2024 Annual Progress Report

Chevron Pipe Line Company Pasco Bulk Fuel Terminal

Tesoro Logistics Operations LLC
Ecology Cleanup Site ID: 4867
Ecology Facility Site ID: 55763995

Project number: 60746115

March 11, 2025

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Quality information

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1 Introduction

This 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) (Ecology, 2023b). 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
- Cleanup Site Identification Number (CSID): 4867
- Facility Site Identification Number (FSID): 55763995

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

The goal of compliance monitoring is to monitor the effectiveness of natural attenuation as one of the selected cleanup actions for the Site. Natural attenuation parameters and chemical analytical results from the 2024 semiannual monitoring events are presented in this report.

1.1 Terminal, Site, and Tidewater Site

The Site is located within the boundary of the larger Pasco Terminal, which is owned and operated by Tesoro; the Pasco Terminal is herein referred to as the Terminal. Chevron Pipe Line Company (CPL) initially owned and operated the Terminal since its construction in 1950 until Tesoro purchased the Terminal in June 2013. In Figures 1 and 2, the Terminal is shown with the brownish orange highlighted area, and the Site boundary is shown with the **red line**. Most of the Terminal is located on top of the bluffs overlooking the Lake Wallula segment of the Snake River adjacent to the south. Sacajawea Park Road and a Burlington Northern Santa Fe (BNSF) rail spur bisect the Terminal with northeast-southwest orientations. The Terminal operations predominantly take place to the south of Sacajawea Park Road over approximately 33 acres; however, the entire Terminal property covers approximately 120 acres. The Terminal includes unimproved land to the southwest, north, and northeast.

The Terminal is developed with aboveground storage tanks (ASTs), loading racks, pumping stations, underground and aboveground pipelines, a barge loading dock, a lined evaporation pond, and terminal offices. The ASTs are used to store diesel, gasoline, jet fuel, and ethanol (AECOM, 2021). The Terminal has been an active fuel terminal since September 1950. The Terminal receives fuel products transferred through underground pipelines and by barge. Nineteen aboveground bulk storage tanks (with storage capacities ranging between 588,000 and 2,520,000 gallons), eight fuel additive tanks (with storage capacities ranging between 500 and 12,000 gallons), and one 23,000-gallon relief tank are present at the Terminal (AECOM, 2021).

The elevations at the Site range from approximately 356 feet National Geodetic Vertical Datum (NGVD) along the Snake River to approximately 425 feet NGVD in the upland portion of the Site (AECOM, 2021).

In Figure 2, the **orange line** labeled as the Tidewater site shows the boundary of the separate Ecology Cleanup Site with Facility Site Name "Tidewater Fuel Line Leak". The Tidewater Terminal Company, Inc. (Tidewater) is responsible for managing ongoing environmental activities in this area associated with a pipeline fuel release (FSID: 39378684; CSID: 2331). The Tidewater site includes fuel pipelines owned and operated by Tidewater, which transfer products between this Terminal and the Tidewater Terminal, located approximately ¾-mile upstream along the Snake River at 671 Tank Farm Road in Pasco, Washington.

1.2 Purpose

As stated in the Order, the *Cleanup Action Plan* (CAP) set the cleanup standards and describes the cleanup action consisting of institutional controls (ICs), monitored natural attenuation (MNA), and enhanced bioremediation using oxygen-releasing compounds (ORCs) (Ecology, 2023a). The *Compliance Monitoring Plan* (CMP) and *Engineering Design Report* (EDR) establish semiannual monitoring to evaluate the effectiveness of the cleanup actions by

analyzing groundwater for indicator hazardous substances (IHSs) and natural attenuation parameters (AECOM, 2024a, 2024b).

The CAP identifies benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and diesel- and motor oil-range total petroleum hydrocarbons (TPH-d and TPH-o) as IHSs and ferrous iron, nitrate, alkalinity, sulfate, methane, dissolved manganese, dissolved oxygen (DO), oxidation reduction potential (ORP), and pH as natural attenuation parameters.

Cleanup levels (CULs) are listed in Table 1 of the CMP, and analytical parameters are listed in the *Sampling and Analysis Plan* (SAP) (Appendix A of the CMP, Table A-4). The CMP provides additional information describing groundwater monitoring locations, methods, frequency, analytical parameters, and reporting obligations based on the following schedule:

- In 2023, semiannual sampling was initiated in spring (first semiannual [1SA]) and fall (second semiannual [2SA]) before ORC deployment (Table 1).
- In 2024, performance monitoring during ORC deployment began and will continue with semiannual events during spring and fall (Table 2) until the IHS concentrations are below the CULs for two sequential monitoring 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 for the inspection and maintenance of the compliance monitoring wells, dedicated bladder pumps, and hangers used for the deployment of the ORC product.

1.3 Objectives

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

1. A list of on-Site activities conducted during the last six months.[1]
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] Note: this Annual Progress Report includes activities conducted during the last 12 months.

2 Field and Other Site-Related Activities

This section includes a list of activities completed in 2024.

2.1 Summary

From March 11 to 15, 2024, AECOM conducted the 1SA event as detailed below and in Table 1:

- Collected DTW measurements at the 19 compliance monitoring wells (MW-02 through MW-08, MW-10 through MW-12, and MW-14) (the Site wells) and two Tidewater monitoring wells (the Tidewater wells).
- Inspected the 19 Site wells at the start of the event.
- Collected groundwater samples from the 19 Site wells and the following field quality assurance and quality control (QA/QC) samples:
    - Field duplicate sample, MW-117-20240313, collected at MW-17.
    - Field blank sample, FB-20240313, collected while working in the tank farm.
    - Three trip blank samples, TB-01-20240312, TB-02-20240313, and TB-03-20240314.
- Following collection of the groundwater samples, deployed the ORC in accordance with the EDR in six Site wells (MW-02, MW-03, MW-11, MW-12, MW-17, and MW-19). More details can be found in Section 2.5.
- Submitted the primary and QA/QC samples to Pace Analytical National, LLC located in Mount Juliet, Tennessee (Pace).

On September 5, 2024, AECOM retrieved the ORC from the six Site wells as detailed in Section 2.5.

From September 30 to October 3, 2024, AECOM conducted the 2SA event as detailed below and in Table 1:

- Collected DTW measurements at the 19 Site wells and two Tidewater wells.
- Inspected the 19 Site wells.
- Collected groundwater samples from 13 of the 19 Site wells (samples were not collected at the six Site wells where ORC was deployed) and the following field QA/QC samples:
    - Field duplicate sample, MW-210-241001, collected at MW-21.
    - One trip blank sample, TB-1-241003.
- Submitted the primary and QA/QC samples to Pace.

2.2 Monitoring Well Gauging

Prior to purging and sampling, AECOM measured the DTW from the well top of casing (TOC) using an electronic water level meter and recorded digitally on Groundwater Monitoring Field Forms. Field forms are included in Appendix A.

The DTW measurements and groundwater elevations (calculated from the surveyed TOC elevations) for the 1SA and 2SA events are listed in Table 2 and Table B1 in Appendix B. Groundwater elevation contour maps produced using groundwater elevations from the 1SA and 2SA events are presented in Figures 3 and 4, respectively.

- In March 2024 (1SA), groundwater elevations ranged from 342.26 feet[a] at MW-06 to 344.27 feet[a] at AR-11
- In October 2024 (2SA), groundwater elevations ranged from 341.46 feet[a] at MW-15 to 343.31 feet[a] at AR-11

The gradient between MW-06 and AR-11 for the 1SA and 2SA events was 0.0018 feet/feet and 0.0016 feet/feet, respectively. Groundwater at the Site appears to generally flow to the southeast, towards Lake Wallula.

The nearby Lake Wallula has a strong influence on groundwater elevation at the Site. Lake Wallula is created on the Columbia and Snake Rivers by the McNary Dam, which is located 33 miles downstream of the Site on the Columbia River, and the Ice Harbor Lock and Dam located 7.5 miles upstream of the Site on the Snake River. The Lake Wallula

[a] North American Vertical Datum of 1929 (NAVD29)

water elevation is controlled by McNary Dam operations as managed by the U.S. Army Corps of Engineers (USACE). The normal, or target, full pool elevation of Lake Wallula is 340.0 feet elevation (NGVD29); with minimum and maximum pool elevations of 335.0 and 357.0 feet (NGVD29), respectively. USACE hydrological data for the last 10 years shows the mean pool elevation measured at McNary Dam was 338.85 feet (NGVD29), with minimum and maximum pool elevations of 337.39 and 339.83 feet (NGVD29), respectively. The narrow distribution of the USACE recorded lake levels suggests that the USACE operates the McNary Dam to maintain a relatively constant lake level.

2.3 Groundwater Sampling

Prior to sample collection during well purging, AECOM collected field parameter measurements for pH, conductivity, dissolved oxygen (DO), temperature, and oxidation reduction potential (ORP) in real time using a field instrument (e.g. Horiba U-50 series) with multiple calibrated sensors. AECOM measured concentrations of two geochemical indicators (ferrous iron and nitrate) using field test kits. Field parameters, and the concentrations of ferrous iron and nitrate are recorded on the Monitoring Well Sampling Field Logs included in Appendix A. The final stabilized field parameters and geochemical indicator concentrations are tabulated in Table 3 and Table B2 (Appendix B).

AECOM field personnel wore disposable nitrile gloves while collecting and managing the groundwater samples. The sample containers were tightly sealed, uniquely labeled, and stored on ice for transportation to the laboratory. AECOM shipped samples to Pace. AECOM followed chain-of-custody procedures from sample collection to sample analysis as outlined in the Quality Assurance Project Plan (QAPP) (Appendix B of the CAP; AECOM, 2024a). Copies of the chain-of-custody forms are included in Appendix C within the laboratory report.

2.4 QA Samples

QA samples were collected to meet data quality objectives (DQOs) outlined in the QAPP (AECOM, 2024a). One field duplicate and at least one trip blank were submitted for analysis for both the 1SA and 2SA events. One field blank was submitted for the 1SA event; however, a due to field oversight, a field blank was not submitted for the 2SA event. This deviation is further discussed in Section 4.2.1.

A detailed review of the QA samples collected and/or analyzed by AECOM and Pace is included in the data quality review memorandums in Appendix D. Analytical data reported for both monitoring events met DQOs for the Site as outlined in the QAPP (AECOM, 2024a).

2.5 Raw Field Data

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

- Groundwater level form and groundwater sampling logs (Appendix A, Field Forms)
- Tabulated DTW measurements, calculated groundwater elevations, and analytical results for this reporting period (Table 2 and Table B1 in Appendix B with the 2014 to 2024 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 Appendix B with the 2014 to 2024 data)

2.6 Operations and Maintenance

In 2024, AECOM completed routine bladder pump and well monument maintenance activities following the O&M Plan. AECOM set up ORC hangers and deployed the ORC in accordance with the EDR on March 14, 2024, within each of the six compliance wells as shown in Table A below.

Table A. ORC Sleeve and Canister Deployment Summary

Well ID	MW-02	MW-03	MW-11	MW-12	MW-17	MW-19
# of ORC Sleeves (1 per 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

On September 5, 2024, just prior to the 2SA event, AECOM retrieved the ORC from the six Site wells. The sleeves and socks were inspected according to Section 4.3.4 of the O&M Plan. At MW-03, only one of the three canisters was retrieved due to a missing cable from the bottom of the retrieved canister indicating a possible connection or cable break. The ORC sleeves from MW-02 and MW-03 were slightly yellow upon retrieval; the sleeve from MW-12 was slightly dirty at the bottom; and the remaining sleeves appeared clean. Except for one sleeve from MW-19, the retrieved sleeves were packaged and stored for future deployment. The MW-19 sleeve was opened to inspect the ORC material, which had become heavily calcified. The ORC was broken apart and applied directly down the well as it would continue to release oxygen to the aquifer.

On November 4, 2024, the remaining two canisters from MW-03 were retrieved, but resistance was encountered approximately every 10-20 feet, likely due to the configuration of cables and connections on the linked canisters. AECOM plans to modify the connections before the 1SA deployment in 2025 to prevent this issue from reoccurring.

2.7 Investigation-Derived Waste

During the 1SA and 2SA events, the field activities generated the following investigation-derived waste: purge water and miscellaneous wastes (sample tubing, gloves, paper towels, etc.). The purge water was disposed of in the facilities process-water treatment system. Miscellaneous wastes were managed as solid waste.

2.8 Permits

As required in Section 4.7 of the EDR, AECOM registered the six Site wells that were used for ORC deployment (MW-02, MW-03, MW-11, MW-12, MW-17, and MW-19) as underground injection chambers with Ecology in accordance with Washington Administrative Code 173-218-060. The wells are registered under Site Number 38327 with a status of Rule-Authorized as summarized in Table B below.

Table B. Underground Injection Chamber Summary

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

3 Groundwater Results

During the 1SA and 2SA events in 2024, AECOM collected groundwater samples from the 19 Site wells in 1SA and 13 Site wells in 2SA (Table 1). Groundwater samples were submitted for analysis of IHSs and NA parameters.

- The primary and field duplicate samples were submitted for analysis of the Site IHSs (listed below).
    - BTEX and naphthalene by Environmental Protection Agency (EPA) Method 8260D
    - TPH-d and TPH-o by Ecology Methods NWTPH-Dx (diesel-range and heavy oil-range TPH)
- The primary and field duplicate samples were submitted for analysis of NA 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 analyzed for BTEX and naphthalene only by EPA Method 8260D.

3.1 Raw Analytical Data

Analytical data generated during the reporting period are listed below and included in Appendix C.

- 1SA – L1716029 laboratory report and chain-of-custody form
- 2SA – L1785666 laboratory report and chain-of-custody form

Data quality reviews were performed on the 20 groundwater samples (19 primary and one field duplicate) and two trip blanks collected in March 2024 and the 14 groundwater samples (13 primary and one field duplicate) and one trip blank collected in October 2024 (Appendix D, Data Validation Reports).

The data from both 2024 monitoring events has been uploaded into Ecology's Environmental Information Management (EIM) database.

3.2 Indicator Hazardous Substances

The IHS results have been tabulated and screened against the selected CULs for groundwater as described in the CAP (AECOM, 2024a). The selected CULs are Ecology Model Toxics Control Act (MTCA) Method A CULs as listed in Table C below, attached Tables 2 and B1, and attached Figure 5.

Table C. Groundwater Cleanup Levels

IHS	CUL (µg/L)
TPH-g, Benzene Present	800
TPH-g, No Benzene Present	1,000
TPH-d	500
TPH-o	500
Benzene	5
Toluene	1,000
Ethylbenzene	700
Total Xylenes	1,000
Naphthalene	160

TPH-d and TPH-o were the only IHSs detected above the CULs in groundwater samples.

In March 2024, TPH-d and/or TPH-o were detected above the CULs as follows:

- TPH-d at MW-02, MW-03, and MW-17
- TPH-o at MW-02 and MW-03

In October 2024, TPH-d and/or TPH-o were not detected above the method reporting limit or CUL.

3.3 Natural Attenuation Evaluation

The NA parameters measured indicate groundwater conditions consistent with those needed for the degradation of petroleum hydrocarbons. This section summarizes the methods and results for the NA parameter evaluation. Monitoring wells included as part of the Site monitoring program as summarized in Table 1 were analyzed for the following NA parameters (Table 3):

- Field parameters: pH, conductivity, temperature, ORP, and DO
- Field-measured geochemical indicators: ferrous iron and nitrate
- Laboratory-measured geochemical indicators: sulfate, alkalinity, dissolved manganese, and methane

These NA parameters can be divided into two groups:

- Direct measurement of electron acceptors (e.g., DO, ORP, sulfate, and nitrate)
- Indirect measurement of byproduct(s) of the partially or fully metabolized electron acceptor (e.g., manganese, ferrous iron, methane, and alkalinity)

Contaminant degrading microorganisms will utilize the most efficient electron acceptors under the prevailing redox conditions while creating metabolic by-products. For example, oxygen (as measured by DO and ORP) is consumed in aerobic respiration to create carbon dioxide (CO_2) while the other electron acceptors are consumed in anaerobic respiration: ferric iron (Fe^{3+}) to create soluble ferrous iron (Fe^{2+}), nitrate to create elemental nitrogen, manganese (Mn^{4+}) to create soluble manganese (Mn^{2+}), and sulfate (SO_4^{2-}) to create sulfide (S^{2-}) (Newell et.al., 1995).

When evaluating these parameters, NA is indicated by either a relatively reduced level of the electron acceptors or an elevated level of the metabolic by-products in locations within and external to a plume. Monitoring well locations within the Site were selected to represent both background (wells located on a plume perimeter) and source area conditions (wells located within a plume).

Table 3 includes the well location relative to a dissolved-phase plume. Based on average plume conditions, Site wells are categorized as inside or outside of known plume perimeter boundaries. Well location classifications are as follows:

- Site wells located within a plume perimeter include MW-02, MW-03, MW-11, MW-12, MW-17, and MW-19 (referred to as plume wells)
- Site wells located outside a plume perimeter include MW-04, MW-06, MW-07, MW-08, MW-10, MW-14, MW-15, MW-16, MW-18, MW-20 through MW-23 (referred to as outside wells)

Field measured NA parameter data generally indicate the following:

- The pH for the plume wells were similar with a range of 6.81 to 7.45 compared to a range of 6.91 to 8.39 for the outside wells.
- Conductivity for the plume wells were similar with a range of 890 to 1,116 µS/cm compared to a range of 800 to 1,200 µS/cm for the outside wells.
- DO concentrations were categorized as being depleted with DO concentrations less than 1.0 milligrams per liter (mg/L) or not depleted with DO concentrations greater than 1.0 mg/L. Depleted DO was recorded at MW-03 (0.54 mg/L) located inside the plume. DO was greater than 1.0 mg/L in the remaining wells; however, the DO concentrations measured in wells located inside the plume were generally lower than those measured outside the plume.

- Negative ORP, indicating reducing conditions, was recorded at plume well MW-03 during the 1SA event. ORP was positive in the remaining wells.

The field-measured geochemical indicator (nitrate and ferrous iron) results are as follows:

- Ferrous iron averaged 0.24 mg/L in the plume wells and 0.053 mg/L in the outside wells.
- Nitrate concentrations were highly variable across the Site. Nitrate averaged 9.17 mg/L in the plume wells and 13.2 mg/L in the outside wells. Lowest nitrate concentrations were found in plume wells MW-03, MW-11, and MW-12, and outside wells MW-06 and MW-08.

Laboratory-measured geochemical indicator (dissolved manganese, sulfate, alkalinity, and methane) results were recorded as follows:

- Sulfate averaged 96.8 mg/L in the plume wells and 115 mg/L in the outside wells.
- Alkalinity averaged 362 mg/L in the plume wells and 200 mg/L in the outside wells.
- Dissolved manganese was detected in plume wells MW-03, MW-11, and MW-12.
- Methane was detected only in plume well MW-03.

In general, the data suggest NA parameters indicative of contaminant biodegradation within the plume. The processes of biodegradation may include manganese reduction, denitrification, iron reduction, and/or methanogenesis.

- Depleted or low DO concentrations, low ORP values and low sulfate concentrations within the plume suggest anaerobic geochemical biodegradation may be a predominant degradation pathway.
- Concentrations of ferrous iron increase, while sulfate concentrations decrease when moving from outside to inside a plume, which can indicate anaerobic conditions favorable for iron and sulfate reduction are present and appear to be likely degradation pathways.
- Further evidence of anaerobic reductive conditions occurring within the plume are the low (negative) ORP values and methane detections observed in plume well MW-03. Methane concentrations suggest methanogenesis is an active degradation pathway.
- Increased concentrations of soluble manganese in plume wells (MW-03, MW-11, and MW-12) are additional evidence of microbial activities related to biodegradation within the plume.
- Increased alkalinity in groundwater samples collected from within a plume provides further evidence biodegradation is occurring within a plume.
- Nitrate concentrations were variable across the site, continued monitoring is needed to determine if biodegradation through denitrification and nitrate reductive processes is occurring along the plume periphery.

4 Conclusions, Deviations, and Recommendations

4.1 Conclusions

The goal of semiannual monitoring at the Site is to monitor IHSs for the effectiveness of MNA and enhanced bioremediation. The NA parameters and chemical analytical results from the 2024 semiannual monitoring events as presented in this report meet this goal.

