AECOM
888 SW 5th Avenue, Suite 600
Portland, OR 97204
aecom.com

July 1, 2024

Mr. Christer Loftenius
Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe Street
Spokane, WA
clof461@ecy.wa.gov

RE: Semi-Annual Progress Report: January 1 through June 30, 2024
Chevron Pipe Line Company Pasco Bulk Terminal
Ecology Cleanup Site ID: 4867
Ecology Facility Site ID: 55763995
Agreed Order No. DE 21664

Dear Mr. Loftenius:

This Semi-Annual Progress Report has been prepared on behalf of Tesoro Logistics Operations LLC (Tesoro) to document the cleanup actions conducted from January 1 through June 30, 2024, at the Chevron Pipe Line Company Pasco Bulk Terminal (herein referred to as the Site). This Semi-Annual Progress Report was prepared in accordance with the requirements of Section VI of Agreed Order Number (No.) DE 21664 (Order) dated April 11, 2023, between the Washington State Department of Ecology (Ecology) and Tesoro.

If you have any questions regarding this progress report, please contact the AECOM Project Manager, Nicky Moody, at (503) 969-6310.

Yours sincerely,
AECOM Technical Services, Inc.

Nicky Moody
Senior Environmental Scientist/Project Manager
AECOM
M: 503.969.6310
E: nicky.moody@aecom.com

cc: Nick Acklam, Washington State Department of Ecology, nack461@ecy.wa.gov
Kyle Waldron, MPC, kawaldron@marathonpetroleum.com
Michael Mungas, MPL, MMungas@marathonpetroleum.com
Dan Andersen, MPL, DJAnderson2@marathonpetroleum.com

Chevron Pipe Line Company Pasco Bulk Terminal
Agreed Order No. DE 21664
Semi-Annual Progress Report: January 1 through June 30, 2024

This Semi-Annual Progress Report has been prepared by AECOM Technical Services, Inc. (AECOM) for the Washington Department of Ecology (Ecology) Cleanup Site named "Chevron Pipe Line Company Pasco Bulk Terminal" (herein referred to as the Site) to document compliance monitoring in accordance with the requirements of Agreed Order Number (No.) DE 21664 dated April 11, 2023 (Order) between Ecology and Tesoro Logistics Operations LLC (Tesoro) (an indirect subsidiary of Marathon Petroleum Corporation).[1] The Site is listed in Ecology's Integrated Site Information System with the following information:

- Facility Site Name: Chevron Pipe Line Company Pasco Bulk Fuel Terminal
- Facility Address: 2900 Sacajawea Park Road, Pasco, Washington 99301, Franklin County
- Facility Site Identification Number (FSID): 55763995
- Cleanup Site Identification Number (CSID): 4867

Site documents are available on Ecology's website at:
https://apps.ecology.wa.gov/cleanupsearch/site/4867.

The Site, which is defined with the **red line** on Figures 1 and 2, is located within the boundary of the larger Pasco Terminal, which is owned and operated by Tesoro; the Pasco Terminal is here in referred to as the Terminal. The Chevron Pipe Line Company (CPL) initially owned and operated the Terminal since its construction in 1950 until Tesoro purchased the Terminal in June 2013.

As stated in the Order, the *Cleanup Action Plan* (CAP)[2] sets cleanup standards and selects the cleanup action that meets the cleanup standards for the Site. The CAP indicates that the Ecology-selected cleanup action for the Site is institutional controls (ICs), monitored natural attenuation (MNA), and enhanced bioremediation using oxygen-releasing compounds (ORCs). As described in the *Compliance Monitoring Plan* (CMP)[3] and *Engineering Design Report* (EDR)[4], the purpose of semi-annual monitoring at the Site is to monitor indicator hazardous substances (IHSs) for the effectiveness of MNA and enhanced bioremediation.

IHSs from the CAP include benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and diesel- and motor oil-range total petroleum hydrocarbons (TPH-d and TPH-o). Natural attenuation (NA) parameters, including ferrous iron, nitrate, alkalinity, sulfate, methane, dissolved manganese, dissolved oxygen (DO), oxidation reduction potential (ORP), and pH, will be used to evaluate the effectiveness of the cleanup action at the Site.

The CAP, CMP, and EDR provide the cleanup levels for the Site IHSs (Table 1 of the CMP). The *Sampling and Analysis Plan* (SAP) (Appendix A of the CMP, Table A-4) provides a full list of analytical parameters.

The CMP provides additional information describing groundwater monitoring locations, methods, frequency, analytical parameters, and reporting obligations required to ensure that the cleanup objectives established in the CAP are met. The performance monitoring schedule is also summarized in the CMP and listed below:

- Performance monitoring will begin with semi-annual events during the spring (first semi-annual [1SA]) and fall (second semi-annual [2SA]) of 2023 before ORC deployment.

[1] Ecology, 2023b. Agreed Order No. DE 21664. In the Matter of Remedial Action by Tesoro Logistic Operation LLC. April
[2] Ecology, 2023a. *Final Corrective Action Plan*. Chevron Pipe Line Co. Pasco Bulk Terminal. March.
[3] AECOM, 2024a. *Compliance Monitoring Plan.* Chevron Pipe Line Company Pasco Bulk Terminal. January.
[4] AECOM, 2024b. *Engineering Design Report.* Chevron Pipe Line Company Pasco Bulk Terminal. January

- Performance monitoring during ORC deployment starting in 2024 will continue with semi-annual events during spring and fall (Table 1) until the IHS concentrations are below the cleanup levels for two sequential events.
- Performance monitoring will then continue without ORC deployment for one additional year before transitioning to confirmation monitoring.

The EDR provides the conceptual design for the implementation of the enhanced bioremediation alternative with the deployment and retrieval of the ORC product in source area compliance monitoring wells. The *Operations and Maintenance Plan* (O&M Plan) (Appendix B of the EDR) includes the procedures for handling of the ORC product and the procedures for the inspection and maintenance of the compliance monitoring wells, dedicated bladder pumps for sampling, and hangers used for the deployment of the ORC product.

Per Section VI of the Order, this Semi-Annual Progress Report includes the following six elements:

1. A list of on-Site activities conducted during the last six months.
2. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests.
3. Description of all deviations from the Scope of Work and Schedule (Exhibit C) of the Order during the current six months and any planned deviations in the upcoming six months.
4. For any deviations in the schedule, a plan for recovering lost time and maintaining compliance with the schedule.
5. All raw data (including laboratory analysis) received during the previous period (if not previously submitted to Ecology), together with a detailed description of the underlying samples collected.
6. A list of deliverables for the upcoming six months.

1. Pre-Field Activities

Prior to the ORC deployment as per Section 4.7 of the EDR, AECOM batch registered the six designated monitoring wells (MW-02, MW-03, MW-11, MW-12, MW-17, and MW-19) as underground injection chambers (UIC) with Ecology in accordance with Washington Administrative Code (WAC) 173-218-060. The monitoring wells are registered under Site Number 38327 with a status of Rule-Authorized.

Site Number	Owner/Organization	Number of Wells	Registration type	Status
38327	Chevron Pipe Line Company Pasco Bulk Terminal	6	Voluntary or Independent Cleanup Sites	Rule-Authorized

AECOM notified Ecology of the 1SA event schedule on March 5, 2024.

2. On-Site Activities

This section includes a list of on-site activities conducted during this reporting period:

- Between March 11 and 15, 2024, AECOM conducted the 1SA event, as outlined in Table 1.
    - Depth-to-groundwater (DTW) measurements and groundwater samples were collected at 19 compliance monitoring wells (MW-02 through MW-04, MW-06 through MW-08, MW-10 through MW-12, and MW-14 through MW-23). AECOM also inspected the 19 compliance monitoring wells at the beginning of the event.

- Additionally, DTW measurements were collected at two Tidewater monitoring wells (AR-11 and TMW-05).
- Field quality assurance and quality control samples for this reporting period included:
  - Field duplicate sample, MW-117-20240313, which was collected at MW-17;
  - Field blank sample, FB-20240313, which was collected while working in the tank farm; and
  - Three trip blank samples, TB-01-20240312, TB-02-20240313, and TB-03-20240314.

- On March 14, 2024, AECOM set up the ORC hangers and deployed the ORC in accordance with the EDR. The table below lists the number of ORC sleeves deployed in each of the six compliance wells.

Well ID	MW-02	MW-03	MW-11	MW-12	MW-17	MW-19
# of ORC Sleeves (1 per PVC Canister)	1	3	1	1	1	2
PVC Canister Diameter (inches)	3.50	3.50	1.75	1.75	1.75	1.75
PVC Canister Length (feet)	3.00	3.00	3.00	3.00	3.00	3.00

- The 20 groundwater samples (19 primary and one field duplicate), one field blank, and three trip blanks were submitted to Pace Analytical National, LLC located in Mount Juliet, Tennessee.
- The primary, field duplicate, and field blank samples were submitted for analysis of the IHSs (listed below).
  - Five volatile organic compounds (VOCs): benzene, toluene, ethylbenzene, total xylenes (BTEX) and naphthalene by US Environmental Protection Agency (EPA) Method 8260D
  - Total petroleum hydrocarbons (TPHs) by Ecology Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and heavy oil-range TPH)
- The primary and field duplicate samples were submitted for analysis of the natural attenuation parameters (listed below).
  - Dissolved gases (methane, ethane, and ethene) by EPA Method RSK-175
  - Dissolved manganese by EPA Method 6010B
  - Sulfate by EPA Method 300.0
  - Total alkalinity by Standard Method (SM) 2320B-2011
- The trip blank samples were submitted for analysis of BTEX and naphthalene only by EPA Method 8260D.

3. Deviations from Required Tasks

This section includes a detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests.

- Not Applicable: No deviations from required tasks occurred during this reporting period, and none are anticipated for the upcoming reporting period.

4. Deviations from the Agreed Order

This section includes a description of all deviations from the Scope of Work and Schedule (Exhibit C) of the Order during the current six months and any planned deviations in the upcoming six months.

- Not Applicable: No deviations from the Order occurred during this period, and none are anticipated for the upcoming period.

5. Deviations in Schedule

This section lists any deviations in the schedule, a plan for recovering lost time and maintaining compliance with the schedule.

- Not Applicable: No schedule deviations occurred during this period, and none are anticipated for the upcoming reporting period. An annotated schedule from Exhibit C of the Order is provided below:

Tasks/Deliverables	Deadlines		Schedule Status
Tesoro submits draft EDR, O&M Plan, and CMP	90 days following the effective date of the Agreed Order	July 10, 2023	Task Complete
Tesoro submits final EDR, O&M Plan, and CMP	30 days after receipt of Ecology's written comments on the drafts	January 31, 2024	Task Complete
Tesoro notifies Ecology that ORC socks are ready to be installed	30 days after Ecology approval of EDR and O&M Plan	February 28, 2024	Task Complete
Tesoro begins cleanup action	As described in EDR, but no later than April 28, 2023	April 28, 2023	Task Complete
Tesoro notifies Ecology in advance of any sample collection or work activity at the Site	7 days in advance of fieldwork	Notified Ecology of the 1SA event on March 5, 2024	On-going
Draft Environmental Covenant (EC)	60 days after ORC socks are deployed for the first time	May 13, 2024	Internal draft complete; exhibits pending; email update provided to Ecology on May 13, 2024
After approval by Ecology, Tesoro records the final EC with the office of the Franklin County Auditor and provides Ecology with the recorded EC	Within 30 days of the recording date of the EC	--	--
Tesoro submits draft Cleanup Action Report	90 days after the ORC treatment is complete	--	--
Tesoro submits Final Cleanup Action Report	30 days after Tesoro receives Ecology's written comments on draft Cleanup Action Report	--	--
Tesoro submits Semi-Annual progress reports	Within 60 days of the last day of the previous six-month period	--	--

Notes:
-- = date pending as set by earlier task/deliverable

6. Raw Data

This section includes all raw data (including laboratory analyses) received during the previous period (if not previously submitted to Ecology), together with a detailed description of the underlying samples collected.

Field forms and data generated during the reporting period are listed below.

- Groundwater level form and groundwater sampling logs (Attachment A, Field Forms)
- Tabulated DTW measurements, calculated groundwater elevations, and analytical results for this reporting period (Table 2 and in Table B1 in Attachment B with the 2014 to 2023 data)
- Tabulated field (pH, temperature, conductivity, dissolved oxygen, and oxidation-reduction potential) and natural attenuation parameter results for this reporting period (Table 3 and in Table B2 in Attachment B with the 2014 to 2023 data)
- Laboratory report and chain-of-custody form (Attachment C)

A summary data quality review was performed on the 20 groundwater samples (19 primary and one field duplicate) and three trip blanks collected in April 2023 (Attachment D, Data Validation Report).

7. Planned Deliverables

This section includes a list of deliverables for the upcoming six months.

- The raw data (groundwater level elevations and laboratory analytical results including data qualifiers added during the data quality review) for this reporting period will be submitted online in a format compatible with Ecology's Environmental Information Management (EIM) System, per Ecology Policy 840 following submission of this Semi-Annual Progress Report to Ecology.
- In compliance with the Order, the next Semi-Annual Progress Report for reporting period July to December 2024 will be issued by February 28, 2025. Note: this report will be issued as an expanded Annual Progress Report, which will evaluate data collected during both 2024 semi-annual events.

Figures

Tables

Attachments

FIGURES

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SCALE IN FEET

AECOM

SITE VICINITY MAP

TESORO LOGISTICS OPERATIONS LLC
CHEVRON PIPE LINE COMPANY PASCO BULK TERMINAL
PASCO, WASHINGTON

60722666

FIGURE 1

K:\Tesoro PascoMXD\2023 CMP\Fig 1 Site Viciniy Map.mxd

Explanation

- Compliance Monitoring Well
- Compliance Monitoring Wells Proposed for ORC Deployment
- Tidewater Monitoring Well
- Vapor Extraction Well

Previous Spill
(Size of circle indicates volume released)

- Diesel
- Gasoline
- Jet Fuel

600 — Number of barrels in spill
12/20/78 — Date of spill

- BNSF Railroad
- BNSF Right of Way
- Excavation Area
- Terminal Boundary
- Site Boundary
- Tidewater Site Boundary

Areas of Concern

- North Area
- Northern Tank Area
- Southern Tank Area

Imagery Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

K:\Tesoro_PascoMXD\2023_CMP\Fig 2 Site Plan and Compliance MW Network.mxd

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SITE MAP AND COMPLIANCE MONITORING WELL NETWORK

TESORO LOGISTICS OPERATIONS LLC
CHEVRON PIPE LINE COMPANY PASCO BULK TERMINAL
PASCO, WASHINGTON

FIGURE 2

TABLES

Table 1. Compliance Monitoring Well and Initial Performance Monitoring Frequency - 2024+
Chevron Pipe Line Company Pasco Bulk Terminal

Location / Well Type	Well ID	Monitoring and Sampling Program											
						IHS - Lab Analysis		Natural Attenuation Field Analysis		Natural Attenuation Lab Analysis			
		Collect GW Level Measurements (During both SA Events)	**Collect Samples** (During 1st SA Event in Spring)	**Deploy ORC Sleeves** (Over 6 months in Summer between two Events)	**Collect Samples** (During 2nd SA Event in Fall)	**TPH-g, TPH-d, & TPH-o** (NWTPH-Gx / NWTPH-Dx)	**BTEX+N** (EPA 8260D)	**Field Parameters** (pH, Cond, DO, Temp, & ORP)	**Ferrous Iron & Nitrate** (Field Test Kits)	**Alkalinity** (SM 2320B)	**Sulfate** (anions) EPA 300)	**Methane** (dissolved gases) (RSKSOP-175)	**Dissolved Manganese** (lab-filtered) (EPA 6010B)
Site Compliance Monitoring Wells	MW-02	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-03[*1SA]	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-04	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-06[*2SA]	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-07	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-08	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-10	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-11	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-12	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-14	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-15	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-16	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-17	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-18	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-19[*1SA]	X	X	X	--	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only	1st SA only
	MW-20	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-21	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-22	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
	MW-23	X	X	--	X	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA	1st SA & 2nd SA
Tidewater Site Monitoring Wells	AR-11	X	--	--	--	--	--	--	--	--	--	--	--
	TMW-05	X	--	--	--	--	--	--	--	--	--	--	--

Notes:
MW-XX[*1SA] = These well locations have been selected as potential sites for one field duplicate and/or extra volume collection for one MS/MSD for the 1st semiannual event (as < 20 primary samples).
MW-XX[*2SA] = These well locations have been selected as potential sites for one field duplicate and/or extra volume collection for one MS/MSD for the 2nd semiannual event (as < 20 primary samples).

Acronyms:
-- = Not applicable, not available, or not sampled
bgs = below ground surface
BTEX+N = benzene, toluene, ethylbenzene, total xylenes and naphthalene
btoc = below top of casing
Cond = conductivity
DO = dissolved oxygen
EPA = US Environmental Protection Agency
ft = feet
GW = groundwater
IHS = indicator hazardous substance
MW = monitoring well
ORP = oxidation reduction potential
RSKSOP-175 = EPA Procedure RSKSOP-175 (Robert S. Kerr Standard Operating Procedure)
SA = semiannual
SM = Standard Method
TPH = total petroleum hydrocarbons
TPH-d = diesel range hydrocarbons (as analyzed by Northwest Method NWTPH-Dx)
TPH-g = gasoline range hydrocarbons (as analyzed by Northwest Method NWPTH-Gx)
TPH-o = motor oil range hydrocarbons (as analyzed by Northwest Method NWTPH-Dx)
X = collect or deploy as listed for that well

Table 2. Groundwater Elevations and Analytical Results - 2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
	Cleanup Levels [1]					*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*
Site Wells													
MW-02	3/12/24	417.23	73.02	344.21	0.86	100 U	**790**	**1,340**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-03	3/12/24	423.40	79.18	344.22	0.76	100 U	**7,150**	**2,280**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-04	3/14/24	412.05	68.32	343.73	0.68	100 U	200 U	**343**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-06	3/13/24	358.52	16.26	342.26	0.53	100 U	200 U	**278**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-07	3/13/24	411.32	67.23	344.09	0.75	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-08	3/13/24	383.76	39.77	343.99	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-10	3/13/24	407.83	63.64	344.19	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-11	3/12/24	423.44	79.30	344.14	0.77	100 U	**334**	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-12	3/12/24	423.62	79.52	344.10	0.78	100 U	**290**	**441**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-14	3/12/24	421.84	77.77	344.07	0.85	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-15	3/13/24	358.50	16.22	342.28	0.44	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-16	3/13/24	370.92	27.24	343.68	0.68	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-17	3/13/24	424.28	80.11	344.17	0.82	100 U	**777 J**	**420 J**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-18	3/14/24	423.69	79.48	344.21	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-19	3/12/24	424.20	80.01	344.19	0.80	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-20	3/14/24	426.52	82.33	344.19	0.80	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-21	3/14/24	426.16	82.06	344.1	0.78	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-22	3/14/24	420.45	76.39	344.06	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-23	3/14/24	421.74	77.70	344.04	0.74	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
Tidewater Wells													
AR-11	3/11/24	422.62	78.35	344.27	0.80	--	--	--	--	--	--	--	--
TMW-05	3/11/24	425.02	80.81	344.21	0.79	--	--	--	--	--	--	--	--

Notes:
Values in **bold** were reported as detected
= Yellow shaded detections exceed the cleanup level
-- = not analyzed or sample not collected
(1) The Cleanup Levels are included in Table 1 of the *Compliance Monitoring Plan* (AECOM, 2023).
(2) On February 7, 2019, the wells were resurveyed by Stratton Surveying and Mapping, P.C. MW-20 through MW-23 were surveyed on December 10, 2019. Horizontal datum = Washington State Plane South Zone North American Datum 1983(1991). Vertical datum = North American Vertical Datum 29.

Acronyms:
µg/L = microgram per liter
btoc - below top of casing
ft = feet
GW = groundwater
J = estimated concentration
NAVD29 = North American Vertical Datum of 1929
TOC = top of casing
TPH-d = total petroleum hydrocarbons, diesel range
TPH-g = total petroleum hydrocarbons, gasoline range
TPH-o = total petroleum hydrocarbons, oil range
U = Analyte not detected above limit shown. Starting with data collected since April 2023, the limit shown is the method reporting limit.

ATTACHMENT A

Field Forms

AECOM

Groundwater Level Form

Chevron Pipe Line Company Pasco Bulk Fuel Terminal, Pasco, WA
60722666

Table B-1

Well ID	Well location	Task	Date	Depth to Water (ft btoc)	Comments	Measured By
MW-02	SCMW	2024-Q1-WL	3/11/2024	73.02		Jackson Long
MW-03	SCMW	2024-Q1-WL	3/11/2024	79.18		Jackson Long
MW-04	SCMW	2024-Q1-WL	3/11/2024	68.32		Jackson Long
MW-06	SCMW	2024-Q1-WL	3/11/2024	16.26		Jackson Long
MW-07	SCMW	2024-Q1-WL	3/11/2024	67.23		Jackson Long
MW-08	SCMW	2024-Q1-WL	3/11/2024	39.77		Jackson Long
MW-10	SCMW	2024-Q1-WL	3/11/2024	63.64		Jackson Long
MW-11	SCMW	2024-Q1-WL	3/11/2024	79.30	Red scum on probe	Jackson Long
MW-12	SCMW	2024-Q1-WL	3/11/2024	79.52		Jackson Long
MW-14	SCMW	2024-Q1-WL	3/11/2024	77.77		Jackson Long
MW-15	SCMW	2024-Q1-WL	3/11/2024	16.22		Jackson Long
MW-16	SCMW	2024-Q1-WL	3/11/2024	27.24		Jackson Long
MW-17	SCMW	2024-Q1-WL	3/11/2024	80.11		Jackson Long
MW-18	SCMW	2024-Q1-WL	3/11/2024	79.48		Jackson Long
MW-19	SCMW	2024-Q1-WL	3/11/2024	80.01		Jackson Long
MW-20	SCMW	2024-Q1-WL	3/11/2024	82.33		Jackson Long
MW-21	SCMW	2024-Q1-WL	3/11/2024	82.06		Jackson Long
MW-22	SCMW	2024-Q1-WL	3/11/2024	76.39		Jackson Long
MW-23	SCMW	2024-Q1-WL	3/11/2024	77.70		Jackson Long
AR-11	TSMW	2024-Q1-WL	3/11/2024	78.35		Jackson Long
TMW-05	TSMW	2024-Q1-WL	3/11/2024	80.81		Jackson Long

ft btoc = feet below top of casing
SCMW = Side Compliance Monitoring Well
TSMW = Tidewater Site Monitoring Well

*Corrected to equivalent freshwater head when LNAPL present
**DNAPL thickness requires depth to bottom measurement

ORC Tracking Form

AECOM

Project Information			
Project Name:	*Chevron Pipe Line Company Pasco Bulk Terminal*	**Date:**	3/14/2024
Project Number:	60722666	**Personnel:**	BSC / SL

ORC Deployment Data

Instructions: During each deployment, record the mass of ORC deployed in each well:
- 3' x 3.5" sleeve = 7.25 lbs.
- 3' x 1.75" sleeve = 1.75 lbs.

