Sample Delivery Group: AR217010
Client Project/Site: 14-Inch Vac to Jal Legacy

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Brett Dennis

Jkramer

Authorized for release by:
12/16/2021 3:03:40 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Jacqueline Gartner (Water Microbiology).

Jessica Kramer
Project Manager
12/16/2021 3:03:40 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Laboratory Job ID: 820-2838-1
SDG: AR217010

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Job ID: 820-2838-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-2838-1

Receipt
The samples were received on 12/9/2021 11:38 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-10

Lab Sample ID: 820-2838-1
Date Collected: 12/07/21 10:08
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 13:39	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 13:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*	*S1+*	*70 - 130*		*12/10/21 13:39*	*1*
1,4-Difluorobenzene (Surr)	*146*	*S1+*	*70 - 130*		*12/10/21 13:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-5

Lab Sample ID: 820-2838-2
Date Collected: 12/07/21 10:54
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:06	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*		*12/10/21 14:06*	*1*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*		*12/10/21 14:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-6

Lab Sample ID: 820-2838-3
Date Collected: 12/07/21 11:30
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:32	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*		*12/10/21 14:32*	*1*
1,4-Difluorobenzene (Surr)	*135*	*S1+*	*70 - 130*		*12/10/21 14:32*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-6
Lab Sample ID: 820-2838-3
Date Collected: 12/07/21 11:30
Matrix: Water
Date Received: 12/09/21 11:38

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-7
Lab Sample ID: 820-2838-4
Date Collected: 12/07/21 12:21
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 14:58	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 14:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*		*12/10/21 14:58*	*1*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*		*12/10/21 14:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-9
Lab Sample ID: 820-2838-5
Date Collected: 12/07/21 13:43
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 15:25	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 15:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*	*S1+*	*70 - 130*		*12/10/21 15:25*	*1*
1,4-Difluorobenzene (Surr)	*137*	*S1+*	*70 - 130*		*12/10/21 15:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-11
Lab Sample ID: 820-2838-6
Date Collected: 12/07/21 14:26
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-11

Lab Sample ID: 820-2838-6
Matrix: Water
Date Collected: 12/07/21 14:26
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 15:51	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 15:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*		*12/10/21 15:51*	*1*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*		*12/10/21 15:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-12

Lab Sample ID: 820-2838-7
Matrix: Water
Date Collected: 12/07/21 15:08
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 17:36	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 17:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*183*	*S1+*	*70 - 130*		*12/10/21 17:36*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*12/10/21 17:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-13

Lab Sample ID: 820-2838-8
Matrix: Water
Date Collected: 12/08/21 09:49
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:03	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*		*12/10/21 18:03*	*1*
1,4-Difluorobenzene (Surr)	*131*	*S1+*	*70 - 130*		*12/10/21 18:03*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-13
Date Collected: 12/08/21 09:49
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-8
Matrix: Water

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-8
Date Collected: 12/08/21 10:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-9
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:29	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*		*12/10/21 18:29*	*1*
1,4-Difluorobenzene (Surr)	*145*	*S1+*	*70 - 130*		*12/10/21 18:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-2
Date Collected: 12/08/21 11:02
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-10
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0276**		0.00200		mg/L			12/10/21 18:56	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 18:56	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 18:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*188*	*S1+*	*70 - 130*		*12/10/21 18:56*	*1*
1,4-Difluorobenzene (Surr)	*151*	*S1+*	*70 - 130*		*12/10/21 18:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0276**		0.00400		mg/L			12/14/21 10:16	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10800**		50.0		mg/L			12/15/21 20:52	100

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-14

Lab Sample ID: 820-2838-11
Matrix: Water
Date Collected: 12/08/21 11:48
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*163*	*S1+*	*70 - 130*		*12/10/21 19:22*	*1*
1,4-Difluorobenzene (Surr)	*135*	*S1+*	*70 - 130*		*12/10/21 19:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-3