The results of the 2024 monitoring period support the following conclusions:

- The hydraulic gradient at the site is relatively flat with limited fluctuations. The groundwater flow direction is to the southeast towards Lake Wallula.
- Analytical results for IHSs are generally aligned with historical analyte concentrations.
- Residual IHSs remain on-site within historically known localized areas. Exceedances of IHSs above the CULs during the 2024 monitoring period included:
    - TPH-d at MW-02, MW-03, and MW-17
    - TPH-o at MW-02 and MW-03
- The lateral extent of the dissolved-phase hydrocarbons is stable. Detected concentrations of TPH-d and TPH-o are consistent with previous monitoring events.
- MNA constituents and stable lateral extent of petroleum hydrocarbons in monitored wells indicate biodegradation processes are active at the Site.
- Decreased ORP values, depleted and low DO, and sulfate concentrations suggest anaerobic biodegradation may be a predominant degradation pathway of petroleum constituents within the plume area.
- Increased soluble manganese and methane concentrations within the plume also are supportive evidence for anaerobic geochemical biodegradation.

AECOM expects that future deployments of ORC in 2025 and beyond will enhance the bioremediation processes as discussed earlier. Introducing ORC into the groundwater will continue to raise the DO concentration, which should accelerate the aerobic degradation process near wells that are otherwise slow to respond; thereby reducing IHS concentrations (AECOM, 2024a). As more NA parameter data is collected during ORC deployments, additional statistical analyses can be conducted to evaluate biodegradation rates and monitor the progress of MNA at the Site.

4.2 Deviations

4.2.1 Required Tasks

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

- A field blank sample was not collected during the 2SA event as discussed in Section 2.4. The field blank collected during the 1SA event validated that the standard sampling procedures are not contributing to the sample contamination, as all field blank results for the 1SA event were non-detect. As per the CMP, one field blank will be collected during each future semiannual event.

4.2.2 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 period and any planned deviations in the upcoming year.

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

4.2.3 Schedule

This section lists any deviations in the schedule and 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 as Table D.

Table D. Agreed Order Schedule

Tasks/Deliverables	Deadlines		Status
Tesoro submits draft EDR, O&M Plan, and CMP	90 days following the effective date of the Agreed Order	July 10, 2023	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	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	Complete
Tesoro begins cleanup action	As described in EDR, but no later than April 28, 2023	April 28, 2023	In progress
Tesoro notifies Ecology in advance of any sample collection or work activity at the Site	7 days in advance of fieldwork	--	On-going
Draft Environmental Covenant (EC)	60 days after ORC socks are deployed for the first time	May 13, 2024	August 21, 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	In progress	In progress
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 semiannual progress reports	Within 60 days of the last day of the previous six-month period	--	--

Notes:

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

4.3 Recommendations and Planned Deliverables (Year 2025)

Continued monitoring according to the CMP is recommended. The next monitoring event is scheduled for April 2025.

A list of planned deliverables for the Year 2025 include:

- In compliance with the Order, the Progress Report for the reporting period January to June 2025 will be issued by August 30, 2025.
- The raw data (groundwater level elevations and laboratory analytical results including data qualifiers added during the data quality review) for reporting periods in 2025 will be submitted online in a format compatible with Ecology's Environmental Information Management (EIM) System, per Ecology Policy 840 following submission of this Annual Progress Report to Ecology.

5 Limitations

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area and in general accordance with the terms and conditions set forth in our Agreement. No warranty or other conditions express or implied should be understood.

The findings presented in this report are based on conditions observed at specific site locations and sampling intervals at the time of the assessment. Because conditions between the monitoring well locations or borings may vary over distance and time, the potential always remains for the presence of unknown, unidentified, unforeseen, or changed surface and subsurface contamination. Conclusions in this report are based on a comparison of chemical analytical results to current regulatory standards.

This report is for the exclusive use of Tesoro and its representatives. No fourth party shall have the right to rely on AECOM's opinions rendered in connection with the services in this report without our written consent, and the second party's agreement to be bound to the same conditions and limitations as Tesoro.

6 References

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Figures

1,000 0 1,000 2,000

SCALE IN FEET

AECOM

SITE VICINITY MAP

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

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FIGURE 1

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

Imagery Source: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

C:\Users\Lazar\AECOM\GDS GIS Services - DCS AMERICAS\CENTRAL REGION US\Marathon\MPC Pasco\Database\MXD\2024_SA1_2_GWFig 2 Site Plan.mxd

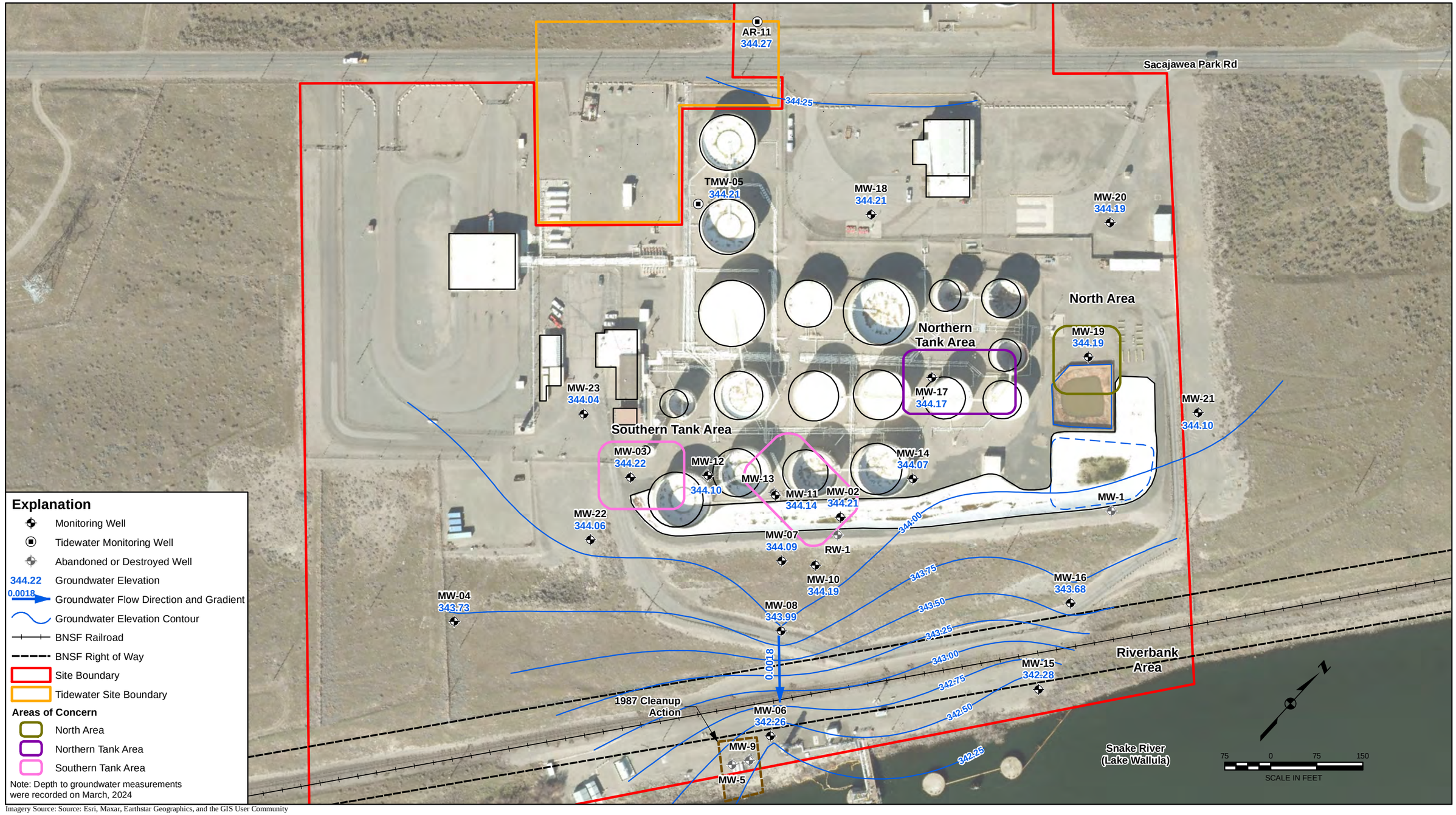
SITE MAP AND MONITORING WELLS USED FOR ORC DEPLOYMENT

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

60746115

AECOM

FIGURE 2



Imagery Source: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

C:\Users\Lazarl\AECOM\GDS GIS Services - DCS AMERICAS\CENTRAL REGION US\Marathon\MPC Pasco\Database\MXD\2024_SA1_2_GWFig 3 Groundwater Elevation Contour Map - March 2024.mxd

GROUNDWATER ELEVATION CONTOUR MAP - MARCH 2024

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

AECOM

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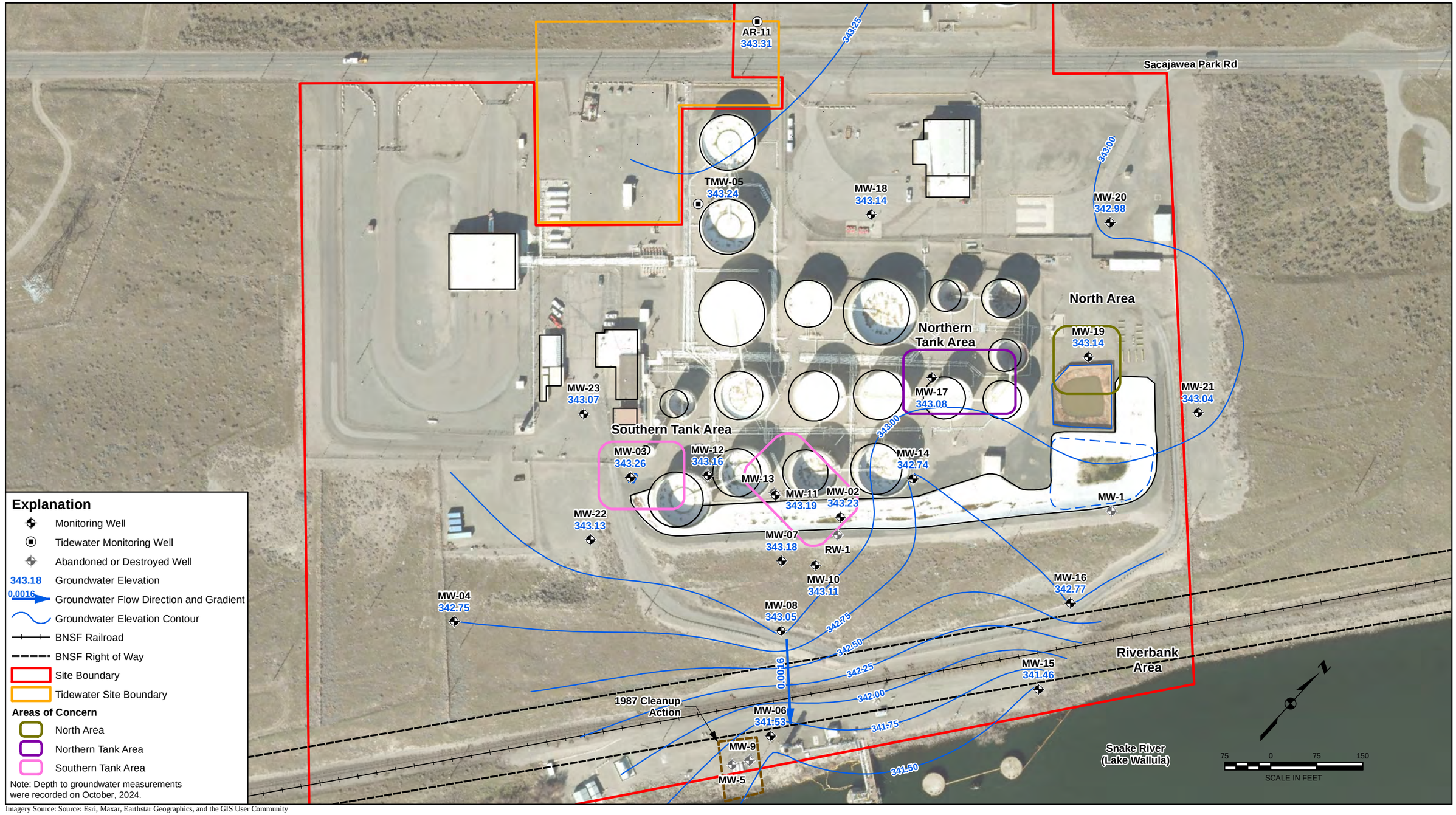
FIGURE 3



Imagery Source: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

C:\Users\Lazarl\AECOM\GDS GIS Services - DCS AMERICAS\CENTRAL REGION US\Marathon\MPC Pasco\Database\MXD\2024_SA1_2_GWFig 4 Groundwater Elevation Contour Map - October 2024.mxd

GROUNDWATER ELEVATION CONTOUR MAP - OCTOBER 2024

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

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FIGURE 4

Sacajawea Park Rd

AR-11

TMW-05

MW-18

MW-18		
Date	TPH-d	TPH-o
3/14/24	All ND	
10/3/24	All ND	

MW-20

MW-20		
Date	TPH-d	TPH-o
3/14/24	All ND	
10/3/24	All ND	

MW-17		
Date	TPH-d	TPH-o
3/13/24	777 J	420 J
10/1/24	NS	

MW-17

MW-19

MW-19		
Date	TPH-d	TPH-o
3/12/24	200 U	250 U
10/1/24	NS	

MW-21

MW-21		
Date	TPH-d	TPH-o
3/14/24	All ND	
10/1/24	All ND	

MW-23		
Date	TPH-d	TPH-o
3/14/24	All ND	
10/1/24	All ND	

MW-23

MW-12		
Date	TPH-d	TPH-o
3/12/24	290	441
10/1/24	NS	

MW-12

MW-03		
Date	TPH-d	TPH-o
3/12/24	7,150	2,280
10/1/24	NS	

MW-03

MW-11

MW-11		
Date	TPH-d	TPH-o
3/12/24	334	250 U
10/1/24	NS	

MW-14

MW-14		
Date	TPH-d	TPH-o
3/12/24	All ND	
10/2/24	All ND	

MW-02

MW-02		
Date	TPH-d	TPH-o
3/12/24	790	1,340
10/1/24	NS	

MW-22		
Date	TPH-d	TPH-o
3/14/24	All ND	
10/1/24	All ND	

MW-22

MW-07

MW-07		
Date	TPH-d	TPH-o
3/13/24	All ND	
10/2/24	All ND	

MW-10

MW-10		
Date	TPH-d	TPH-o
3/13/24	All ND	
10/2/24	All ND	

MW-16

MW-16		
Date	TPH-d	TPH-o
3/13/24	All ND	
10/2/24	All ND	

MW-04

MW-04		
Date	TPH-d	TPH-o
3/14/24	200 U	343
10/2/24	All ND	

MW-08

MW-08		
Date	TPH-d	TPH-o
3/13/24	All ND	
10/2/24	All ND	

MW-15

MW-15		
Date	TPH-d	TPH-o
3/13/24	All ND	
10/2/24	All ND	

MW-06

MW-06		
Date	TPH-d	TPH-o
3/13/24	200 U	278
10/2/24	All ND	

Snake River (Lake Wallula)

N

75 0 75 150

SCALE IN FEET

Explanation

- Complaince Monitoring Well
- Compliance Monitoring Well with IHS Detected Above Cleanup Level
- Tidewater Monitoring Well

Previous Spill
(Size of circle indicates volume released)

- Diesel
- Gasoline
- Jet Fuel
- BNSF Railroad
- BNSF Right of Way
- Site Boundary
- Tidewater Site Boundary

Areas of Concern

- North Area
- Northern Tank Area
- Southern Tank Area

All units in micrograms per liter (µg/L)
= IHS detection above the cleanup level
Bold Text = IHS detection above the minimum detection limit
All ND = All Non-Detect
IHS = Indicator Hazardous Substance
J = Estimated concentration
NS = Not Sampled
TPH-d = Diesel-range hydrocarbons
TPH-o = Motor oil-range hydrocarbons
U = Analyte not detected above the limit shown

Cleanup Levels (see Table 3)	
TPH-d	TPH-o
500	*500*

Imagery Source: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

C:\Users\Lazar\AECOM\GDS GIS Services - DCS AMERICAS\CENTRAL REGION US\Marathon\MPC Pasco\Database\MXD\2024_SA1_2_GW\Fig 5 2024 GW Data Summary Map.mxd

AECOM

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GROUNDWATER ANALYTICAL DATA SUMMARY MAP

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

FIGURE 5

Tables

Table 1. Compliance Monitoring Well and Initial Performance Monitoring Frequency - 2024+

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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
Cleanup Levels (1)						*800*	*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*
MW-02	03-12-2024	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
	10-01-2024	417.23	74.00	343.23	0.98	-	-	-	-	-	-	-	-
MW-03	03-12-2024	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
	10-01-2024	423.40	80.14	343.26	0.96	-	-	-	-	-	-	-	-
MW-04	03-14-2024	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
	10-02-2024	412.05	69.30	342.75	0.98	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-06	03-13-2024	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
	10-02-2024	358.52	16.99	341.53	0.73	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-07	03-13-2024	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
	10-02-2024	411.32	68.14	343.18	0.91	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-08	03-13-2024	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
	10-02-2024	383.76	40.71	343.05	0.94	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-10	03-13-2024	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
	10-02-2024	407.83	64.72	343.11	1.08	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-11	03-12-2024	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
	10-01-2024	423.44	80.25	343.19	0.95	-	-	-	-	-	-	-	-
MW-12	03-12-2024	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
	10-01-2024	423.62	80.46	343.16	0.94	-	-	-	-	-	-	-	-
MW-14	03-12-2024	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
	10-02-2024	421.84	79.10	342.74	1.33	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-15	03-13-2024	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
	10-02-2024	358.50	17.04	341.46	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-16	03-13-2024	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
	10-02-2024	370.92	28.15	342.77	0.91	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-17	03-13-2024	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
	10-01-2024	424.28	81.20	343.08	1.09	-	-	-	-	-	-	-	-
MW-18	03-14-2024	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
	10-03-2024	423.69	80.55	343.14	1.07	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-19	03-12-2024	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
	10-01-2024	424.20	81.06	343.14	1.05	-	-	-	-	-	-	-	-
MW-20	03-14-2024	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
	10-03-2024	426.52	83.54	342.98	1.21	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-21	03-14-2024	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
	10-01-2024	426.16	83.12	343.04	1.06	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-22	03-14-2024	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
	10-01-2024	420.45	77.32	343.13	0.93	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-23	03-14-2024	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
	10-01-2024	421.74	78.67	343.07	0.97	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	03-01-2024	422.62	78.35	344.27	0.80	-	-	-	-	-	-	-	-
	10-01-2024	422.62	79.31	343.31	0.96	-	-	-	-	-	-	-	-
TMW-05	03-01-2024	425.02	80.81	344.21	0.79	-	-	-	-	-	-	-	-
	10-01-2024	425.02	81.78	343.24	0.97	-	-	-	-	-	-	-	-

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 =

Acronyms:
µg/L = microgram per liter
btoc - below top of casing
ft = feet
GW = groundwater

Table 2: Groundwater Elevations and Analytical Results - 2024

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.