When sleeves are retrieved at the end of the deployment period, estimate and record the mass remaining. Refer to Section 4.3.4 of the O&M Plan: If the mass remaining is less than approximately 15%, the remaining ORC can be injected into the well, and the cleaned sleeve material disposed of as municipal solid waste; if the mass remaining is greater than approximately 15%, prepare the used sleeves for storage.

Well ID	Deployment Date	Pounds of ORC Deployed	Retrieval Date	Pounds of ORC Remaining	Used Sleeves Stored or Cleaned?	Notes/Comments
MW-2	3/14@ 1048	1 x 4" sleeve				75.7' cable 79.2' total deployment 1 sleeve w/ 4" sock
MW-3	3/14@ 0940	3x 4" socks				84.5' cable 95.25 total deployment 3 sleeves w/ 4" socks
MW-11	3/14@ 0934	1x 2" sock				81' cable 84.4' total deployment 1 sleeve w/ 2" sock
MW-12	3/14@ 0918	1 x 2" sock				81.5' cable 84.9' total deployment 1 sleeve w/ 2" sock
MW-17	3/14@ 1034	1 x 2" sock				80' Cable 83.3' total deployment 1 sleeve w/ 2" sock
MW-19	3/14@ 1014	2x 2" Sock				83.4 ft cable 89.6 ft total deployment 2 sleeves w/ 2" sock

Inspection Form: Monitoring Wells, ORC Hangers, and Bladder Pumps

AECOM

Project Information	
Project Name: ~~Chevron Pipe Line Company~~ MPC Pasco Bulk Terminal	Date: 3/11/2024
Project Number: ~~60675951~~ 60722666	Personnel: Jackson Long, Eddie LeCocq

Inspection Item	YES	NO	Comments/Notes
Bladder Pumps			
Any bladder pumps in poor condition?			
ORC Hangers			
Any hangers in poor condition?			
Well Inspection			

Well ID	Exterior Condition	Surface Concrete	Bolts / Washers	Gasket	Well Cap	Interior Condition	Well Casing Condition	Access Issues / Other Comments
MW-~~2~~ 15	G	G	NA	NA	NA	G	G	Stickup 4"
MW-3	G	G	NA	NA	G	G	G	Stickup 4"
MW-4	G	G	NA	NA	NA	G	G	Stickup 4"
MW-6	G	G	NA	NA	NA	G	G	Stickup 2"
MW-7	G	G	NA	NA	NA	G	G	Stickup 2"
MW-8	G	G	NA	NA	NA	broken return line clasp	G	Stickup 2"
MW-10	G	G	NA	NA	NA	G	G	Stickup 4"
MW-11	no lock G	G	NA	NA	NA	G	G	Stickup 2" 1608 79.30 ft (red scuta)
MW-12	G	G	NA	NA	NA	broken return line clasp	G	Stickup 2" 1600 79.52 ft
MW-14	no lock G	G	NA	NA	NA	G	G	Stickup 2" 1712 77.77 ft
MW-~~15~~ 2	G	G	NA	NA	G	G	G	Stickup 4" 1718 73.02 ft
MW-16	G	G	NA	NA	NA	G	G	Stickup 2"
MW-17	G	G	NA	NA	NA	G	G	Stickup 2" 1707 80.11 ft
MW-18	G	G	P	G	NA	P	G	2/3 bolts monument bolt hole broken off. flush 2" [illegible]
MW-19	G	G	NA	NA	G	G	G	Stickup 2"
MW-20	G	G	NA	NA	G	return clasp breaking F	G	Stickup 2"
MW-21	G	G	NA	NA	NA	clasp broken [illegible] F	G	Stickup 2"
MW-22	G	G	NA	NA	NA	G	G	Stickup 2"
MW-23	G	G	F	G	G	G	G	bolts not flush flush 2"

TMW-05 1740. 80.81 ft

AR-11

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-02-20240312	Date:	3/12/2024 4:13:00 PM
Well ID:	MW-02	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # 23J106070	WL/int meter: Heron H. Oil Interface # U49485X	
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	83.3 ft bgs	Screen Interval:	63.30 - 83.30 ft bgs
SAP Pump Depth:	77 ft btoc		

Water Level			
Date:	3/12/2024 3:30:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	73.23 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/12/2024 3:32:00 PM	End Date and Time:	3/12/2024 4:10:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	10.9 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
3:40 PM	200	15.9	7.45	1347	8.31	126.3	6.50	73.34		
3:45 PM	200	16.0	7.26	1119	5.42	120.7	5.77	73.28		
3:50 PM	200	16.0	7.24	1116	5.14	115.7	5.41	73.24		
3:55 PM	200	15.8	7.24	1113	4.98	111.2	5.45	73.27		
4:00 PM	200	15.8	7.24	1115	4.93	108.5	5.61	73.28		
4:05 PM	200	16.0	7.27	1113	4.78	104.5	6.36	73.32		
4:10 PM	200	15.9	7.23	1116	4.65	104.0	5.91	7.31		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-03-20240312	Date:	3/12/2024 11:57:00 AM
Well ID:	MW-03	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	94.95 ft bgs	Screen Interval:	74.95 - 94.95 ft bgs
SAP Pump Depth:	85 ft btoc		

Water Level			
Date:	3/12/2024 9:52:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	79.28 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/12/2024 11:12:00 AM	End Date and Time:	3/12/2024 11:52:00 AM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	1.32 mg/L	Nitrate:	< 0.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
11:17 AM	225	152.0	7.04	1025	3.50	-19.1	23.05	79.32		
11:22 AM	225	15.1	7.04	1026	3.40	-18.8	20.07	79.33		
11:27 AM	225	15.8	7.04	1045	1.36	-56.7	17.22	79.31		
11:32 AM	225	15.8	7.05	1047	0.70	-62.7	14.44	79.34		
11:39 AM	225	15.9	7.07	1047	0.57	-63.9	13.91	79.28		
11:43 AM	225	15.9	7.07	1047	0.55	-64.8	14.63	79.29		Yellow hue
11:47 AM	225	15.7	7.08	1040	0.54	-65.7	15.06	79.34		
11:52 AM	225	15.6	7.08	1037	0.54	-66.0	15.68	79.35		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-04-20240314	Date:	3/14/2024 1:09:00 PM
Well ID:	MW-04	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	76.75 ft bgs	Screen Interval:	56.75 - 76.75 ft bgs
SAP Pump Depth:	72 ft btoc		

Water Level			
Date:	3/14/2024 12:31:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	68.39 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/14/2024 12:32:00 PM	End Date and Time:	3/14/2024 1:07:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.02 mg/L	Nitrate:	34.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
12:37 PM	400	15.8	7.89	908	8.79	136.4	2.50	68.39		
12:42 PM	170	15.8	7.77	908	8.38	144.1	4.22	68.45		
12:47 PM	280	15.8	7.76	908	8.32	148.3	1.43	68.45		
12:52 PM	280	15.8	7.76	907	8.32	151.1	1.24	68.45		
12:57 PM	280	15.9	7.76	909	8.30	153.4	4.27	68.46		
1:03 PM	280	15.8	7.76	906	8.30	155.0	1.10	68.45		
1:07 PM	280	15.9	7.76	909	8.29	156.0	1.33	68.45		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-06-20240313	Date:	3/13/2024 9:10:00 AM
Well ID:	MW-06	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	25 ft bgs	Screen Interval:	8.50 - 23.50 ft bgs
SAP Pump Depth:	21 ft btoc		

Water Level			
Date:	3/13/2024 8:31:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	16.25 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 8:35:00 AM	End Date and Time:	3/13/2024 9:05:00 AM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	< 0.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
8:40 AM	220	13.5	7.58	832	8.54	136.1	8.69	16.25	None	Clear colorless
8:45 AM	220	13.6	7.57	834	8.58	138.3	11.04	16.25		
8:50 AM	220	13.6	7.56	837	8.52	139.9	9.39	16.25		
8:55 AM	220	13.6	7.56	839	8.49	140.3	8.62	16.25		
9:00 AM	220	13.7	7.55	840	8.46	140.7	7.99	16.25		
9:05 AM	220	13.7	7.55	841	8.45	140.6	7.38	16.25		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-07-20240313	Date:	3/13/2024 2:56:00 PM
Well ID:	MW-07	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	79 ft bgs	Screen Interval:	57.00 - 77.00 ft bgs
SAP Pump Depth:	72 ft btoc		

Water Level			
Date:	3/13/2024 2:18:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	67.37 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 2:20:00 PM	End Date and Time:	3/13/2024 2:53:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	28.6 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
2:23 PM	230	16.8	7.32	934	8.86	135.2	2.28	67.37		
2:28 PM	230	16.8	7.51	926	8.08	133.5	2.52	67.38		
2:33 PM	230	16.7	7.63	926	8.05	128.3	2.34	67.36		
2:38 PM	230	16.6	7.65	927	8.06	123.0	2.64	67.37		
2:43 PM	230	16.6	7.66	925	8.04	119.7	2.43	67.39		
2:48 PM	230	16.7	7.66	927	8.05	118.2	2.36	67.38		
2:53 PM	230	16.6	7.66	926	8.05	116.1	2.31	67.36		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-08-20240313	Date:	3/13/2024 2:15:00 PM
Well ID:	MW-08	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	56 ft bgs	Screen Interval:	29.00 - 54.00 ft bgs
SAP Pump Depth:	44 ft btoc		

Water Level			
Date:	3/13/2024 1:33:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	39.84 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 1:40:00 PM	End Date and Time:	3/13/2024 2:10:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	0.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
1:45 PM	250	15.8	7.50	803	7.44	143.6	2.74	39.84		
1:50 PM	250	15.8	7.50	803	7.39	144.7	2.66	39.84		
1:55 PM	250	15.7	7.50	802	7.40	145.8	2.63	39.84		
2:00 PM	250	15.8	7.50	803	7.39	146.7	2.64	39.84		
2:05 PM	250	15.8	7.50	803	7.39	147.7	2.67	39.84		
2:10 PM	250	15.8	7.50	803	7.39	148.8	2.70	39.84		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-10-20240313	Date:	3/13/2024 1:17:00 PM
Well ID:	MW-10	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	78.25 ft bgs	Screen Interval:	55.00 - 76.00 ft bgs
SAP Pump Depth:	68 ft btoc		

Water Level			
Date:	3/13/2024 12:25:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	63.84 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 12:42:00 PM	End Date and Time:	3/13/2024 1:15:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	20.9 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
12:45 PM	500	16.4	7.56	932	8.77	138.2	1.90	63.84		
12:50 PM	400	16.1	7.67	929	8.06	142.0	1.85	63.88		
12:55 PM	175	16.1	7.70	929	8.04	140.3	1.90	63.78		
1:00 PM	300	16.2	7.69	929	8.05	138.8	1.92	63.84		
1:05 PM	300	16.2	7.69	929	8.06	137.4	1.89	63.86		
1:10 PM	300	16.2	7.69	930	8.04	135.1	1.80	63.84		
1:15 PM	300	16.2	7.69	929	8.06	133.9	1.89			

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-11-20240312	Date:	3/12/2024 5:20:00 PM
Well ID:	MW-11	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	84.5 ft bgs	Screen Interval:	74.50 - 84.50 ft bgs
SAP Pump Depth:	83 ft btoc		

Water Level			
Date:	3/12/2024 4:33:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	79.31 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/12/2024 4:35:00 PM	End Date and Time:	3/12/2024 5:15:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		
Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	< 0.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
4:40 PM	130	15.7	6.72	1030	5.98	146.9	16.40	79.38	None	Clear colorless
4:45 PM	130	16.3	6.55	1007	2.60	140.1	22.14	79.47		
4:50 PM	130	16.0	6.65	979	1.73	132.4	22.18	79.52		
4:55 PM	130	16.0	6.70	948	2.08	131.2	17.61	79.53		
5:00 PM	130	16.0	6.74	922	2.49	131.3	13.45	79.47		
5:05 PM	130	15.9	6.78	901	2.84	132.2	12.16	79.53		
5:10 PM	130	15.9	6.79	897	3.02	133.5	11.96	79.54		
5:15 PM	130	15.9	6.81	890	3.17	134.5	12.23	79.55		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-12-20240312	Date:	3/12/2024 2:30:00 PM
Well ID:	MW-12	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	85 ft bgs	Screen Interval:	75.00 - 84.50 ft bgs
SAP Pump Depth:	83.5 ft btoc		

Water Level			
Date:	3/12/2024 1:21:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	79.52 ft btoc
Notes:	Not Recorded		
Purge Information			
Begin Date and Time:	3/12/2024 1:28:00 PM	End Date and Time:	3/12/2024 2:18:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		
Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	< 0.3 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
1:33 PM	175	14.1	7.20	1061	7.11	54.7	9.91	79.65	None	Clear colorless
1:38 PM	175	14.9	7.08	1085	7.04	67.4	2.77	79.52		
1:43 PM	175	14.3	7.03	1091	6.85	76.2	4.06	79.71		
1:48 PM	175	14.9	6.98	1111	3.42	72.6	8.49	79.72		
1:53 PM	200	15.2	6.99	1066	1.80	68.6	6.58	79.73		
1:59 PM	200	15.1	7.00	1044	1.95	72.2	5.76	79.79		
2:03 PM	200	15.0	7.00	1034	1.92	73.2	4.86	79.80		
2:08 PM	200	15.2	7.02	1013	2.14	75.8	4.20	79.80		
2:13 PM	200	15.1	7.04	987	2.26	77.4	3.57	79.81		
2:18 PM	200	15.0	7.05	977	2.38	79.9	3.33	79.81		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-14-20240312	Date:	3/12/2024 5:56:00 PM
Well ID:	MW-14	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # 23J106070	WL/int meter: Heron H. Oil Interface # U49485X	
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	82.5 ft bgs	Screen Interval:	72.50 - 82.00 ft bgs
SAP Pump Depth:	82 ft btoc		

Water Level			
Date:	3/12/2024 5:18:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	77.77 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/12/2024 5:18:00 PM	End Date and Time:	3/12/2024 5:53:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.06 mg/L	Nitrate:	6.9 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
5:23 PM	175	13.5	7.43	971	9.06	151.8	8.37	77.98		
5:28 PM	175	14.7	7.21	954	7.20	157.2	6.97	77.98		
5:33 PM	175	14.7	7.50	953	7.06	157.1	7.59	77.98		
5:38 PM	175	14.8	7.51	951	7.03	158.8	8.47	78.02		
5:43 PM	175	15.2	7.52	953	6.99	158.1	8.41	78.02		
5:48 PM	175	15.1	7.53	953	6.96	157.5	9.08	77.98		
5:53 PM	175	15.2	7.53	953	6.97	158.0	9.18	77.99		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-15-20240313	Date:	3/13/2024 10:31:00 AM
Well ID:	MW-15	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	23.5 ft bgs	Screen Interval:	8.50 - 23.50 ft bgs
SAP Pump Depth:	20.5 ft btoc		

Water Level			
Date:	3/13/2024 9:54:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	16.18 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 9:56:00 AM	End Date and Time:	3/13/2024 10:26:00 AM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	0.5 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
10:01 AM	250	14.8	7.44	791	6.94	128.9	15.09	16.18	None	Clear colorless
10:06 AM	250	15.3	7.41	805	6.39	128.9	8.59	16.18		
10:11 AM	250	15.4	7.41	805	6.34	129.9	5.62	16.19		
10:16 AM	250	15.5	7.41	808	6.30	130.6	4.96	16.19		
10:21 AM	250	15.5	7.41	806	6.30	131.9	4.81	16.19		
10:26 AM	250	15.6	7.41	807	6.29	132.3	4.60	16.19		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-16-20240313	Date:	3/13/2024 12:25:00 PM
Well ID:	MW-16	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	30 ft bgs	Screen Interval:	20.00 - 30.00 ft bgs
SAP Pump Depth:	31 ft btoc		

Water Level			
Date:	3/13/2024 11:37:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	27.21 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 11:40:00 AM	End Date and Time:	3/13/2024 12:20:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		
Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	1.2 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
11:45 AM	250	15.7	7.44	808	6.81	133.3	13.63	27.21	None	Clear colorless
11:50 AM	250	15.8	7.41	812	6.42	134.9	15.47	27.21		
11:55 AM	250	15.7	7.40	811	6.39	136.3	9.42	27.21		
12:00 PM	250	15.8	7.40	811	6.37	137.6	7.58	27.21		
12:05 PM	250	15.8	7.40	812	6.35	139.0	6.19	27.21		
12:10 PM	250	15.8	7.40	812	6.35	140.5	5.56	27.21		
12:15 PM	250	15.8	7.40	812	6.35	142.1	5.19	27.21		
12:20 PM	250	15.8	7.40	812	6.35	143.0	5.06	27.21		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-17-20240313	Date:	3/13/2024 9:27:00 AM
Well ID:	MW-17	Location Type:	Monitoring Well
Duplicate ID:	MW-117-20240313	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # 23J106070	WL/int meter: Heron H. Oil Interface # U49485X	
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	83 ft bgs	Screen Interval:	73.00 - 83.00 ft bgs
SAP Pump Depth:	84 ft btoc		

Water Level			
Date:	3/13/2024 8:51:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	80.32 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/13/2024 8:52:00 AM	End Date and Time:	3/13/2024 9:25:00 AM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.03 mg/L	Nitrate:	20.4 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
8:55 AM	220	10.1	7.69	1128	10.72	172.5	4.01	80.34		
9:00 AM	220	12.9	7.53	1128	8.49	172.6	5.02	80.28		
9:05 AM	220	12.6	7.40	1100	7.73	173.7	3.50	80.32		
9:10 AM	220	12.7	7.38	1097	7.46	173.4	3.89	80.34		
9:15 AM	220	14.5	7.31	1097	6.66	172.4	2.99	80.33		
9:20 AM	220	14.2	7.31	1096	6.73	171.9	2.27	80.34		
9:25 AM	220	14.5	7.30	1097	6.56	170.0	1.93			

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-18-20240314	Date:	3/14/2024 5:15:00 PM
Well ID:	MW-18	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Flush	Well Diameter:	2 in
Total Depth:	87 ft bgs	Screen Interval:	72.00 - 87.00 ft bgs
SAP Pump Depth:	86.5 ft btoc		

Water Level			
Date:	3/14/2024 1:18:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	79.52 ft btoc
Notes:	Not Recorded		
Purge Information			
Begin Date and Time:	3/14/2024 4:15:00 PM	End Date and Time:	3/14/2024 5:10:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		
Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	2.2 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
4:20 PM	250	16.3	7.30	842	8.47	171.8	352.11	79.52	None	Brown turbid
4:25 PM	250	16.3	7.30	841	8.37	172.5	282.36	79.52		
4:30 PM	250	16.2	7.30	838	8.21	172.9	184.14	79.52		
4:35 PM	250	16.2	7.31	836	8.16	173.7	129.01	79.52		
4:40 PM	250	16.1	7.32	833	8.14	173.8	90.32	79.52		
4:45 PM	250	16.1	7.32	832	8.14	174.2	56.53	79.52		
4:50 PM	250	16.1	7.33	835	8.14	175.2	28.19	79.52		
4:55 PM	250	16.1	7.33	834	8.14	175.8	16.34	79.52		
5:00 PM	250	16.1	7.33	832	8.14	176.4	12.87	79.52		
5:05 PM	250	16.1	7.33	830	8.13	176.8	9.42	79.52		
5:10 PM	250	16.1	7.33	829	8.12	177.0	7.39	79.52		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-19-20240312	Date:	3/12/2024 11:06:00 AM
Well ID:	MW-19	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # 23J106070	WL/int meter: Heron H. Oil Interface # U49485X	
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	87 ft bgs	Screen Interval:	72.00 - 87.00 ft bgs
SAP Pump Depth:	85 ft btoc		

Water Level			
Date:	3/12/2024 10:12:00 AM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	80.18 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/12/2024 10:21:00 AM	End Date and Time:	3/12/2024 10:58:00 AM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.03 mg/L	Nitrate:	22.8 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
10:28 AM	300	14.7	7.38	961	6.50	141.6	7.93	80.19		
10:33 AM	300	15.7	7.34	967	4.94	156.6	1.48	80.11		
10:38 AM	300	15.8	7.40	969	5.02	152.6	5.22	80.18		
10:43 AM	300	15.5	7.42	967	5.35	149.9	7.16	80.09		
10:48 AM	300	15.5	7.43	965	5.52	148.0	7.74	80.18		
10:53 AM	300	15.4	7.44	966	5.59	145.1	7.54	80.17		
10:58 AM	300	14.8	7.45	966	5.85	144.3	7.00	80.18		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)		Project #: 60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal		Event: 2024-Q1-GW

Sample Information			
Sample ID:	MW-20-20240314	Date:	3/14/2024 12:42:00 PM
Well ID:	MW-20	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	99 ft bgs	Screen Interval:	79.00 - 94.00 ft bgs
SAP Pump Depth:	95 ft btoc		

Water Level			
Date:	3/14/2024 12:03:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	82.35 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/14/2024 12:07:00 PM	End Date and Time:	3/14/2024 12:37:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	0.9 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
12:12 PM	220	16.1	7.55	803	8.22	138.1	5.88	82.35	None	Clear colorless
12:17 PM	220	15.9	7.57	804	8.02	137.9	4.90	82.35		
12:22 PM	220	15.7	7.58	800	8.01	139.1	3.73	82.35		
12:27 PM	220	15.7	7.58	800	8.00	140.8	3.30	82.35		
12:32 PM	220	15.7	7.58	800	8.00	141.9	3.29	82.35		
12:37 PM	220	15.7	7.58	800	8.00	142.8	3.21	82.35		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-21-20240314	Date:	3/14/2024 2:55:00 PM
Well ID:	MW-21	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	93 ft bgs	Screen Interval:	77.00 - 92.00 ft bgs
SAP Pump Depth:	93 ft btoc		

Water Level			
Date:	3/14/2024 1:55:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	82.03 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/14/2024 2:20:00 PM	End Date and Time:	3/14/2024 2:50:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	0.9 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
2:25 PM	200	15.7	7.40	815	8.70	159.6	2.94	82.03		
2:30 PM	200	15.8	7.53	810	8.14	157.2	3.19	82.03	None	Clear colorless
2:35 PM	200	15.8	7.57	808	8.06	158.2	2.91	82.03		
2:40 PM	200	15.8	7.57	807	8.05	159.0	2.70	82.03		
2:45 PM	200	15.8	7.57	807	8.03	159.3	2.69	82.03		
2:50 PM	200	15.8	7.57	807	8.03	159.9	2.59	82.03		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-22-20240314	Date:	3/14/2024 2:44:00 PM
Well ID:	MW-22	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	95 ft bgs	Screen Interval:	79.00 - 94.00 ft bgs
SAP Pump Depth:	94 ft btoc		