Lab Sample ID: 820-2838-12
Matrix: Water
Date Collected: 12/08/21 13:17
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 19:48	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 19:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*189*	*S1+*	*70 - 130*		*12/10/21 19:48*	*1*
1,4-Difluorobenzene (Surr)	*150*	*S1+*	*70 - 130*		*12/10/21 19:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Matrix: Water
Date Collected: 12/08/21 13:55
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 20:15	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 20:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*178*	*S1+*	*70 - 130*		*12/10/21 20:15*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*		*12/10/21 20:15*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Date Collected: 12/08/21 13:55
Matrix: Water
Date Received: 12/09/21 11:38

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: DUP 1

Lab Sample ID: 820-2838-14
Date Collected: 12/08/21 00:00
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 20:41	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 20:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*169*	*S1+*	*70 - 130*		*12/10/21 20:41*	*1*
1,4-Difluorobenzene (Surr)	*140*	*S1+*	*70 - 130*		*12/10/21 20:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Client Sample ID: DUP 2

Lab Sample ID: 820-2838-15
Date Collected: 12/08/21 00:00
Matrix: Water
Date Received: 12/09/21 11:38

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 21:07	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 21:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*171*	*S1+*	*70 - 130*		*12/10/21 21:07*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*		*12/10/21 21:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/14/21 10:16	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-2838-1	MW-10	179 S1+	146 S1+
820-2838-2	MW-5	160 S1+	132 S1+
820-2838-3	MW-6	160 S1+	135 S1+
820-2838-4	MW-7	173 S1+	138 S1+
820-2838-5	MW-9	179 S1+	137 S1+
820-2838-6	MW-11	144 S1+	125
820-2838-7	MW-12	183 S1+	105
820-2838-8	MW-13	159 S1+	131 S1+
820-2838-9	MW-8	175 S1+	145 S1+
820-2838-10	MW-2	188 S1+	151 S1+
820-2838-11	MW-14	163 S1+	135 S1+
820-2838-12	MW-3	189 S1+	150 S1+
820-2838-13	MW-4	178 S1+	143 S1+
820-2838-14	DUP 1	169 S1+	140 S1+
820-2838-15	DUP 2	171 S1+	143 S1+
890-1683-B-2 MS	Matrix Spike	147 S1+	116
890-1683-B-2 MSD	Matrix Spike Duplicate	130	138 S1+
LCS 880-14446/3	Lab Control Sample	143 S1+	115
LCSD 880-14446/4	Lab Control Sample Dup	126	107
MB 880-14446/8	Method Blank	87	123

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14446/8
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Toluene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			12/10/21 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/10/21 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/10/21 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*12/10/21 11:28*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*		*12/10/21 11:28*	*1*

Lab Sample ID: LCS 880-14446/3
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1117		mg/L		112	70 - 130		
Toluene			0.100	0.1084		mg/L		108	70 - 130		
Ethylbenzene			0.100	0.1102		mg/L		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2419		mg/L		121	70 - 130		
o-Xylene			0.100	0.1124		mg/L		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-14446/4
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1041		mg/L		104	70 - 130	7	20
Toluene			0.100	0.09888		mg/L		99	70 - 130	9	20
Ethylbenzene			0.100	0.1002		mg/L		100	70 - 130	9	20
m-Xylene & p-Xylene			0.200	0.2195		mg/L		110	70 - 130	10	20
o-Xylene			0.100	0.1040		mg/L		104	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-1683-B-2 MS
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.100	0.1150		mg/L		115	70 - 130		
Toluene	<0.00200	U	0.100	0.1050		mg/L		105	70 - 130		

Eurofins Xenco, Lubbock

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-1683-B-2 MS
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.1075		mg/L		107	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2374		mg/L		119	70 - 130
o-Xylene	<0.00200	U	0.100	0.1158		mg/L		116	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-1683-B-2 MSD
Matrix: Water
Analysis Batch: 14446