Table 3: Field Parameters and Natural Attenuation Results - 2024

Well ID	Well Location (relative to groundwater contaminant plume)	Sample Date	Field Measured Parameters							Laboratory Parameters			
			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	Inside	03-12-2024	7.23	1,116	4.65	15.90	104.0	0.02 U	**10.9**	**79.1 J**	**488 J**	0.0100 U	0.0100 U
MW-03	Inside	03-12-2024	7.08	1,037	0.54	15.60	-66.0	**1.32**	0.3 U	**52.7**	**479 J**	**0.644**	**1.38**
MW-04	Outside	03-14-2024	7.76	909	8.29	15.90	156.0	**0.020**	**>30**	**107**	**189 J**	0.0100 U	0.0100 U
		10-02-2024	7.02	1,030	5.39	17.67	173.0	**0.030**	**21.0**	**117**	**194 J**	0.0100 U	0.0100 U
MW-06	Outside	03-13-2024	7.55	841	8.45	13.70	140.6	0.02 U	0.3 U	**112**	**162 J**	0.0100 U	0.0100 U
		10-02-2024	7.62	1,200	9.91	19.57	180.0	**0.08**	**9.4**	**113 J**	**176 J**	0.0100 U	0.0100 U
MW-07	Outside	03-13-2024	7.66	926	8.05	16.60	116.1	0.02 U	28.6	**109**	**197 J**	0.0100 U	0.0100 U
		10-02-2024	7.00	1,000	9.84	16.75	234.0	0.02 U	5.4	**120**	**236 J**	0.0100 U	0.0100 U
MW-08	Outside	03-13-2024	7.50	803	7.39	15.80	148.8	0.02 U	0.3 U	**118**	**196 J**	0.0100 U	0.0100 U
		10-02-2024	7.01	1,060	5.91	18.76	165.0	**0.01**	**21.6**	**120**	**195 J**	0.0100 U	0.0100 U
MW-10	Outside	03-13-2024	7.69	929	8.06	16.20	133.9	0.02 U	**20.9**	**112**	**194 J**	0.0100 U	0.0100 U
		10-02-2024	7.33	945	7.03	18.07	207.0	**0.04**	**12.8**	**118**	**191 J**	0.0100 U	0.0100 U
MW-11	Inside	03-12-2024	6.81	890	3.17	15.90	134.5	0.02 U	0.3 U	**103**	**298 J**	**0.0975**	0.0100 U
MW-12	Inside	03-12-2024	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	Outside	03-12-2024	7.53	953	6.97	15.20	158.0	**0.06**	**6.9**	**113**	**209 J**	0.0100 U	0.0100 U
		10-02-2024	6.91	1,130	3.99	17.91	164.0	0.02 U	**18.2**	**124**	**240 J**	0.0100 U	0.0100 U
MW-15	Outside	03-13-2024	7.41	807	6.29	15.60	132.3	0.02 U	**0.5**	**113**	**206 J**	0.0100 U	0.0100 U
		10-02-2024	7.59	1,020	8.83	20.05	164.0	**0.06**	**4.4**	**117**	**213 J**	0.0100 U	0.0100 U
MW-16	Outside	03-13-2024	7.40	812	6.35	15.80	143.0	0.02 U	**1.2**	**117**	**204 J**	0.0100 U	0.0100 U
		10-02-2024	6.93	1,080	4.31	17.93	163.0	**0.02**	**18.2**	**117**	**209 J**	0.0100 U	0.0100 U
MW-17	Inside	03-13-2024	7.30	1,097	6.56	14.50	170.0	**0.03**	**20.4**	**131**	**273 J**	0.0100 U	0.0100 U
MW-18	Outside	03-14-2024	7.33	829	8.12	16.10	177.0	0.02 U	**2.2**	**112**	**219 J**	0.0100 U	0.0100 U
		10-03-2024	6.95	1,190	6.61	15.93	164.0	**0.03**	**13.3**	**121**	**233 J**	0.0100 U	0.0100 U
MW-19	Inside	03-12-2024	7.45	966	5.85	14.80	144.3	**0.03**	**22.8**	**107**	**245 J**	0.0100 U	0.0100 U
MW-20	Outside	03-14-2024	7.58	800	8.00	15.70	142.8	0.02 U	**0.9**	**113**	**191 J**	0.0100 U	0.0100 U
		10-03-2024	7.49	1,030	9.99	15.74	147.0	**0.05**	**6.5**	**123**	**187 J**	0.0100 U	0.0100 U
MW-21	Outside	03-14-2024	7.57	807	8.03	15.80	159.9	0.02 U	**0.9**	**111**	**192 J**	0.0100 U	0.0100 U
		10-01-2024	8.29	1,070	7.82	17.42	143.0	**0.66**	**>30**	**125**	**190 J**	0.0100 U	0.0100 U
MW-22	Outside	03-14-2024	7.76	908	8.29	16.10	145.0	0.02 U	**33.7**	**111**	**190 J**	0.0100 U	0.0100 U
		10-01-2024	8.39	976	7.00	20.74	149.0	**0.03**	**15.4**	**115**	**190 J**	0.0100 U	0.0100 U
MW-23	Outside	03-14-2024	7.73	905	7.88	16.50	128.7	0.02 U	**23.7**	**106**	**193 J**	0.0100 U	0.0100 U
		10-01-2024	7.17	902	9.30	17.61	179.0	**0.03**	**17.1**	**112**	**192 J**	0.0100 U	0.0100 U

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.

Appendix A. Field Forms

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

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		

AECOM

Groundwater Level Form

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

Table B-1

Well ID	Purpose	Task	Date	Depth to Water (ft br)	Comments	Measured By
AR-11	Tidewater Well	2024-Q4-WL	10/1/2024	79.31		Richardson
MW-02	Monitoring Well	2024-Q4-WL	10/1/2024	74.00		Richardson
MW-03	Monitoring Well	2024-Q4-WL	10/1/2024	80.14	Orc still in well	Richardson
MW-04	Monitoring Well	2024-Q4-WL	10/1/2024	69.30		Richardson
MW-06	Monitoring Well	2024-Q4-WL	10/1/2024	16.99		Richardson
MW-07	Monitoring Well	2024-Q4-WL	10/1/2024	68.14		Richardson
MW-08	Monitoring Well	2024-Q4-WL	10/1/2024	40.71		Richardson
MW-10	Monitoring Well	2024-Q4-WL	10/1/2024	64.72		Richardson
MW-11	Monitoring Well	2024-Q4-WL	10/1/2024	80.25		Richardson
MW-12	Monitoring Well	2024-Q4-WL	10/1/2024	80.46		Richardson
MW-14	Monitoring Well	2024-Q4-WL	10/1/2024	79.10		Richardson
MW-15	Monitoring Well	2024-Q4-WL	10/1/2024	17.04		Richardson
MW-16	Monitoring Well	2024-Q4-WL	10/1/2024	28.15		Richardson
MW-17	Monitoring Well	2024-Q4-WL	10/1/2024	81.20		Richardson
MW-18	Monitoring Well	2024-Q4-WL	10/1/2024	80.55		Richardson
MW-19	Monitoring Well	2024-Q4-WL	10/1/2024	81.06		Richardson
MW-20	Monitoring Well	2024-Q4-WL	10/1/2024	83.54		Richardson
MW-21	Monitoring Well	2024-Q4-WL	10/1/2024	83.12		Richardson
MW-22	Monitoring Well	2024-Q4-WL	10/1/2024	77.32		Richardson
MW-23	Monitoring Well	2024-Q4-WL	10/1/2024	78.67		Richardson
TMW-05	Tidewater Well	2024-Q4-WL	10/1/2024	81.78		Richardson

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

ft-feet; asl-above sea level;
bgs-below ground surface; br-below reference

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-04-241002	Date:	10/2/2024 9:41:00 AM
Well ID:	MW-04	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	76.75 ft bgs	Screen Interval:	56.7500 - 76.7500 ft bgs
SAP Pump Depth:	72 ft btoc		

Water Level			
Date:	10/2/2024 9:08:00 AM	Measured Well Depth:	79.20 ft btoc
Is Well Dry?	No	Depth to Water:	69.27 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 9:11:00 AM	End Date and Time:	10/2/2024 9:41:00 AM
Initial Pump Depth:	72 ft btoc	Final Pump Depth:	72 ft btoc
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:	21 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
9:16 AM	200			17.58	6.63	962	6.54	168	0.2	69.27	None	Clear
9:21 AM	200			17.24	6.97	993	5.54	171	0	69.27		
9:26 AM	200			17.37	7.01	1010	5.53	172	0	69.27		
9:31 AM	200			17.46	7	1020	5.48	174	0	69.27		
9:36 AM	200			17.55	7.01	1030	5.52	175	0	69.27		
9:41 AM	200		5	17.67	7.02	1030	5.39	173	0	69.27		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	Mw-06-241002	Date:	10/2/2024 12:40:00 PM
Well ID:	MW-06	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # U104298x WL/int meter: Qed mp50 # U49485x		
Comments:	MSMSD collected		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	25 ft bgs	Screen Interval:	8.5000 - 23.5000 ft bgs
SAP Pump Depth:	21 ft btoc		

Water Level			
Date:	10/2/2024 11:57:00 AM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	16.99 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 11:58:00 AM	End Date and Time:	10/2/2024 11:05:00 PM
Initial Pump Depth:	21 ft btoc	Final Pump Depth:	21 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.08 mg/L	Nitrate:	9.4 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
12:10 PM	150	0		19.19	7.42	1200	9.81	185	0	17.01		
12:15 PM	150	0		19	7.5	1200	9.15	183	0	17.02		
12:20 PM	150	0		18.92	7.49	1190	9.81	184	0	17.03		
12:25 PM	150	0		18.94	7.5	1180	9.74	184	0	17.03		
12:30 PM	150	0		18.85	7.43	1180	9.74	188	0	17.02		
11:05 PM	120	0		19.57	7.62	1200	9.91	180	0	17		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	Mw-07-241002	Date:	10/2/2024 9:35:00 AM
Well ID:	MW-07	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # U104298x WL/int meter: Qed mp50 # U49485x		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	79 ft bgs	Screen Interval:	57.0000 - 77.0000 ft bgs
SAP Pump Depth:	72 ft btoc		

Water Level			
Date:	10/2/2024 9:06:00 AM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	6.31 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 9:08:00 AM	End Date and Time:	10/2/2024 9:31:00 AM
Initial Pump Depth:	72 ft btoc	Final Pump Depth:	72 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0 mg/L	Nitrate:	5.4 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
9:09 AM	200	0		16.73	6.32	1020	10.99	261	0	68.35		
9:15 AM	200	1000	1000	16.46	6.7	1040	10.54	246	13.6	68.33		
9:20 AM	200	1000	2000	16.63	6.87	1020	10.19	240	0	68.32		
9:25 AM	200	1000	3000	16.71	6.93	1010	9.99	238	0	68.33		
9:28 AM	200	1000	3600	16.74	7.01	1010	9.91	234	0	68.3		
9:31 AM	200	1000	4200	16.75	7	1000	9.84	234	0	68.3		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-08-241002	Date:	10/2/2024 3:05:00 PM
Well ID:	MW-08	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	56 ft bgs	Screen Interval:	29.0000 - 54.0000 ft bgs
SAP Pump Depth:	44 ft btoc		

Water Level			
Date:	10/2/2024 2:26:00 PM	Measured Well Depth:	55.00 ft btoc
Is Well Dry?	No	Depth to Water:	40.86 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 2:35:00 PM	End Date and Time:	10/2/2024 3:05:00 PM
Initial Pump Depth:	44 ft btoc	Final Pump Depth:	44 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.01 mg/L	Nitrate:	21.6 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
2:40 PM	300			19.47	6.97	1050	6.36	169	0	40.86	None	Clear
2:45 PM	300			18.81	6.96	1060	5.55	169	0	40.86		
2:50 PM	300			18.77	6.97	1070	5.99	166	0	40.86		
2:55 PM	300			18.72	6.98	1070	5.97	166	0	40.86		
3:00 PM	300			18.7	7	1070	5.92	165	0	40.86		
3:05 PM	300		8	18.76	7.01	1060	5.91	165	0	40.86		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-10-241002	Date:	10/2/2024 10:40:00 AM
Well ID:	MW-10	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # U104298x WL/int meter: Qed mp50 # U49485x		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	4 in
Total Depth:	78.25 ft bgs	Screen Interval:	55.0000 - 76.0000 ft bgs
SAP Pump Depth:	68 ft btoc		

Water Level			
Date:	10/2/2024 10:16:00 AM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	64.71 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 10:16:00 AM	End Date and Time:	10/2/2024 10:39:00 AM
Initial Pump Depth:	68 ft btoc	Final Pump Depth:	68 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.04 mg/L	Nitrate:	12.8 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
10:19 AM	160	0		19.32	7	948	8.28	219	0	64.72		
10:24 AM	160	0		17.97	7.15	947	7.18	212	0	64.72		
10:29 AM	160	0		17.85	7.23	948	7.14	210	0	64.72		
10:34 AM	160	0		18.02	7.3	947	7.07	207	0	64.72		
10:39 AM	160	0		18.07	7.33	945	7.03	207	0	64.73		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q4-GW	

Sample Information

Sample ID:	MW-14-241002	Date:	10/2/2024 11:47:00 AM
Well ID:	MW-14	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information

Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	82.5 ft bgs	Screen Interval:	27.5000 - 53.0000 ft bgs
SAP Pump Depth:	82 ft btoc		

Water Level

Date:	10/2/2024 11:08:00 AM	Measured Well Depth:	85.20 ft btoc
Is Well Dry?	No	Depth to Water:	78.89 ft btoc
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	10/2/2024 11:17:00 AM	End Date and Time:	10/2/2024 11:47:00 AM
Initial Pump Depth:	84 ft btoc	Final Pump Depth:	84 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters

Ferrous Iron:	0 mg/L	Nitrate:	18.2 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
11:22 AM	200			20.71	6.62	1060	6.1	184	0	78.89	None	Clear
11:27 AM	200			19.25	6.8	1100	4.21	171	0	78.89		
11:32 AM	200			18.81	6.84	1120	4.44	170	0	78.89		
11:37 AM	200			18.07	6.88	1130	4.01	167	0	78.89		
11:42 AM	200			17.92	6.89	1130	3.89	165	0	78.89		
11:47 AM	200		7	17.91	6.91	1130	3.99	164	0	78.89		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q4-GW	

Sample Information			
Sample ID:	Mw-15-241002	Date:	10/2/2024 2:40:00 PM
Well ID:	MW-15	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # WL/int meter: Qed mp50 # U49485x		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	23.5 ft bgs	Screen Interval:	8.5000 - 23.5000 ft bgs
SAP Pump Depth:	20.5 ft btoc		

Water Level			
Date:	10/2/2024 2:05:00 PM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	16.88 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 2:07:00 PM	End Date and Time:	10/2/2024 2:33:00 PM
Initial Pump Depth:	21 ft btoc	Final Pump Depth:	21 ft btoc
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:	4.4 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
2:08 PM	150	0		21.61	7.63	1030	7.83	153	0	16.94		
2:13 PM	150	0		20.03	7.58	1030	9.65	163	0	16.91		
2:18 PM	150	0		19.98	7.56	1030	9.29	165	0	16.91		
2:23 PM	150	0		19.84	7.56	1020	9.3	165	0	16.91		
2:28 PM	150	0		19.94	7.58	1020	9.07	164	0	16.91		
2:33 PM	150	0		20.05	7.59	1020	8.83	164	0	16.91		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q4-GW	

Sample Information			
Sample ID:	MW-16-241002	Date:	10/2/2024 1:35:00 PM
Well ID:	MW-16	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	30 ft bgs	Screen Interval:	20.0000 - 30.0000 ft bgs
SAP Pump Depth:	31 ft btoc		

Water Level			
Date:	10/2/2024 12:58:00 PM	Measured Well Depth:	33.00 ft btoc
Is Well Dry?	No	Depth to Water:	28.11 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/2/2024 1:05:00 PM	End Date and Time:	10/2/2024 1:35:00 PM
Initial Pump Depth:	31 ft btoc	Final Pump Depth:	31 ft btoc
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:	18.2 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
1:10 PM	220			19.29	6.97	1070	4.84	164	10.2	28.1	None	Clear
1:15 PM	220			18.33	6.95	1080	4.16	163	0.7	28.11		
1:20 PM	220			18.03	6.94	1080	4.08	164	0	28.11		
1:25 PM	220			17.86	6.95	1080	4.44	162	0	28.1		
1:30 PM	220			17.83	6.94	1080	4.04	162	0	28.1		
1:35 PM	220		9	17.93	6.93	1080	4.31	163	0	28.1		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q4-GW	

Sample Information			
Sample ID:	MW-18-241003	Date:	10/3/2024 9:05:00 AM
Well ID:	MW-18	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Flush	Well Diameter:	2 in
Total Depth:	87 ft bgs	Screen Interval:	72.0000 - 87.0000 ft bgs
SAP Pump Depth:	86.5 ft btoc		

Water Level			
Date:	10/3/2024 8:05:00 AM	Measured Well Depth:	87.00 ft btoc
Is Well Dry?	No	Depth to Water:	80.56 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/3/2024 8:15:00 AM	End Date and Time:	10/3/2024 9:05:00 AM
Initial Pump Depth:	86.5 ft btoc	Final Pump Depth:	86.5 ft btoc
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:	13.3 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
8:20 AM	300			15.06	6.71	1090	6	176	400	80.56	None	Clear
8:25 AM	300			15.63	6.74	1190	6.39	166	130	80.56		
8:30 AM	300			15.61	6.7	1190	6.14	168	58.8	80.56		
8:35 AM	300			15.67	6.77	1190	6.39	165	28.8	80.56		
8:40 AM	300			15.77	6.79	1190	6.63	161	26.5	80.56		
8:45 AM	300			15.73	6.88	1200	6.41	160	20.2	80.56		
8:50 AM	300			15.77	6.91	1200	6.08	162	18.4	80.56		

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GROUNDWATER SAMPLING LOG

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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	300			15.84	6.94	1200	6.09	161	12	80.56		
9:00 AM	300			15.94	6.95	1190	6.19	161	10.2	80.56		
9:05 AM	300		14	15.93	6.95	1190	6.61	164	9.7	80.56		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #: 60722666	
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event: 2024-Q4-GW	

Sample Information			
Sample ID:	MW-20-241003	Date:	10/3/2024 8:45:00 AM
Well ID:	MW-20	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # U104298x		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	99 ft bgs	Screen Interval:	79.0000 - 94.0000 ft bgs
SAP Pump Depth:	95 ft btoc		

Water Level			
Date:	10/3/2024 8:13:00 AM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	83.43 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/3/2024 8:14:00 AM	End Date and Time:	10/3/2024 8:43:00 AM
Initial Pump Depth:	95 ft btoc	Final Pump Depth:	95 ft btoc
Purge Method:	Low flow (pump type: Bladder)	Sample Method:	Low flow
Notes:	Not Recorded		

Natural Attenuation Field Parameters			
Ferrous Iron:	0.05 mg/L	Nitrate:	6.5 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
8:18 AM	200	0		15.28	7.52	1050	9.42	114	33.4	83.41		
8:23 AM	200	0		15.5	7.52	1050	11.03	130	14	83.43		
8:28 AM	200	0		15.59	7.47	1040	10.58	140	0.9	83.43		
8:33 AM	200	0		15.73	7.48	1040	10.3	143	0	83.43		
8:38 AM	200	0		15.72	7.49	1030	10.21	145	0	83.43		
8:43 AM	200	0		15.74	7.49	1030	9.99	147	0	83.43		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-21-241001	Date:	10/1/2024 2:15:00 PM
Well ID:	MW-21	Location Type:	Monitoring Well
Duplicate ID:	Mw-210-241001	Sampler:	RichardsonE2
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	93 ft bgs	Screen Interval:	77.0000 - 92.0000 ft bgs
SAP Pump Depth:	93 ft btoc		

Water Level			
Date:	10/1/2024 1:26:00 PM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	83.12 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/1/2024 1:30:00 PM	End Date and Time:	10/1/2024 2:11:00 PM
Initial Pump Depth:	93 ft btoc	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:	0.66 mg/L	Nitrate:	999999999 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
1:35 PM	300	0	0	19.97	8.78	1.04	8.63	96	33.4	83.15		
	300	0	0	19.97	8.78	1.04	8.63	96	33.4	83.15		
1:41 PM	300	0		18.1	8.61	1.07	7.99	115	33.4	83.15		
	300	0		18.1	8.61	1.07	7.99	115	33.4	83.15		
1:45 PM	300	0		17.79	8.36	1.07	7.76	126	33.4	83.15		
	300	0		17.79	8.36	1.07	7.76	126	33.4	83.15		
1:50 PM	300	0		17.89	8.26	1.06	7.85	132	33.4	83.15		
	300	0		17.89	8.26	1.06	7.85	132	33.4	83.15		
1:53 PM	300	0		17.51	8.34	1.08	7.99	130	33.4	83.15		
	300	0		17.51	8.34	1.08	7.99	130	33.4	83.15		