Water Level			
Date:	3/14/2024 2:10:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	76.49 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/14/2024 2:10:00 PM	End Date and Time:	3/14/2024 2:42:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	33.7 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
2:17 PM	200	17.1	7.83	906	8.54	150.2	1.82	76.48		
2:22 PM	200	16.3	7.75	909	7.89	150.4	1.88	76.56		
2:27 PM	300	16.3	7.77	909	8.28	149.4	2.13	76.56		
2:32 PM	300	16.3	7.76	910	8.41	147.9	1.85	76.56		
2:37 PM	300	16.1	7.76	908	8.26	147.1	1.79	76.48		
2:42 PM	300	16.1	7.76	908	8.29	145.0	1.78	76.56		

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q1-GW	

Sample Information			
Sample ID:	MW-23-20240314	Date:	3/14/2024 5:24:00 PM
Well ID:	MW-23	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Edward Lecocq
Equipment:	Field param meter: YSI Pro Plus # U106087X WL/int meter: Heron H. Oil Interface # U49485X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Flush	Well Diameter:	2 in
Total Depth:	96 ft bgs	Screen Interval:	80.00 - 95.00 ft bgs
SAP Pump Depth:	92 ft btoc		

Water Level			
Date:	3/14/2024 4:49:00 PM	Measured Well Depth:	Not Recorded
Is Well Dry?	No	Depth to Water:	77.84 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	3/14/2024 4:50:00 PM	End Date and Time:	3/14/2024 5:22:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	< 0.02 mg/L	Nitrate:	23.7 mg/L

Time	Purge Rate (ml/min)	Temperature (deg C)	pH (su)	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Purge Depth to Water (ft)	Odor (none)	Color (none)
4:52 PM	350	16.6	7.98	927	9.52	153.4	2.82	77.85		
4:57 PM	350	16.4	7.75	906	7.59	151.5	9.88	77.85		
5:02 PM	300	16.5	7.74	905	7.83	147.2	9.22	77.86		
5:07 PM	250	16.6	7.74	905	7.88	140.2	7.88	77.86		
5:12 PM	250	16.5	7.73	905	7.88	136.2	6.77	77.85		
5:17 PM	250	16.4	7.73	905	7.91	132.5	5.28	77.85		
5:22 PM	250	16.5	7.73	905	7.88	128.7	4.19	77.85		

ATTACHMENT B

Groundwater Data and Analytical Results – 2014-2024

Table 3. Field Parameters and Natural Attenuation Results – 2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Measured Parameters							Laboratory Measured Parameters				Well Location (relative to groundwater contaminant plume)
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*applicable*
MW-02	3/12/24	7.23	1,116	4.65	15.9	104	0.02 U	**10.9**	**79.1 J**	**488 J**	0.0100 U	0.0100 U	Inside
MW-03	3/12/24	7.08	1,037	0.54	15.6	-66.0	**1.32**	0.3 U	**52.7**	**479 J**	**0.644**	**1.38**	Inside
MW-04	3/14/24	7.76	909	8.29	15.9	156	**0.02**	**34.3**	**107**	**189 J**	0.0100 U	0.0100 U	Outside
MW-06	3/13/24	7.55	841	8.45	13.7	140.6	0.02 U	0.3 U	**112**	**162 J**	0.0100 U	0.0100 U	Outside
MW-07	3/13/24	7.66	926	8.05	16.6	116.1	0.02 U	**28.6**	**109**	**197 J**	0.0100 U	0.0100 U	Outside
MW-08	3/13/24	7.50	803	7.39	15.8	148.8	0.02 U	**0.3**	**118**	**196 J**	0.0100 U	0.0100 U	Outside
MW-10	3/13/24	7.69	929	8.06	16.2	133.9	0.02 U	**20.9**	**112**	**194 J**	0.0100 U	0.0100 U	Outside
MW-11	3/12/24	6.81	890	3.17	15.9	134.5	0.02 U	0.3 U	**103**	**298 J**	**0.0975**	0.0100 U	Inside
MW-12	3/12/24	7.05	977	2.38	15.0	79.9	0.02 U	0.3 U	**108 J**	**387 J**	**0.0859**	0.0100 U	Inside
MW-14	3/12/24	7.53	953	6.97	15.2	158	**0.06**	**6.9**	**113**	**209 J**	0.0100 U	0.0100 U	Outside
MW-15	3/13/24	7.41	807	6.29	15.6	132.3	0.02 U	**0.5**	**113**	**206 J**	0.0100 U	0.0100 U	Outside
MW-16	3/13/24	7.40	812	6.35	15.8	143	0.02 U	**1.2**	**117**	**204 J**	0.0100 U	0.0100 U	Outside
MW-17	3/13/24	7.30	1,097	6.56	14.5	170	**0.03**	**20.4**	**131**	**273 J**	0.0100 U	0.0100 U	Inside
MW-18	3/14/24	7.33	829	8.12	16.1	177	0.02 U	**2.2**	**112**	**219 J**	0.0100 U	0.0100 U	Outside
MW-19	3/12/24	7.45	966	5.85	14.8	144.3	**0.03**	**22.8**	**107**	**245 J**	0.0100 U	0.0100 U	Inside
MW-20	3/14/24	7.58	800	8.00	15.7	142.8	0.02 U	**0.9**	**113**	**191 J**	0.0100 U	0.0100 U	Outside
MW-21	3/14/24	7,57	807	8.03	15.8	159.9	0.02 U	**0.9**	**111**	**192 J**	0.0100 U	0.0100 U	Outside
MW-22	3/14/24	7.76	908	8.29	16.1	145	0.02 U	**33.7**	**111**	**190 J**	0.0100 U	0.0100 U	Outside
MW-23	3/14/24	7.73	905	7.88	16.5	128.7	0.02 U	**23.7**	**106**	**193 J**	0.0100 U	0.0100 U	Outside

Notes:
Values in bold were reported as detected.
-- = not analyzed or sample not collected

Acronyms:
deg C = degrees Celsius
J = estimated concentration
mg/L = milligrams per liter
mS/cm = millisiemens per centimeter
µS/cm = microsiemens per centimeter
mV = millivolts
ORP = Oxidation Reduction Potential
su = Standard Unit
U = analyte not detected above limit shown. Starting with data collected since April 2023, the limit shown is the method reporting limit.

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Site Wells													
MW-02	5/29/14	417.28	72.83	344.45	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	417.28	74.03	343.25	1.20	250 U	250 U	500 U	0.50 U	**0.68**	0.50 U	0.50 U	0.50 U
	6/4/15	417.28	73.31	343.97	-0.72	250 U	**140**	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/28/15	417.28	74.42	342.86	1.11	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	8/29/16	417.28	74.52	342.76	0.10	50 U	**1,400**	**710**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	417.28	74.02	343.26	-0.50	50 U	**410**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/17/17	417.28	72.86	344.42	-1.16	--	--	--	--	--	--	--	--
	10/24/17	417.28	74.12	343.16	1.26	250 U	**580**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/14/18	417.28	72.89	344.39	-1.23	250 U	**450**	**480**	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/2/18	417.23	73.93	343.30	1.09	100 U	**1,300**	**1,800**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/26/19	417.23	73.49	343.74	-0.44	100 U	**1,500**	**1,200**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	417.23	73.75	343.48	0.26	100 U	**1,600**	**1,100**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	417.23	73.38	343.85	-0.37	100 U	**1,200**	**930**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	417.23	73.71	343.52	0.33	100 U	**460**	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	417.23	73.69	343.54	-0.02	31.6 U	**1,250**	**901**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/26/21	417.23	74.38	342.85	0.69	100 U	**630**	**460**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/3/22	417.23	73.98	343.25	-0.40	100 U	**2,850**	**8,560**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	417.23	73.00	344.23	-0.98	100 U	**1,240**	**969**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/12/23	417.23	73.88	343.35	0.88	100 U	**874**	**1,020**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	417.23	73.02	344.21	0.86	100 U	**790**	**1,340**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-03	5/28/14	423.42	78.85	344.57	--	250 U	**1,100**	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/30/14	423.42	80.18	343.24	1.33	**620**	**18,000**	500 U	0.50 U	**1.4**	0.50 U	0.50 U	0.50 U
	6/4/15	423.42	79.46	343.96	-0.72	250 U	**3,300**	250 U	0.50 U	0.50 U	0.50 U	1.0 U	**0.51**
	9/29/15	423.42	80.58	342.84	1.12	**733**	**3,300**	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	8/30/16	423.42	80.60	342.82	0.02	**1,400**	**11,000**	**1,100**	2.0 U	2.0 U	3.0 U	3.0 U	**2.5**
	12/6/16	423.42	80.17	343.25	-0.43	**290**	**6,600**	**290**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/16/17	423.42	79.04	344.38	-1.13	500 U	**2,600**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/25/17	423.42	80.23	343.19	1.19	**380**	**5,700**	**410**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/14/18	423.42	79.20	344.22	-1.03	250 U	**4,700**	**860**	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/4/18	423.40	80.00	343.40	0.82	**180 J**	**8,800**	**2,000**	0.53 U	0.39 U	0.50 U	**3.0 U**	0.93 U
	6/26/19	423.40	79.64	343.76	-0.36	**300**	**8,600**	**1,900**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	423.40	79.93	343.47	0.29	**230 J**	**2,700 J**	**830 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	423.40	79.57	343.83	-0.36	**200 J**	**4,400**	**920**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/16/20	423.40	79.92	343.48	0.35	**150 J**	**2,200**	**210 J**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/27/21	423.40	79.86	343.54	-0.06	632 U	**12,100 J**	**3,500 J**	0.471 U	1.39 U	0.685 U	0.870 U	5.00 UJ
	10/25/21	423.40	80.49	342.91	0.63	**213**	**6,910**	**1,740**	0.471 U	1.39 U	0.685 U	**1.30 J**	5.00 U
	11/3/22	423.40	80.16	343.24	-0.33	**117 J**	**5,860**	**1,410**	0.094 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	423.40	79.16	344.24	-1.00	100 U	**5,120**	**1,240**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/11/23	423.40	79.94	343.46	0.78	**140 J**	**7,840**	**2,180**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	423.40	79.18	344.22	0.76	100 U	**7,150**	**2,280**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
				Cleanup Levels [1]		*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-04	5/28/14	412.09	67.98	344.11	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/28/14	412.09	69.17	342.92	1.19	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	6/3/15	412.09	68.48	343.61	-0.69	250 U	100 U	250 U	0.50 U	**0.52**	0.5 U	1.0 U	0.50 U
	9/28/15	412.09	69.52	342.57	1.04	--	--	--	--	--	--	--	--
	8/30/16	412.09	69.66	342.43	0.14	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	412.09	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	412.09	68.02	344.07	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/13/18	412.05	68.15	343.90	0.17	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	6/26/19	412.05	68.68	343.37	0.53	100 U	69 U	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/9/19	412.05	68.98	343.07	0.30	--	--	--	--	--	--	--	--
	6/23/20	412.05	68.62	343.43	-0.36	100 U	69 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/14/20	412.05	68.90	343.15	0.28	--	--	--	--	--	--	--	--
	5/25/21	412.05	68.84	343.21	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	412.05	69.47	342.58	0.63	--	--	--	--	--	--	--	--
	10/31/22	412.05	69.11	342.94	-0.36	--	--	--	--	--	--	--	--
	4/25/23	412.05	68.24	343.81	-0.87	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/13/23	412.05	69.00	343.05	0.76	100 U	200 U	**490**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	412.05	68.32	343.73	0.68	100 U	200 U	**343**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-06	5/29/14	358.61	15.57	343.04	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	358.61	16.82	341.79	1.25	250 U	250 U	500 U	0.50 U	**4.9**	0.50 U	0.50 U	0.50 U
	6/3/15	358.61	16.18	342.43	-0.64	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/28/15	358.61	17.15	341.46	0.97	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	8/30/16	358.61	17.15	341.46	0.00	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	358.61	16.91	341.70	-0.24	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/16/17	358.61	15.88	342.73	-1.03	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/23/17	358.61	17.01	341.60	1.13	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/11/18	358.61	15.73	342.88	-1.28	250 U	**180**	**460**	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/2/18	358.52	16.95	341.57	1.31	100 U	**71 J**	350 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/26/19	358.52	16.48	342.04	-0.47	100 U	71 U	110 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/10/19	358.52	16.97	341.55	0.49	100 U	62 U	92 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/23/20	358.52	16.31	342.21	-0.66	100 U	69 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/16/20	358.52	16.61	341.91	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/24/21	358.52	16.44	342.08	-0.17	31.6 U	66.7 U	**120 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	358.52	16.99	341.53	0.55	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	358.52	16.75	341.77	-0.24	100 U	**224**	**519**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	358.52	16.20	342.32	-0.55	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/10/23	358.52	16.79	341.73	0.59	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	358.52	16.26	342.26	0.53	100 U	200 U	**278**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
	Cleanup Levels [1]					*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-07	5/28/14	411.40	67.02	344.38	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	411.40	68.23	343.17	1.21	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	6/3/15	411.40	67.48	343.92	-0.75	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/28/15	411.40	68.61	342.79	1.13	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	8/30/16	411.40	68.74	342.66	0.13	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	411.40	68.18	343.22	-0.56	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/15/17	411.40	67.02	344.38	-1.16	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/24/17	411.40	68.22	343.18	1.20	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/13/18	411.40	67.16	344.24	-1.06	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/4/18	411.32	68.03	343.29	0.95	100 U	**86 J**	97 U	0.53 U	0.39 U	**0.60 J**	3.0 U	0.93 U
	6/26/19	411.32	67.68	343.64	-0.35	100 U	**110**	98 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	411.32	67.58	343.74	-0.10	100 U	**67 J**	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/23/20	411.32	67.57	343.75	-0.01	100 U	66 U	98 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/14/20	411.32	67.87	343.45	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	411.32	67.82	343.50	-0.05	31.6 U	66.7 U	**103 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	411.32	68.47	342.85	0.65	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	411.32	68.12	343.20	-0.35	100 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	411.32	67.15	344.17	-0.97	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/10/23	411.32	67.98	343.34	0.83	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/23	411.32	67.23	344.09	0.75	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-08	5/28/14	383.91	39.56	344.35	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	383.91	40.78	343.13	1.22	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	6/3/15	383.91	40.04	343.87	-0.74	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/28/15	383.91	41.13	342.78	1.09	--	--	--	--	--	--	--	--
	8/30/16	383.91	40.30	343.61	-0.83	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	383.91	--	--	--	--	--	--	--	--	--	--	--
	5/17/17	383.91	39.56	344.35	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/11/18	383.76	39.65	344.11	0.240	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	6/26/19	383.76	40.26	343.50	0.610	100 U	71 U	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/9/19	383.76	40.48	343.28	0.22	--	--	--	--	--	--	--	--
	6/23/20	383.76	40.14	343.62	-0.34	100 U	68 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/14/20	383.76	40.44	343.32	0.300	--	--	--	--	--	--	--	--
	5/26/21	383.76	40.38	343.38	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	383.76	41.03	342.73	0.65	--	--	--	--	--	--	--	--
	4/25/23	383.76	39.93	343.83	-1.10	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/11/23	383.76	40.59	343.17	0.66	100 U	200 U	**351**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	383.76	39.77	343.99	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-10	5/28/14	407.91	63.46	344.45	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	407.91	64.68	343.23	1.22	250 U	250 U	500 U	0.50 U	**1.1**	0.50 U	0.50 U	0.50 U
	6/3/15	407.91	63.91	344.00	-0.77	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/28/15	407.91	65.02	342.89	1.11	--	--	--	--	--	--	--	--
	8/30/16	407.91	65.22	342.69	0.20	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	407.91	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	407.91	63.50	344.41	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/13/18	407.83	63.58	344.25	0.16	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	6/26/19	407.83	64.15	343.68	0.57	100 U	**88 J**	**110 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/9/19	407.83	64.37	343.46	0.22	--	**--**	**--**	--	--	--	--	--
	6/23/20	407.83	64.03	343.80	-0.34	100 U	66 U	98 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/14/20	407.83	64.36	343.47	0.33	--	--	--	--	--	--	--	--
	5/25/21	407.83	64.30	343.53	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	407.83	64.94	342.89	0.64	--	--	--	--	--	--	--	--
	10/31/22	407.83	64.60	343.23	-0.34	--	--	--	--	--	--	--	--
	4/25/23	407.83	63.63	344.20	-0.97	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/10/23	407.83	64.45	343.38	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	407.83	63.64	344.19	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-11	5/29/14	423.48	79.19	344.29	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/30/14	423.48	80.31	343.17	1.12	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	6/4/15	423.48	79.55	343.93	-0.76	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/29/15	423.48	80.67	342.81	1.12	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	8/29/16	423.48	80.42	343.06	-0.25	50 U	**520**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	423.48	80.29	343.19	-0.13	50 U	**360**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/16/17	423.48	79.15	344.33	-1.14	500 U	**390**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/25/17	423.48	80.31	343.17	1.16	250 U	**360**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/14/18	423.48	79.30	344.18	-1.01	250 U	**160**	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/2/18	423.44	80.14	343.30	0.88	100 U	**500**	**570 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/27/19	423.44	79.79	343.65	-0.35	100 U	**400**	**320 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	423.44	80.01	343.43	0.22	100 U	**130**	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	423.44	79.66	343.78	-0.35	100 U	**3,900**	**2,300**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	423.44	79.95	343.49	0.29	100 U	**210 J**	130 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	423.44	79.95	343.49	0.00	31.6 U	**765 J**	**428 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	423.44	80.62	342.82	0.67	31.6 U	**499**	**230 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	423.44	80.21	343.23	-0.41	100 U	**200 J**	**84.6 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	423.44	79.28	344.16	-0.93	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/12/23	423.44	80.07	343.37	0.79	100 U	**350**	**599**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	423.44	79.30	344.14	0.77	100 U	**334**	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
				Cleanup Levels [1]		*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-12	5/29/14	423.65	79.26	344.39	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/30/14	423.65	80.45	343.20	1.19	250 U	250 U	500 U	0.50 U	**0.66**	0.50 U	0.50 U	0.50 U
	6/4/15	423.65	79.72	343.93	-0.73	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	9/29/15	423.65	80.83	342.82	1.11	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	12/6/16	423.65	80.48	343.17	-0.35	50 U	110 U	250 U	**6.0**	2.0 U	3.0 U	3.0 U	2.0 U
	5/16/17	423.65	79.30	344.35	-1.18	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/24/17	423.65	80.45	343.20	1.15	250 U	**160**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/14/18	423.65	79.30	344.35	-1.15	250 U	**160**	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/3/18	423.62	80.22	343.40	0.95	100 U	**270**	**240 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/27/19	423.62	79.97	343.65	-0.25	100 U	**270**	**300 J**	**0.63 J**	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	423.62	80.20	343.42	0.23	100 U	**170**	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	423.62	79.85	343.77	-0.35	100 U	**450**	**330 J**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/16/20	423.62	80.14	343.48	0.29	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/27/21	423.62	80.06	343.56	-0.08	31.6 U	**601**	**448**	1.00 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	423.62	80.79	342.83	0.73	31.6 U	**273**	**652**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	423.62	80.37	343.25	-0.42	100 U	66.7 U	**736**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	423.62	79.45	344.17	-0.92	100 U	**234**	250 U	1.00 U	1.000 U	1.000 U	3.000 U	5.00 U
	10/12/23	423.62	80.30	343.32	0.85	100 U	**419**	**749**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	423.62	79.52	344.10	0.78	100 U	**290**	**441**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-14	5/29/14	421.97	77.58	344.39	--	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10/29/14	421.97	78.80	343.17	1.22	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	6/4/15	421.97	78.04	343.93	-0.76	250 U	100 U	250 U	0.50 U	**0.72**	0.50 U	1.0 U	0.50 U
	9/28/15	421.97	79.18	342.79	1.14	250 U	100 U	250 U	0.50 U	**0.72**	0.50 U	1.0 U	0.50 U
	8/29/16	421.97	79.32	342.65	0.14	50 U	**120**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12/5/16	421.97	78.75	343.22	-0.57	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	5/17/17	421.97	77.55	344.42	-1.20	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10/24/17	421.97	78.78	343.19	1.23	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	6/13/18	421.97	77.74	344.23	-1.04	250 U	**110**	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12/2/18	421.84	78.53	343.31	0.92	100 U	**170**	350 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/27/19	421.84	78.28	343.56	-0.25	100 U	**80 J**	**120 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	421.84	78.52	343.32	0.24	100 U	67 U	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	421.84	78.16	343.68	-0.36	100 U	73 U	110 U	0.24 U	0.39 U	0.50 U	0.39 U	**1.0 J**
	12/15/20	421.84	78.46	343.38	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	421.84	78.43	343.41	-0.03	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	421.84	79.20	342.64	0.77	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/3/22	421.84	78.73	343.11	-0.47	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	421.84	77.97	343.87	-0.76	100 U	200 U	250 U	1.00 U	1.000 U	1.000 U	3.000 U	5.00 U
	10/12/23	421.84	78.62	343.22	0.65	100 U	200 U	**408**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	421.84	77.77	344.07	0.85	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