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1091		mg/L		109	70 - 130	5	25
Toluene	<0.00200	U	0.100	0.1051		mg/L		105	70 - 130	0	25
Ethylbenzene	<0.00200	U	0.100	0.1087		mg/L		109	70 - 130	1	25
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2361		mg/L		118	70 - 130	1	25
o-Xylene	<0.00200	U	0.100	0.1127		mg/L		113	70 - 130	3	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14928/3
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			12/15/21 17:32	1

Lab Sample ID: LCS 880-14928/4
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.00		mg/L		100	90 - 110

Lab Sample ID: LCSD 880-14928/5
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	25.0	25.22		mg/L		101	90 - 110	1	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-9212-A-10 MS
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	169		125	298.4		mg/L		104	90 - 110		

Lab Sample ID: 880-9212-A-10 MSD
Matrix: Water
Analysis Batch: 14928

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	169		125	300.5		mg/L		106	90 - 110	1	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

GC VOA

Analysis Batch: 14446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-1	MW-10	Total/NA	Water	8021B	
820-2838-2	MW-5	Total/NA	Water	8021B	
820-2838-3	MW-6	Total/NA	Water	8021B	
820-2838-4	MW-7	Total/NA	Water	8021B	
820-2838-5	MW-9	Total/NA	Water	8021B	
820-2838-6	MW-11	Total/NA	Water	8021B	
820-2838-7	MW-12	Total/NA	Water	8021B	
820-2838-8	MW-13	Total/NA	Water	8021B	
820-2838-9	MW-8	Total/NA	Water	8021B	
820-2838-10	MW-2	Total/NA	Water	8021B	
820-2838-11	MW-14	Total/NA	Water	8021B	
820-2838-12	MW-3	Total/NA	Water	8021B	
820-2838-13	MW-4	Total/NA	Water	8021B	
820-2838-14	DUP 1	Total/NA	Water	8021B	
820-2838-15	DUP 2	Total/NA	Water	8021B	
MB 880-14446/8	Method Blank	Total/NA	Water	8021B	
LCS 880-14446/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-14446/4	Lab Control Sample Dup	Total/NA	Water	8021B	
890-1683-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
890-1683-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 14761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-1	MW-10	Total/NA	Water	Total BTEX	
820-2838-2	MW-5	Total/NA	Water	Total BTEX	
820-2838-3	MW-6	Total/NA	Water	Total BTEX	
820-2838-4	MW-7	Total/NA	Water	Total BTEX	
820-2838-5	MW-9	Total/NA	Water	Total BTEX	
820-2838-6	MW-11	Total/NA	Water	Total BTEX	
820-2838-7	MW-12	Total/NA	Water	Total BTEX	
820-2838-8	MW-13	Total/NA	Water	Total BTEX	
820-2838-9	MW-8	Total/NA	Water	Total BTEX	
820-2838-10	MW-2	Total/NA	Water	Total BTEX	
820-2838-11	MW-14	Total/NA	Water	Total BTEX	
820-2838-12	MW-3	Total/NA	Water	Total BTEX	
820-2838-13	MW-4	Total/NA	Water	Total BTEX	
820-2838-14	DUP 1	Total/NA	Water	Total BTEX	
820-2838-15	DUP 2	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 14928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-2838-10	MW-2	Total/NA	Water	300.0	
MB 880-14928/3	Method Blank	Total/NA	Water	300.0	
LCS 880-14928/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-14928/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-9212-A-10 MS	Matrix Spike	Total/NA	Water	300.0	
880-9212-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-10
Date Collected: 12/07/21 10:08
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 13:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-5
Date Collected: 12/07/21 10:54
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-6
Date Collected: 12/07/21 11:30
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-7
Date Collected: 12/07/21 12:21
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 14:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-9
Date Collected: 12/07/21 13:43
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 15:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-11
Date Collected: 12/07/21 14:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 15:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-12
Date Collected: 12/07/21 15:08
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 17:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-13
Date Collected: 12/08/21 09:49
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-8
Date Collected: 12/08/21 10:26
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-2
Date Collected: 12/08/21 11:02
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 18:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID
Total/NA	Analysis	300.0		100			14928	12/15/21 20:52	CH	XEN MID