AECOM

GROUNDWATER SAMPLING LOG

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
1:56 PM	300	0		17.78	8.37	1.07	7.79	131	33.4	83.15		
	300	0		17.78	8.37	1.07	7.79	131	33.4	83.15		
1:59 PM	300	0		17.44	8.26	1.07	7.9	137	33.4	83.15		
	300	0		17.44	8.26	1.07	7.9	137	33.4	83.15		
2:02 PM	300	0		17.44	8.14	1.08	8.29	137	33.4	83.15		
	300	0		17.44	8.14	1.08	8.29	137	33.4	83.15		
2:05 PM	300	0		17.32	8.26	1.08	8.08	140	33.4	83.15		
	300	0		17.32	8.26	1.08	8.08	140	33.4	83.15		
2:08 PM	300	0		17.38	8.27	1.07	7.89	142	33.4	83.15		
	300	0		17.38	8.27	1.07	7.89	142	33.4	83.15		
2:11 PM	300	0		17.42	8.29	1.07	7.82	143	33.4	83.15		
	300	0		17.42	8.29	1.07	7.82	143	33.4	83.15		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-22-241001	Date:	10/1/2024 4:25:00 PM
Well ID:	MW-22	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	RichardsonE2
Equipment:	Field param meter: Horiba U-52 # U104298x		
Comments:	Not Recorded		

Well Information			
Well Completion:	Stick-up	Well Diameter:	2 in
Total Depth:	95 ft bgs	Screen Interval:	79.0000 - 94.0000 ft bgs
SAP Pump Depth:	94 ft btoc		

Water Level			
Date:	10/1/2024 3:40:00 PM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	77.44 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/1/2024 3:45:00 PM	End Date and Time:	10/1/2024 4:21:00 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:	0.03 mg/L	Nitrate:	15.4 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
3:51 PM	200	0		27	8.62	912	6.22	121	0	77.45		
	200	0		27	8.62	912	6.22	121	0	77.45		
3:56 PM	200	0		25.34	8.47	903	5.53	133	33.4	77.45		
	200	0		25.34	8.47	903	5.53	133	33.4	77.45		
4:04 PM	200	0		23.12	8.53	976	6.33	136	33.4	77.45		
	200	0		23.12	8.53	976	6.33	136	33.4	77.45		
4:09 PM	200	0		19.76	8.49	1010	6.63	142	33.4	77.45		
	200	0		19.76	8.49	1010	6.63	142	33.4	77.45		
4:12 PM	200	0		20.32	8.42	999	6.23	145	33.4	77.42		
	200	0		20.32	8.42	999	6.23	145	33.4	77.42		
4:15 PM	200	0		19.59	8.4	1020	7.21	146	33.4	77.42		
	200	0		19.59	8.4	1020	7.21	146	33.4	77.42		
4:18 PM	200	0		20.13	8.43	996	6.91	146	33.4	77.42		
	200	0		20.13	8.43	996	6.91	146	33.4	77.42		

AECOM

GROUNDWATER SAMPLING LOG

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
	200	0		20.74	8.39	976	7	149	33.4	77.43		
4:21 PM	200	0		20.74	8.39	976	7	149	33.4	77.43		

Reviewer Comments

GROUNDWATER SAMPLING LOG

Client:	Marathon Petroleum Corporation (MPC)	Project #:	60722666
Site:	Chevron Pipe Line Company Pasco Bulk Fuel Terminal	Event:	2024-Q4-GW

Sample Information			
Sample ID:	MW-23-241001	Date:	10/1/2024 3:40:00 PM
Well ID:	MW-23	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Jackson Long
Equipment:	Field param meter: Horiba U-52 # U115618X		
Comments:	Not Recorded		

Well Information			
Well Completion:	Flush	Well Diameter:	2 in
Total Depth:	96 ft bgs	Screen Interval:	80.0000 - 95.0000 ft bgs
SAP Pump Depth:	92 ft btoc		

Water Level			
Date:	10/1/2024 2:53:00 PM	Measured Well Depth:	NE btoc
Is Well Dry?	No	Depth to Water:	78.66 ft btoc
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	10/1/2024 3:00:00 PM	End Date and Time:	10/1/2024 3:40:00 PM
Initial Pump Depth:	92 ft btoc	Final Pump Depth:	92 ft btoc
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:	17.1 mg/L

Time	Purge Rate (l/min)	Purge Volume (l)	Cumulative Purge Volume (l)	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)
3:05 PM	300			18.34	7.75	915	6.97	100	5.4	78.66	None	Clear
3:10 PM	300			17.82	7.69	908	9.76	118	0.2	78.66		
3:15 PM	300			17.75	7.57	900	9.73	135	0	78.66		
3:20 PM	300			17.75	7.45	910	9.49	148	0.3	78.66		
3:25 PM	300			17.66	7.32	903	9.33	162	1.1	78.66		
3:30 PM	300			17.64	7.26	904	9.3	171	1.3	78.66		
3:35 PM	300			17.65	7.2	895	9.29	176	2.7	78.66		
3:40 PM	300		15	17.61	7.17	902	9.3	179	2	78.66		

Reviewer Comments

Appendix B. Groundwater Data and Analytical Results - 2014-2024

Table B1: Groundwater Elevations and Analytical Results - 2014-2024

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800*	*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*
MW-02	05-29-2014	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
	10-29-2014	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
	06-04-2015	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
	09-28-2015	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
	08-29-2016	417.28	74.52	342.76	0.10	50 U	**1400**	**710**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	12-05-2016	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
	05-17-2017	417.28	72.86	344.42	-1.16	-	-	-	-	-	-	-	-
	10-24-2017	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
	06-14-2018	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
	12-02-2018	417.23	73.93	343.30	1.09	100 U	**1300**	**1800**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	06-26-2019	417.23	73.49	343.74	-0.44	100 U	**1500**	**1200**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12-11-2019	417.23	73.75	343.48	0.26	100 U	**1600**	**1100**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	06-24-2020	417.23	73.38	343.85	-0.37	100 U	**1200**	**930**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12-15-2020	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
	05-25-2021	417.23	73.69	343.54	-0.02	31.6 U	**1250**	**901**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	417.23	74.38	342.85	0.69	100 U	**630**	**460**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-03-2022	417.23	73.98	343.25	-0.40	100 U	**2850**	**8560**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	417.23	73.00	344.23	-0.98	100 U	**1240**	**969**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-12-2023	417.23	73.88	343.35	0.88	100 U	**874**	**1020**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	03-12-2024	417.23	73.02	344.21	-0.86	100 U	**790**	**1340**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10-01-2024	417.23	74.00	343.23	0.98	-	-	-	-	-	-	-	-
MW-03	05-28-2014	423.42	78.85	344.57	-	250 U	**1100**	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	10-30-2014	423.42	80.18	343.24	1.33	**620**	**18000**	500 U	0.50 U	**1.4**	0.50 U	0.50 U	0.50 U
	06-04-2015	423.42	79.46	343.96	-0.72	250 U	**3300**	250 U	0.50 U	0.50 U	0.50 U	1.0 U	**0.51**
	09-29-2015	423.42	80.58	342.84	1.12	**733**	**3300**	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
	08-30-2016	423.42	80.60	342.82	0.02	**1400**	**11000**	**1100**	2.0 U	2.0 U	3.0 U	3.0 U	**2.5**
	12-02-2016	423.42	80.17	343.25	-0.43	**290**	**6600**	**290**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	05-16-2017	423.42	79.04	344.38	-1.13	500 U	**2600**	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	10-25-2017	423.42	80.23	343.19	1.19	**380**	**5700**	**410**	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	06-14-2018	423.42	79.20	344.22	-1.03	250 U	**4700**	**860**	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	12-04-2018	423.40	80.00	343.40	0.82	**180 J**	**8800**	**2000**	0.53 U	0.39 U	0.50 U	3.0 U	0.93 U
	06-26-2019	423.40	79.64	343.76	-0.36	**300**	**8600**	**1900**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12-11-2019	423.40	79.93	343.47	0.29	**230 J**	**2700 J**	**830 J**	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	06-24-2020	423.40	79.57	343.83	-0.36	**200 J**	**4400**	**920**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12-16-2020	423.40	79.92	343.48	0.35	**150 J**	**2200**	**210 J**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	05-27-2021	423.40	79.86	343.54	-0.06	632 U	**12100 J**	**3500 J**	0.471 U	1.39 U	0.69 U	0.870 U	5.00 UJ
	10-25-2021	423.40	80.49	342.91	0.63	**213**	**6910**	**1740**	0.471 U	1.39 U	0.69 U	**1.30 J**	5.00 U
	11-02-2022	423.40	80.16	343.24	-0.33	**117 J**	**5860**	**1410**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	423.40	79.16	344.24	-1.00	100 U	**5120**	**1240**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-11-2023	423.40	79.94	343.46	0.78	**140 J**	**7840**	**2180**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	03-12-2024	423.40	79.18	344.22	-0.76	100 U	**7150**	**2280**	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10-01-2024	423.40	80.14	343.26	0.96	-	-	-	-	-	-	-	-

Table B1: Groundwater Elevations and Analytical Results - 2014-2024

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800*	*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*
MW-04	05-28-2014	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
	10-28-2014	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
	06-03-2015	412.09	68.48	343.61	-0.69	250 U	100 U	250 U	0.50 U	**0.52**	0.50 U	1.0 U	0.50 U
	09-28-2015	412.09	69.52	342.57	1.04	-	-	-	-	-	-	-	-
	08-30-2016	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
	05-15-2017	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
	06-13-2018	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
	06-26-2019	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
	12-09-2019	412.05	68.98	343.07	0.30	-	-	-	-	-	-	-	-
	06-23-2020	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
	12-14-2020	412.05	68.90	343.15	0.28	-	-	-	-	-	-	-	-
	05-25-2021	412.05	68.84	343.21	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-25-2021	412.05	69.47	342.58	0.63	-	-	-	-	-	-	-	-
	10-31-2022	412.05	69.11	342.94	-0.36	-	-	-	-	-	-	-	-
	04-25-2023	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 UJ
	10-13-2023	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
	03-14-2024	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
	10-02-2024	412.05	69.30	342.75	0.98	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-06	05-29-2014	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
	10-29-2014	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
	06-03-2015	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
	09-28-2015	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
	08-30-2016	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
	12-05-2016	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
	05-16-2017	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
	10-23-2017	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
	06-11-2018	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
	12-02-2018	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
	06-26-2019	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
	12-10-2019	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
	06-23-2020	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
	12-16-2020	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
	05-24-2021	358.52	16.44	342.08	-0.17	31.6 U	66.7 U	**120 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	358.52	16.99	341.53	0.55	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	358.52	16.75	341.77	-0.24	100 U	**224**	**519**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	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 UJ
	10-10-2023	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
	03-13-2024	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
	10-02-2024	358.52	16.99	341.53	0.73	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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels (1)	*800*	*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*
MW-07	05-28-2014	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
	10-29-2014	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
	06-03-2015	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
	09-28-2015	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
	08-30-2016	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
	12-05-2016	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
	05-15-2017	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
	10-24-2017	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
	06-13-2018	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
	12-04-2018	411.32	68.03	343.29	0.95	100 U	**86 J**	97 U	0.53 U	0.39 U	**0.6 J**	3.0 U	0.93 U
	06-26-2019	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
	12-11-2019	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
	06-23-2020	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
	12-14-2020	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
	05-25-2021	411.32	67.82	343.50	-0.05	31.6 U	66.7 U	**103 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	411.32	68.47	342.85	0.65	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	411.32	68.12	343.20	-0.35	100 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	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 UJ
	10-10-2023	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
	03-13-2024	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
	10-02-2024	411.32	68.14	343.18	0.91	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-08	05-28-2014	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
	10-29-2014	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
	06-03-2015	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
	09-28-2015	383.91	41.13	342.78	1.09	-	-	-	-	-	-	-	-
	08-30-2016	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
	05-17-2017	383.91	39.56	344.35	-0.74	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	06-11-2018	383.76	39.65	344.11	0.24	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U
	06-26-2019	383.76	40.26	343.50	0.61	100 U	71 U	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	12-09-2019	383.76	40.48	343.28	0.22	-	-	-	-	-	-	-	-
	06-23-2020	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
	12-14-2020	383.76	40.44	343.32	0.30	-	-	-	-	-	-	-	-
	05-26-2021	383.76	40.38	343.38	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-25-2021	383.76	41.03	342.73	0.65	-	-	-	-	-	-	-	-
	10-31-2022	383.76	46.71	337.05	5.68	-	-	-	-	-	-	-	-
	04-25-2023	383.76	39.93	343.83	-6.78	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-11-2023	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
	03-13-2024	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
	10-02-2024	383.76	40.71	343.05	0.94	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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels (1)	*800*	*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*
MW-10	05-28-2014	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
	10-29-2014	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
	06-03-2015	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
	09-28-2015	407.91	65.02	342.89	1.11	-	-	-	-	-	-	-	-
	08-30-2016	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
	05-15-2017	407.91	63.50	344.41	-1.72	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U
	06-13-2018	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
	06-26-2019	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
	12-09-2019	407.83	64.37	343.46	0.22	-	-	-	-	-	-	-	-
	06-23-2020	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
	12-14-2020	407.83	64.36	343.47	0.33	-	-	-	-	-	-	-	-
	05-25-2021	407.83	64.30	343.53	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-31-2022	407.83	64.60	343.23	0.30	-	-	-	-	-	-	-	-
	04-25-2023	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 UJ
	10-10-2023	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
	03-13-2024	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
	10-02-2024	407.83	64.72	343.11	1.08	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-11	05-29-2014	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
	10-30-2014	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
	06-04-2015	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
	09-29-2015	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
	08-29-2016	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
	12-05-2016	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
	05-16-2017	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
	10-25-2017	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
	06-14-2018	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
	12-02-2018	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
	06-27-2019	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
	12-11-2019	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
	06-24-2020	423.44	79.66	343.78	-0.35	100 U	**3900**	**2300**	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U
	12-15-2020	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
	05-25-2021	423.44	79.95	343.49	0.00	31.6 U	**765 J**	**428 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	423.44	80.62	342.82	0.67	31.6 U	**499**	**230 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	423.44	80.21	343.23	-0.41	100 U	**200 J**	**84.6 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	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 UJ
	10-12-2023	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
	03-12-2024	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
	10-01-2024	423.44	80.25	343.19	0.95	-	-	-	-	-	-	-	-

Table B1: Groundwater Elevations and Analytical Results - 2014-2024

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800*	*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*
MW-12	05-29-2014	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
	10-30-2014	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
	06-04-2015	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
	09-29-2015	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
	12-06-2016	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
	05-16-2017	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
	10-24-2017	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
	06-14-2018	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
	12-03-2018	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
	06-27-2019	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
	12-11-2019	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
	06-24-2020	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
	12-16-2020	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
	05-27-2021	423.62	80.06	343.56	-0.08	31.6 U	**601**	**448**	1.00 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	423.62	80.79	342.83	0.73	31.6 U	**273**	**652**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	423.62	80.37	343.25	-0.42	100 U	66.7 U	**736**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	423.62	79.45	344.17	-0.92	100 U	**234**	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
	10-12-2023	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
	03-12-2024	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
	10-01-2024	423.62	80.46	343.16	0.94	-	-	-	-	-	-	-	-
MW-14	05-29-2014	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
	10-29-2014	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
	06-04-2015	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
	09-28-2015	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
	08-29-2016	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
	12-05-2016	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
	05-17-2017	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
	10-24-2017	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
	06-13-2018	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
	12-02-2018	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
	06-27-2019	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
	12-11-2019	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
	06-24-2020	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**
	12-15-2020	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
	05-25-2021	421.84	78.43	343.41	-0.03	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	421.84	79.20	342.64	0.77	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-03-2022	421.84	78.73	343.11	-0.47	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	421.84	77.97	343.87	-0.76	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-12-2023	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
	03-12-2024	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
	10-02-2024	421.84	79.10	342.74	1.33	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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	*800*	*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*
MW-15	12-03-2018	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
	06-26-2019	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
	12-10-2019	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
	06-23-2020	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
	12-14-2020	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
	05-25-2021	358.50	16.34	342.16	-0.09	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-25-2021	358.50	16.90	341.60	0.56	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	358.50	16.63	341.87	-0.27	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	358.50	16.08	342.42	-0.55	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-10-2023	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
	03-13-2024	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
	10-02-2024	358.50	17.04	341.46	0.82	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-16	12-03-2018	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
	12-10-2019	370.92	27.79	343.13	-0.16	100 U	62 U	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U
	06-22-2020	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
	12-16-2020	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
	05-25-2021	370.92	27.68	343.24	-0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	370.92	28.32	342.60	0.64	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	370.92	27.92	343.00	-0.40	100 U	66.7 U	**207 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	370.92	27.14	343.78	-0.78	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 UJ
	10-11-2023	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
	03-13-2024	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
	10-02-2024	370.92	28.15	342.77	0.91	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-17	12-03-2018	424.28	81.00	343.28	-	**180 J**	**880**	**850**	**2.9 J**	**1.9 J**	**8.6 J**	**38 J**	**4.7 J**
	06-27-2019	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
	12-11-2019	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
	06-24-2020	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
	12-15-2020	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
	05-25-2021	424.28	80.78	343.50	-0.02	31.6 U	**486**	**358**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	424.28	81.50	342.78	0.72	31.6 U	**855**	**674**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-03-2022	424.28	81.04	343.24	-0.46	100 U	**903**	**503**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	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 UJ
	10-12-2023	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
	03-13-2024	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
	10-01-2024	424.28	81.20	343.08	1.09	-	-	-	-	-	-	-	-
MW-18	12-04-2018	423.66			-	**280**	65 U	96 U	**1.4 J**	**0.83 J**	**3.2**	**15**	**1.7 J**
	06-26-2019	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
	12-12-2019	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
	06-22-2020	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
	12-15-2020	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
	05-26-2021	423.69	80.11	343.58	0.00	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	423.69	80.78	342.91	0.67	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-01-2022	423.69	80.32	343.37	-0.46	100 U	66.7 U	**101 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	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 UJ
	10-11-2023	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
	03-14-2024	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
	10-03-2024	423.69	80.55	343.14	1.07	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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
					Cleanup Levels [1]	800	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
MW-19	12-03-2018	424.20	80.80	343.40	-	**18000 J**	**3100**	**110 J**	**300**	**160**	**740**	**630**	**390**
	06-27-2019	424.20	80.50	343.70	-0.30	**3200**	**930**	**98 U**	**160**	**23**	**180**	**260**	**110 J**
	12-10-2019	424.20	80.72	343.48	0.22	**530**	**320**	**93** U	**27**	4.1 U	**14**	**56**	**18**
	06-24-2020	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**
	12-16-2020	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
	05-26-2021	424.20	80.61	343.59	-0.04	**51.2 J**	**147 J**	83.3 U	1.00 U	0.28 U	0.14 U	3.00 U	**1.56 J**
	10-27-2021	424.20	81.31	342.89	0.70	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-01-2022	424.20	80.92	343.28	-0.39	100 U	66.7 U	**97.8 J**	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	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 UJ
	10-11-2023	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
	03-12-2024	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
	10-01-2024	424.20	81.06	343.14	1.05	-	-	-	-	-	-	-	-
MW-20	12-12-2019	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
	06-22-2020	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
	12-16-2020	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
	05-26-2021	426.52	82.94	343.58	0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-26-2021	426.52	83.60	342.92	0.66	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-01-2022	426.52	83.26	343.26	-0.34	100 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-26-2023	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 UJ
	10-11-2023	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
	03-14-2024	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
	10-03-2024	426.52	83.54	342.98	1.21	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-21	12-12-2019	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
	06-22-2020	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
	12-15-2020	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
	05-26-2021	426.16	82.66	343.50	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	426.16	83.33	342.83	0.67	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	426.16	83.07	343.09	-0.26	100 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	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 UJ
	10-12-2023	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
	03-14-2024	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
	10-01-2024	426.16	83.12	343.04	1.06	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
MW-22	12-11-2019	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
	06-23-2020	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
	12-15-2020	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
	05-26-2021	420.45	77.00	343.45	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	420.45	77.64	342.81	0.64	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-02-2022	420.45	77.29	343.16	-0.35	100 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-25-2023	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 UJ
	10-13-2023	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
	03-14-2024	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
	10-01-2024	420.45	77.32	343.13	0.93	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

Well ID	Sample Date	TOC Elevation	Depth to GW	GW Elevation	Change in GW Elevation	TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
Cleanup Levels (1)						*800*	*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*
MW-23	12-11-2019	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
	06-23-2020	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
	12-15-2020	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
	05-26-2021	421.74	78.30	343.44	0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 UJ
	10-27-2021	421.74	78.93	342.81	0.63	31.6 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	11-03-2022	421.74	78.53	343.21	-0.40	100 U	66.7 U	83.3 U	0.0941 U	0.28 U	0.14 U	0.17 U	1.00 U
	04-24-2023	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 UJ
	10-12-2023	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
	03-14-2024	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
	10-01-2024	421.74	78.67	343.07	0.97	100 U	200 U	250 U	1.00 U	1.00 U	1.00 U	3.00 U	5.00 U
AR-11	06-25-2019	422.62	78.84	343.78	-	-	-	-	-	-	-	-	-
	12-09-2019	422.62	78.96	343.66	0.12	-	-	-	-	-	-	-	-
	06-22-2020	422.62	78.63	343.99	-0.33	-	-	-	-	-	-	-	-
	12-15-2020	422.62	79.01	343.61	0.38	-	-	-	-	-	-	-	-
	05-24-2021	422.62	78.98	343.64	-0.03	-	-	-	-	-	-	-	-
	10-25-2021	422.62	79.62	343.00	0.64	-	-	-	-	-	-	-	-
	10-31-2022	422.62	79.18	343.44	-0.44	-	-	-	-	-	-	-	-
	04-24-2023	422.62	78.28	344.34	-0.90	-	-	-	-	-	-	-	-
	10-09-2023	422.62	79.15	343.47	0.87	-	-	-	-	-	-	-	-
	03-11-2024	422.62	78.35	344.27	-0.80	-	-	-	-	-	-	-	-
	10-01-2024	422.62	79.31	343.31	0.96	-	-	-	-	-	-	-	-
TMW-05	06-25-2019	425.02	81.29	343.73	-	-	-	-	-	-	-	-	-
	12-09-2019	425.02	81.40	343.62	0.11	-	-	-	-	-	-	-	-
	06-22-2020	425.02	81.07	343.95	-0.33	-	-	-	-	-	-	-	-
	12-15-2020	425.02	81.46	343.56	0.39	-	-	-	-	-	-	-	-
	05-24-2021	425.02	81.41	343.61	-0.05	-	-	-	-	-	-	-	-
	10-25-2021	425.02	82.06	342.96	0.65	-	-	-	-	-	-	-	-
	10-31-2022	425.02	81.63	343.39	-0.43	-	-	-	-	-	-	-	-
	04-24-2023	425.02	80.73	344.29	-0.90	-	-	-	-	-	-	-	-
	10-09-2023	425.02	81.60	343.42	0.87	-	-	-	-	-	-	-	-
	03-11-2024	425.02	80.81	344.21	-0.79	-	-	-	-	-	-	-	-
	10-01-2024	425.02	81.78	343.24	0.97	-	-	-	-	-	-	-	-

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

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.