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Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-15	12/3/18	358.50	16.69	341.81	--	100 U	**70 J**	97 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/26/19	358.50	16.41	342.09	-0.28	100 U	66 U	98 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/10/19	358.50	16.78	341.72	0.37	100 U	64 U	95 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/23/20	358.50	16.17	342.33	-0.61	100 U	68 U	**110 J**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/14/20	358.50	16.43	342.07	0.26	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	358.50	16.34	342.16	-0.09	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	358.50	16.90	341.60	0.56	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	358.50	16.63	341.87	-0.27	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	358.50	16.08	342.42	-0.82	100 U	200 U	250 U	1.00 U	1.000 U	1.000 U	3.00 U	5.00 U
	10/10/23	358.50	16.66	341.84	0.58	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	358.50	16.22	342.28	0.44	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-16	12/3/18	370.92	27.95	342.97	--	100 U	**82 J**	96 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/26/19	370.92	27.60	343.32	-0.35	100 U	**77 J**	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/10/19	370.92	27.79	343.13	0.19	100 U	62 U	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/22/20	370.92	27.41	343.51	-0.38	100 U	71 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/16/20	370.92	27.69	343.23	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/25/21	370.92	27.68	343.24	-0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	370.92	28.32	342.60	0.64	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	370.92	27.92	343.00	-0.40	100 U	66.7 U	**207 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	370.92	27.14	343.78	-0.78	100 U	200 U	250 U	1.00 U	1.000 U	1.000 U	3.00 U	5.00 U
	10/11/23	370.92	27.92	343.00	0.78	100 U	200 U	**266**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	370.92	27.24	343.68	0.68	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-17	12/3/18	424.28	81.00	343.28	--	**180 J**	**880**	**850**	**2.9 J**	**1.9 J**	**8.6 J**	**38 J**	**4.7 J**
	6/27/19	424.28	80.62	343.66	-0.38	100 U	**530**	**640**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/11/19	424.28	81.84	342.44	1.22	100 U	**960**	**800**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/24/20	424.28	80.48	343.80	-1.36	100 U	**750**	**420**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	424.28	80.80	343.48	0.32	100 U	**350**	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/25/21	424.28	80.78	343.50	-0.02	31.6 U	**486**	**358**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	424.28	81.50	342.78	0.72	31.6 U	**855**	**674**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/3/22	424.28	81.04	343.24	-0.46	100 U	**903**	**503**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	424.28	80.12	344.16	-0.92	100 U	**604**	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/12/23	424.28	80.93	343.35	0.81	100 U	**434**	**566**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/13/24	424.28	80.11	344.17	0.82	100 U	**777 J**	**420 J**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-18	12/3/18	423.66	--	--	--	**280**	65 U	96 U	**1.4 J**	**0.83 J**	**3.2**	**15**	**1.7 J**
	6/26/19	423.69	80.01	343.68	--	100 U	**68 J**	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12/12/19	423.69	80.12	343.57	0.11	100 U	62 U	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/22/20	423.69	79.81	343.88	-0.31	100 U	68 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	423.69	80.11	343.58	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/26/21	423.69	80.11	343.58	0.00	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	423.69	80.78	342.91	0.67	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/1/22	423.69	80.32	343.37	-0.46	100 U	66.7 U	**101 J**	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	423.69	79.44	344.25	-0.88	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/11/23	423.69	80.29	343.40	0.85	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	423.69	79.48	344.21	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
	Cleanup Levels [1]					*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
MW-19	12/3/18	424.20	80.80	343.40	--	**18,000 J**	**3,100**	**110 J**	**300**	**160**	**740**	**630**	**390**
	6/27/19	424.20	80.50	343.70	-0.30	**3,200**	**930**	98 U	**160**	**23**	**180**	**260**	**110 J**
	12/10/19	424.20	80.72	343.48	0.22	**530**	**320**	93 U	**27**	4.1 U	**14**	**56**	**18**
	6/24/20	424.20	80.27	343.93	-0.45	100 U	**110**	**110 J**	**6.0**	0.39 U	**0.57 J**	**2.9 J**	**4.6 J**
	12/16/20	424.20	80.65	343.55	0.38	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/26/21	424.20	80.61	343.59	-0.04	**51.2 J**	**147 J**	83.3 U	1.00 U	0.278 U	0.137 U	3.00 U	**1.56 J**
	10/25/21	424.20	81.31	342.89	0.70	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/1/22	424.20	80.92	343.28	-0.39	100 U	66.7 U	**97.8 J**	0.0941 U	0.278 U	0.137 U	0.17 U	1.00 U
	4/26/23	424.20	79.96	344.24	-0.96	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/11/23	424.20	80.81	343.39	0.85	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/12/24	424.20	80.01	344.19	0.80	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-20	12/12/19	426.52	82.84	343.68	--	100 U	**77 J**	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/22/20	426.52	82.68	343.84	-0.16	100 U	70 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/16/20	426.52	82.93	343.59	0.25	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	5/26/21	426.52	82.94	343.58	0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	426.52	83.60	342.92	0.66	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/1/22	426.52	83.26	343.26	-0.34	100 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/26/23	426.52	83.43	343.09	0.17	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/11/23	426.52	83.13	343.39	-0.30	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	426.52	82.33	344.19	0.80	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-21	12/12/19	426.16	82.65	343.51	--	100 U	67 U	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/22/20	426.16	82.42	343.74	-0.23	100 U	72 U	**110 J**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	426.16	82.70	343.46	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	3.0 U	0.93 U
	5/26/21	426.16	82.66	343.50	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	426.16	83.33	342.83	0.67	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	426.16	83.07	343.09	-0.26	100 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	426.16	82.00	344.16	-1.07	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/12/23	426.16	82.84	343.32	0.84	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	426.16	82.06	344.10	0.78	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-22	12/11/19	420.45	77.00	343.45	--	100 U	64 U	94 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/23/20	420.45	76.76	343.69	-0.24	100 U	66 U	97 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	420.45	77.04	343.41	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	3.0 U	0.93 U
	5/26/21	420.45	77.00	343.45	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	420.45	77.64	342.81	0.64	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/2/22	420.45	77.29	343.16	-0.35	100 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/25/23	420.45	76.34	344.11	-0.95	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/13/23	420.45	77.20	343.25	0.86	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	420.45	76.39	344.06	0.81	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-23	12/11/19	421.74	78.30	343.44	--	100 U	61 U	90 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	6/23/20	421.74	77.94	343.80	-0.36	100 U	71 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12/15/20	421.74	78.26	343.48	0.32	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U
	5/26/21	421.74	78.30	343.44	0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ
	10/25/21	421.74	78.93	342.81	0.63	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	11/3/22	421.74	78.53	343.21	-0.40	100 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U
	4/24/23	421.74	77.62	344.12	-0.91	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10/12/23	421.74	78.44	343.30	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	3/14/24	421.74	77.70	344.04	0.74	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U

Table B1. Groundwater Elevations and Analytical Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	Indicator Hazardous Substances (IHSs)							
						TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
				Cleanup Levels [1]		*800/1,000*	*500*	*500*	*5*	*1,000*	*700*	*1,000*	*160*
	Units:	*ft NAVD29* [2]	*ft btoc*	*ft NAVD29* [2]	*ft*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Tidewater Wells													
AR-11	6/25/19	422.62	78.84	343.78	--	--	--	--	--	--	--	--	--
	12/9/19	422.62	78.96	343.66	0.12	--	--	--	--	--	--	--	--
	6/22/20	422.62	78.63	343.99	-0.33	--	--	--	--	--	--	--	--
	12/15/20	422.62	79.01	343.61	0.38	--	--	--	--	--	--	--	--
	5/24/21	422.62	78.98	343.64	-0.03	--	--	--	--	--	--	--	--
	10/25/21	422.62	79.62	343.00	0.64	--	--	--	--	--	--	--	--
	10/31/22	422.62	79.18	343.44	-0.44	--	--	--	--	--	--	--	--
	4/24/23	422.62	78.28	344.34	-0.90	--	--	--	--	--	--	--	--
	10/9/23	422.62	79.15	343.47	0.87	--	--	--	--	--	--	--	--
	3/11/24	422.62	78.35	344.27	0.80	--	--	--	--	--	--	--	--
TMW-05	6/25/19	425.02	81.29	343.73	--	--	--	--	--	--	--	--	--
	12/9/19	425.02	81.40	343.62	0.11	--	--	--	--	--	--	--	--
	6/22/20	425.02	81.07	343.95	-0.33	--	--	--	--	--	--	--	--
	12/15/20	425.02	81.46	343.56	0.39	--	--	--	--	--	--	--	--
	5/24/21	425.02	81.41	343.61	-0.05	--	--	--	--	--	--	--	--
	10/25/21	425.02	82.06	342.96	0.65	--	--	--	--	--	--	--	--
	10/31/22	425.02	81.63	343.39	-0.43	--	--	--	--	--	--	--	--
	4/24/23	425.02	80.73	344.29	-0.90	--	--	--	--	--	--	--	--
	10/9/23	425.02	81.60	343.42	0.87	--	--	--	--	--	--	--	--
	3/11/24	425.02	80.81	344.21	0.79	--	--	--	--	--	--	--	--

Notes:

Values in **bold** were reported as detected

= Yellow shaded detections exceed the cleanup level

-- = not analyzed or sample not collected

(1) The Cleanup Levels are included in Table 1 of the *Compliance Monitoring Plan* (AECOM, 2023).

(2) On February 7, 2019, the wells were resurveyed by Stratton Surveying and Mapping, P.C. MW-20 through MW-23 were surveyed on December 10, 2019. Horizontal datum = Washington State Plane South Zone North American Datum 1983(1991). Vertical datum = North American Vertical Datum 29.

Acronyms:

µg/L = microgram per liter

btoc = below top of casing

ft = feet

GW = groundwater

J = estimated concentration

NAVD29 = North American Vertical Datum of 1929

TOC = top of casing

TPH = total petroleum hydrocarbon

TPH-g = gasoline range hydrocarbons (as analyzed by Northwest Method NWPTH-Gx)

TPH-d = diesel range hydrocarbons (as analyzed by Northwest Method NWTPH-Dx)

TPH-o = motor oil range hydrocarbons (as analyzed by Northwest Method NWTPH-Dx)

U = analyte not detected above limit shown. With data collected from September 2018 to April 2023, the limit shown is the method detection limit; then starting in April 2023, the limit shown is the method reporting limit in compliance with the *Compliance Monitoring Plan* (AECOM, 2023).

UJ = analyte not detected above laboratory report limit; reporting limit estimated.

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-02	5/29/14	7.16	1,215	2.49	17.58	146.3	**1.16**	**13.8**	**100**	**537**	0.0050 U	0.0010 U
	10/29/14	6.85	1,578	1.07	17.51	91.6	**1.33**	**2.6**	**140**	**730**	**0.011**	0.0010 U
	6/4/15	6.84	1,018	2.21	17.97	-66.6	**0.53**	0.3 U	**107**	**558**	0.0050 U	0.0010 U
	9/28/15	6.91	1,467	1.77	17.60	-7.0	--	**1.7**	**167**	**711**	0.0050 U	**0.0242**
	8/29/16	7.38	1,400	1.74	19.89	94	--	--	**110**	--	0.020 U	0.0050 U
	12/5/16	6.63	1,050	6.16	15.80	282	--	--	**89**	**400**	--	0.0050 U
	10/24/17	7.34	1,270	8.93	17.58	112	0.02 U	**9.70**	**110**	**350**	0.020 U	**0.0083**
	6/14/18	6.84	1,160	3.40	22.39	178	**0.96**	**11.0**	**110**	**400**	0.020 U	0.0050 U
	12/2/18	7.54	1,680	4.81	13.55	206	**0.15**	**10.8**	**92**	**680**	0.0017 U	**0.022**
	6/26/19	6.93	1,400	IE	17.80	115	**0.12**	**17.9**	**120**	**560**	**0.0066 J**	**0.0017** U
	12/11/19	7.00	1,540	1.55	13.57	120	0.02 U	**16.8**	**110**	**530**	0.0017 U	0.0050 U
	6/24/20	6.91	1,420	2.27	29.34	97	**0.02**	**12.7**	**110**	**560**	0.0017 U	0.0050 U
	12/15/20	7.72	1,319	2.37	15.25	109.4	**0.82**	**5.4**	**100**	**540**	**0.0022 J**	0.0050 U
	5/25/21	7.45	1,450	3.05	21.30	87	**0.02**	**11.4**	**97.9**	**692**	**0.0018 J**	0.00291 U
	10/26/21	7.31	1,180	0.00	17.79	133	0.02 U	**3.3**	**98.6**	**430**	0.000855 U	0.00291 U
	11/3/22	8.22	1,380	0.18	15.60	74	0.02 U	**>30.0**	**97.9**	**509**	**0.00190 J**	0.00291 U
	4/26/23	7.00	1,379	3.24	16.26	183.9	0.02 U	**14.6**	**86.4**	**541 J**	0.0100 U	0.0100 U
	10/12/23	7.35	1,460	3.68	15.72	155	0.01	**11.2**	**88.3 J**	**671 J**	0.0100 U	0.0100 U
	3/12/24	7.23	1,116	4.65	15.90	104	0.02 U	**10.9**	**79.1 J**	**488 J**	0.0100 U	0.0100 U
MW-03	5/28/14	7.15	1,053	--	18.12	-105.6	--	--	--	--	--	--
	10/30/14	6.91	1,136	0.84	17.28	-144.7	--	--	--	--	--	--
	6/4/15	6.82	1,353	0.95	18.61	-154.0	--	--	--	--	--	--
	9/29/15	6.82	1,174	1.01	17.51	-174.4	--	--	--	--	--	--
	8/30/16	7.13	1,190	2.42	18.13	-153.0	--	--	--	--	--	--
	12/2/16	6.86	963	3.24	16.06	36	--	--	--	--	--	--
	5/16/17	7.27	996	0.82	17.01	-37	--	--	--	--	--	--
	10/25/17	7.41	1,200	4.01	17.58	-105	--	--	--	--	--	--
	6/14/18	6.70	1,030	2.75	19.46	42	--	--	--	--	--	--
	12/4/18	7.56	1,280	8.82	16.31	-65	--	--	**29**	**520**	**0.96**	**1.7**
	6/26/19	6.99	1,030	IE	18.20	-120	**1.71**	**2.7**	**32**	**470**	**0.80**	**2.1**
	12/11/19	7.22	1,310	0.83	14.47	-192	**1.28**	**1.3**	**63**	**450 J**	**0.81**	**0.50**
	6/24/20	7.02	1,220	0.96	22.25	-100	**1.90**	**1.9**	**61**	**450**	**0.66**	**0.063**
	12/16/20	7.60	1,274	1.30	16.10	-94.2	**1.11**	0.3 U	**49**	**500**	**0.77**	**1.1**
	5/27/21	7.09	1,410	0.00	17.02	-93	**1.27**	**1.5**	**37.7**	**557**	**0.719**	**1.92**
	10/25/21	7.07	1,350	1.05	16.79	-88	**2.72**	**2.9**	**27.5**	**648**	**0.862**	**2.74**
	11/2/22	7.20	1,190	0.00	15.67	-98	**2.79**	**0.7**	**45.2**	**544**	**0.697**	**0.869**
	4/25/23	7.34	1,367	0.49	16.06	-150.2	**0.66**	0.3 U	**71.2**	**455 J**	**0.580**	**0.336**
	10/11/23	7.3	1,310	2.56	16.84	-123	**2.78**	**3.7**	**27.9**	**595 J**	**0.734**	**2.07**
	3/12/24	7.08	1,037	0.54	15.60	-66	**1.32**	0.3 U	**52.7**	**479 J**	**0.644**	**1.38**

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-04	5/28/14	7.68	728	--	17.78	82.2	--	--	--	--	--	--
	10/28/14	7.38	741	7.75	16.90	36.0	--	--	--	--	--	--
	6/3/15	7.40	751	8.28	17.76	-23.6	--	--	--	--	--	--
	9/28/15	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	8.36	813	7.34	18.32	59	--	--	--	--	--	--
	12/5/16	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	7.99	861	7.78	17.9	-27	--	--	--	--	--	--
	6/13/18	7.49	813	7.56	20.99	161	--	--	--	--	--	--
	6/26/19	7.40	962	6.62	19.15	150	--	--	--	--	--	--
	6/23/20	7.57	1,050	9.28	19.38	84	--	--	--	--	--	**0.00099 J**
	5/25/21	7.60	1,120	7.74	17.46	165	--	--	--	--	--	--
	4/25/23	7.77	1,027	8.27	16.12	27.4	0.02 U	9.6	115	190 **J**	0.010 U	0.01 U
	10/13/23	7.59	948	6.50	15.99	171	**0.02**	**28.6**	**109**	**195 J**	0.0100 U	0.0100 U
	3/14/24	7.76	909	8.29	15.9	156	**0.02**	**34.3**	**107**	**189 J**	0.0100 U	0.0100 U
MW-06	5/29/14	7.93	950	8.78	15.40	127.1	0.02 U	**18.5**	**110**	**252**	0.0050 U	0.0010 U
	10/29/14	7.43	817	6.79	19.45	84.7	**0.40**	0.3 U	**100**	**185**	0.0050 U	0.0010 U
	6/3/15	7.53	744	8.59	17.18	-44.8	0.02 U	0.3 U	**107**	**169**	0.0050 U	**0.00168**
	9/28/15	7.53	812	6.76	19.23	-8.5	--	**15.7**	**108**	**189**	0.0050 U	0.0010 U
	8/30/16	8.30	836	7.39	18.88	110	--	--	**100**	--	0.020 U	0.0050 U
	12/5/16	6.83	851	6.84	14.54	207	--	--	**93**	**170**	0.020 U	0.0050 U
	5/16/17	8.06	824	7.89	14.65	66	--	--	**96**	**150**	0.020 U	**0.0085**
	10/23/17	7.61	863	9.32	19.68	186	0.02 U	0.3 U	**98**	**180**	0.020 U	0.0050 U
	6/11/18	7.38	828	8.38	20.69	156	0.02 U	**8.09**	**96 J**	**150**	0.020 U	0.0050 U
	12/2/18	7.98	963	7.86	18.65	241	0.02 U	**>30.0**	**100**	**170**	**0.0021 J**	0.0017 U
	6/26/19	7.54	831	IE	17.70	121	0.02 U	**14.7**	**100**	**140**	0.0050 U	0.0017 U
	12/10/19	7.69	1,070	9.47	14.60	10	0.02 U	**9.2**	**110**	**160**	0.0017 U	0.0010 U
	6/23/20	7.55	1,080	9.05	19.09	103	**0.11**	**8.1**	**110**	**160**	0.0017 U	0.00050 U
	12/16/20	7.88	2,036	8.38	16.20	92	0.02 U	**17.4**	**110**	**150**	0.0017 U	0.00050 U
	5/24/21	7.60	1,190	5.53	20.50	102	0.02 U	**18.3**	**107**	**164**	0.000855 U	**0.0133**
	10/26/21	7.60	1,120	0.00	18.59	174	**0.47**	**7.8**	**119**	**179**	0.000855 U	0.00291 U
	11/2/22	8.40	984	7.99	17.31	105	**0.11**	**5.5**	**119**	**348**	**0.0487**	**0.0200**
	4/25/23	7.58	1,137	10.04	15.12	148.4	0.02 U	**8.2**	**110**	**154 J**	0.0100 U	0.0100 U
	10/10/23	7.07	1,100	7.68	18.55	276	0.02 U	**3.3**	**109**	**175 J**	0.0100 U	0.0100 U
	3/13/24	7.55	841	8.45	13.70	140.6	0.02 U	0.3 U	**112**	**162 J**	0.0100 U	0.0100 U

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-07	5/28/14	7.63	775	--	18.48	101.7	--	--	--	--	--	--
	10/29/14	7.48	773	7.43	16.81	84.1	--	--	--	--	--	--
	6/3/15	7.10	843	6.78	18.03	-1.8	--	--	--	--	--	--
	9/28/15	7.10	798	7.40	17.31	-6.4	--	**6.0**	**103**	**203**	**0.0086**	0.0010 U
	8/30/16	7.96	964	6.92	19.01	94	--	--	--	--	--	--
	12/5/16	7.06	839	7.90	15.85	165	--	--	--	--	--	--
	5/15/17	7.62	863	6.10	17.30	35	--	--	--	--	--	--
	10/24/17	7.83	918	7.73	17.67	145	--	--	--	--	--	--
	6/13/18	7.25	837	6.58	22.15	182	--	--	--	--	--	--
	12/4/18	8.02	976	8.26	13.19	173	--	--	--	--	--	--
	6/26/19	7.42	1,190	4.35	21.12	166	--	--	--	--	--	--
	12/11/19	7.36	1,050	5.38	14.10	107	--	--	--	--	--	--
	6/23/20	7.31	1,030	8.37	21.48	94	--	--	--	--	--	--
	12/14/20	7.66	979	8.02	15.20	132	--	--	--	--	--	--
	5/25/21	7.40	1,200	6.20	16.48	180	--	--	--	--	--	--
	10/27/21	7.61	1,050	0.47	17.21	186	--	--	--	--	--	--
	11/2/22	7.48	912	4.98	15.50	179	--	--	--	--	--	--
	4/25/23	7.66	1,055	8.00	16.67	67.1	0.02 U	8.0	116	199 **J**	0.0100 U	0.0100 U
	10/10/23	7.77	970	0.58	16.89	133	**0.05**	**23.5**	**110**	**203 J**	0.0100 U	0.0100 U
	3/13/24	7.66	926	8.05	16.60	116.1	0.02 U	**28.6**	**109**	**197 J**	0.0100 U	0.0100 U
MW-08	5/28/14	7.70	755	--	17.50	89.5	**0.59**	**16.8**	**110**	**242**	0.0050 U	0.0010 U
	10/29/14	7.37	774	7.05	17.34	75.3	0.02 U	**18.4**	**100**	**190**	0.0072 U	0.0010 U
	6/3/15	7.39	778	7.38	17.90	-42.7	0.02 U	**16.7**	**108**	**185**	0.0050 U	0.0010 U
	9/28/15	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	7.72	843	5.29	19.46	143	--	--	**100**	--	0.020 U	0.0050 U
	12/5/16	--	--	--	--	--	--	--	--	--	--	--
	5/17/17	7.88	869	5.68	17.96	28	--	--	**100**	**170**	0.020 U	0.0050 U
	6/11/18	7.28	866	7.46	19.77	175	0.02 U	**>30.0**	**120**	**180**	0.020 U	0.0050 U
	6/26/19	7.58	848	IE	18.29	116	--	--	--	--	--	--
	6/23/20	7.46	925	5.11	25.04	107	0.02 U	**15.9**	**130**	**180**	0.0017 U	**0.00062 J**
	5/26/21	7.56	1,140	7.16	17.73	153	0.02 U	**>30.0**	--	--	--	--
	4/25/23	7.52	1,044	8.54	16.77	110.8	0.02 U	**15**	117	195 **J**	0.01 U	0.0100 U
	10/11/23	7.88	969	2.77	17.09	156	**0.02**	**24.3**	**110**	**200 J**	0.0100 U	0.0100 U
	3/13/24	7.50	803	7.39	15.8	148.8	0.02 U	**0.3**	**118**	**196 J**	0.0100 U	0.0100 U