Client Sample ID: MW-14
Date Collected: 12/08/21 11:48
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 19:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: MW-3
Date Collected: 12/08/21 13:17
Date Received: 12/09/21 11:38

Lab Sample ID: 820-2838-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 19:48	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Client Sample ID: MW-4

Lab Sample ID: 820-2838-13
Matrix: Water
Date Collected: 12/08/21 13:55
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 20:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: DUP 1

Lab Sample ID: 820-2838-14
Matrix: Water
Date Collected: 12/08/21 00:00
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 20:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Client Sample ID: DUP 2

Lab Sample ID: 820-2838-15
Matrix: Water
Date Collected: 12/08/21 00:00
Date Received: 12/09/21 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	14446	12/10/21 21:07	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 14-Inch Vac to Jal Legacy

Job ID: 820-2838-1
SDG: AR217010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
820-2838-1	MW-10	Water	12/07/21 10:08	12/09/21 11:38
820-2838-2	MW-5	Water	12/07/21 10:54	12/09/21 11:38
820-2838-3	MW-6	Water	12/07/21 11:30	12/09/21 11:38
820-2838-4	MW-7	Water	12/07/21 12:21	12/09/21 11:38
820-2838-5	MW-9	Water	12/07/21 13:43	12/09/21 11:38
820-2838-6	MW-11	Water	12/07/21 14:26	12/09/21 11:38
820-2838-7	MW-12	Water	12/07/21 15:08	12/09/21 11:38
820-2838-8	MW-13	Water	12/08/21 09:49	12/09/21 11:38
820-2838-9	MW-8	Water	12/08/21 10:26	12/09/21 11:38
820-2838-10	MW-2	Water	12/08/21 11:02	12/09/21 11:38
820-2838-11	MW-14	Water	12/08/21 11:48	12/09/21 11:38
820-2838-12	MW-3	Water	12/08/21 13:17	12/09/21 11:38
820-2838-13	MW-4	Water	12/08/21 13:55	12/09/21 11:38
820-2838-14	DUP 1	Water	12/08/21 00:00	12/09/21 11:38
820-2838-15	DUP 2	Water	12/08/21 00:00	12/09/21 11:38

Loc: 820
2838

820-2838 Chain of Custody

terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact:
Project Manager: Brett Dennis
SRS #: 2009-092
Sampler's Name: Aaron Adams
Sampler's Signature:

REQUESTED

TEMP OF COOLER WHEN RECEIVED (°C): 4.6/4.5 IR4

Project Number: AR217010
Project Name: 14-Inch Vac to Jal Legacy

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			BTEX (EPA Method 8021)	Chloride (EPA Method 300)						Lab Sample ID
GW	12/7/2021	10:08		X	MW-10			3				X							
GW	12/7/2021	10:54		X	MW-5			3				X							
GW	12/7/2021	11:30		X	MW-6			3				X							
GW	12/7/2021	12:21		X	MW-7			3				X							
GW	12/7/2021	13:43		X	MW-9			3				X							
GW	12/7/2021	14:26		X	MW-11			3				X							
GW	12/7/2021	15:08		X	MW-12			3				X							
GW	12/8/2021	9:49		X	MW-13			3				X							
GW	12/8/2021	10:26		X	MW-8			3				X							
GW	12/8/2021	11:02		X	MW-2			3	1			X	X						
GW	12/8/2021	11:48		X	MW-14			3				X							
GW	12/8/2021	13:17		X	MW-3			3				X							
GW	12/8/2021	13:55		X	MW-4			3				X							
GW	12/8/2021	-		X	DUP-1			3				X							

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:
	12-8-21	1802		12-8-21	
	12-9-21	11:30	Todd Randall	12/9/21	1130

NOTES: **Bill directly to Plains Pipeline**

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

2838

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact:
Project Manager: Brett Dennis
SRS #: 2009-092
Sampler's Name: Aaron Adams
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.6/4.5

Page 1 of 1

Project Number: AR217010
Project Name: 14-Inch Vac to Jal Legacy

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 40 ml VOA	250 ml Poly			BTEX (EPA Method 8021)							Lab Sample ID
GW	12/8/2021			X	DUP-2			3				X							