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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	05-29-2014	7.16	1,215	2.49	**17.58**	146.3	**1.16**	**13.8**	**100**	**537**	0.0050 U	0.0010 U
	10-29-2014	6.85	1,578	1.07	17.51	91.6	**1.33**	**2.6**	**140**	**730**	**0.011**	0.0010 U
	06-04-2015	6.84	1,018	2.21	17.97	-66.6	**0.53**	**0.1**	**107**	**558**	0.0050 U	0.0010 U
	09-28-2015	6.91	1,467	1.77	17.60	-7.0	-	**1.7**	**167**	**711**	0.0050 U	**0.0242**
	08-29-2016	7.38	1,400	1.74	19.89	94.0	-	-	**110**	-	0.020 U	0.0050 U
	12-05-2016	6.63	1,050	6.16	15.80	282.0	-	-	**89**	**400**	-	0.0050 U
	10-24-2017	7.34	1,270	8.93	17.58	112.0	0.02 U	**9.7**	**110**	**350**	0.020 U	**0.0083**
	06-14-2018	6.84	1,160	3.40	22.39	178.0	**0.96**	**11.0**	**110**	**400**	0.020 U	0.0050 U
	12-02-2018	7.54	1,680	4.81	13.55	206.0	**0.15**	**10.8**	**92**	**680**	0.0017 U	**0.022**
	06-26-2019	6.93	1,400	-	17.80	115.0	**0.12**	**17.9**	**120**	**560**	**0.0066 J**	0.0017 U
	12-11-2019	7.00	1,540	1.55	13.57	120.0	0.02 U	**16.8**	**110**	**530**	0.0017 U	0.00050 U
	06-24-2020	6.91	1,420	2.27	29.34	97.0	**0.02**	**12.7**	**110**	**560**	0.0017 U	0.00050 U
	12-15-2020	7.72	1,319	2.37	15.25	109.4	**0.82**	**5.4**	**100**	**540**	**0.0022 J**	0.00050 U
	05-25-2021	7.45	1,450	3.05	21.30	87.0	**0.02**	**11.4**	**97.9**	**692**	**0.00178 J**	0.0029 U
	10-26-2021	7.31	1,180	0.00	17.79	133.0	0.02 U	**3.3**	**98.6**	**430**	0.00086 U	0.0029 U
	11-03-2022	8.22	1,380	0.18	15.60	74.0	0.02 U	**> 30**	**97.9**	**509**	**0.00190 J**	0.0029 U
	04-26-2023	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
	10-12-2023	7.35	1,460	3.68	15.72	155.0	**0.01**	**11.2**	**88.3 J**	**671 J**	0.0100 U	0.0100 U
	03-12-2024	7.23	1,116	4.65	15.90	104.0	0.02 U	**10.9**	**79.1 J**	**488 J**	0.0100 U	0.0100 U
MW-03	05-28-2014	7.15	1,053	-	18.12	-105.6	-	-	-	-	-	-
	10-30-2014	6.91	1,136	0.84	17.28	-144.7	-	-	-	-	-	-
	06-04-2015	6.82	1,353	0.95	18.61	-154.0	-	-	-	-	-	-
	09-29-2015	6.82	1,174	1.01	17.51	-174.4	-	-	-	-	-	-
	08-30-2016	7.13	1,190	2.42	18.13	-153.0	-	-	-	-	-	-
	12-02-2016	6.86	963	3.24	16.06	36.0	-	-	-	-	-	-
	05-16-2017	7.27	996	0.82	17.01	-37.0	-	-	-	-	-	-
	10-25-2017	7.41	1,200	4.01	17.58	-105.0	-	-	-	-	-	-
	06-14-2018	6.70	1,030	2.75	19.46	42.0	-	-	-	-	-	-
	12-04-2018	7.56	1,280	8.82	16.31	-65.0	-	-	**29**	**520**	**0.96**	**1.7**
	06-26-2019	6.99	1,030	-	18.20	-120.0	**1.71**	**2.7**	**32**	**470**	**0.80**	**2.1**
	12-11-2019	7.22	1,310	0.83	14.47	-192.0	**1.28**	**1.3**	**63**	**450 J**	**0.81**	**0.50**
	06-24-2020	7.02	1,220	0.96	22.25	-100.0	**1.9**	**1.9**	**61**	**450**	**0.66**	**0.063**
	12-16-2020	7.60	1,274	1.30	16.10	-94.2	**1.11**	0.3 U	**49**	**500**	**0.77**	**1.1**
	05-27-2021	7.09	1,410	0.00	17.02	-93.0	**1.27**	**1.5**	**37.7**	**557**	**0.719**	**1.92**
	10-25-2021	7.07	1,350	1.05	16.79	-88.0	**2.72**	**2.9**	**27.5**	**648**	**0.862**	**2.74**
	11-02-2022	7.20	1,190	0.00	15.67	-98.0	**2.79**	**0.7**	**45.2**	**544**	**0.697**	**0.869**
	04-25-2023	7.34	1,367	0.49	16.06	-150.2	**0.66**	0.3 U	**71.2**	**455 J**	**0.580**	**0.336**
	10-11-2023	7.30	1,310	2.56	16.84	-123.0	**2.78**	**3.7**	**27.9**	**595 J**	**0.734**	**2.07**
	03-12-2024	7.08	1,037	0.54	15.60	-66.0	**1.32**	0.3 U	**52.7**	**479 J**	**0.644**	**1.38**

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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	05-28-2014	7.68	728	-	17.78	82.2	-	-	-	-	-	-
	10-28-2014	7.38	741	7.75	16.90	36.0	-	-	-	-	-	-
	06-03-2015	7.40	751	8.28	17.76	-23.6	-	-	-	-	-	-
	09-28-2015	-	-	-	-	-	-	-	-	-	-	-
	08-30-2016	8.36	813	7.34	18.32	59.0	-	-	-	-	-	-
	12-05-2016	-	-	-	-	-	-	-	-	-	-	-
	05-15-2017	7.99	861	7.78	17.90	-27.0	-	-	-	-	-	-
	06-13-2018	7.49	813	7.56	20.99	161.0	-	-	-	-	-	-
	06-26-2019	7.40	962	6.62	19.15	150.0	-	-	-	-	-	-
	06-23-2020	7.57	1,050	9.28	19.38	84.0	-	-	-	-	-	**0.001 J**
	05-25-2021	7.60	1,120	7.74	17.46	165.0	-	-	-	-	-	-
	04-25-2023	7.77	1,027	8.27	16.12	27.4	0.02 U	**9.6**	**115**	**190 J**	0.0100 U	0.0100 U
	10-13-2023	7.59	947	6.15	15.89	172.0	**0.02**	**28.6**	**109**	**195 J**	0.0100 U	0.0100 U
	03-14-2024	7.76	909	8.29	15.90	156.0	**0.02**	**> 30**	**107**	**189 J**	0.0100 U	0.0100 U
	10-02-2024	7.02	1,030	5.39	17.67	173.0	**0.03**	**21.0**	**117**	**194 J**	0.0100 U	0.0100 U
MW-06	05-29-2014	7.93	95	8.78	15.40	127.1	0.02 U	**18.5**	**110**	**252**	0.0050 U	0.0010 U
	10-29-2014	7.43	817	6.79	19.45	84.7	**0.4**	0.3 U	**100**	**185**	0.0050 U	0.0010 U
	06-03-2015	7.53	744	8.59	17.18	-44.8	0.02 U	0.3 U	**107**	**169**	0.0050 U	**0.0017**
	09-28-2015	7.53	812	6.76	19.23	-8.5	-	**15.7**	**108**	**189**	0.0050 U	0.0010 U
	08-30-2016	8.30	836	7.39	18.88	110.0	-	-	**100**	-	0.020 U	0.0050 U
	12-05-2016	6.83	851	6.84	14.54	207.0	-	-	**93**	**170**	0.020 U	0.0050 U
	05-16-2017	8.06	824	7.89	14.65	66.0	-	-	**96**	**150**	0.020 U	**0.0085**
	10-23-2017	7.61	863	9.32	19.68	186.0	0.02 U	0.04 U	**98**	**180**	0.020 U	0.0050 U
	06-11-2018	7.38	828	8.38	20.69	156.0	0.02 U	**8.09**	**96 J**	**150**	0.020 U	0.0050 U
	12-02-2018	7.98	963	7.86	18.65	241.0	0.02 U	**> 30**	**100**	**170**	**0.0021 J**	0.0017 U
	06-26-2019	7.54	831	-	17.70	121.0	0.02 U	**14.7**	**100**	**140**	0.0050 U	0.0017 U
	12-10-2019	7.69	1,070	9.47	14.60	10.0	0.02 U	**9.2**	**110**	**160**	0.0017 U	0.0010 U
	06-23-2020	7.55	1,080	9.05	19.09	103.0	**0.11**	**8.1**	**110**	**160**	0.0017 U	0.00050 U
	12-16-2020	7.88	2,036	8.38	16.20	92.0	0.02 U	**17.4**	**110**	**150**	0.0017 U	0.00050 U
	05-24-2021	7.60	1,190	5.53	20.50	102.0	**0.04**	**18.3**	**107**	**164**	0.00086 U	**0.0133**
	10-26-2021	7.60	1,120	0.00	18.59	174.0	**0.47**	**7.8**	**119**	**179**	0.00086 U	0.0029 U
	11-02-2022	8.40	984	7.99	17.31	105.0	**0.11**	**5.5**	**119**	**348**	**0.0487**	**0.0200**
	04-25-2023	7.58	1,137	10.04	15.12	148.4	0.02 U	**8.2**	**110**	**154 J**	0.0100 U	0.0100 U
	10-10-2023	7.07	1,100	7.68	18.55	276.0	0.02 U	**3.3**	**109**	**175 J**	0.0100 U	0.0100 U
	03-13-2024	7.55	841	8.45	13.70	140.6	0.02 U	0.3 U	**112**	**162 J**	0.0100 U	0.0100 U
	10-02-2024	7.62	1,200	9.91	19.57	180.0	**0.08**	**9.4**	**113 J**	**176 J**	0.0100 U	0.0100 U

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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	05-28-2014	7.63	775	-	18.48	101.7	-	-	-	-	-	-
	10-29-2014	7.48	773	7.43	16.81	84.1	-	-	-	-	-	-
	06-03-2015	7.10	843	6.78	18.03	-1.8	-	-	-	-	-	-
	09-28-2015	7.10	798	7.40	17.31	-6.4	-	**6.0**	**103**	**203**	**0.0086**	0.0010 U
	08-30-2016	7.96	964	6.92	19.01	94.0	-	-	-	-	-	-
	12-05-2016	7.06	839	7.90	15.85	165.0	-	-	-	-	-	-
	05-15-2017	7.62	863	6.10	17.30	35.0	-	-	-	-	-	-
	10-24-2017	7.83	918	7.73	17.67	145.0	-	-	-	-	-	-
	06-13-2018	7.25	837	6.58	22.15	182.0	-	-	-	-	-	-
	12-04-2018	8.02	976	8.26	13.19	173.0	-	-	-	-	-	-
	06-26-2019	7.42	1,190	4.35	21.12	166.0	-	-	-	-	-	-
	12-11-2019	7.36	1,050	5.38	14.10	107.0	-	-	-	-	-	-
	06-23-2020	7.31	1,030	8.37	21.48	94.0	-	-	-	-	-	-
	12-14-2020	7.66	979	8.02	15.20	132.0	-	-	-	-	-	-
	05-25-2021	7.40	1,200	6.20	16.48	180.0	-	-	-	-	-	-
	10-27-2021	7.61	1,050	0.47	17.21	186.0	-	-	-	-	-	-
	11-02-2022	7.48	912	4.98	15.50	179.0	-	-	-	-	-	-
	04-25-2023	7.66	1,055	8.00	16.67	67.1	0.02 U	**8.0**	**116**	**199 J**	0.0100 U	0.0100 U
	10-10-2023	7.77	970	0.58	16.89	133.0	**0.05**	**23.5**	**110**	**203 J**	0.0100 U	0.0100 U
	03-13-2024	7.66	926	8.05	16.60	116.1	0.02 U	**28.6**	**109**	**197 J**	0.0100 U	0.0100 U
	10-02-2024	7.00	1,000	9.84	16.75	234.0	0.02 U	**5.4**	**120**	**236 J**	0.0100 U	0.0100 U
MW-08	05-28-2014	7.70	755	-	17.50	89.5	**0.59**	**16.8**	**110**	**242**	0.0050 U	0.0010 U
	10-29-2014	7.37	774	7.05	17.34	75.3	0.02 U	**18.4**	**100**	**190**	0.0072 U	0.0010 U
	06-03-2015	7.39	778	7.38	17.90	-42.7	0.02 U	**16.7**	**108**	**185**	0.0050 U	0.0010 U
	09-28-2015	-	-	-	-	-	-	-	-	-	-	-
	08-30-2016	7.72	843	5.29	19.46	143.0	-	-	**100**	-	0.020 U	0.0050 U
	12-05-2016	-	-	-	-	-	-	-	-	-	-	-
	05-17-2017	7.88	869	5.68	17.96	28.0	-	-	**100**	**170**	0.020 U	0.0050 U
	06-11-2018	7.28	866	7.46	19.77	175.0	0.02 U	**> 30**	**120**	**180**	0.020 U	0.0050 U
	06-26-2019	7.58	848	-	18.29	116.0	-	-	-	-	-	-
	06-23-2020	7.46	925	5.11	25.04	107.0	0.02 U	**15.9**	**130**	**180**	0.0017 U	**0.0006 J**
	05-26-2021	7.56	1,140	7.16	17.73	153.0	**0.06**	**> 30**	-	-	-	-
	04-25-2023	7.52	1,044	8.54	16.77	110.8	0.02 U	**15.0**	**117**	**195 J**	0.0100 U	0.0100 U
	10-11-2023	7.88	969	2.77	17.09	156.0	**0.02**	**24.3**	**110**	**200 J**	0.0100 U	0.0100 U
	03-13-2024	7.50	803	7.39	15.80	148.8	0.02 U	0.3 U	**118**	**196 J**	0.0100 U	0.0100 U
	10-02-2024	7.01	1,060	5.91	18.76	165.0	**0.01**	**21.6**	**120**	**195 J**	0.0100 U	0.0100 U

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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-10	05-28-2014	7.65	764	-	17.91	137.6	-	-	-	-	-	-
	10-29-2014	7.40	769	7.45	17.02	80.6	-	-	-	-	-	-
	06-03-2015	7.29	780	7.32	17.90	-34.4	-	-	-	-	-	-
	09-28-2015	-	-	-	-	-	-	-	-	-	-	-
	08-30-2016	8.28	831	5.40	18.26	100.0	-	-	-	-	-	-
	12-05-2016	-	-	-	-	-	-	-	-	-	-	-
	05-15-2017	7.39	888	6.24	17.41	29.0	-	-	-	-	-	-
	06-13-2018	7.35	730	4.96	28.26	178.0	-	-	-	-	-	-
	06-26-2019	7.60	1,010	6.38	18.25	155.0	-	-	-	-	-	-
	06-23-2020	7.40	1,040	7.45	20.04	91.0	-	-	-	-	-	-
	05-25-2021	7.71	1,040	6.67	16.54	100.0	-	-	-	-	-	-
	04-25-2023	7.53	1,055	7.91	16.43	86.3	0.02 U	**9.6**	**117**	**200 J**	0.0100 U	0.0100 U
	10-10-2023	7.70	974	0.19	15.95	121.0	**0.04**	**26.3**	**110**	**193 J**	0.0100 U	0.0100 U
	03-13-2024	7.69	929	8.06	16.20	133.9	0.02 U	**20.9**	**112**	**194 J**	0.0100 U	0.0100 U
	10-02-2024	7.33	945	7.03	18.07	207.0	**0.04**	**12.8**	**118**	**191 J**	0.0100 U	0.0100 U
MW-11	05-29-2014	7.20	889	1.08	19.27	102.7	-	-	-	-	-	-
	10-30-2014	6.96	932	1.12	18.47	89.0	-	-	-	-	-	-
	06-04-2015	6.89	916	0.94	18.97	-49.8	-	-	-	-	-	-
	09-29-2015	6.89	914	0.89	18.40	-15.4	-	-	-	-	-	-
	08-29-2016	7.32	952	2.67	19.99	148.0	-	-	-	-	-	-
	12-05-2016	6.70	933	1.73	17.14	204.0	-	-	-	-	-	-
	05-16-2017	7.44	949	4.79	17.41	46.0	-	-	-	-	-	-
	10-25-2017	7.37	1,040	7.49	18.57	154.0	-	-	-	-	-	-
	06-14-2018	6.71	956	3.35	21.77	198.0	-	-	-	-	-	-
	12-02-2018	7.48	1,140	5.47	15.49	231.0	-	-	-	-	-	-
	06-27-2019	6.98	1,290	1.70	17.37	213.0	-	-	-	-	-	-
	12-11-2019	7.21	1,100	2.97	15.90	34.0	-	-	-	-	-	-
	06-24-2020	6.95	1,380	0.00	20.84	83.0	-	-	-	-	-	-
	12-15-2020	7.43	1,154	2.73	15.93	133.1	-	-	-	-	-	-
	05-25-2021	7.23	1,120	1.77	18.78	122.0	-	-	-	-	-	-
	10-27-2021	7.13	1,070	0.00	17.33	189.0	-	-	-	-	-	-
	11-02-2022	6.94	952	0.43	16.08	167.0	-	-	-	-	-	-
	04-26-2023	6.89	1,079	5.08	16.65	196.1	0.02 U	**16.5**	**109**	**261 J**	**0.0731**	0.0100 U
	10-12-2023	7.33	1,050	3.52	17.43	174.0	**0.03**	**19.6**	**98.9**	**298 J**	**0.113**	0.0100 U
	03-12-2024	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