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	µ*S/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-10	5/28/14	7.65	764	--	17.91	137.6	--	--	--	--	--	--
	10/29/14	7.40	769	7.45	17.02	80.6	--	--	--	--	--	--
	6/3/15	7.29	780	7.32	17.90	-34.4	--	--	--	--	--	--
	9/28/15	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	8.28	831	5.40	18.26	100	--	--	--	--	--	--
	12/5/16	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	7.39	888	6.24	17.41	29	--	--	--	--	--	--
	6/13/18	7.35	730	4.96	28.26	178	--	--	--	--	--	--
	6/26/19	7.60	1,010	6.38	18.25	155	--	--	--	--	--	--
	6/23/20	7.40	1,040	7.45	20.04	91	--	--	--	--	--	--
	5/25/21	7.71	1,040	6.67	16.54	100	--	**--**	**--**	**--**	--	--
	4/25/23	7.53	1,055	7.91	16.43	86.3	0.02 U	**9.6**	**117**	**200 J**	0.0100 U	0.0100 U
	10/10/23	7.7	974	0.19	15.95	121	**0.04**	**26.3**	**110**	**193 J**	0.0100 U	0.0100 U
	3/13/24	7.69	929	8.06	16.2	133.9	0.02 U	**20.9**	**112**	**194 J**	0.0100 U	0.0100 U
MW-11	5/29/14	7.20	889	1.08	19.27	102.7	--	--	--	--	--	--
	10/30/14	6.96	932	1.12	18.47	89.0	--	--	--	--	--	--
	6/4/15	6.89	916	0.94	18.97	-49.8	--	--	--	--	--	--
	9/29/15	6.89	914	0.89	18.40	-15.4	--	--	--	--	--	--
	8/29/16	7.32	952	2.67	19.99	148	--	--	--	--	--	--
	12/5/16	6.70	933	1.73	17.14	204	--	--	--	--	--	--
	5/16/17	7.44	949	4.79	17.41	46	--	--	--	--	--	--
	10/25/17	7.37	1,040	7.49	18.57	154	--	--	--	--	--	--
	6/14/18	6.71	956	3.35	21.77	198	--	--	--	--	--	--
	12/2/18	7.48	1,140	5.47	15.49	231	--	--	--	--	--	--
	6/27/19	6.98	1,290	1.70	17.37	213	--	--	--	--	--	--
	12/11/19	7.21	1,100	2.97	15.90	34	--	--	--	--	--	--
	6/24/20	6.95	1,380	0.00	20.84	83	--	--	--	--	--	--
	12/15/20	7.43	1,154	2.73	15.93	133.1	--	--	--	--	--	--
	5/25/21	7.23	1,120	1.77	18.78	122	--	**--**	**--**	**--**	--	--
	10/27/21	7.13	1,070	0.00	17.33	189	--	--	--	--	--	--
	11/2/22	6.94	952	0.43	16.08	167	--	--	--	--	--	--
	4/26/23	6.89	1,079	5.08	16.65	196.1	0.02 U	16.5	109	261 **J**	0.0731	0.0100 U
	10/12/23	7.33	1,050	3.52	17.43	174	0.03	**19.6**	**98.9**	**298 J**	**0.113**	0.0100 U
	3/12/24	6.81	890	3.17	15.90	134.5	0.02 U	0.3 U	**103**	**298 J**	**0.0975**	0.0100 U

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	µ*S/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-12	5/29/14	7.22	993	1.81	19.82	-27.5	--	**9.2**	**110**	**309**	**0.270**	**0.0142**
	10/30/14	6.82	1,135	2.55	16.73	-50.6	**4.68**	0.3 U	**110**	**350**	**0.280**	**0.0870**
	6/4/15	6.82	1,017	2.17	18.40	-74.5	**0.34**	**10.4**	**113**	**312**	**0.201**	0.0010 U
	9/29/15	6.82	1,124	1.15	16.49	-63.7	--	**7.0**	**107**	**367**	**0.252**	**0.0362**
	8/29/16	7.45	1,290	1.10	19.42	-10	--	--	**83**	--	**0.25**	**0.760**
	12/6/16	6.80	993	3.22	14.52	121	--	--	--	**270**	**0.19**	**0.063**
	5/16/17	7.96	965	3.93	15.97	36	--	--	**100**	**240**	**0.16**	**0.012**
	10/24/17	7.50	1,100	3.39	17.70	49	0.02 U	**10.5**	**98.0**	**270**	**0.19**	**0.090**
	6/14/18	6.57	1,120	1.95	18.69	212	0.02 U	**23.8**	**120**	**290**	**0.043**	0.0050 U
	12/3/18	7.57	1,360	5.67	13.71	176	0.02 U	**16.4**	**130**	**370**	**0.074**	0.0017 U
	6/27/19	6.97	1,110	IE	15.90	164	**0.09**	**4.7**	**120 J**	**340**	**0.10**	**0.026**
	12/11/19	7.29	1,300	3.22	12.59	15	0.02 U	**7.0**	**140**	**290 J**	**0.076**	**0.0015 J**
	6/24/20	6.76	1,410	0.00	22.66	114	**0.11**	**4.3**	**140**	**430**	**0.12**	**0.0064**
	12/16/20	7.59	1,273	3.16	15.10	121.4	0.02 U	**7.2**	**140**	**360**	**0.14**	**0.0037**
	5/27/21	7.44	1,440	0.19	16.49	141	**0.06**	**12.4**	**114**	**513**	0.0963	0.0386
	10/27/21	7.26	1,310	0.00	16.54	189	**0.16**	**0.5**	**123**	**365**	0.000855 U	**0.0190**
	11/2/22	7.06	1,080	1.33	14.93	196	**0.02**	**0.8**	**122**	**179**	0.000934 U	0.0029 U
	4/26/23	7.10	1,193	3.69	15.73	174.9	0.02 U	**4.5**	**113**	**321 J**	0.0559	0.0100 U
	10/12/23	7.13	1,440	0.98	16.69	270	0.02 U	0.3 U	**96.2**	**507 J**	**0.0357**	0.0100 U
	3/12/24	7.05	977	2.38	15.00	79.9	0.02 U	0.3 U	**108 J**	**387 J**	**0.0859**	0.0100 U
MW-14	5/29/14	7.53	795	5.70	17.69	101.4	--	--	--	--	--	--
	10/29/14	7.23	805	5.65	17.81	105.4	--	--	--	--	--	--
	6/4/15	7.39	784	6.22	17.02	-46.6	--	--	--	--	--	--
	8/29/16	7.71	877	5.19	18.76	120	--	--	--	--	--	--
	12/5/16	6.97	855	6.29	15.43	178	--	--	--	--	--	--
	5/17/17	7.71	923	3.02	17.44	46	--	--	--	--	--	--
	10/24/17	7.70	932	6.18	17.69	144	--	--	--	--	--	--
	12/2/18	7.87	1,010	7.32	15.75	222	--	--	--	--	--	--
	6/27/19	7.54	1,180	3.44	16.30	160	--	--	--	--	--	--
	12/11/19	7.21	1,020	4.27	14.38	107	--	--	--	--	--	--
	6/24/20	7.24	1,060	4.61	20.61	116	--	--	--	--	--	--
	12/15/20	7.90	1,032	7.28	16.10	111.3	--	--	--	--	--	--
	5/25/21	7.58	1,090	5.21	17.23	83	--	**--**	**--**	**--**	--	--
	10/26/21	7.51	1,060	0.00	17.20	184	--	--	--	--	--	--
	11/3/22	8.43	916	4.26	15.50	110	--	--	--	--	--	--
	4/26/23	7.29	1,052	7.96	16.24	202.3	0.02 U	18.6	119	207 J	0.01 U	0.01 U
	10/12/23	7.36	1,030	5.94	16.72	278	**0.1**	**13**	**113**	**226 J**	0.0100 U	0.0100 U
	3/12/24	7.53	953	6.97	15.20	158	**0.06**	**6.9**	**113**	**209 J**	0.0100 U	0.0100 U

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Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-15	12/3/18	8.02	950	6.16	16.03	178	--	--	--	--	--	--
	6/26/19	7.60	990	4.44	18.75	168	--	--	--	--	--	--
	12/10/19	7.37	1,070	4.99	12.99	63	--	--	--	--	--	--
	6/23/20	7.38	904	4.46	27.69	108	--	--	--	--	--	--
	12/14/20	7.92	1,017	6.74	15.00	92.8	--	--	--	--	--	--
	5/25/21	7.51	1,180	5.92	16.67	170	--	--	--	--	--	--
	10/25/21	7.52	1,040	0.00	19.38	171	--	--	--	--	--	--
	11/2/22	8.36	914	5.54	16.82	91	--	--	--	--	--	--
	4/25/23	7.38	1,052	7.52	15.95	166.7	0.02 U	8.6	119	204 J	0.01 U	0.01 U
	10/10/23	7.01	998	5.16	17.52	302	0.02 U	0.3 U	**109**	**218 J**	0.0100 U	0.0100 U
	3/13/24	7.41	807	6.29	15.60	132.3	0.02 U	**0.5**	**113**	**206 J**	0.0100 U	0.0100 U
MW-16	12/3/18	8.04	949	6.37	16.40	186	--	--	--	--	--	--
	6/2/19	7.58	1,020	4.48	18.08	166	--	--	--	--	--	--
	12/10/19	7.62	1,010	6.11	15.28	-73	0.02 U	**8.4**	**120**	**190 J**	0.0017 U	**0.0029**
	6/22/20	7.18	1,040	4.09	22.10	80	**0.03**	**15.7**	**130**	**180**	0.0017 U	0.00050 U
	12/16/20	7.99	1,026	6.62	16.20	69.3	0.02 U	**17.1**	**130**	**190**	0.0017 U	0.00050 U
	5/25/21	7.46	1,150	4.56	18.87	151	0.02 U	**26.9**	**124**	**200**	**0.00120 J**	0.00291 U
	10/26/21	7.57	1,040	0.00	16.93	173	**0.60**	**6.8**	**126**	**206**	0.000855 U	0.00291 U
	11/2/22	8.42	911	3.62	15.07	94	**0.05**	**>30.0**	**121**	**204**	0.000934 U	0.00291 U
	4/25/23	7.46	1,051	7.29	16.49	161.1	0.02 U	**19.6**	**117**	**205 J**	0.0100 U	0.0100 U
	10/11/23	7.61	1,000	6.26	16.56	270	0.02 U	**1**	**109 J**	**215 J**	0.0100 U	0.0100 U
	3/13/24	7.4	812	6.35	15.80	143	0.02 U	**1.2**	**117**	**204 J**	0.0100 U	0.0100 U
MW-17	12/3/18	7.46	1,770	5.47	13.77	139	--	--	--	--	--	--
	6/27/19	7.11	1,630	2.78	15.82	185	--	--	--	--	--	--
	12/11/19	6.91	1,540	2.96	13.84	118	--	--	--	--	--	--
	6/24/20	7.18	1,330	9.1	18.86	100	--	--	--	--	--	--
	12/15/20	7.38	1,259	6.94	14.10	107	--	--	--	--	--	--
	5/25/21	7.25	1,270	8.75	16.72	118	--	--	--	--	--	--
	10/26/21	7.28	1,340	0.00	17.01	195	--	--	--	--	--	--
	11/3/22	7.15	1,170	2.54	14.63	185	--	--	--	--	--	--
	4/26/23	7.29	1,316	6.12	15.97	112.4	0.02 U	12.3	146	272 J	0.01 U	0.01 U
	10/12/23	7.23	1,200	4.63	16.23	153	0.02 U	**27.3**	**130**	**317 J**	0.0100 U	0.0100 U
	3/13/24	7.30	1,097	6.56	14.50	170	**0.03**	**20.4**	**131**	**273 J**	0.0100 U	0.0100 U
MW-18	12/4/18	7.95	1,060	7.62	11.93	101	--	--	--	--	--	--
	6/26/19	7.12	1,100	IE	18.79	126	**0.12**	**23.4**	**150 J**	**220**	0.0050 U	0.0017 U
	12/12/19	7.42	1,490	7.25	14.20	46	0.02 U	**15.2**	**170**	**240**	0.0017 U	**0.0043**
	6/22/20	7.10	1,280	7.1	19.54	119	0.02 U	**10.7**	**160**	**210**	0.0017 U	0.00050 U
	12/15/20	7.53	1,049	8.10	15.50	109	0.02 U	**16.5**	**150**	**220**	0.0017 U	0.00050 U
	5/26/21	7.33	1,210	6.42	17.10	211	**0.02**	**23.6**	**131**	**214**	0.000855 U	0.00291 U
	10/26/21	7.44	1,060	4.06	16.62	145	**0.28**	**25.1**	**136**	**220**	0.000855 U	0.00291 U
	11/1/202	7.31	946	9.21	15.90	224	0.02 U	**5.5**	**130**	**210**	0.000934 U	0.00291 U
	4/26/23	7.43	1,118	8.40	16.81	122.7	0.02 U	**6.2**	**123**	**221 J**	0.010000 U	0.01000 U
	10/11/23	7.35	1,140	7.9	17.07	320	**0.09**	**8.2**	**119**	**242 J**	0.0100 U	0.0100 U
	3/14/24	7.33	829	8.12	16.10	177	0.02 U	**2.2**	**112**	**219 J**	0.0100 U	0.0100 U

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	*µS/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-19	12/3/18	7.44	2,040	4.76	13.11	-75	--	--	--	--	--	--
	6/27/19	7.27	1,050	IE	16.62	-121	**1.37**	**13.8**	**120**	**240**	**0.14**	**1.3**
	12/10/19	7.32	1,200	7.16	16.44	-134	**0.14**	**14.0**	**150**	**220**	**0.079**	**0.27**
	6/24/20	7.26	1,190	7.06	18.80	48	**0.02**	**13.8**	**140**	**200**	**0.028**	**0.12**
	12/16/20	7.64	1,985	6.41	15.80	103	0.02 U	**16.1**	**140**	**200**	**0.0021 J**	0.00050 U
	5/26/21	7.29	1,200	3.12	17.73	88	0.02 U	**20.0**	**115**	**255**	**0.0248**	**0.0724**
	10/27/21	7.47	1,050	0.00	17.24	183	--	**15.7**	**123**	**219**	**0.00121 J**	0.00291 U
	11/1/22	8.22	928	4.54	15.53	140	**0.32**	**5.5**	**123**	**215**	**0.00112 J**	0.00291 U
	4/26/23	7.52	1,084	6.41	16.08	92.7	0.02 U	**9.0**	**112**	**228 J**	0.01000 U	0.01000 U
	10/11/23	7.27	1,040	5.23	16.66	294	**0.09**	**8.3**	**102**	**259 J**	0.0100 U	0.0100 U
	3/12/24	7.45	966	5.85	14.80	144.3	**0.03**	**22.8**	**107**	**245 J**	0.0100 U	0.0100 U
MW-20	12/12/19	7.89	993	6.36	15.70	7	0.02 U	**21.5**	**130**	**170 J**	**0.012 J**	0.00050 U
	6/22/20	7.53	1,010	7.95	20.41	93	**0.08**	**9.8**	**130**	**170**	0.0017 U	**0.00075 J**
	12/16/20	7.91	1,905	8.04	15.70	89	**0.02**	**5.7**	**140**	**160**	**0.0019 J**	0.00050 U
	5/26/21	7.29	1,200	3.12	17.54	179	0.02 U	**>30.0**	**124**	**185**	0.000855 U	0.00291 U
	10/26/21	7.69	978	4.01	14.95	131	0.02 U	**>30.0**	**129**	**181**	0.000855 U	0.00291 U
	11/1/22	7.56	889	6.83	15.88	214	**0.06**	**5.5**	**127**	**185**	0.000934 U	0.00291 U
	4/26/23	7.57	1,061	8.39	16.90	126.5	0.02 U	**11.6**	**120**	**192 J**	0.010000 U	0.01000 U
	10/11/23	7.56	996	8.35	17.38	315	0.02 U	**8.1**	**114**	**188 J**	0.0100 U	0.0100 U
	3/14/24	7.58	800	8.00	15.70	142.8	0.02 U	**0.9**	**113**	**191 J**	0.0100 U	0.0100 U
MW-21	12/12/19	7.71	1,020	6.25	14.21	108	0.02 U	**20.2**	**130**	**170**	0.0017 U	0.00050 U
	6/22/20	7.54	1,070	7.27	18.57	78	**0.10**	**>30.0**	**130**	**160**	0.0017 U	0.00050 U
	12/15/20	7.85	1,974	8.12	14.90	103	0.02 U	**20.6**	**150**	**170**	0.0017 U	0.00050 U
	5/26/21	7.81	1,020	7.97	17.59	146	**0.08**	**12.4**	**124**	**189**	0.000855 U	0.00291 U
	10/27/21	7.63	967	3.81	16.37	182	**0.07**	**9.9**	**128**	**183**	0.000855 U	0.00291 U
	11/2/22	8.59	910	6.80	15.43	109	0.02 U	**>30.0**	**128**	**188**	0.001480 J	0.00291 U
	4/25/23	7.66	1.064	8.40	16.18	85.9	0.02 U	**7.4**	**116**	**195 J**	0.0100 U	0.0100 U
	10/12/23	7.44	1,010	8.09	16.08	315	0.02 U	**5.9**	**116**	**193 J**	0.0100 U	0.0100 U
	3/14/24	7,57	807	8.03	15.80	159.9	0.02 U	**0.9**	**111**	**192 J**	0.0100 U	0.0100 U
MW-22	12/11/19	7.50	1,050	5.69	14.61	102	**0.04**	**25**	**140**	**170 J**	0.0017 U	**0.00075 J**
	6/23/20	7.62	992	6.57	21.61	107	**0.09**	**7.4**	**130**	**170**	0.0017 U	0.00050 U
	12/15/20	7.85	1,978	8.17	15.80	92	0.02 U	**12.3**	**150**	**170**	0.0017 U	0.00050 U
	5/26/21	7.89	999	7.46	18.68	125	**0.25**	**27.7**	**127**	**189**	0.000855 U	0.00291 U
	10/27/21	7.76	1,030	0.78	16.90	179	**0.04**	**13.9**	**129**	**179**	0.000855 U	0.00291 U
	11/2/22	7.58	868	6.61	15.61	199	0.02 U	**5.5**	**124**	**187**	0.000934 U	0.00291 U
	4/25/23	7.76	1,006	9.06	16.19	87.1	0.02 U	**16.1**	**110**	**196 J**	0.010000 U	0.01000 U
	10/13/23	7.41	966	8.38	16.38	302	**0.09**	**5.4**	**108**	**194 J**	0.0100 U	0.0100 U
	3/14/24	7.76	908	8.29	16.10	145	0.02 U	**33.7**	**111**	**190 J**	0.0100 U	0.0100 U

Table B2. Field Parameters and Natural Attenuation Results - 2014-2024
Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Well ID	Sample Date	Field Parameters							Laboratory Analytical			
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane
	Units:	*su*	µ*S/cm*	*mg/L*	*deg C*	*mV*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
MW-23	12/11/19	7.75	1,020	5.90	15.06	12	0.02 U	**6.5**	**130**	**170**	**0.042**	0.00050 U
	6/24/20	7.56	1,100	8.01	17.51	84	**0.10**	**>30.0**	**130**	**180**	0.0017 U	0.00050 U
	12/15/20	8.11	1,062	8.33	16.60	116.1	**0.03**	**20.5**	**150**	**170**	0.0017 U	0.00050 U
	5/26/21	7.58	1,180	6.25	18.69	158	**0.07**	**28.0**	**129**	**186**	0.000855 U	0.00291 U
	10/27/21	7.70	1,060	0.80	17.14	183	0.02 U	**25.7**	**133**	**189**	0.000855 U	0.00291 U
	11/3/22	7.53	873	5.58	15.46	190	**0.02**	**5.0**	**124**	**190**	0.000934 U	0.00291 U
	4/24/23	7.62	1,019	8.69	16.51	46.4	0.02 U	**19.3**	**110**	**196 J**	0.010000 U	0.01000 U
	10/12/23	7.52	987	6.37	18.94	290	0.08	**8.0**	**109**	**197 J**	0.0100 U	0.0100 U
	3/14/24	7.73	905	7.88	16.50	128.7	0.02 U	**23.7**	**106**	**193 J**	0.0100 U	0.0100 U

Notes:
-- = not analyzed or sample not collected
Values in **bold** were reported as detected
'>X = analyte concentration greater than range of colorimeter

Acronyms:
deg C = degrees Celsius
IE = Instrument Error
J = estimated concentration
mg/L = milligrams per liter
µS/cm = microseimens per centimeter
mV = millivolts
ORP = Oxidation Reduction Potential
su = Standard Unit
U = analyte not detected above limit shown. With data collected from September 2018 to April 2023, the limit shown is the method detection limit; then starting in April 2023, the limit shown is the method reporting limit in compliance with the *Compliance Monitoring Plan* (AECOM, 2023).