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:
	12-8-21	1802		12-8-21	
	12-9-21	11:39 am	Teddy Rodriguez	12/9/21	1138

NOTES: **Bill directly to Plains Pipeline**

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

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 820-2747 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-2838-1
Address: 1211 W Florida Ave,	Due Date Requested: 12/15/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: General Waters	Project #: 82000284			
Site	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH4-5, Z other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B/5030B (MOD) BTEX	Total_BTEX_GCV	300_ORGFM_28D/ Chloride	Special Instructions/Note:
MW-10 (820-2838-1)	12/7/21	10 08 Central		Water	X	X		
MW-5 (820-2838-2)	12/7/21	10 54 Central		Water	X	X		
MW-6 (820-2838-3)	12/7/21	11 30 Central		Water	X	X		
MW-7 (820-2838-4)	12/7/21	12 21 Central		Water	X	X		
MW-9 (820-2838-5)	12/7/21	13 43 Central		Water	X	X		
MW-11 (820-2838-6)	12/7/21	14 26 Central		Water	X	X		
MW-12 (820-2838-7)	12/7/21	15 06 Central		Water	X	X		
MW-13 (820-2838-8)	12/8/21	09 49 Central		Water	X	X		
MW-8 (820-2838-9)	12/8/21	10 26 Central		Water	X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment
Relinquished by: Holly Taylor	Date/Time: 12/9/21 1700	Company	Received by: [signature] R
Relinquished by	Date/Time	Company	Received by
Relinquished by	Date/Time	Company	Received by

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 5.1 / 5.2 .10 IR8

Ver: 06/08/2021

6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone. 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 820-2747.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 2 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-2838-1
Address: 1211 W. Florida Ave	Due Date Requested: 12/15/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: General Waters	Project #: 82000284			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B/8030B (MOD) BTEX	Total_BTEX_GCV	300_ORGFM_28D/ Chloride
		Preservation Code:					
MW-2 (820-2838-10)	12/8/21	11:02 Central		Water	X	X	X
MW-14 (820-2838-11)	12/8/21	11:48 Central		Water	X	X	
MW-3 (820-2838-12)	12/8/21	13:17 Central		Water	X	X	
MW-4 (820-2838-13)	12/8/21	13:55 Central		Water	X	X	
DUP 1 (820-2838-14)	12/8/21	Central		Water	X	X	
DUP 2 (820-2838-15)	12/8/21	Central		Water	X	X	

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Special Instructions/Note:

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Holly Taylor	12/9/21 1700		Jessica R	12-10-21 1121	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 5.1 / 5.2 .10 IR8

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-2838-1
SDG Number: AR217010

Login Number: 2838
List Number: 1
Creator: Taylor, Holly

List Source: Eurofins Xenco, Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-2838-1
SDG Number: AR217010

Login Number: 2838
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Xenco, Midland
List Creation: 12/10/21 11:30 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received 3 days after it was sampled
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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 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 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 93365

CONDITIONS

Operator:	OGRID:
PLAINS MARKETING L.P. 333 Clay Street Suite 1900 Houston, TX 77002	34053
	Action Number: 93365
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2021 ANNUAL GROUNDWATER MONITORING REPORT: Content satisfactory Contractor anticipated actions approved by NMOCD and are as follows; 1. Continue quarterly monitoring well gauging, groundwater purging, and sampling for BTEX for all monitor wells on-site and in addition, chloride from MW-2 2. Conduct monthly manual recovery of PSH from MW-1, if applicable 3. Conduct monthly manual recovery of hydrocarbon impacted groundwater from MW-1, MW-3, MW-8, and MW-13 4. Continue AFR events on monitoring well MW-1, MW-3, MW-8 and M13 to enhance recovery of hydrocarbon impacted groundwater 5. Discontinue quarterly MDPE recovery events from MW-1 6. Submit annual report to NMOCD no later than March 31,2023.	8/3/2022