Well ID	Sample Date	Field Measured 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-12	05-29-2014	7.22	993	1.81	19.82	-27.5	-	**9.2**	**110**	**309**	**0.27**	**0.0142**
	10-30-2014	6.82	1,135	2.55	16.73	-50.6	**4.68**	0.3 U	**110**	**350**	**0.28**	**0.087**
	06-04-2015	6.82	1,017	2.17	18.40	-74.5	**0.34**	**10.4**	**113**	**312**	**0.201**	0.0010 U
	09-29-2015	6.82	1,124	1.15	16.49	-63.7	-	**7.0**	**107**	**367**	**0.252**	**0.0362**
	08-29-2016	7.45	1,290	1.10	19.42	-10.0	-	-	**83**	-	**0.25**	**0.76**
	12-06-2016	6.80	993	3.22	14.52	121.0	-	-	**-**	**270**	**0.19**	**0.063**
	05-16-2017	7.96	965	3.93	15.97	36.0	-	-	**100**	**240**	**0.16**	**0.012**
	10-24-2017	7.50	1,100	3.39	17.70	49.0	0.02 U	**10.5**	**98**	**270**	**0.19**	**0.090**
	06-14-2018	6.57	1,120	1.95	18.69	212.0	0.02 U	**23.8**	**120**	**290**	**0.043**	0.0050 U
	12-03-2018	7.57	1,360	5.67	13.71	176.0	0.02 U	**16.4**	**130**	**370**	**0.074**	0.0017 U
	06-27-2019	6.97	1,110	-	15.90	164.0	**0.09**	**4.7**	**120 J**	**340**	**0.10**	**0.026**
	12-11-2019	7.29	1,300	3.22	12.59	15.0	0.02 U	**7.0**	**140**	**290 J**	**0.076**	**0.0015 J**
	06-24-2020	6.76	1,410	0.00	22.66	114.0	**0.11**	**4.3**	**140**	**430**	**0.12**	**0.0064**
	12-16-2020	7.59	1,273	3.16	15.10	121.4	0.02 U	**7.2**	**140**	**360**	**0.14**	**0.0037**
	05-27-2021	7.44	1,440	0.19	16.49	141.0	**0.06**	**12.4**	**114**	**513**	**0.0963**	**0.0386**
	10-27-2021	7.26	1,310	0.00	16.54	189.0	**0.16**	**0.5**	**123**	**365**	0.00086 U	**0.0190**
	11-02-2022	7.06	1,080	1.33	14.93	196.0	**0.02**	**0.8**	**122**	**179**	0.00093 U	0.0029 U
	04-26-2023	7.10	1,193	3.69	15.73	174.9	0.02 U	**4.5**	**113**	**321 J**	**0.0559**	0.0100 U
	10-12-2023	7.13	1,440	0.98	16.69	270.0	0.02 U	0.3 U	**96.2**	**507 J**	**0.0357**	0.0100 U
	03-12-2024	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	05-29-2014	7.53	795	5.70	17.69	101.4	-	-	**-**	-	-	-
	10-29-2014	7.23	805	5.65	17.81	105.4	-	-	**-**	-	-	-
	06-04-2015	7.39	784	6.22	17.02	-46.6	-	-	**-**	-	-	-
	08-29-2016	7.71	877	5.19	18.76	120.0	-	-	**-**	-	-	-
	12-05-2016	6.97	855	6.29	15.43	178.0	-	-	**-**	-	-	-
	05-17-2017	7.71	923	3.02	17.44	46.0	-	-	**-**	-	-	-
	10-24-2017	7.70	932	6.18	17.69	144.0	-	-	**-**	-	-	-
	12-02-2018	7.87	1,010	7.32	15.75	222.0	-	-	**-**	-	-	-
	06-27-2019	7.54	1,180	3.44	16.30	160.0	-	-	**-**	-	-	-
	12-11-2019	7.21	1,020	4.27	14.38	107.0	-	-	**-**	-	-	-
	06-24-2020	7.24	1,060	4.61	20.61	116.0	-	-	**-**	-	-	-
	12-15-2020	7.90	1,032	7.28	16.10	111.3	-	-	**-**	-	-	-
	05-25-2021	7.58	1,090	5.21	17.23	83.0	-	-	**-**	-	-	-
	10-26-2021	7.51	1,060	0.00	17.20	184.0	-	-	**-**	-	-	-
	11-03-2022	8.43	916	4.26	15.50	110.0	-	-	**-**	-	-	-
	04-26-2023	7.29	1,052	7.96	16.24	202.3	0.02 U	**18.6**	**119**	**207 J**	0.0100 U	0.0100 U
	10-12-2023	7.36	1,030	5.94	16.72	278.0	**0.1**	**13.0**	**113**	**226 J**	0.0100 U	0.0100 U
	03-12-2024	7.53	953	6.97	15.20	158.0	**0.06**	**6.9**	**113**	**209 J**	0.0100 U	0.0100 U
	10-02-2024	6.91	1,130	3.99	17.91	164.0	0.02 U	**18.2**	**124**	**240 J**	0.0100 U	0.0100 U

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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	12-03-2018	8.02	950	6.16	16.03	178.0	-	-	-	-	-	-
	06-26-2019	7.60	990	4.44	18.75	168.0	-	-	-	-	-	-
	12-10-2019	7.37	1,070	4.99	12.99	63.0	-	-	-	-	-	-
	06-23-2020	7.38	904	4.46	27.69	108.0	-	-	-	-	-	-
	12-14-2020	7.92	1,017	6.74	15.00	92.8	-	-	-	-	-	-
	05-25-2021	7.51	1,180	5.92	16.67	170.0	-	-	-	-	-	-
	10-25-2021	7.52	1,040	0.00	19.38	171.0	-	-	-	-	-	-
	11-02-2022	8.36	914	5.54	16.82	91.0	-	-	-	-	-	-
	04-25-2023	7.38	1,052	7.52	15.95	166.7	0.02 U	**8.6**	**119**	**204 J**	0.0100 U	0.0100 U
	10-10-2023	7.01	998	5.16	17.52	302.0	0.02 U	0.3 U	**109**	**218 J**	0.0100 U	0.0100 U
	03-13-2024	7.41	807	6.29	15.60	132.3	0.02 U	**0.5**	**113**	**206 J**	0.0100 U	0.0100 U
	10-02-2024	7.59	1,020	8.83	20.05	164.0	**0.06**	**4.4**	**117**	**213 J**	0.0100 U	0.0100 U
MW-16	12-03-2018	8.04	949	6.37	16.40	186.0	-	-	-	-	-	-
	06-26-2019	7.58	1,020	4.48	18.08	166.0	-	-	-	-	-	-
	12-10-2019	7.62	1,010	6.11	15.28	-73.0	0.02 U	**8.4**	**120**	**190 J**	0.0017 U	**0.0029**
	06-22-2020	7.18	1,040	4.09	22.10	80.0	**0.03**	**15.7**	**130**	**180**	0.0017 U	0.00050 U
	12-16-2020	7.99	1,026	6.62	16.20	69.3	0.02 U	**17.1**	**130**	**190**	0.0017 U	0.00050 U
	05-25-2021	7.46	1,150	4.56	18.87	151.0	0.02 U	**26.9**	**124**	**200**	**0.00120 J**	0.0029 U
	10-26-2021	7.57	1,040	0.00	16.93	173.0	**0.6**	**6.8**	**126**	**206**	0.00086 U	0.0029 U
	11-02-2022	8.42	911	3.62	15.07	94.0	**0.05**	**> 30**	**121**	**204**	0.00093 U	0.0029 U
	04-25-2023	7.46	1,051	7.29	16.49	161.1	0.02 U	**19.6**	**117**	**205 J**	0.0100 U	0.0100 U
	10-11-2023	7.61	1,000	6.26	16.56	270.0	0.02 U	**1.0**	**109 J**	**215 J**	0.0100 U	0.0100 U
	03-13-2024	7.40	812	6.35	15.80	143.0	0.02 U	**1.2**	**117**	**204 J**	0.0100 U	0.0100 U
	10-02-2024	6.93	1,080	4.31	17.93	163.0	**0.02**	**18.2**	**117**	**209 J**	0.0100 U	0.0100 U
MW-17	12-03-2018	7.46	1,770	5.47	13.77	139.0	-	-	-	-	-	-
	06-27-2019	7.11	1,630	2.78	15.82	185.0	-	-	-	-	-	-
	12-11-2019	6.91	1,540	2.96	13.84	118.0	-	-	-	-	-	-
	06-24-2020	7.18	1,330	9.10	18.86	100.0	-	-	-	-	-	-
	12-15-2020	7.38	1,259	6.94	14.10	107.0	-	-	-	-	-	-
	05-25-2021	7.25	1,270	8.75	16.72	118.0	-	-	-	-	-	-
	10-26-2021	7.28	1,340	0.00	17.01	195.0	-	-	-	-	-	-
	11-03-2022	7.15	1,170	2.54	14.63	185.0	-	-	-	-	-	-
	04-26-2023	7.29	1,316	6.12	15.97	112.4	0.02 U	**12.3**	**146**	**272 J**	0.0100 U	0.0100 U
	10-12-2023	7.23	1,200	4.63	16.23	153.0	0.02 U	**27.3**	**130**	**317 J**	0.0100 U	0.0100 U
	03-13-2024	7.30	1,097	6.56	14.50	170.0	**0.03**	**20.4**	**131**	**273 J**	0.0100 U	0.0100 U

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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-18	12-04-2018	7.95	1,060	7.62	11.93	101.0	-	-	-	-	-	-
	06-26-2019	7.12	1,100	-	18.79	126.0	**0.12**	**23.4**	**150 J**	**220**	0.0050 U	0.0017 U
	12-12-2019	7.42	1,490	7.25	14.20	46.0	0.02 U	**15.2**	**170**	**240**	0.0017 U	**0.0043**
	06-22-2020	7.10	1,280	7.10	19.54	119.0	0.02 U	**10.7**	**160**	**210**	0.0017 U	0.00050 U
	12-15-2020	7.53	1,049	8.10	15.50	109.0	0.02 U	**16.5**	**150**	**220**	0.0017 U	0.00050 U
	05-26-2021	7.33	1,210	6.42	17.10	211.0	**0.02**	**23.6**	**131**	**214**	0.00086 U	0.0029 U
	10-26-2021	7.44	1,060	4.06	16.62	145.0	**0.28**	**25.1**	**136**	**220**	0.00086 U	0.0029 U
	11-01-2022	7.31	946	9.21	15.90	224.0	0.02 U	**5.5**	**130**	**210**	0.00093 U	0.0029 U
	04-26-2023	7.43	1,118	8.40	16.81	122.7	0.02 U	**6.2**	**123**	**221 J**	0.0100 U	0.0100 U
	10-11-2023	7.35	1,140	7.90	17.07	320.0	**0.09**	**8.2**	**119**	**242 J**	0.0100 U	0.0100 U
	03-14-2024	7.33	829	8.12	16.10	177.0	0.02 U	**2.2**	**112**	**219 J**	0.0100 U	0.0100 U
	10-03-2024	6.95	1,190	6.61	15.93	164.0	**0.03**	**13.3**	**121**	**233 J**	0.0100 U	0.0100 U
MW-19	12-03-2018	7.44	2,040	4.76	13.11	-75.0	-	-	-	-	-	-
	06-27-2019	7.27	1,050	-	16.62	-121.0	**1.37**	**13.8**	**120**	**240**	**0.14**	**1.3**
	12-10-2019	7.32	1,200	7.16	16.44	-134.0	**0.14**	**14.0**	**150**	**220**	**0.079**	**0.27**
	06-24-2020	7.26	1,190	7.06	18.80	48.0	**0.02**	**13.8**	**140**	**200**	**0.028**	**0.12**
	12-16-2020	7.64	1,985	6.41	15.80	103.0	0.02 U	**16.1**	**140**	**200**	**0.0021 J**	0.00050 U
	05-26-2021	7.29	1,200	3.12	17.73	88.0	0.02 U	**20.0**	**115**	**255**	**0.0248**	**0.0724**
	10-27-2021	7.47	1,050	0.00	17.24	183.0	-	**15.7**	**123**	**219**	**0.00121 J**	0.0029 U
	11-01-2022	8.22	928	4.54	15.53	140.0	**0.32**	**5.5**	**123**	**215**	**0.00112 J**	0.0029 U
	04-26-2023	7.52	1,084	6.41	16.08	92.7	0.02 U	**9.0**	**112**	**228 J**	0.0100 U	0.0100 U
	10-11-2023	7.27	1,040	5.23	16.66	294.0	**0.09**	**8.3**	**102**	**259 J**	0.0100 U	0.0100 U
	03-12-2024	7.45	966	5.85	14.80	144.3	**0.03**	**22.8**	**107**	**245 J**	0.0100 U	0.0100 U
MW-20	12-12-2019	7.89	993	6.36	15.70	7.0	0.02 U	**21.5**	**130**	**170 J**	**0.012 J**	0.00050 U
	06-22-2020	7.53	1,010	7.95	20.41	93.0	**0.08**	**9.8**	**130**	**170**	0.0017 U	**0.0008 J**
	12-16-2020	7.91	1,905	8.04	15.70	89.0	**0.02**	**5.7**	**140**	**160**	**0.0019 J**	0.00050 U
	05-26-2021	7.29	1,200	3.12	17.54	179.0	0.02 U	**> 30**	**124**	**185**	0.00086 U	0.0029 U
	10-26-2021	7.69	978	4.01	14.95	131.0	0.02 U	**> 30**	**129**	**181**	0.00086 U	0.0029 U
	11-01-2022	7.56	889	6.83	15.88	214.0	**0.06**	**5.5**	**127**	**185**	0.00093 U	0.0029 U
	04-26-2023	7.57	1,061	8.39	16.90	126.5	0.02 U	**11.6**	**120**	**192 J**	0.0100 U	0.0100 U
	10-11-2023	7.56	996	8.35	17.38	315.0	0.02 U	**8.1**	**114**	**188 J**	0.0100 U	0.0100 U
	03-14-2024	7.58	800	8.00	15.70	142.8	0.02 U	**0.9**	**113**	**191 J**	0.0100 U	0.0100 U
	10-03-2024	7.49	1,030	9.99	15.74	147.0	**0.05**	**6.5**	**123**	**187 J**	0.0100 U	0.0100 U
MW-21	12-12-2019	7.71	1,020	6.25	14.21	108.0	0.02 U	**20.2**	**130**	**170**	0.0017 U	0.00050 U
	06-22-2020	7.54	1,070	7.27	18.57	78.0	**0.1**	**> 30**	**130**	**160**	0.0017 U	0.00050 U
	12-15-2020	7.85	1,974	8.12	14.90	103.0	0.02 U	**20.6**	**150**	**170**	0.0017 U	0.00050 U
	05-26-2021	7.81	1,020	7.97	17.59	146.0	**0.08**	**12.4**	**124**	**189**	0.00086 U	0.0029 U
	10-27-2021	7.63	967	3.81	16.37	182.0	**0.07**	**9.9**	**128**	**183**	0.00086 U	0.0029 U
	11-02-2022	8.59	910	6.80	15.43	109.0	0.02 U	**> 30**	**128**	**188**	**0.00148 J**	0.0029 U
	04-25-2023	7.66	1,064	8.40	16.18	85.9	0.02 U	**7.4**	**116**	**195 J**	0.0100 U	0.0100 U
	10-12-2023	7.44	1,010	8.09	16.08	315.0	0.02 U	**5.9**	**116**	**193 J**	0.0100 U	0.0100 U
	03-14-2024	7.57	807	8.03	15.80	159.9	0.02 U	**0.9**	**111**	**192 J**	0.0100 U	0.0100 U
	10-01-2024	8.29	1,070	7.82	17.42	143.0	**0.66**	**> 30**	**125**	**190 J**	0.0100 U	0.0100 U

Table B2: Field Parameters and Natural Attenuation Results - 2014-2024

Well ID	Sample Date	Field Measured 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-22	12-11-2019	7.50	1,050	5.69	14.61	102.0	**0.04**	**25.0**	**140**	**170 J**	0.0017 U	**0.0008 J**
	06-23-2020	7.62	992	6.57	21.61	107.0	**0.09**	**7.4**	**130**	**170**	0.0017 U	0.00050 U
	12-15-2020	7.85	1,978	8.17	15.80	92.0	0.02 U	**12.3**	**150**	**170**	0.0017 U	0.00050 U
	05-26-2021	7.89	999	7.46	18.68	125.0	**0.25**	**27.7**	**127**	**189**	0.00086 U	0.0029 U
	10-27-2021	7.76	1,030	0.78	16.90	179.0	**0.04**	**13.9**	**129**	**179**	0.00086 U	0.0029 U
	11-02-2022	7.58	868	6.61	15.61	199.0	0.02 U	**5.5**	**124**	**187**	0.00093 U	0.0029 U
	04-25-2023	7.76	1,006	9.06	16.19	87.1	0.02 U	**16.1**	**110**	**196 J**	0.0100 U	0.0100 U
	10-13-2023	7.41	966	8.38	16.38	302.0	**0.09**	**5.4**	**108**	**194 J**	0.0100 U	0.0100 U
	03-14-2024	7.76	908	8.29	16.10	145.0	0.02 U	**> 30**	**111**	**190 J**	0.0100 U	0.0100 U
	10-01-2024	8.39	976	7.00	20.74	149.0	**0.03**	**15.4**	**115**	**190 J**	0.0100 U	0.0100 U
MW-23	12-11-2019	7.75	1,020	5.90	15.06	12.0	0.02 U	**6.5**	**130**	**170**	**0.042**	0.00050 U
	06-23-2020	7.56	1,100	8.01	17.51	84.0	**0.10**	**> 30**	**130**	**180**	0.0017 U	0.00050 U
	12-15-2020	8.11	1,062	8.33	16.60	116.1	**0.03**	**20.5**	**150**	**170**	0.0017 U	0.00050 U
	05-26-2021	7.58	1,180	6.25	18.69	158.0	**0.07**	**28.0**	**129**	**186**	0.00086 U	0.0029 U
	10-27-2021	7.70	1,060	0.80	17.14	183.0	0.02 U	**25.7**	**133**	**189**	0.00086 U	0.0029 U
	11-03-2022	7.53	873	5.58	15.46	190.0	**0.02**	**5.0**	**124**	**190**	0.00093 U	0.0029 U
	04-24-2023	7.62	1,019	8.69	16.51	46.4	0.02 U	**19.3**	**110**	**196 J**	0.0100 U	0.0100 U
	10-12-2023	7.52	987	6.37	18.94	290.0	**0.08**	**8.0**	**109**	**197 J**	0.0100 U	0.0100 U
	03-14-2024	7.73	905	7.88	16.50	128.7	0.02 U	**23.7**	**106**	**193 J**	0.0100 U	0.0100 U
	10-01-2024	7.17	902	9.30	17.61	179.0	**0.03**	**17.1**	**112**	**192 J**	0.0100 U	0.0100 U

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.