ATTACHMENT C

Laboratory Report and Chain-of-Custody Form

ANALYTICAL REPORT

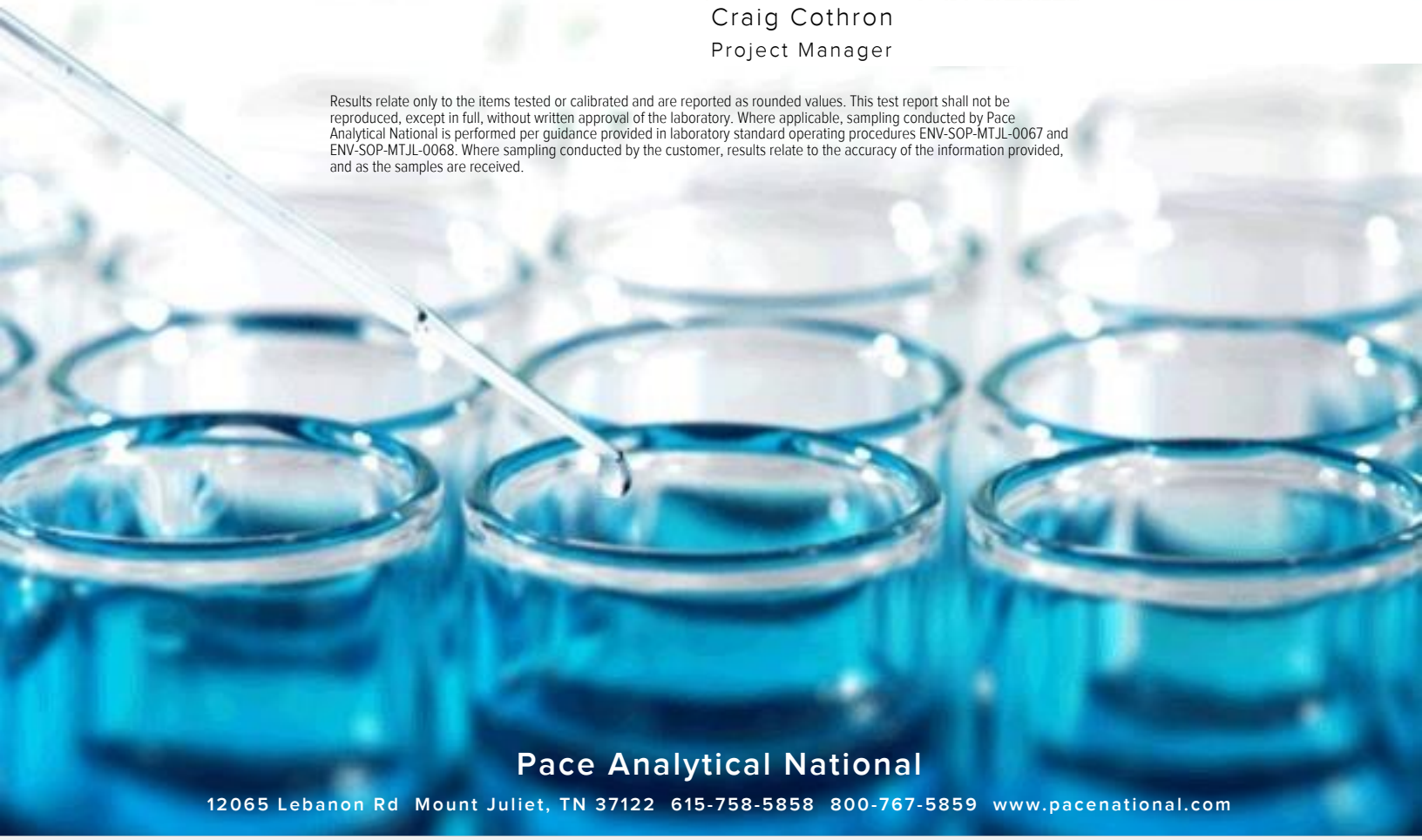
April 08, 2024

AECOM - Portland, OR

Sample Delivery Group:	L1716029
Samples Received:	03/16/2024
Project Number:	60722666
Description:	Marathon Pasco Terminal - 1SA 2024
Site:	55763995
Report To:	Ms. Nicky Moody 888 SW 5th Ave Suite 600 Portland, OR 97204

Entire Report Reviewed By:

Craig Cothron
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW-02-20240312 L1716029-01 GW

Collected by: Edeward L | Collected date/time: 03/12/24 16:13 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251037	1	03/21/24 15:11	03/21/24 15:11	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	1	03/25/24 19:58	03/25/24 19:58	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 11:45	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 04:22	03/20/24 04:22	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:31	03/19/24 14:31	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 15:34	03/20/24 15:34	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 15:48	MAA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/25/24 10:17	MAA	Mt. Juliet, TN

MW-03-20240312 L1716029-02 GW

Collected by: Edeward L | Collected date/time: 03/12/24 11:57 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251037	1	03/21/24 15:23	03/21/24 15:23	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	1	03/25/24 20:36	03/25/24 20:36	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 11:48	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 04:45	03/20/24 04:45	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:36	03/19/24 14:36	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 15:56	03/20/24 15:56	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 16:09	MAA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/25/24 10:37	MAA	Mt. Juliet, TN

MW-04-20240314 L1716029-03 GW

Collected by: Edeward L | Collected date/time: 03/14/24 13:09 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251037	1	03/21/24 15:27	03/21/24 15:27	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 20:49	03/25/24 20:49	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 11:50	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 05:08	03/20/24 05:08	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:41	03/19/24 14:41	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 16:39	03/19/24 16:39	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 16:29	MAA	Mt. Juliet, TN

MW-06-20240313 L1716029-04 GW

Collected by: Edeward L | Collected date/time: 03/13/24 09:10 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251037	1	03/21/24 15:34	03/21/24 15:34	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	1	03/25/24 21:02	03/25/24 21:02	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 11:53	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 05:30	03/20/24 05:30	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:43	03/19/24 14:43	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249594	1	03/22/24 23:00	03/22/24 23:00	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 16:50	MAA	Mt. Juliet, TN

MW-07-20240313 L1716029-05 GW

Collected by: Edeward L | Collected date/time: 03/13/24 14:56 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 16:34	03/21/24 16:34	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 21:41	03/25/24 21:41	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:01	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 05:53	03/20/24 05:53	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:46	03/19/24 14:46	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249594	1	03/22/24 23:23	03/22/24 23:23	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 17:10	MAA	Mt. Juliet, TN

MW-08-20240313 L1716029-06 GW

Collected by: Edeward L | Collected date/time: 03/13/24 14:15 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 16:47	03/21/24 16:47	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	1	03/25/24 21:54	03/25/24 21:54	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:04	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 06:16	03/20/24 06:16	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:49	03/19/24 14:49	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249594	1	03/22/24 23:46	03/22/24 23:46	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2250897	1	03/23/24 10:13	03/24/24 17:31	MAA	Mt. Juliet, TN

MW-10-20240313 L1716029-07 GW

Collected by: Edeward L | Collected date/time: 03/13/24 13:17 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 16:54	03/21/24 16:54	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 22:07	03/25/24 22:07	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:07	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 06:38	03/20/24 06:38	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:51	03/19/24 14:51	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249594	1	03/23/24 00:08	03/23/24 00:08	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 19:35	MAA	Mt. Juliet, TN

MW-11-20240312 L1716029-08 GW

Collected by: Edeward L | Collected date/time: 03/12/24 17:20 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:00	03/21/24 17:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 22:20	03/25/24 22:20	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:09	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 08:13	03/20/24 08:13	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:54	03/19/24 14:54	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 16:17	03/20/24 16:17	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/26/24 18:26	DMG	Mt. Juliet, TN

MW-12-20240312 L1716029-09 GW

Collected by: Edeward L | Collected date/time: 03/12/24 14:30 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:06	03/21/24 17:06	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 22:32	03/25/24 22:32	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 11:35	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 12:21	03/20/24 12:21	DSS	Mt. Juliet, TN

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

MW-12-20240312 L1716029-09 GW

Collected by: Edeward L | Collected date/time: 03/12/24 14:30 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 14:56	03/19/24 14:56	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 16:39	03/20/24 16:39	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/23/24 04:17	DMG	Mt. Juliet, TN

MW-14-20240312 L1716029-10 GW

Collected by: Edeward L | Collected date/time: 03/12/24 17:56 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:13	03/21/24 17:13	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 23:24	03/25/24 23:24	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:12	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2249934	1	03/20/24 08:36	03/20/24 08:36	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 15:02	03/19/24 15:02	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 17:00	03/20/24 17:00	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/23/24 05:17	DMG	Mt. Juliet, TN

MW-15-20240313 L1716029-11 GW

Collected by: Edeward L | Collected date/time: 03/13/24 10:31 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:20	03/21/24 17:20	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/25/24 23:37	03/25/24 23:37	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:15	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 12:43	03/20/24 12:43	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 15:08	03/19/24 15:08	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249594	1	03/23/24 00:31	03/23/24 00:31	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 19:55	MAA	Mt. Juliet, TN

MW-16-20240313 L1716029-12 GW

Collected by: Edeward L | Collected date/time: 03/13/24 14:25 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:38	03/21/24 17:38	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 00:16	03/26/24 00:16	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:17	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 13:04	03/20/24 13:04	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248427	1	03/19/24 15:10	03/19/24 15:10	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 17:01	03/19/24 17:01	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 20:14	MAA	Mt. Juliet, TN

MW-17-20240313 L1716029-13 GW

Collected by: Edeward L | Collected date/time: 03/13/24 09:27 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:45	03/21/24 17:45	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 00:30	03/26/24 00:30	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:20	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 13:26	03/20/24 13:26	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2248940	1	03/19/24 11:24	03/19/24 11:24	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 17:22	03/19/24 17:22	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/27/24 00:07	DMG	Mt. Juliet, TN

MW-18-20240314 L1716029-14 GW

Collected by: Edeward L | Collected date/time: 03/14/24 17:15 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 17:53	03/21/24 17:53	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 00:43	03/26/24 00:43	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:23	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 13:48	03/20/24 13:48	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:22	03/20/24 09:22	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 17:44	03/19/24 17:44	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/26/24 19:26	DMG	Mt. Juliet, TN

MW-19-20240312 L1716029-15 GW

Collected by: Edeward L | Collected date/time: 03/12/24 11:06 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:00	03/21/24 18:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 00:57	03/26/24 00:57	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:25	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 14:10	03/20/24 14:10	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:25	03/20/24 09:25	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 17:22	03/20/24 17:22	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 20:34	MAA	Mt. Juliet, TN

MW-20-20240314 L1716029-16 GW

Collected by: Edeward L | Collected date/time: 03/14/24 14:42 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:07	03/21/24 18:07	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 01:11	03/26/24 01:11	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:34	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 14:32	03/20/24 14:32	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:28	03/20/24 09:28	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 18:05	03/19/24 18:05	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 20:54	MAA	Mt. Juliet, TN

MW-21-20240314 L1716029-17 GW

Collected by: Edeward L | Collected date/time: 03/14/24 14:55 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:20	03/21/24 18:20	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 01:24	03/26/24 01:24	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:36	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 14:54	03/20/24 14:54	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:30	03/20/24 09:30	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249643	1	03/19/24 18:26	03/19/24 18:26	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/26/24 22:06	DMG	Mt. Juliet, TN

MW-22-20240314 L1716029-18 GW

Collected by: Edeward L | Collected date/time: 03/14/24 14:44 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:14	03/21/24 18:14	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 01:37	03/26/24 01:37	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:39	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 15:16	03/20/24 15:16	DSS	Mt. Juliet, TN

MW-22-20240314 L1716029-18 GW

Collected by: Edeward L | Collected date/time: 03/14/24 14:44 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:33	03/20/24 09:33	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2252595	1	03/24/24 07:12	03/24/24 07:12	JTO	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2253095	1	03/25/24 12:55	03/25/24 12:55	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2254155	1	03/26/24 17:12	03/28/24 21:14	MAA	Mt. Juliet, TN

MW-23-20240314 L1716029-19 GW

Collected by: Edeward L | Collected date/time: 03/14/24 17:24 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:26	03/21/24 18:26	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 01:50	03/26/24 01:50	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:42	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 15:38	03/20/24 15:38	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:36	03/20/24 09:36	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2252595	1	03/24/24 07:33	03/24/24 07:33	JTO	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2253095	1	03/25/24 13:15	03/25/24 13:15	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/26/24 22:47	DMG	Mt. Juliet, TN

MW-117-20240313 L1716029-20 GW

Collected by: Edeward L | Collected date/time: 03/13/24 08:42 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2251245	1	03/21/24 18:47	03/21/24 18:47	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2250699	5	03/26/24 02:03	03/26/24 02:03	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2248917	1	03/21/24 01:51	03/21/24 12:44	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250058	1	03/20/24 16:00	03/20/24 16:00	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2249715	1	03/20/24 09:38	03/20/24 09:38	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2252595	1	03/24/24 07:54	03/24/24 07:54	JTO	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2253095	1	03/25/24 13:36	03/25/24 13:36	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/27/24 00:48	DMG	Mt. Juliet, TN

TB-01-20240312 L1716029-21 GW

Collected by: Edeward L | Collected date/time: 03/12/24 00:00 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250070	1	03/20/24 12:51	03/20/24 12:51	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2249578	1	03/20/24 12:22	03/20/24 12:22	JCP	Mt. Juliet, TN

TB-02-20240313 L1716029-22 GW

Collected by: Edeward L | Collected date/time: 03/13/24 00:00 | Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250070	1	03/20/24 13:13	03/20/24 13:13	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2251202	1	03/21/24 11:20	03/21/24 11:20	JCP	Mt. Juliet, TN

SAMPLE SUMMARY

TB-03-20240314 L1716029-23 GW

Collected by: Edeward L
Collected date/time: 03/14/24 00:00
Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250070	1	03/20/24 13:36	03/20/24 13:36	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2251202	1	03/21/24 11:42	03/21/24 11:42	JCP	Mt. Juliet, TN

FB-20240313 L1716029-24 GW

Collected by: Edeward L
Collected date/time: 03/13/24 11:00
Received date/time: 03/16/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2250070	1	03/20/24 13:59	03/20/24 13:59	DSS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2252595	1	03/24/24 06:51	03/24/24 06:51	JTO	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2253095	1	03/25/24 13:56	03/25/24 13:56	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2252162	1	03/22/24 16:24	03/26/24 21:26	DMG	Mt. Juliet, TN

CASE NARRATIVE

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

Craig Cothron
Project Manager

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	488000		20000	1	03/21/2024 15:11	WG2251037

Sample Narrative:

L1716029-01 WG2251037: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	79100	J6	5000	1	03/25/2024 19:58	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 11:45	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 04:22	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.8*		*78.0-120*		*03/20/2024 04:22*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:31	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:31	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:31	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 15:34	WG2249578
Toluene	ND		1.00	1	03/20/2024 15:34	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 15:34	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 15:34	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 15:34	WG2249578
(S) Toluene-d8	*106*		*80.0-120*		*03/20/2024 15:34*	WG2249578
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/20/2024 15:34*	WG2249578
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/20/2024 15:34*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	790		200	1	03/25/2024 10:17	WG2250897
Residual Range Organics (RRO)	1340		250	1	03/24/2024 15:48	WG2250897
(S) o-Terphenyl	*83.7*		*52.0-156*		*03/25/2024 10:17*	WG2250897
(S) o-Terphenyl	*88.4*		*52.0-156*		*03/24/2024 15:48*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	479000		20000	1	03/21/2024 15:23	WG2251037

Sample Narrative:

L1716029-02 WG2251037: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	52700		5000	1	03/25/2024 20:36	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	644		10.0	1	03/21/2024 11:48	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 04:45	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*87.8*		*78.0-120*		*03/20/2024 04:45*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	1380		10.0	1	03/19/2024 14:36	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:36	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:36	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 15:56	WG2249578
Toluene	ND		1.00	1	03/20/2024 15:56	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 15:56	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 15:56	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 15:56	WG2249578
(S) Toluene-d8	*110*		*80.0-120*		*03/20/2024 15:56*	WG2249578
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/20/2024 15:56*	WG2249578
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*03/20/2024 15:56*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	7150		200	1	03/25/2024 10:37	WG2250897
Residual Range Organics (RRO)	2280		250	1	03/24/2024 16:09	WG2250897
(S) o-Terphenyl	*80.0*		*52.0-156*		*03/25/2024 10:37*	WG2250897
(S) o-Terphenyl	*105*		*52.0-156*		*03/24/2024 16:09*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	189000		20000	1	03/21/2024 15:27	WG2251037

Sample Narrative:
L1716029-03 WG2251037: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	107000		25000	5	03/25/2024 20:49	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 11:50	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 05:08	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.7*		*78.0-120*		*03/20/2024 05:08*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:41	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:41	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:41	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/19/2024 16:39	WG2249643
Toluene	ND		1.00	1	03/19/2024 16:39	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 16:39	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 16:39	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 16:39	WG2249643
(S) Toluene-d8	*105*		*80.0-120*		*03/19/2024 16:39*	WG2249643
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/19/2024 16:39*	WG2249643
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/19/2024 16:39*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/24/2024 16:29	WG2250897
Residual Range Organics (RRO)	343		250	1	03/24/2024 16:29	WG2250897
(S) o-Terphenyl	*94.7*		*52.0-156*		*03/24/2024 16:29*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	162000		20000	1	03/21/2024 15:34	WG2251037

Sample Narrative:
L1716029-04 WG2251037: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	112000		5000	1	03/25/2024 21:02	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 11:53	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 05:30	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.4*		*78.0-120*		*03/20/2024 05:30*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:43	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:43	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:43	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/22/2024 23:00	WG2249594
Toluene	ND		1.00	1	03/22/2024 23:00	WG2249594
Ethylbenzene	ND		1.00	1	03/22/2024 23:00	WG2249594
Xylenes, Total	ND		3.00	1	03/22/2024 23:00	WG2249594
Naphthalene	ND		5.00	1	03/22/2024 23:00	WG2249594
(S) Toluene-d8	*110*		*80.0-120*		*03/22/2024 23:00*	WG2249594
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/22/2024 23:00*	WG2249594
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/22/2024 23:00*	WG2249594

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/24/2024 16:50	WG2250897
Residual Range Organics (RRO)	278		250	1	03/24/2024 16:50	WG2250897
(S) o-Terphenyl	*98.4*		*52.0-156*		*03/24/2024 16:50*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	197000		20000	1	03/21/2024 16:34	WG2251245

Sample Narrative:

L1716029-05 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	109000		25000	5	03/25/2024 21:41	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:01	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 05:53	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.4*		*78.0-120*		*03/20/2024 05:53*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:46	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:46	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:46	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/22/2024 23:23	WG2249594
Toluene	ND		1.00	1	03/22/2024 23:23	WG2249594
Ethylbenzene	ND		1.00	1	03/22/2024 23:23	WG2249594
Xylenes, Total	ND		3.00	1	03/22/2024 23:23	WG2249594
Naphthalene	ND		5.00	1	03/22/2024 23:23	WG2249594
(S) Toluene-d8	*108*		*80.0-120*		*03/22/2024 23:23*	WG2249594
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/22/2024 23:23*	WG2249594
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/22/2024 23:23*	WG2249594

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/24/2024 17:10	WG2250897
Residual Range Organics (RRO)	ND		250	1	03/24/2024 17:10	WG2250897
(S) o-Terphenyl	*93.7*		*52.0-156*		*03/24/2024 17:10*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	196000		20000	1	03/21/2024 16:47	WG2251245

Sample Narrative:
L1716029-06 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	118000		5000	1	03/25/2024 21:54	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:04	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 06:16	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.1*		*78.0-120*		*03/20/2024 06:16*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/19/2024 14:49	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:49	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:49	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/22/2024 23:46	WG2249594
Toluene	ND		1.00	1	03/22/2024 23:46	WG2249594
Ethylbenzene	ND		1.00	1	03/22/2024 23:46	WG2249594
Xylenes, Total	ND		3.00	1	03/22/2024 23:46	WG2249594
Naphthalene	ND		5.00	1	03/22/2024 23:46	WG2249594
(S) Toluene-d8	*111*		*80.0-120*		*03/22/2024 23:46*	WG2249594
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*03/22/2024 23:46*	WG2249594
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/22/2024 23:46*	WG2249594

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/24/2024 17:31	WG2250897
Residual Range Organics (RRO)	ND		250	1	03/24/2024 17:31	WG2250897
(S) o-Terphenyl	*98.9*		*52.0-156*		*03/24/2024 17:31*	WG2250897

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	194000		20000	1	03/21/2024 16:54	WG2251245

Sample Narrative:
L1716029-07 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	112000		25000	5	03/25/2024 22:07	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:07	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 06:38	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.5*		*78.0-120*		*03/20/2024 06:38*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:51	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:51	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:51	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/23/2024 00:08	WG2249594
Toluene	ND		1.00	1	03/23/2024 00:08	WG2249594
Ethylbenzene	ND		1.00	1	03/23/2024 00:08	WG2249594
Xylenes, Total	ND		3.00	1	03/23/2024 00:08	WG2249594
Naphthalene	ND		5.00	1	03/23/2024 00:08	WG2249594
(S) Toluene-d8	*110*		*80.0-120*		*03/23/2024 00:08*	WG2249594
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*03/23/2024 00:08*	WG2249594
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/23/2024 00:08*	WG2249594

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 19:35	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 19:35	WG2254155
(S) o-Terphenyl	*76.5*		*52.0-156*		*03/28/2024 19:35*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	298000		20000	1	03/21/2024 17:00	WG2251245

Sample Narrative:

L1716029-08 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	103000		25000	5	03/25/2024 22:20	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	97.5		10.0	1	03/21/2024 12:09	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 08:13	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.2*		*78.0-120*		*03/20/2024 08:13*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:54	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:54	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:54	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 16:17	WG2249578
Toluene	ND		1.00	1	03/20/2024 16:17	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 16:17	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 16:17	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 16:17	WG2249578
(S) Toluene-d8	*109*		*80.0-120*		*03/20/2024 16:17*	WG2249578
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/20/2024 16:17*	WG2249578
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*03/20/2024 16:17*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	334		200	1	03/26/2024 18:26	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/26/2024 18:26	WG2252162
(S) o-Terphenyl	*96.8*		*52.0-156*		*03/26/2024 18:26*	WG2252162

Sample Narrative:

L1716029-08 WG2252162: Sample resembles laboratory standard for Diesel.

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	387000		20000	1	03/21/2024 17:06	WG2251245

Sample Narrative:

L1716029-09 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	108000	J6	25000	5	03/25/2024 22:32	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	85.9		10.0	1	03/21/2024 11:35	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 12:21	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*100*		*78.0-120*		*03/20/2024 12:21*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 14:56	WG2248427
Ethane	ND		13.0	1	03/19/2024 14:56	WG2248427
Ethene	ND		13.0	1	03/19/2024 14:56	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 16:39	WG2249578
Toluene	ND		1.00	1	03/20/2024 16:39	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 16:39	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 16:39	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 16:39	WG2249578
(S) Toluene-d8	*107*		*80.0-120*		*03/20/2024 16:39*	WG2249578
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/20/2024 16:39*	WG2249578
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/20/2024 16:39*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	290		200	1	03/23/2024 04:17	WG2252162
Residual Range Organics (RRO)	441		250	1	03/23/2024 04:17	WG2252162
(S) o-Terphenyl	*92.1*		*52.0-156*		*03/23/2024 04:17*	WG2252162

Sample Narrative:

L1716029-09 WG2252162: Sample resembles laboratory standard for Hydraulic Fluid.

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	209000		20000	1	03/21/2024 17:13	WG2251245

Sample Narrative:
L1716029-10 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	113000		25000	5	03/25/2024 23:24	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:12	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 08:36	WG2249934
(S) a,a,a-Trifluorotoluene(FID)	*88.1*		*78.0-120*		*03/20/2024 08:36*	WG2249934

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 15:02	WG2248427
Ethane	ND		13.0	1	03/19/2024 15:02	WG2248427
Ethene	ND		13.0	1	03/19/2024 15:02	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 17:00	WG2249578
Toluene	ND		1.00	1	03/20/2024 17:00	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 17:00	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 17:00	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 17:00	WG2249578
(S) Toluene-d8	*108*		*80.0-120*		*03/20/2024 17:00*	WG2249578
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/20/2024 17:00*	WG2249578
(S) 1,2-Dichloroethane-d4	*99.0*		*70.0-130*		*03/20/2024 17:00*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/23/2024 05:17	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/23/2024 05:17	WG2252162
(S) o-Terphenyl	*77.9*		*52.0-156*		*03/23/2024 05:17*	WG2252162

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	206000		20000	1	03/21/2024 17:20	WG2251245

Sample Narrative:
L1716029-11 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	113000		25000	5	03/25/2024 23:37	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:15	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 12:43	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 12:43*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/19/2024 15:08	WG2248427
Ethane	ND		13.0	1	03/19/2024 15:08	WG2248427
Ethene	ND		13.0	1	03/19/2024 15:08	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/23/2024 00:31	WG2249594
Toluene	ND		1.00	1	03/23/2024 00:31	WG2249594
Ethylbenzene	ND		1.00	1	03/23/2024 00:31	WG2249594
Xylenes, Total	ND		3.00	1	03/23/2024 00:31	WG2249594
Naphthalene	ND		5.00	1	03/23/2024 00:31	WG2249594
(S) Toluene-d8	*108*		*80.0-120*		*03/23/2024 00:31*	WG2249594
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*03/23/2024 00:31*	WG2249594
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/23/2024 00:31*	WG2249594

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 19:55	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 19:55	WG2254155
(S) o-Terphenyl	*80.5*		*52.0-156*		*03/28/2024 19:55*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	204000		20000	1	03/21/2024 17:38	WG2251245

Sample Narrative:
L1716029-12 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	117000		25000	5	03/26/2024 00:16	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:17	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:04	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 13:04*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/19/2024 15:10	WG2248427
Ethane	ND		13.0	1	03/19/2024 15:10	WG2248427
Ethene	ND		13.0	1	03/19/2024 15:10	WG2248427

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/19/2024 17:01	WG2249643
Toluene	ND		1.00	1	03/19/2024 17:01	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 17:01	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 17:01	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 17:01	WG2249643
(S) Toluene-d8	*86.9*		*80.0-120*		*03/19/2024 17:01*	WG2249643
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/19/2024 17:01*	WG2249643
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/19/2024 17:01*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 20:14	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 20:14	WG2254155
(S) o-Terphenyl	*78.5*		*52.0-156*		*03/28/2024 20:14*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	273000		20000	1	03/21/2024 17:45	WG2251245

Sample Narrative:
L1716029-13 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	131000		25000	5	03/26/2024 00:30	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:20	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:26	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 13:26*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/19/2024 11:24	WG2248940
Ethane	ND		13.0	1	03/19/2024 11:24	WG2248940
Ethene	ND		13.0	1	03/19/2024 11:24	WG2248940

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/19/2024 17:22	WG2249643
Toluene	ND		1.00	1	03/19/2024 17:22	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 17:22	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 17:22	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 17:22	WG2249643
(S) Toluene-d8	*105*		*80.0-120*		*03/19/2024 17:22*	WG2249643
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*03/19/2024 17:22*	WG2249643
(S) 1,2-Dichloroethane-d4	*94.4*		*70.0-130*		*03/19/2024 17:22*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	777		200	1	03/27/2024 00:07	WG2252162
Residual Range Organics (RRO)	420		250	1	03/27/2024 00:07	WG2252162
(S) o-Terphenyl	*178*	J1	*52.0-156*		*03/27/2024 00:07*	WG2252162

Sample Narrative:
L1716029-13 WG2252162: Sample resembles laboratory standard for Hydraulic Fluid.

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	219000		20000	1	03/21/2024 17:53	WG2251245

Sample Narrative:
L1716029-14 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	112000		25000	5	03/26/2024 00:43	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:23	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:48	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*100*		*78.0-120*		*03/20/2024 13:48*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/20/2024 09:22	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:22	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:22	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/19/2024 17:44	WG2249643
Toluene	ND		1.00	1	03/19/2024 17:44	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 17:44	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 17:44	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 17:44	WG2249643
(S) Toluene-d8	*103*		*80.0-120*		*03/19/2024 17:44*	WG2249643
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/19/2024 17:44*	WG2249643
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/19/2024 17:44*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/26/2024 19:26	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/26/2024 19:26	WG2252162
(S) o-Terphenyl	*89.5*		*52.0-156*		*03/26/2024 19:26*	WG2252162

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	245000		20000	1	03/21/2024 18:00	WG2251245

Sample Narrative:
L1716029-15 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	107000		25000	5	03/26/2024 00:57	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:25	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 14:10	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*100*		*78.0-120*		*03/20/2024 14:10*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/20/2024 09:25	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:25	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:25	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/20/2024 17:22	WG2249578
Toluene	ND		1.00	1	03/20/2024 17:22	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 17:22	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 17:22	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 17:22	WG2249578
(S) Toluene-d8	*107*		*80.0-120*		*03/20/2024 17:22*	WG2249578
(S) 4-Bromofluorobenzene	*99.5*		*77.0-126*		*03/20/2024 17:22*	WG2249578
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/20/2024 17:22*	WG2249578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 20:34	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 20:34	WG2254155
(S) o-Terphenyl	*74.0*		*52.0-156*		*03/28/2024 20:34*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	191000		20000	1	03/21/2024 18:07	WG2251245

Sample Narrative:

L1716029-16 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	113000		25000	5	03/26/2024 01:11	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:34	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 14:32	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 14:32*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	03/20/2024 09:28	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:28	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:28	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	03/19/2024 18:05	WG2249643
Toluene	ND		1.00	1	03/19/2024 18:05	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 18:05	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 18:05	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 18:05	WG2249643
(S) Toluene-d8	*106*		*80.0-120*		*03/19/2024 18:05*	WG2249643
(S) 4-Bromofluorobenzene	*98.7*		*77.0-126*		*03/19/2024 18:05*	WG2249643
(S) 1,2-Dichloroethane-d4	*94.4*		*70.0-130*		*03/19/2024 18:05*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 20:54	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 20:54	WG2254155
(S) o-Terphenyl	*77.5*		*52.0-156*		*03/28/2024 20:54*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	192000		20000	1	03/21/2024 18:20	WG2251245

Sample Narrative:
L1716029-17 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	111000		25000	5	03/26/2024 01:24	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:36	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 14:54	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*100*		*78.0-120*		*03/20/2024 14:54*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/20/2024 09:30	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:30	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:30	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/19/2024 18:26	WG2249643
Toluene	ND		1.00	1	03/19/2024 18:26	WG2249643
Ethylbenzene	ND		1.00	1	03/19/2024 18:26	WG2249643
Xylenes, Total	ND		3.00	1	03/19/2024 18:26	WG2249643
Naphthalene	ND		5.00	1	03/19/2024 18:26	WG2249643
(S) Toluene-d8	*104*		*80.0-120*		*03/19/2024 18:26*	WG2249643
(S) 4-Bromofluorobenzene	*97.9*		*77.0-126*		*03/19/2024 18:26*	WG2249643
(S) 1,2-Dichloroethane-d4	*96.6*		*70.0-130*		*03/19/2024 18:26*	WG2249643

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/26/2024 22:06	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/26/2024 22:06	WG2252162
(S) o-Terphenyl	*94.2*		*52.0-156*		*03/26/2024 22:06*	WG2252162

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	190000		20000	1	03/21/2024 18:14	WG2251245

Sample Narrative:
L1716029-18 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	111000		25000	5	03/26/2024 01:37	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:39	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 15:16	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 15:16*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/20/2024 09:33	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:33	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:33	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/24/2024 07:12	WG2252595
Toluene	ND		1.00	1	03/24/2024 07:12	WG2252595
Ethylbenzene	ND		1.00	1	03/25/2024 12:55	WG2253095
Xylenes, Total	ND		3.00	1	03/24/2024 07:12	WG2252595
Naphthalene	ND		5.00	1	03/24/2024 07:12	WG2252595
(S) Toluene-d8	*116*		*80.0-120*		*03/24/2024 07:12*	WG2252595
(S) Toluene-d8	*107*		*80.0-120*		*03/25/2024 12:55*	WG2253095
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*03/24/2024 07:12*	WG2252595
(S) 4-Bromofluorobenzene	*88.9*		*77.0-126*		*03/25/2024 12:55*	WG2253095
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*03/24/2024 07:12*	WG2252595
(S) 1,2-Dichloroethane-d4	*83.4*		*70.0-130*		*03/25/2024 12:55*	WG2253095

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/28/2024 21:14	WG2254155
Residual Range Organics (RRO)	ND		250	1	03/28/2024 21:14	WG2254155
(S) o-Terphenyl	*72.0*		*52.0-156*		*03/28/2024 21:14*	WG2254155

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	193000		20000	1	03/21/2024 18:26	WG2251245

Sample Narrative:
L1716029-19 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	106000		25000	5	03/26/2024 01:50	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:42	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 15:38	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 15:38*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/20/2024 09:36	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:36	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:36	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/24/2024 07:33	WG2252595
Toluene	ND		1.00	1	03/24/2024 07:33	WG2252595
Ethylbenzene	ND		1.00	1	03/25/2024 13:15	WG2253095
Xylenes, Total	ND		3.00	1	03/24/2024 07:33	WG2252595
Naphthalene	ND		5.00	1	03/24/2024 07:33	WG2252595
(S) Toluene-d8	*115*		*80.0-120*		*03/24/2024 07:33*	WG2252595
(S) Toluene-d8	*113*		*80.0-120*		*03/25/2024 13:15*	WG2253095
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*03/24/2024 07:33*	WG2252595
(S) 4-Bromofluorobenzene	*91.4*		*77.0-126*		*03/25/2024 13:15*	WG2253095
(S) 1,2-Dichloroethane-d4	*118*		*70.0-130*		*03/24/2024 07:33*	WG2252595
(S) 1,2-Dichloroethane-d4	*83.7*		*70.0-130*		*03/25/2024 13:15*	WG2253095

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/26/2024 22:47	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/26/2024 22:47	WG2252162
(S) o-Terphenyl	*85.3*		*52.0-156*		*03/26/2024 22:47*	WG2252162

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	272000		20000	1	03/21/2024 18:47	WG2251245

Sample Narrative:
L1716029-20 WG2251245: Endpoint pH 4.5 headspace

Wet Chemistry by Method 300.0

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	134000		25000	5	03/26/2024 02:03	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	03/21/2024 12:44	WG2248917

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 16:00	WG2250058
(S) a,a,a-Trifluorotoluene(FID)	*101*		*78.0-120*		*03/20/2024 16:00*	WG2250058

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/20/2024 09:38	WG2249715
Ethane	ND		13.0	1	03/20/2024 09:38	WG2249715
Ethene	ND		13.0	1	03/20/2024 09:38	WG2249715

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/24/2024 07:54	WG2252595
Toluene	ND		1.00	1	03/24/2024 07:54	WG2252595
Ethylbenzene	ND		1.00	1	03/25/2024 13:36	WG2253095
Xylenes, Total	ND		3.00	1	03/24/2024 07:54	WG2252595
Naphthalene	ND		5.00	1	03/24/2024 07:54	WG2252595
(S) Toluene-d8	*114*		*80.0-120*		*03/24/2024 07:54*	WG2252595
(S) Toluene-d8	*111*		*80.0-120*		*03/25/2024 13:36*	WG2253095
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*03/24/2024 07:54*	WG2252595
(S) 4-Bromofluorobenzene	*91.7*		*77.0-126*		*03/25/2024 13:36*	WG2253095
(S) 1,2-Dichloroethane-d4	*120*		*70.0-130*		*03/24/2024 07:54*	WG2252595
(S) 1,2-Dichloroethane-d4	*84.9*		*70.0-130*		*03/25/2024 13:36*	WG2253095

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	835		200	1	03/27/2024 00:48	WG2252162
Residual Range Organics (RRO)	504		250	1	03/27/2024 00:48	WG2252162
(S) o-Terphenyl	*86.8*		*52.0-156*		*03/27/2024 00:48*	WG2252162

Sample Narrative:
L1716029-20 WG2252162: Sample resembles laboratory standard for Hydraulic Fluid.

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 12:51	WG2250070
(S) a,a,a-Trifluorotoluene(FID)	*88.7*		*78.0-120*		*03/20/2024 12:51*	WG2250070

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/20/2024 12:22	WG2249578
Toluene	ND		1.00	1	03/20/2024 12:22	WG2249578
Ethylbenzene	ND		1.00	1	03/20/2024 12:22	WG2249578
Xylenes, Total	ND		3.00	1	03/20/2024 12:22	WG2249578
Naphthalene	ND		5.00	1	03/20/2024 12:22	WG2249578
(S) Toluene-d8	*109*		*80.0-120*		*03/20/2024 12:22*	WG2249578
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/20/2024 12:22*	WG2249578
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/20/2024 12:22*	WG2249578

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:13	WG2250070
(S) a,a,a-Trifluorotoluene(FID)	*87.9*		*78.0-120*		*03/20/2024 13:13*	WG2250070

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/21/2024 11:20	WG2251202
Toluene	ND		1.00	1	03/21/2024 11:20	WG2251202
Ethylbenzene	ND		1.00	1	03/21/2024 11:20	WG2251202
Xylenes, Total	ND		3.00	1	03/21/2024 11:20	WG2251202
Naphthalene	ND		5.00	1	03/21/2024 11:20	WG2251202
(S) Toluene-d8	*95.8*		*80.0-120*		*03/21/2024 11:20*	WG2251202
(S) 4-Bromofluorobenzene	*97.8*		*77.0-126*		*03/21/2024 11:20*	WG2251202
(S) 1,2-Dichloroethane-d4	*98.2*		*70.0-130*		*03/21/2024 11:20*	WG2251202

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:36	WG2250070
(S) a,a,a-Trifluorotoluene(FID)	*88.4*		*78.0-120*		*03/20/2024 13:36*	WG2250070

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/21/2024 11:42	WG2251202
Toluene	ND		1.00	1	03/21/2024 11:42	WG2251202
Ethylbenzene	ND		1.00	1	03/21/2024 11:42	WG2251202
Xylenes, Total	ND		3.00	1	03/21/2024 11:42	WG2251202
Naphthalene	ND		5.00	1	03/21/2024 11:42	WG2251202
(S) Toluene-d8	*99.4*		*80.0-120*		*03/21/2024 11:42*	WG2251202
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*03/21/2024 11:42*	WG2251202
(S) 1,2-Dichloroethane-d4	*98.0*		*70.0-130*		*03/21/2024 11:42*	WG2251202

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/20/2024 13:59	WG2250070
(S) a,a,a-Trifluorotoluene(FID)	*88.4*		*78.0-120*		*03/20/2024 13:59*	WG2250070

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/24/2024 06:51	WG2252595
Toluene	ND		1.00	1	03/24/2024 06:51	WG2252595
Ethylbenzene	ND		1.00	1	03/25/2024 13:56	WG2253095
Xylenes, Total	ND		3.00	1	03/24/2024 06:51	WG2252595
Naphthalene	ND		5.00	1	03/24/2024 06:51	WG2252595
(S) Toluene-d8	*114*		*80.0-120*		*03/24/2024 06:51*	WG2252595
(S) Toluene-d8	*110*		*80.0-120*		*03/25/2024 13:56*	WG2253095
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*03/24/2024 06:51*	WG2252595
(S) 4-Bromofluorobenzene	*84.9*		*77.0-126*		*03/25/2024 13:56*	WG2253095
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*03/24/2024 06:51*	WG2252595
(S) 1,2-Dichloroethane-d4	*86.4*		*70.0-130*		*03/25/2024 13:56*	WG2253095

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	03/26/2024 21:26	WG2252162
Residual Range Organics (RRO)	ND		250	1	03/26/2024 21:26	WG2252162
(S) o-Terphenyl	*101*		*52.0-156*		*03/26/2024 21:26*	WG2252162

Method Blank (MB)

(MB) R4048488-2 03/21/24 12:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1715905-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1715905-01 03/21/24 12:48 • (DUP) R4048488-3 03/21/24 12:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	1020000	1020000	1	0.749		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1716029-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-01 03/21/24 15:11 • (DUP) R4048488-4 03/21/24 15:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	488000	490000	1	0.234		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R4048488-1 03/21/24 12:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	98200	98.2	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4048640-2 03/21/24 16:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1716029-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-05 03/21/24 16:34 • (DUP) R4048640-3 03/21/24 16:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	197000	196000	1	0.626		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1716029-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-20 03/21/24 18:47 • (DUP) R4048640-4 03/21/24 18:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	272000	271000	1	0.618		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R4048640-1 03/21/24 16:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	98800	98.8	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4049912-1 03/25/24 19:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		594	5000

L1716029-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-01 03/25/24 19:58 • (DUP) R4049912-3 03/25/24 20:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	79100	80500	1	1.82		15

L1716029-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-09 03/25/24 22:32 • (DUP) R4049912-5 03/25/24 22:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	108000	111000	5	2.93		15

Laboratory Control Sample (LCS)

(LCS) R4049912-2 03/25/24 19:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	40000	100	90.0-110	

L1716029-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1716029-01 03/25/24 19:58 • (MS) R4049912-4 03/25/24 20:23

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	79100	105000	64.3	1	80.0-120	J6

Sample Narrative:

MS: Spike failure due to matrix interference

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/25/24 22:32 • (MS) R4049912-6 03/25/24 22:58 • (MSD) R4049912-7 03/25/24 23:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	108000	128000	126000	49.1	45.5	5	80.0-120	J6	J6	1.14	15

Sample Narrative:

MS: Spike failure due to matrix interference

MSD: Spike failure due to matrix interference

Method Blank (MB)

(MB) R4048399-1 03/21/24 11:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Manganese,Dissolved	U		0.934	10.0

Laboratory Control Sample (LCS)

(LCS) R4048399-2 03/21/24 11:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	1000	1030	103	80.0-120	

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/21/24 11:35 • (MS) R4048399-4 03/21/24 11:40 • (MSD) R4048399-5 03/21/24 11:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	1000	85.9	1100	1090	101	101	1	75.0-125			0.269	20

Method Blank (MB)

(MB) R4047914-3 03/19/24 22:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	60.6	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*89.5*			*78.0-120*

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

(LCS) R4047914-1 03/19/24 20:36 • (LCSD) R4047914-2 03/19/24 20:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	4410	4330	88.2	86.6	70.0-124			1.83	20
(S) a,a,a-Trifluorotoluene(FID)				*89.9*	*92.5*	*78.0-120*				

Method Blank (MB)

(MB) R4048111-2 03/20/24 11:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*101*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4048111-1 03/20/24 10:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5590	102	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*98.8*	*78.0-120*	

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/20/24 12:21 • (MS) R4048111-3 03/20/24 18:33 • (MSD) R4048111-4 03/20/24 18:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	ND	7390	7450	148	149	1	10.0-155			0.809	21
(S) a,a,a-Trifluorotoluene(FID)					*98.3*	*99.6*		*78.0-120*				

Method Blank (MB)

(MB) R4048107-2 03/20/24 11:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	47.8	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*89.2*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4048107-1 03/20/24 10:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	4540	90.8	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*88.9*	*78.0-120*	

Method Blank (MB)

(MB) R4047412-2 03/19/24 14:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L1715613-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1715613-01 03/19/24 14:12 • (DUP) R4047412-3 03/19/24 14:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20

L1716029-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-03 03/19/24 14:41 • (DUP) R4047412-4 03/19/24 15:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20

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

(LCS) R4047412-1 03/19/24 14:00 • (LCSD) R4047412-7 03/19/24 15:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	65.4	66.3	96.5	97.8	85.0-115			1.37	20
Ethane	129	122	127	94.6	98.4	85.0-115			4.02	20
Ethene	127	122	127	96.1	100	85.0-115			4.02	20

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/19/24 14:56 • (MS) R4047412-5 03/19/24 15:16 • (MSD) R4047412-6 03/19/24 15:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	67.8	ND	74.6	78.4	110	116	1	50.0-150			4.97	20
Ethane	129	ND	129	139	100	108	1	50.0-150			7.46	20
Ethene	127	ND	129	138	102	109	1	50.0-150			6.74	20

Method Blank (MB)

(MB) R4047263-2 03/19/24 08:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L1714882-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1714882-01 03/19/24 08:57 • (DUP) R4047263-3 03/19/24 09:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	13700	13100	10	4.48		20
Ethane	ND	ND	10	0.000		20
Ethene	ND	ND	10	0.000		20

L1714882-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1714882-16 03/19/24 09:47 • (DUP) R4047263-4 03/19/24 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	17200	17100	10	0.583		20
Ethane	ND	ND	10	0.000		20
Ethene	ND	ND	10	0.000		20

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

(LCS) R4047263-1 03/19/24 08:51 • (LCSD) R4047263-7 03/19/24 11:40

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	66.4	68.3	97.9	101	85.0-115			2.82	20
Ethane	129	127	122	98.4	94.6	85.0-115			4.02	20
Ethene	127	127	122	100	96.1	85.0-115			4.02	20

L1714882-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1714882-18 03/19/24 09:56 • (MS) R4047263-5 03/19/24 11:30 • (MSD) R4047263-6 03/19/24 11:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	678	18500	19600	19700	162	177	10	50.0-150	V	V	0.509	20
Ethane	1290	ND	1300	1280	101	99.2	10	50.0-150			1.55	20
Ethene	1270	ND	1290	1270	102	100	10	50.0-150			1.56	20

Method Blank (MB)

(MB) R4047695-2 03/20/24 09:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L1716029-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1716029-14 03/20/24 09:22 • (DUP) R4047695-3 03/20/24 09:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20

L1716175-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1716175-06 03/20/24 09:54 • (DUP) R4047695-4 03/20/24 10:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20

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

(LCS) R4047695-1 03/20/24 09:01 • (LCSD) R4047695-5 03/20/24 10:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	67.1	68.3	99.0	101	85.0-115			1.77	20
Ethane	129	130	126	101	97.7	85.0-115			3.12	20
Ethene	127	129	126	102	99.2	85.0-115			2.35	20

Method Blank (MB)

(MB) R4048466-2 03/20/24 10:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
Naphthalene	U		1.00	5.00
(S) Toluene-d8	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4048466-1 03/20/24 09:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	4.33	86.6	70.0-123	
Toluene	5.00	4.40	88.0	79.0-120	
Ethylbenzene	5.00	4.31	86.2	79.0-123	
Xylenes, Total	15.0	13.2	88.0	79.0-123	
Naphthalene	5.00	4.03	80.6	54.0-135	
(S) Toluene-d8			*107*	*80.0-120*	
(S) 4-Bromofluorobenzene			*97.4*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*99.2*	*70.0-130*	

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/20/24 16:39 • (MS) R4048466-3 03/20/24 19:31 • (MSD) R4048466-4 03/20/24 19:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	ND	5.55	5.94	111	119	1	17.0-158			6.79	27
Toluene	5.00	ND	5.36	5.93	107	119	1	26.0-154			10.1	28
Ethylbenzene	5.00	ND	5.23	5.81	105	116	1	30.0-155			10.5	27
Xylenes, Total	15.0	ND	15.8	17.1	105	114	1	29.0-154			7.90	28
Naphthalene	5.00	ND	ND	5.46	91.4	109	1	12.0-156			17.7	35
(S) Toluene-d8					*103*	*104*		*80.0-120*				
(S) 4-Bromofluorobenzene					*97.3*	*98.3*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*103*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4049329-3 03/22/24 18:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
Naphthalene	U		1.00	5.00
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*

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

(LCS) R4049329-1 03/22/24 17:35 • (LCSD) R4049329-2 03/22/24 17:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.45	4.46	89.0	89.2	70.0-123			0.224	20
Toluene	5.00	5.00	5.06	100	101	79.0-120			1.19	20
Ethylbenzene	5.00	4.69	4.88	93.8	97.6	79.0-123			3.97	20
Xylenes, Total	15.0	14.1	14.2	94.0	94.7	79.0-123			0.707	20
Naphthalene	5.00	4.30	4.27	86.0	85.4	54.0-135			0.700	20
(S) Toluene-d8				*108*	*109*	*80.0-120*				
(S) 4-Bromofluorobenzene				*107*	*106*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*107*	*105*	*70.0-130*				