Appendix C. Laboratory Reports and Chain-of-Custody Forms

ANALYTICAL REPORT

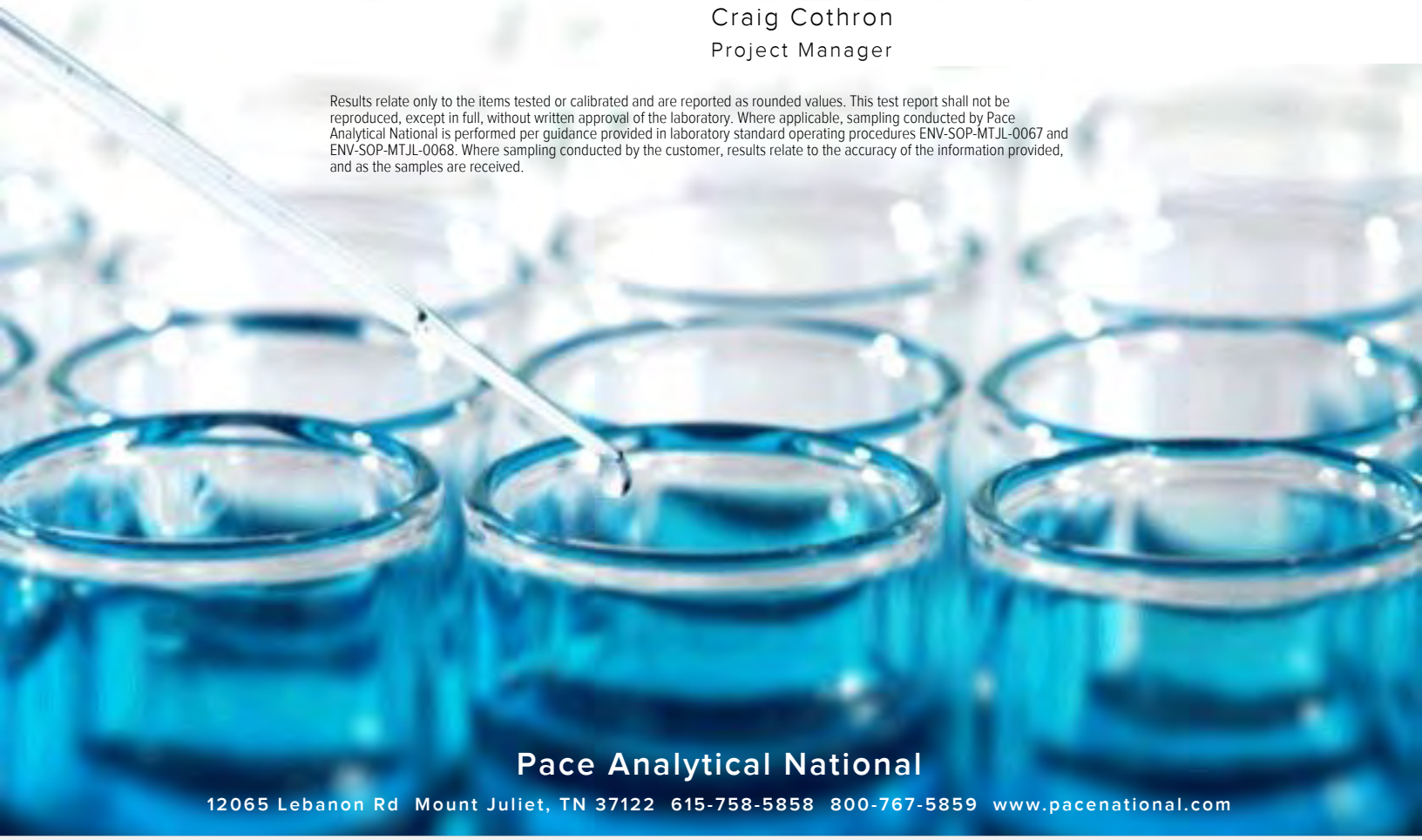
April 08, 2024

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-20-20240314 L1716029-16 25

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SAMPLE SUMMARY

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

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

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

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	79100	J6	5000	1	03/25/2024 19:58	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 11:45	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 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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	52700		5000	1	03/25/2024 20:36	WG2250699

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	644		10.0	1	03/21/2024 11:48	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 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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	107000		25000	5	03/25/2024 20:49	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 11:50	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 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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	109000		25000	5	03/25/2024 21:41	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 12:01	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 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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	118000		5000	1	03/25/2024 21:54	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 12:04	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 06:16	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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	117000		25000	5	03/26/2024 00:16	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 12:17	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 13:04	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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	112000		25000	5	03/26/2024 00:43	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 12:23	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 13:48	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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	107000		25000	5	03/26/2024 00:57	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 12:25	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 14:10	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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
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	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
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	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
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	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
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	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
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	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	108000	111000	5	2.93		15

Laboratory Control Sample (LCS)

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

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
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	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
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	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
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 ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
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 ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
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 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 %
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.

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):

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

Quote #

Date Results Needed

Immediately
Packed on Ice N___ Y X

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					-08
MW-12- 20240312	G	GW	83	3/12	1430	12	X	X	X	X		X	X					-09
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

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		6	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1 °C Bottles Received:	
				.HD 269	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/16/24 Time: 0930	Hold: Condition: NCF / OK
			Christopher S. Gallin		

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 LeCoy

Site/Facility ID #
55763995

P.O. #

Collected by (signature):

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

Quote #

Date Results Needed

Immediately
Packed on Ice N___ Y X

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	84.5	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:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	Sample Receipt Checklist
	3/15	1032			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
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 °C Bottles Received: 10	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher J. Gallina	Date: 3/16/24 Time: 0900	Hold: / Condition: NCF / OK

Chain of Custody Page 2 of 3

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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**

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 LaCoy

Site/Facility ID #
55763995

P.O. #

Collected by (signature):

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

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 # L1716024

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 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: X Y __N
Preservation Correct/Checked: X Y __N
RAD Screen <0.5 mR/hr: X 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
[signature]	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

ANALYTICAL REPORT

October 22, 2024

AECOM - Portland, OR

Sample Delivery Group:	L1785666
Samples Received:	10/04/2024
Project Number:	60722666
Description:	Marathon Pasco Terminal - 2SA 2024

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 mydata.pacelabs.com

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MW-04-241002 L1785666-01 GW

Collected by: ER, JL | Collected date/time: 10/02/24 09:41 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376869	1	10/06/24 12:00	10/06/24 12:00	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 15:49	10/08/24 15:49	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:16	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 06:48	10/12/24 06:48	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 11:54	10/07/24 11:54	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2380537	1	10/12/24 11:43	10/12/24 11:43	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/17/24 14:49	MAA	Mt. Juliet, TN

MW-06-241002 L1785666-02 GW

Collected by: ER, JL | Collected date/time: 10/02/24 12:40 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376869	1	10/06/24 12:15	10/06/24 12:15	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 16:00	10/08/24 16:00	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 00:46	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 07:10	10/12/24 07:10	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:12	10/07/24 12:12	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2380537	1	10/12/24 12:03	10/12/24 12:03	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 14:18	MAA	Mt. Juliet, TN

MW-07-241002 L1785666-03 GW

Collected by: ER, JL | Collected date/time: 10/02/24 09:35 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376869	1	10/06/24 12:20	10/06/24 12:20	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 16:44	10/08/24 16:44	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:18	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 07:32	10/12/24 07:32	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:15	10/07/24 12:15	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2380537	1	10/12/24 12:22	10/12/24 12:22	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 13:58	MAA	Mt. Juliet, TN

MW-08-241002 L1785666-04 GW

Collected by: ER, JL | Collected date/time: 10/02/24 15:05 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 13:23	10/06/24 13:23	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 16:55	10/08/24 16:55	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:20	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 07:54	10/12/24 07:54	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:19	10/07/24 12:19	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 17:35	10/10/24 17:35	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2380537	1	10/12/24 12:42	10/12/24 12:42	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 13:38	MAA	Mt. Juliet, TN

MW-10-241002 L1785666-05 GW

Collected by: ER, JL | Collected date/time: 10/02/24 10:40 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 13:28	10/06/24 13:28	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 17:05	10/08/24 17:05	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:22	MAP	Mt. Juliet, TN

MW-10-241002 L1785666-05 GW

Collected by: ER, JL | Collected date/time: 10/02/24 10:40 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 08:16	10/12/24 08:16	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:22	10/07/24 12:22	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 17:54	10/10/24 17:54	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2380537	1	10/12/24 13:02	10/12/24 13:02	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 13:17	MAA	Mt. Juliet, TN

MW-14-241002 L1785666-06 GW

Collected by: ER, JL | Collected date/time: 10/02/24 11:47 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 13:53	10/06/24 13:53	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 17:16	10/08/24 17:16	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:23	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 08:38	10/12/24 08:38	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:25	10/07/24 12:25	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 18:14	10/10/24 18:14	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 12:57	MAA	Mt. Juliet, TN

MW-15-241002 L1785666-07 GW

Collected by: ER, JL | Collected date/time: 10/02/24 14:35 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:00	10/06/24 14:00	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 17:27	10/08/24 17:27	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:25	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 09:00	10/12/24 09:00	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:32	10/07/24 12:32	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 18:33	10/10/24 18:33	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/21/24 12:37	MAA	Mt. Juliet, TN

MW-16-241002 L1785666-08 GW

Collected by: ER, JL | Collected date/time: 10/02/24 13:35 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:04	10/06/24 14:04	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 17:38	10/08/24 17:38	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:30	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 09:22	10/12/24 09:22	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377039	1	10/07/24 12:35	10/07/24 12:35	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 18:53	10/10/24 18:53	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2382583	1	10/16/24 15:12	10/17/24 11:34	MAA	Mt. Juliet, TN

MW-18-241003 L1785666-09 GW

Collected by: ER, JL | Collected date/time: 10/03/24 09:05 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:10	10/06/24 14:10	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 17:49	10/08/24 17:49	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:32	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 09:44	10/12/24 09:44	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 13:56	10/07/24 13:56	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 19:13	10/10/24 19:13	WHS	Mt. Juliet, TN

MW-18-241003 L1785666-09 GW

Collected by: ER, JL | Collected date/time: 10/03/24 09:05 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2383842	1	10/17/24 08:32	10/19/24 06:47	MAA	Mt. Juliet, TN

MW-20-241003 L1785666-10 GW

Collected by: ER, JL | Collected date/time: 10/03/24 08:45 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:16	10/06/24 14:16	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 18:00	10/08/24 18:00	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:34	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 10:06	10/12/24 10:06	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 13:59	10/07/24 13:59	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 19:32	10/10/24 19:32	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2383842	1	10/17/24 08:32	10/19/24 07:07	MAA	Mt. Juliet, TN

MW-21-241001 L1785666-11 GW

Collected by: ER, JL | Collected date/time: 10/01/24 14:15 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:22	10/06/24 14:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376732	5	10/08/24 18:33	10/08/24 18:33	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378097	1	10/16/24 22:40	10/17/24 01:36	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 10:28	10/12/24 10:28	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 14:02	10/07/24 14:02	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 19:52	10/10/24 19:52	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2381340	1	10/14/24 07:18	10/15/24 05:40	MAA	Mt. Juliet, TN

MW-22-241001 L1785666-12 GW

Collected by: ER, JL | Collected date/time: 10/01/24 16:25 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:27	10/06/24 14:27	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376885	1	10/09/24 02:37	10/09/24 02:37	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378099	1	10/17/24 14:41	10/17/24 20:46	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 10:50	10/12/24 10:50	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 14:05	10/07/24 14:05	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 20:11	10/10/24 20:11	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2381340	1	10/14/24 07:18	10/15/24 06:00	MAA	Mt. Juliet, TN

MW-23-241001 L1785666-13 GW

Collected by: ER, JL | Collected date/time: 10/01/24 15:40 | Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:33	10/06/24 14:33	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376885	1	10/09/24 02:50	10/09/24 02:50	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378099	1	10/17/24 14:41	10/17/24 20:48	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 11:11	10/12/24 11:11	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 14:08	10/07/24 14:08	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 20:31	10/10/24 20:31	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2381340	1	10/14/24 07:18	10/15/24 06:19	MAA	Mt. Juliet, TN

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

MW-210-241001 L1785666-14 GW

Collected by: ER, JL
Collected date/time: 10/01/24 16:20
Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2376874	1	10/06/24 14:38	10/06/24 14:38	BJM	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2376885	1	10/09/24 03:04	10/09/24 03:04	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2378099	1	10/17/24 14:41	10/17/24 20:25	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 11:33	10/12/24 11:33	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2377045	1	10/07/24 14:11	10/07/24 14:11	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 20:50	10/10/24 20:50	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2381340	1	10/14/24 07:18	10/15/24 06:39	MAA	Mt. Juliet, TN

TB-1-241003 L1785666-15 GW

Collected by: ER, JL
Collected date/time: 10/03/24 00:00
Received date/time: 10/04/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2380746	1	10/12/24 06:26	10/12/24 06:26	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2379800	1	10/10/24 14:58	10/10/24 14:58	WHS	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

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1785666-01	MW-04-241002	6010B
L1785666-02	MW-06-241002	6010B
L1785666-03	MW-07-241002	6010B
L1785666-04	MW-08-241002	6010B
L1785666-05	MW-10-241002	6010B
L1785666-06	MW-14-241002	6010B
L1785666-07	MW-15-241002	6010B
L1785666-08	MW-16-241002	6010B
L1785666-09	MW-18-241003	6010B
L1785666-10	MW-20-241003	6010B
L1785666-11	MW-21-241001	6010B
L1785666-12	MW-22-241001	6010B
L1785666-13	MW-23-241001	6010B
L1785666-14	MW-210-241001	6010B
R4133799-3		6010B
R4134329-3		6010B

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	194000		20000	1	10/06/2024 12:00	WG2376869

Sample Narrative:
L1785666-01 WG2376869: 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	10/08/2024 15:49	WG2376732

Sample Narrative:
L1785666-01 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:16	WG2378097

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	10/12/2024 06:48	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*98.8*		*78.0-120*		*10/12/2024 06:48*	WG2380746

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	10/07/2024 11:54	WG2377039
Ethane	ND		13.0	1	10/07/2024 11:54	WG2377039
Ethene	ND		13.0	1	10/07/2024 11:54	WG2377039

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	10/12/2024 11:43	WG2380537
Toluene	ND		1.00	1	10/12/2024 11:43	WG2380537
Ethylbenzene	ND		1.00	1	10/12/2024 11:43	WG2380537
Xylenes, Total	ND		3.00	1	10/12/2024 11:43	WG2380537
Naphthalene	ND		5.00	1	10/12/2024 11:43	WG2380537
(S) Toluene-d8	*100*		*80.0-120*		*10/12/2024 11:43*	WG2380537
(S) 4-Bromofluorobenzene	*99.0*		*77.0-126*		*10/12/2024 11:43*	WG2380537
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*10/12/2024 11:43*	WG2380537

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	10/17/2024 14:49	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/17/2024 14:49	WG2382583
(S) o-Terphenyl	*125*		*52.0-156*		*10/17/2024 14:49*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	176000		20000	1	10/06/2024 12:15	WG2376869

Sample Narrative:
L1785666-02 WG2376869: 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	J6	25000	5	10/08/2024 16:00	WG2376732

Sample Narrative:
L1785666-02 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 00:46	WG2378097

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	10/12/2024 07:10	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.9*		*78.0-120*		*10/12/2024 07:10*	WG2380746

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	10/07/2024 12:12	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:12	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:12	WG2377039

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	10/12/2024 12:03	WG2380537
Toluene	ND		1.00	1	10/12/2024 12:03	WG2380537
Ethylbenzene	ND		1.00	1	10/12/2024 12:03	WG2380537
Xylenes, Total	ND		3.00	1	10/12/2024 12:03	WG2380537
Naphthalene	ND		5.00	1	10/12/2024 12:03	WG2380537
(S) Toluene-d8	*102*		*80.0-120*		*10/12/2024 12:03*	WG2380537
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*10/12/2024 12:03*	WG2380537
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*10/12/2024 12:03*	WG2380537

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	10/21/2024 14:18	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 14:18	WG2382583
(S) o-Terphenyl	*162*	J1	*52.0-156*		*10/21/2024 14:18*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	236000		20000	1	10/06/2024 12:20	WG2376869

Sample Narrative:
L1785666-03 WG2376869: 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	120000		25000	5	10/08/2024 16:44	WG2376732

Sample Narrative:
L1785666-03 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:18	WG2378097

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	10/12/2024 07:32	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.1*		*78.0-120*		*10/12/2024 07:32*	WG2380746

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	10/07/2024 12:15	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:15	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:15	WG2377039

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	10/12/2024 12:22	WG2380537
Toluene	ND		1.00	1	10/12/2024 12:22	WG2380537
Ethylbenzene	ND		1.00	1	10/12/2024 12:22	WG2380537
Xylenes, Total	ND		3.00	1	10/12/2024 12:22	WG2380537
Naphthalene	ND		5.00	1	10/12/2024 12:22	WG2380537
(S) Toluene-d8	*101*		*80.0-120*		*10/12/2024 12:22*	WG2380537
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*10/12/2024 12:22*	WG2380537
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*10/12/2024 12:22*	WG2380537

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	10/21/2024 13:58	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 13:58	WG2382583
(S) o-Terphenyl	*141*		*52.0-156*		*10/21/2024 13:58*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	195000		20000	1	10/06/2024 13:23	WG2376874

Sample Narrative:

L1785666-04 WG2376874: 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	120000		25000	5	10/08/2024 16:55	WG2376732

Sample Narrative:

L1785666-04 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:20	WG2378097

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	10/12/2024 07:54	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.1*		*78.0-120*		*10/12/2024 07:54*	WG2380746

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	10/07/2024 12:19	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:19	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:19	WG2377039

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	10/12/2024 12:42	WG2380537
Toluene	ND		1.00	1	10/10/2024 17:35	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 17:35	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 17:35	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 17:35	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 17:35*	WG2379800
(S) Toluene-d8	*99.7*		*80.0-120*		*10/12/2024 12:42*	WG2380537
(S) 4-Bromofluorobenzene	*93.8*		*77.0-126*		*10/10/2024 17:35*	WG2379800
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*10/12/2024 12:42*	WG2380537
(S) 1,2-Dichloroethane-d4	*77.2*		*70.0-130*		*10/10/2024 17:35*	WG2379800
(S) 1,2-Dichloroethane-d4	*109*		*70.0-130*		*10/12/2024 12:42*	WG2380537

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	10/21/2024 13:38	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 13:38	WG2382583
(S) o-Terphenyl	*161*	J1	*52.0-156*		*10/21/2024 13:38*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	191000		20000	1	10/06/2024 13:28	WG2376874

Sample Narrative:
L1785666-05 WG2376874: 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	118000		25000	5	10/08/2024 17:05	WG2376732

Sample Narrative:
L1785666-05 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:22	WG2378097

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	10/12/2024 08:16	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.6*		*78.0-120*		*10/12/2024 08:16*	WG2380746

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	10/07/2024 12:22	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:22	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:22	WG2377039

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	10/12/2024 13:02	WG2380537
Toluene	ND		1.00	1	10/10/2024 17:54	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 17:54	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 17:54	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 17:54	WG2379800
(S) Toluene-d8	*104*		*80.0-120*		*10/10/2024 17:54*	WG2379800
(S) Toluene-d8	*101*		*80.0-120*		*10/12/2024 13:02*	WG2380537
(S) 4-Bromofluorobenzene	*94.0*		*77.0-126*		*10/10/2024 17:54*	WG2379800
(S) 4-Bromofluorobenzene	*97.6*		*77.0-126*		*10/12/2024 13:02*	WG2380537
(S) 1,2-Dichloroethane-d4	*78.4*		*70.0-130*		*10/10/2024 17:54*	WG2379800
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*10/12/2024 13:02*	WG2380537

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	10/21/2024 13:17	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 13:17	WG2382583
(S) o-Terphenyl	*144*		*52.0-156*		*10/21/2024 13:17*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	240000		20000	1	10/06/2024 13:53	WG2376874

Sample Narrative:

L1785666-06 WG2376874: 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	124000		25000	5	10/08/2024 17:16	WG2376732

Sample Narrative:

L1785666-06 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:23	WG2378097

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	10/12/2024 08:38	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.0*		*78.0-120*		*10/12/2024 08:38*	WG2380746

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	10/07/2024 12:25	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:25	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:25	WG2377039

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	10/10/2024 18:14	WG2379800
Toluene	ND		1.00	1	10/10/2024 18:14	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 18:14	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 18:14	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 18:14	WG2379800
(S) Toluene-d8	*105*		*80.0-120*		*10/10/2024 18:14*	WG2379800
(S) 4-Bromofluorobenzene	*93.1*		*77.0-126*		*10/10/2024 18:14*	WG2379800
(S) 1,2-Dichloroethane-d4	*76.3*		*70.0-130*		*10/10/2024 18:14*	WG2379800