Method Blank (MB)

(MB) R4047646-4 03/19/24 11:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
Naphthalene	U		1.00	5.00
(S) Toluene-d8	*106*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.5*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*93.9*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4047646-1 03/19/24 09:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	5.60	112	70.0-123	
Toluene	5.00	5.79	116	79.0-120	
Ethylbenzene	5.00	5.83	117	79.0-123	
Xylenes, Total	15.0	17.2	115	79.0-123	
Naphthalene	5.00	4.39	87.8	54.0-135	
(S) Toluene-d8			*103*	*80.0-120*	
(S) 4-Bromofluorobenzene			*99.2*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*94.0*	*70.0-130*	

Method Blank (MB)

(MB) R4048838-3 03/21/24 10:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
Naphthalene	U		1.00	5.00
(S) Toluene-d8	*100*			*80.0-120*
(S) 4-Bromofluorobenzene	*96.8*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.1*			*70.0-130*

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

(LCS) R4048838-1 03/21/24 09:09 • (LCSD) R4048838-2 03/21/24 09:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.85	4.75	97.0	95.0	70.0-123			2.08	20
Toluene	5.00	5.18	5.10	104	102	79.0-120			1.56	20
Ethylbenzene	5.00	5.35	5.28	107	106	79.0-123			1.32	20
Xylenes, Total	15.0	16.5	15.9	110	106	79.0-123			3.70	20
Naphthalene	5.00	4.31	4.19	86.2	83.8	54.0-135			2.82	20
(S) Toluene-d8				*101*	*100*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*95.7*	*97.9*	*70.0-130*				

Method Blank (MB)

(MB) R4049308-3 03/24/24 05:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Xylenes, Total	U		0.174	3.00
Naphthalene	U		1.00	5.00
(S) Toluene-d8	*116*			*80.0-120*
(S) 4-Bromofluorobenzene	*109*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*

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

(LCS) R4049308-1 03/24/24 04:25 • (LCSD) R4049308-2 03/24/24 04:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.67	4.75	93.4	95.0	70.0-123			1.70	20
Toluene	5.00	4.71	4.66	94.2	93.2	79.0-120			1.07	20
Xylenes, Total	15.0	13.7	13.7	91.3	91.3	79.0-123			0.000	20
Naphthalene	5.00	4.14	4.31	82.8	86.2	54.0-135			4.02	20
(S) Toluene-d8				*114*	*115*	*80.0-120*				
(S) 4-Bromofluorobenzene				*108*	*110*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*120*	*119*	*70.0-130*				

Method Blank (MB)

(MB) R4050060-2 03/25/24 10:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.137	1.00
(S) Toluene-d8	*112*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*82.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4050060-1 03/25/24 10:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	5.00	5.46	109	79.0-123	
(S) Toluene-d8			*104*	*80.0-120*	
(S) 4-Bromofluorobenzene			*93.4*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*79.3*	*70.0-130*	

Method Blank (MB)

(MB) R4049372-1 03/24/24 08:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*77.5*			*52.0-156*

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

(LCS) R4049372-2 03/24/24 09:03 • (LCSD) R4049372-3 03/24/24 09:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1580	1590	105	106	50.0-150			0.631	20
(S) o-Terphenyl				*100*	*107*	*52.0-156*				

Method Blank (MB)

(MB) R4049956-1 03/23/24 01:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*69.0*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4049956-2 03/23/24 02:16

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1400	93.3	50.0-150	
(S) o-Terphenyl			*90.5*	*52.0-156*	

L1715316-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715316-03 03/23/24 02:36 • (MS) R4049956-3 03/23/24 02:57 • (MSD) R4049956-4 03/23/24 03:17

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1430	ND	596	788	41.7	55.1	1	50.0-150	J6	J3	27.7	20
(S) o-Terphenyl					*40.9*	*44.4*		*52.0-156*	J2	J2		

Sample Narrative:

OS: pH < 2; sample run in hold

L1716029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1716029-09 03/23/24 04:17 • (MS) R4049956-5 03/23/24 04:37 • (MSD) R4049956-6 03/23/24 04:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1430	290	1720	1720	100	100	1	50.0-150			0.000	20
(S) o-Terphenyl					*88.4*	*94.7*		*52.0-156*				

Sample Narrative:

OS: Sample resembles laboratory standard for Hydraulic Fluid.

Method Blank (MB)

(MB) R4051290-1 03/28/24 14:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*66.0*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4051290-2 03/28/24 15:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1220	81.3	50.0-150	
(S) o-Terphenyl			*74.5*	*52.0-156*	

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/28/24 18:36 • (MS) R4051290-3 03/28/24 18:55 • (MSD) R4051290-4 03/28/24 19:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1500	ND	1400	1360	93.3	90.7	1	50.0-150			2.90	20
(S) o-Terphenyl					*78.5*	*80.5*		*52.0-156*				

Sample Narrative:

OS: Duplicate analysis was performed due to missing MS/D.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
AECOM - Portland, OR

888 SW 5th Ave
Suite 600
Portland. OR 97204

Billing Information:
Accounts Payable
888 SW 5th Ave
Suite 600
Portland, OR 97204

Pres Chk

Report to:
Ms. Nicky Moody

Email To:
nicky.moody@aecom.com;christina.wheeler@a

Project Description:
Marathon Pasco Terminal - 1SA 2024

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-969-6310**

Client Project #
60722666

Lab Project #
AECOMPORSSA-CPL

Collected by (print):
Edward LeCoq

Site/Facility ID #
55763995

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at:
https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1716029

F017

Acctnum: **AECOMPORSSA**
Template: **T223778**
Prelogin: **P1056788**
PM: **034 - Craig Cothron**
PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK,SULFATE 250mlHDPE-NoPres	MNDICP 250mlHDPE-NoPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	NWTPHGX 40mlAmb-HCl-Blk	RSK175 40mlAmb HCl	V8260BTEXN 40mlAmb-HCl	V8260BTEXN 40mlAmb-HCl-Blk			Remarks	Sample # (lab only)
MW-02- 20240312	G	GW	77	3/12	1613	12	X	X	X	X		X	X					-01
MW-03- 20240312	G	GW	85	3/12	1157	12	X	X	X	X		X	X					-02
MW-04- 20240314	G	GW	72	3/14	1309	12	X	X	X	X		X	X					-03
MW-06- 20240313	G	GW	21	3/13	0910	12	X	X	X	X		X	X					-04
MW-07- 20240313	G	GW	72	3/13	1456	12	X	X	X	X		X	X					-05
MW-08- 20240313	G	GW	44	3/13	1415	12	X	X	X	X		X	X					-06
MW-10- 20240313	G	GW	68	3/13	1317	12	X	X	X	X		X	X					-07
MW-11- 20240312	G	GW	83	3/12	1720	12	X	X	X	X		X	X					-06
MW-12- 20240312	G	GW	83	3/12	1430	12	X	X	X	X		X	X					-01
MW-12 MS 20240312	G	GW	83	3/12	1430	12	X	X	X	X		X	X					

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

Remarks:PO 148565

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

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

	Date:	Time:		
Relinquished by : (Signature)	3/15	1032	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1 °C Bottles Received: 269
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher S. Gallin	Date: 3/16/24 Time: 0930

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Company Name/Address:
AECOM - Portland, OR

888 SW 5th Ave
Suite 600
Portland, OR 97204

Billing Information:
Accounts Payable
888 SW 5th Ave
Suite 600
Portland, OR 97204

Pres Chk

Report to:
Ms. Nicky Moody

Email To:
nicky.moody@aecom.com;christina.wheeler@a

Project Description:
Marathon Pasco Terminal - 1SA 2024

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-969-6310**

Client Project #
60722666

Lab Project #
AECOMPORSSA-CPL

Collected by (print):
Edward LeCoq

Site/Facility ID #
55763995

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK,SULFATE 250mlHDPE-NoPres	MNDICP 250mlHDPE-NoPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	NWTPHGX 40mlAmb-HCl-Blk	RSK175 40mlAmb HCl	V8260BTEXN 40mlAmb-HCl	V8260BTEXN 40mlAmb-HCl-Blk			Remarks	Sample # (lab only)
MW-12 MSD 20240312	G	GW	83	3/12	1430	12	X	X	X	X		X	X					
MW-14- 20240312	G	GW	84	3/12	1756	12	X	X	X	X		X	X					-10
MW-15- 20240313	G	GW	21	3/13	1031	12	X	X	X	X		X	X					-11
MW-16- 20240313	G	GW	31	3/13	1425	12	X	X	X	X		X	X					-12
MW-17- 20240313	G	GW	84	3/13	0927	12	X	X	X	X		X	X					-13
MW-18- 20240314	G	GW	86.5	3/14	1715	12	X	X	X	X		X	X					-14
MW-19- 20240312	G	GW	85	3/12	1106	12	X	X	X	X		X	X					-15
MW-20- 20240314	G	GW	95	3/14	1442	~~12~~ 10	X	X	X	X		X	X					-16
MW-21- 20240314	G	GW	93	3/14	1455	12	X	X	X	X		X	X					-17
MW-22- 20240314	G	GW	94	3/14	1444	12	X	X	X	X		X	X					-18

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

Remarks:PO 148565

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature) | Date: 3/15 | Time: 1032 | Received by: (Signature)

Relinquished by : (Signature) | Date: | Time: | Received by: (Signature)

Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) Christopher L. Gallina | Date: 3/16/24 | Time: 0900

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.9 °C Bottles Received: 10

If preservation required by Login: Date/Time

Hold: | Condition: NCF / OK

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

Chain of Custody Page 2 of 3

Pace
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MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1716029

Table #

Acctnum: **AECOMPORSSA**
Template: **T223778**
Prelogin: **P1056788**
PM: **034 - Craig Cothron**
PB:

Shipped Via: **FedEx Ground**

Company Name/Address:
AECOM - Portland, OR

888 SW 5th Ave
Suite 600
Portland. OR 97204

Billing Information:
Accounts Payable
888 SW 5th Ave
Suite 600
Portland, OR 97204

Pres Chk

Report to:
Ms. Nicky Moody

Email To:
nicky.moody@aecom.com;christina.wheeler@a

Project Description:
Marathon Pasco Terminal - 1SA 2024

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-969-6310**

Client Project #
60722666

Lab Project #
AECOMPORSSA-CPL

Collected by (print):
Edward LeCoq

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Site/Facility ID #
55763995

P.O. #

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK,SULFATE 250mlHDPE-NoPres	MNDICP 250mlHDPE-NoPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	NWTPHGX 40mlAmb-HCl-Blk	RSK175 40mlAmb HCl	V8260BTEXN 40mlAmb-HCl	V8260BTEXN 40mlAmb-HCl-Blk			Remarks	Sample # (lab only)
MW-23-20240314	G	GW		3/14	1724	12	X	X	X	X		X	X					-19
MW-17-20240313	G	GW	84	3/13	0842	12	X	X	X	X		X	X					-20
		GW				12	X	X	X	X		X	X					
TB-01-20240312		GW	-	3/12	-	2					X			X				-21
TB-02-20240313		GW	-	3/13	-	2					X			X				-22
TB-03-20240314		GW	-	3/14	-	2					X			X				-23
~~FIELD BLANK~~ FB-20240313	G	GW	-	3/13	1100	7			X	X			X					-24

Chain of Custody Page 3 of 3

Pace
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MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # L1716029

Table #

Acctnum: **AECOMPORSSA**
Template: **T223778**
Prelogin: **P1056788**
PM: **034 - Craig Cothron**
PB:

Shipped Via: **FedEX Ground**

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

Remarks:PO 148565

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	3/15	1032			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: 40	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christoph J. Gallin	Date: 3/16/24 Time: 0930	Hold: Condition: NCF / OK

ATTACHMENT D

Data Validation Report

AECOM
1111 3rd Ave
Suite 1600
Seattle, WA 98101
www.aecom.com

206 438 2700 tel
866 495 5288 fax

Memorandum

To	Nicky Moody, Project Manager
Info	FINAL
Subject	Summary Data Quality Review Chevron Pipe Line Company Pasco Bulk Terminal March 2024 Semi-Annual Groundwater Sampling
From	Christina Wheeler, Chemist Lucy Panteleeff, Chemist
Date	April 19, 2024

The summary data quality review of 20 groundwater samples, 3 trip blanks and 1 field rinsate blank collected between March 12 and March 14, 2024, has been completed. The samples were analyzed at Pace Analytical National, LLC (Pace), located in Mount Juliet, Tennessee, for selected volatile organic compounds (VOCs) by EPA Method 8260D; total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and heavy oil-range TPH); dissolved gases (methane, ethane, and ethene) by EPA Method RSK-175; dissolved manganese by EPA Method 6010B; sulfate by EPA Method 300.0; and/or total alkalinity by Standard Method (SM) 2320B-2011. The laboratory provided a standard report containing sample results and associated quality assurance (QA) and quality control (QC) data for all samples. For this report, the sample date suffixes (i.e., -20240312) will not be used unless needed for clarity. The following samples are associated with Pace laboratory group L1716029:

Sample ID	**Laboratory ID**	**Requested Analyses**
MW-02-20240312	L1716029-01	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-03-20240312	L1716029-02	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-04-20240314	L1716029-03	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-06-20240313	L1716029-04	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-07-20240313	L1716029-05	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-08-20240313	L1716029-06	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-10-20240313	L1716029-07	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-11-20240312	L1716029-08	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-12-20240312	L1716029-09	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-14-20240312	L1716029-10	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-15-20240313	L1716029-11	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-16-20240313	L1716029-12	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-17-20240313	L1716029-13	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-18-20240314	L1716029-14	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-19-20240312	L1716029-15	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-20-20240314	L1716029-16	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-21-20240314	L1716029-17	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-22-20240314	L1716029-18	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-23-20240314	L1716029-19	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-117- 20240313 (Field Duplicate of MW-17)	L1716029-20	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
TB-01-20240312 (trip blank)	L1716029-21	VOCs, TPH-Gx
TB-02-20240313 (trip blank)	L1716029-22	VOCs, TPH-Gx
TB-03-20240314 (trip blank)	L1716029-23	VOCs, TPH-Gx
FB-20240313 (field blank)	L1716029-24	VOCs, TPH-Gx, TPH-Dx

Data were evaluated based on validation criteria established in the analytical methods, as well as *National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020, and the *National Functional*

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Summary Data Quality Review
Chevron Pipeline Company Pasco Bulk Terminal
March 2024 Semi-Annual Groundwater Sampling
Laboratory Group: L1716029

Guidelines for Inorganic Superfund Methods Data Review, November 2020, as applied to the reported methodology.

The following data components were reviewed during the limited data validation procedure for compliance with method specific or laboratory control charted criteria where appropriate: chain of custody forms, holding times, field/method/trip/instrument blanks, surrogate recoveries, matrix spike/matrix spike duplicate recoveries, laboratory and field duplicate results, laboratory control sample/laboratory control sample duplicate recoveries, reporting limits, and electronic data deliverables.

A summary of qualifiers that may be assigned to results in these laboratory groups are included in Table 1. Qualifiers that may be assigned to results include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- DNR - Do Not Report. Another result is available that is more reliable or appropriate.

Sample Receipt

Upon receipt by the laboratory, the sample container information was compared to the chain-of-custody (COC), and the cooler temperatures were recorded. No discrepancies related to sample identification were noted by the laboratory and the coolers were received at temperatures within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.

Organic Analyses

Samples were analyzed for VOCs, TPHs, and/or dissolved gases by the methods identified in the introduction of this report.

1. Holding Times – Acceptable

2. Blanks – Acceptable except as noted below:

   Gasoline-range TPH by NWTPH-Gx – Gasoline-range TPH was detected at concentrations between the method detection limits (MDLs) and the reporting limits (RLs) in the method blanks associated with batches WG2249934 (60.6 ug/L) and WG2250070 (47.8 ug/L). Gasoline-range TPH was not detected in the samples associated with these batches; therefore, data were not qualified based on these method blank detections.

3. Surrogates – Acceptable except as noted below:

Diesel-range TPH by NWTPH-Dx – The percent recoveries for o-terphenyl in the following samples were outside the control limits of 52.0-156%.

Sample	Recovery
MW-17	178%
Batch MS	40.9%
Batch MSD	44.4%

Data were not qualified based on surrogate recoveries in QC samples (MS/MSD). The results for diesel-range and residual-range TPHs were qualified as estimated and flagged 'J' based on this surrogate recovery.

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable except as noted below:

   General – MS/MSDs for all organic analyses were performed using MW-12 and/or samples from unrelated projects. Data are not qualified based on outliers in samples from unrelated projects. Results for MW-12 were acceptable.

6. Laboratory Duplicate – Acceptable where applicable

   Dissolved Methane by EPA Method RSK-175 – Laboratory duplicates were performed using MW-04, MW-18, and four samples from unrelated projects. Results were comparable.

7. Field Duplicate – Acceptable

   General – A field duplicate was submitted for MW-17 and identified as MW-117. Results were comparable for all analytes reported at concentrations greater than five times the reporting limits.

8. Reporting Limits – Acceptable

9. Other Items of Note:

   Diesel Range and Residual Range Organics by NWTPH-Dx – The laboratory noted that the chromatographic patterns for MW-12, MW-17, and MW-117 resembled hydraulic fluid. No data were qualified based on these qualitative observations.

Dissolved Manganese

Samples were analyzed for dissolved manganese by EPA Method 6010B.

1. Holding Times – Acceptable

2. Blanks – Acceptable

3. Laboratory Control Sample (LCS) – Acceptable

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable

   An MS/MSD was performed using MW-12. Results were acceptable.

5. Field Duplicate – Acceptable

   A field duplicate was submitted for MW-17 and identified as MW-117. Results were comparable.

6. Reporting Limits – Acceptable

Conventional Analyses

Samples were analyzed for sulfate and alkalinity by the methods identified in the introduction of this report.

1. Holding Times – Acceptable

2. Blanks – Acceptable

3. Laboratory Control Sample (LCS) – Acceptable

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable where applicable

   Sulfate by EPA Method 300.0 – An MS and/or MSD were performed using MW-02 and MW-12. The following percent recoveries were below the control limits of 80-120%:

Sample	MS Recovery	MSD Recovery
MW-02	64.3%	NA
MW-12	49.1%	45.5%

NA – not applicable

   The results for sulfate in MW-02 and MW-12 were qualified as estimated and flagged 'J' based on these MS/MSD recoveries.

5. Laboratory Duplicate – Acceptable

   Sulfate by EPA Method 300.0 – Laboratory duplicates were performed using MW-02 and MW-12. Results were comparable.

   Alkalinity by SM 2320B – Laboratory duplicates were performed using MW-02, MW-17, MW-117, and a sample from an unrelated project. Results were comparable.

6. Field Duplicate – Acceptable

   General – A field duplicate was submitted for MW-17 and identified as MW-117. Results were comparable.

7. Reporting Limits – Acceptable

8. Other Items of Note:

   Alkalinity by SM 2320B – The laboratory indicated the presence of headspace in all the samples associated with this laboratory group. The analysis method requires the absence of headspace in the sample containers, therefore; the results for alkalinity in all the samples were qualified as estimated and flagged 'J' based on the presence of headspace.

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are usable for meeting project objectives. The completeness for Pace laboratory group L1716029 is 100%.

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Chevron Pipeline Company Pasco Bulk Terminal
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Table 1 – Summary of Qualified Data

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
MW-02-20240312	L1716029-01	E300.0	Sulfate	79100	ug/L	79100 J	m
MW-02-20240312	L1716029-01	SM2320B	Alkalinity, total (as $CaCO_3$)	488000	ug/L	488000 J	hs
MW-03-20240312	L1716029-02	SM2320B	Alkalinity, total (as $CaCO_3$)	479000	ug/L	479000 J	hs
MW-04-20240314	L1716029-03	SM2320B	Alkalinity, total (as $CaCO_3$)	189000	ug/L	189000 J	hs
MW-06-20240313	L1716029-04	SM2320B	Alkalinity, total (as $CaCO_3$)	162000	ug/L	197000 J	hs
MW-07-20240313	L1716029-05	SM2320B	Alkalinity, total (as $CaCO_3$)	197000	ug/L	197000 J	hs
MW-08-20240313	L1716029-06	SM2320B	Alkalinity, total (as $CaCO_3$)	196000	ug/L	196000 J	hs
MW-10-20240313	L1716029-07	SM2320B	Alkalinity, total (as $CaCO_3$)	194000	ug/L	194000 J	hs
MW-11-20240312	L1716029-08	SM2320B	Alkalinity, total (as $CaCO_3$)	298000	ug/L	298000 J	hs
MW-12-20240312	L1716029-09	SM2320B	Alkalinity, total (as $CaCO_3$)	387000	ug/L	387000 J	hs
MW-12-20240312	L1716029-09	E300.0	Sulfate	108000	ug/L	108000 J	m
MW-14-20240312	L1716029-10	SM2320B	Alkalinity, total (as $CaCO_3$)	209000	ug/L	209000 J	hs
MW-15-20240313	L1716029-11	SM2320B	Alkalinity, total (as $CaCO_3$)	206000	ug/L	206000 J	hs
MW-16-20240313	L1716029-12	SM2320B	Alkalinity, total (as $CaCO_3$)	204000	ug/L	204000 J	hs
MW-17-20240313	L1716029-13	NWTPH-DX	TPH-Dx	777	ug/L	777 J	s
MW-17-20240313	L1716029-13	NWTPH-DX	TPH-Dx	420	ug/L	420 J	s
MW-17-20240313	L1716029-13	SM2320B	Alkalinity, total (as $CaCO_3$)	273000	ug/L	273000 J	hs
MW-18-20240314	L1716029-14	SM2320B	Alkalinity, total (as $CaCO_3$)	219000	ug/L	219000 J	hs
MW-19-20240312	L1716029-15	SM2320B	Alkalinity, total (as $CaCO_3$)	245000	ug/L	245000 J	hs
MW-20-20240314	L1716029-16	SM2320B	Alkalinity, total (as $CaCO_3$)	191000	ug/L	191000 J	hs
MW-21-20240314	L1716029-17	SM2320B	Alkalinity, total (as $CaCO_3$)	192000	ug/L	192000 J	hs
MW-22-20240314	L1716029-18	SM2320B	Alkalinity, total (as $CaCO_3$)	190000	ug/L	190000 J	hs
MW-23-20240314	L1716029-19	SM2320B	Alkalinity, total (as $CaCO_3$)	193000	ug/L	193000 J	hs
MW-117-20240313	L1716029-20	SM2320B	Alkalinity, total (as $CaCO_3$)	272000	ug/L	272000 J	hs

Notes:
$CaCO_3$ – calcium carbonate
hs – headspace
ID - identification
J – estimated value
m – matrix spike recoveries
s – surrogate recovery
ug/L – microgram per liter