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	10/21/2024 12:57	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 12:57	WG2382583
(S) o-Terphenyl	*79.5*		*52.0-156*		*10/21/2024 12:57*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	213000		20000	1	10/06/2024 14:00	WG2376874

Sample Narrative:
L1785666-07 WG2376874: 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	10/08/2024 17:27	WG2376732

Sample Narrative:
L1785666-07 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:25	WG2378097

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	10/12/2024 09:00	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.6*		*78.0-120*		*10/12/2024 09:00*	WG2380746

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	10/07/2024 12:32	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:32	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:32	WG2377039

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	10/10/2024 18:33	WG2379800
Toluene	ND		1.00	1	10/10/2024 18:33	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 18:33	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 18:33	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 18:33	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 18:33*	WG2379800
(S) 4-Bromofluorobenzene	*93.3*		*77.0-126*		*10/10/2024 18:33*	WG2379800
(S) 1,2-Dichloroethane-d4	*76.9*		*70.0-130*		*10/10/2024 18:33*	WG2379800

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	10/21/2024 12:37	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/21/2024 12:37	WG2382583
(S) o-Terphenyl	*156*		*52.0-156*		*10/21/2024 12:37*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	209000		20000	1	10/06/2024 14:04	WG2376874

Sample Narrative:
L1785666-08 WG2376874: 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	117000		25000	5	10/08/2024 17:38	WG2376732

Sample Narrative:
L1785666-08 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:30	WG2378097

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	10/12/2024 09:22	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.3*		*78.0-120*		*10/12/2024 09:22*	WG2380746

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	10/07/2024 12:35	WG2377039
Ethane	ND		13.0	1	10/07/2024 12:35	WG2377039
Ethene	ND		13.0	1	10/07/2024 12:35	WG2377039

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	10/10/2024 18:53	WG2379800
Toluene	ND		1.00	1	10/10/2024 18:53	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 18:53	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 18:53	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 18:53	WG2379800
(S) Toluene-d8	*104*		*80.0-120*		*10/10/2024 18:53*	WG2379800
(S) 4-Bromofluorobenzene	*92.6*		*77.0-126*		*10/10/2024 18:53*	WG2379800
(S) 1,2-Dichloroethane-d4	*79.4*		*70.0-130*		*10/10/2024 18:53*	WG2379800

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	10/17/2024 11:34	WG2382583
Residual Range Organics (RRO)	ND		250	1	10/17/2024 11:34	WG2382583
(S) o-Terphenyl	*108*		*52.0-156*		*10/17/2024 11:34*	WG2382583

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	233000		20000	1	10/06/2024 14:10	WG2376874

Sample Narrative:
L1785666-09 WG2376874: 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	121000		25000	5	10/08/2024 17:49	WG2376732

Sample Narrative:
L1785666-09 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:32	WG2378097

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	10/12/2024 09:44	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.2*		*78.0-120*		*10/12/2024 09:44*	WG2380746

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	10/07/2024 13:56	WG2377045
Ethane	ND		13.0	1	10/07/2024 13:56	WG2377045
Ethene	ND		13.0	1	10/07/2024 13:56	WG2377045

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	10/10/2024 19:13	WG2379800
Toluene	ND		1.00	1	10/10/2024 19:13	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 19:13	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 19:13	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 19:13	WG2379800
(S) Toluene-d8	*104*		*80.0-120*		*10/10/2024 19:13*	WG2379800
(S) 4-Bromofluorobenzene	*96.0*		*77.0-126*		*10/10/2024 19:13*	WG2379800
(S) 1,2-Dichloroethane-d4	*82.1*		*70.0-130*		*10/10/2024 19:13*	WG2379800

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	10/19/2024 06:47	WG2383842
Residual Range Organics (RRO)	ND		250	1	10/19/2024 06:47	WG2383842
(S) o-Terphenyl	*107*		*52.0-156*		*10/19/2024 06:47*	WG2383842

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	187000		20000	1	10/06/2024 14:16	WG2376874

Sample Narrative:
L1785666-10 WG2376874: 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	123000		25000	5	10/08/2024 18:00	WG2376732

Sample Narrative:
L1785666-10 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:34	WG2378097

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	10/12/2024 10:06	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.0*		*78.0-120*		*10/12/2024 10:06*	WG2380746

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	10/07/2024 13:59	WG2377045
Ethane	ND		13.0	1	10/07/2024 13:59	WG2377045
Ethene	ND		13.0	1	10/07/2024 13:59	WG2377045

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	10/10/2024 19:32	WG2379800
Toluene	ND		1.00	1	10/10/2024 19:32	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 19:32	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 19:32	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 19:32	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 19:32*	WG2379800
(S) 4-Bromofluorobenzene	*93.2*		*77.0-126*		*10/10/2024 19:32*	WG2379800
(S) 1,2-Dichloroethane-d4	*78.4*		*70.0-130*		*10/10/2024 19:32*	WG2379800

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	10/19/2024 07:07	WG2383842
Residual Range Organics (RRO)	ND		250	1	10/19/2024 07:07	WG2383842
(S) o-Terphenyl	*101*		*52.0-156*		*10/19/2024 07:07*	WG2383842

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	190000		20000	1	10/06/2024 14:22	WG2376874

Sample Narrative:
L1785666-11 WG2376874: 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	125000		25000	5	10/08/2024 18:33	WG2376732

Sample Narrative:
L1785666-11 WG2376732: Dilution due to matrix

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 01:36	WG2378097

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	10/12/2024 10:28	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.2*		*78.0-120*		*10/12/2024 10:28*	WG2380746

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	10/07/2024 14:02	WG2377045
Ethane	ND		13.0	1	10/07/2024 14:02	WG2377045
Ethene	ND		13.0	1	10/07/2024 14:02	WG2377045

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	10/10/2024 19:52	WG2379800
Toluene	ND		1.00	1	10/10/2024 19:52	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 19:52	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 19:52	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 19:52	WG2379800
(S) Toluene-d8	*105*		*80.0-120*		*10/10/2024 19:52*	WG2379800
(S) 4-Bromofluorobenzene	*93.1*		*77.0-126*		*10/10/2024 19:52*	WG2379800
(S) 1,2-Dichloroethane-d4	*80.9*		*70.0-130*		*10/10/2024 19:52*	WG2379800

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	10/15/2024 05:40	WG2381340
Residual Range Organics (RRO)	ND		250	1	10/15/2024 05:40	WG2381340
(S) o-Terphenyl	*91.5*		*52.0-156*		*10/15/2024 05:40*	WG2381340

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	190000		20000	1	10/06/2024 14:27	WG2376874

Sample Narrative:
L1785666-12 WG2376874: 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	115000		5000	1	10/09/2024 02:37	WG2376885

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		10.0	1	10/17/2024 20:46	WG2378099

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	10/12/2024 10:50	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.1*		*78.0-120*		*10/12/2024 10:50*	WG2380746

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	10/07/2024 14:05	WG2377045
Ethane	ND		13.0	1	10/07/2024 14:05	WG2377045
Ethene	ND		13.0	1	10/07/2024 14:05	WG2377045

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	10/10/2024 20:11	WG2379800
Toluene	ND		1.00	1	10/10/2024 20:11	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 20:11	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 20:11	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 20:11	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 20:11*	WG2379800
(S) 4-Bromofluorobenzene	*95.7*		*77.0-126*		*10/10/2024 20:11*	WG2379800
(S) 1,2-Dichloroethane-d4	*76.2*		*70.0-130*		*10/10/2024 20:11*	WG2379800

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	10/15/2024 06:00	WG2381340
Residual Range Organics (RRO)	ND		250	1	10/15/2024 06:00	WG2381340
(S) o-Terphenyl	*90.0*		*52.0-156*		*10/15/2024 06:00*	WG2381340

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	192000		20000	1	10/06/2024 14:33	WG2376874

Sample Narrative:

L1785666-13 WG2376874: 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	10/09/2024 02:50	WG2376885

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 20:48	WG2378099

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	10/12/2024 11:11	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.2*		*78.0-120*		*10/12/2024 11:11*	WG2380746

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	10/07/2024 14:08	WG2377045
Ethane	ND		13.0	1	10/07/2024 14:08	WG2377045
Ethene	ND		13.0	1	10/07/2024 14:08	WG2377045

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	10/10/2024 20:31	WG2379800
Toluene	ND		1.00	1	10/10/2024 20:31	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 20:31	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 20:31	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 20:31	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 20:31*	WG2379800
(S) 4-Bromofluorobenzene	*93.7*		*77.0-126*		*10/10/2024 20:31*	WG2379800
(S) 1,2-Dichloroethane-d4	*80.3*		*70.0-130*		*10/10/2024 20:31*	WG2379800

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	10/15/2024 06:19	WG2381340
Residual Range Organics (RRO)	ND		250	1	10/15/2024 06:19	WG2381340
(S) o-Terphenyl	*90.5*		*52.0-156*		*10/15/2024 06:19*	WG2381340

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	190000		20000	1	10/06/2024 14:38	WG2376874

Sample Narrative:
L1785666-14 WG2376874: 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	121000		5000	1	10/09/2024 03:04	WG2376885

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Manganese,Dissolved	ND		10.0	1	10/17/2024 20:25	WG2378099

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	10/12/2024 11:33	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.2*		*78.0-120*		*10/12/2024 11:33*	WG2380746

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	10/07/2024 14:11	WG2377045
Ethane	ND		13.0	1	10/07/2024 14:11	WG2377045
Ethene	ND		13.0	1	10/07/2024 14:11	WG2377045

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	10/10/2024 20:50	WG2379800
Toluene	ND		1.00	1	10/10/2024 20:50	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 20:50	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 20:50	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 20:50	WG2379800
(S) Toluene-d8	*104*		*80.0-120*		*10/10/2024 20:50*	WG2379800
(S) 4-Bromofluorobenzene	*94.1*		*77.0-126*		*10/10/2024 20:50*	WG2379800
(S) 1,2-Dichloroethane-d4	*81.8*		*70.0-130*		*10/10/2024 20:50*	WG2379800

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	10/15/2024 06:39	WG2381340
Residual Range Organics (RRO)	ND		250	1	10/15/2024 06:39	WG2381340
(S) o-Terphenyl	*87.5*		*52.0-156*		*10/15/2024 06:39*	WG2381340

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	10/12/2024 06:26	WG2380746
(S) a,a,a-Trifluorotoluene(FID)	*99.6*		*78.0-120*		*10/12/2024 06:26*	WG2380746

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	10/10/2024 14:58	WG2379800
Toluene	ND		1.00	1	10/10/2024 14:58	WG2379800
Ethylbenzene	ND		1.00	1	10/10/2024 14:58	WG2379800
Xylenes, Total	ND		3.00	1	10/10/2024 14:58	WG2379800
Naphthalene	ND		5.00	1	10/10/2024 14:58	WG2379800
(S) Toluene-d8	*103*		*80.0-120*		*10/10/2024 14:58*	WG2379800
(S) 4-Bromofluorobenzene	*95.3*		*77.0-126*		*10/10/2024 14:58*	WG2379800
(S) 1,2-Dichloroethane-d4	*79.6*		*70.0-130*		*10/10/2024 14:58*	WG2379800

Method Blank (MB)

(MB) R4129079-2 10/06/24 09:32

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

L1785310-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785310-01 10/06/24 09:41 • (DUP) R4129079-3 10/06/24 09:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	316000	320000	1	1.15		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1785666-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785666-01 10/06/24 12:00 • (DUP) R4129079-4 10/06/24 12:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	194000	195000	1	0.338		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R4129079-1 10/06/24 09:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	104000	104	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

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

Method Blank (MB)

(MB) R4129099-2 10/06/24 12:31

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

L1785114-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1785114-03 10/06/24 12:43 • (DUP) R4129099-3 10/06/24 12:50

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	231000	232000	1	0.257		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1785692-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785692-01 10/06/24 15:02 • (DUP) R4129099-4 10/06/24 15:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	305000	310000	1	1.88		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R4129099-1 10/06/24 12:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	101000	101	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4131423-1 10/08/24 12:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		637	5000

L1785554-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785554-01 10/08/24 13:16 • (DUP) R4131423-3 10/08/24 13:27

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	14600	14600	1	0.128		15

L1785666-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1785666-02 10/08/24 16:00 • (DUP) R4131423-5 10/08/24 16:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	113000	112000	5	0.764		15

Sample Narrative:

OS: Dilution due to matrix

Laboratory Control Sample (LCS)

(LCS) R4131423-2 10/08/24 13:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	43700	109	90.0-110	

L1785554-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1785554-01 10/08/24 13:16 • (MS) R4131423-4 10/08/24 13:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	14600	56200	104	1	90.0-110	

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/08/24 16:00 • (MS) R4131423-6 10/08/24 16:22 • (MSD) R4131423-7 10/08/24 16:33

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	113000	134000	130000	51.5	41.4	5	90.0-110	J6	J6	3.07	15

Sample Narrative:

OS: Dilution due to matrix

Method Blank (MB)

(MB) R4131403-1 10/08/24 22:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		637	5000

L1785632-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785632-01 10/08/24 23:01 • (DUP) R4131403-3 10/08/24 23:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	58200	57100	1	1.97		15

L1785632-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1785632-02 10/08/24 23:55 • (DUP) R4131403-6 10/09/24 00:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	18800	18400	1	2.39		15

Laboratory Control Sample (LCS)

(LCS) R4131403-2 10/08/24 22:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	40500	101	90.0-110	

L1785632-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785632-01 10/08/24 23:01 • (MS) R4131403-4 10/08/24 23:28 • (MSD) R4131403-5 10/08/24 23:41

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	58200	89000	90600	76.9	81.0	1	90.0-110	J6	J6	1.82	15

L1785632-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1785632-02 10/08/24 23:55 • (MS) R4131403-7 10/09/24 00:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	18800	48200	73.5	1	90.0-110	J6

QUALITY CONTROL SUMMARY

L1785666-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4133799-1 10/17/24 00:42

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

Laboratory Control Sample (LCS)

(LCS) R4133799-2 10/17/24 00:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Manganese,Dissolved	1000	992	99.2	80.0-120	

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/17/24 00:46 • (MS) R4133799-4 10/17/24 00:49 • (MSD) R4133799-5 10/17/24 00:51

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	%	%		%			%	%
Manganese,Dissolved	1000	ND	1010	983	101	98.3	1	75.0-125			2.41	20

Method Blank (MB)

(MB) R4134329-1 10/17/24 20:21

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) R4134329-2 10/17/24 20:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	1000	1010	101	80.0-120	

L1785666-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-14 10/17/24 20:25 • (MS) R4134329-4 10/17/24 20:28 • (MSD) R4134329-5 10/17/24 20:30

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	ND	990	981	98.8	98.0	1	75.0-125			0.874	20

Method Blank (MB)

(MB) R4133006-2 10/12/24 05:29

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)	*99.0*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4133006-1 10/12/24 04:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	5480	110	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*78.0-120*	

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/12/24 07:10 • (MS) R4133006-3 10/12/24 13:45 • (MSD) R4133006-4 10/12/24 14:07

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	5450	5490	109	110	1	10.0-155			0.731	21
(S) a,a,a-Trifluorotoluene(FID)					*104*	*102*		*78.0-120*				

Method Blank (MB)

(MB) R4129344-2 10/07/24 08:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		5.10	10.0
Ethane	U		3.40	13.0
Ethene	U		3.40	13.0

L1785417-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1785417-05 10/07/24 08:53 • (DUP) R4129344-3 10/07/24 11:25

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

L1785666-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1785666-01 10/07/24 11:54 • (DUP) R4129344-4 10/07/24 12:37

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) R4129344-1 10/07/24 08:35 • (LCSD) R4129344-9 10/07/24 12:59

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	63.8	67.4	94.1	99.4	85.0-115			5.49	20
Ethane	129	121	120	93.8	93.0	85.0-115			0.830	20
Ethene	127	122	121	96.1	95.3	85.0-115			0.823	20

L1785420-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785420-08 10/07/24 09:01 • (MS) R4129344-5 10/07/24 12:40 • (MSD) R4129344-6 10/07/24 12:45

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	62.5	66.3	92.2	97.8	1	50.0-150			5.90	20
Ethane	129	ND	118	119	91.5	92.2	1	50.0-150			0.844	20
Ethene	127	ND	119	120	93.7	94.5	1	50.0-150			0.837	20

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/07/24 12:12 • (MS) R4129344-7 10/07/24 12:50 • (MSD) R4129344-8 10/07/24 12:54

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	67.4	63.9	99.4	94.2	1	50.0-150			5.33	20
Ethane	129	ND	120	120	93.0	93.0	1	50.0-150			0.000	20
Ethene	127	ND	121	121	95.3	95.3	1	50.0-150			0.000	20

Method Blank (MB)

(MB) R4129509-2 10/07/24 13:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		5.10	10.0
Ethane	U		3.40	13.0
Ethene	U		3.40	13.0

L1785666-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1785666-09 10/07/24 13:56 • (DUP) R4129509-3 10/07/24 14:31

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

L1785816-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1785816-06 10/07/24 14:37 • (DUP) R4129509-4 10/07/24 15:44

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) R4129509-1 10/07/24 13:45 • (LCSD) R4129509-5 10/07/24 15:48

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	71.3	66.9	105	98.7	85.0-115			6.37	20
Ethane	129	122	119	94.6	92.2	85.0-115			2.49	20
Ethene	127	122	119	96.1	93.7	85.0-115			2.49	20

Method Blank (MB)

(MB) R4131517-2 10/10/24 10:31

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	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*93.0*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*75.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4131517-1 10/10/24 09:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	4.84	96.8	70.0-123	
Toluene	5.00	5.39	108	79.0-120	
Ethylbenzene	5.00	5.42	108	79.0-123	
Xylenes, Total	15.0	16.4	109	79.0-123	
Naphthalene	5.00	5.21	104	54.0-135	
(S) Toluene-d8			*104*	*80.0-120*	
(S) 4-Bromofluorobenzene			*97.9*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*78.8*	*70.0-130*	

Method Blank (MB)

(MB) R4133304-2 10/12/24 10:42

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	*99.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4133304-1 10/12/24 10:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	4.02	80.4	70.0-123	
Toluene	5.00	4.41	88.2	79.0-120	
Ethylbenzene	5.00	4.55	91.0	79.0-123	
Xylenes, Total	15.0	13.9	92.7	79.0-123	
Naphthalene	5.00	4.44	88.8	54.0-135	
(S) Toluene-d8			*104*	*80.0-120*	
(S) 4-Bromofluorobenzene			*109*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*95.9*	*70.0-130*	

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/12/24 12:03 • (MS) R4133304-3 10/12/24 20:14 • (MSD) R4133304-4 10/12/24 20:33

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	3.82	3.92	76.4	78.4	1	17.0-158			2.58	27
Toluene	5.00	ND	4.03	3.84	80.6	76.8	1	26.0-154			4.83	28
Ethylbenzene	5.00	ND	4.01	4.00	80.2	80.0	1	30.0-155			0.250	27
Xylenes, Total	15.0	ND	12.2	12.2	81.3	81.3	1	29.0-154			0.000	28
Naphthalene	5.00	ND	ND	ND	50.0	57.2	1	12.0-156			13.4	35
(S) Toluene-d8					*105*	*103*		*80.0-120*				
(S) 4-Bromofluorobenzene					*106*	*107*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*98.3*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4132841-1 10/14/24 21:23

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*95.5*			*52.0-156*

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

(LCS) R4132841-2 10/14/24 21:42 • (LCSD) R4132841-3 10/14/24 22:02

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 %
Diesel Range Organics (DRO)	1500	1530	1520	102	101	50.0-150			0.656	20
(S) o-Terphenyl				*107*	*107*	*52.0-156*				

Method Blank (MB)

(MB) R4134110-1 10/16/24 21:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*143*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4134110-2 10/16/24 21:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	1500	1840	123	50.0-150	
(S) o-Terphenyl			*130*	*52.0-156*	

L1785666-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785666-02 10/21/24 14:18 • (MS) R4135561-1 10/21/24 14:39 • (MSD) R4135561-2 10/21/24 14:59

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 %
Diesel Range Organics (DRO)	1500	ND	2160	1790	144	119	1	50.0-150			18.7	20
(S) o-Terphenyl					*156*	*126*		*52.0-156*				

Method Blank (MB)

(MB) R4135199-1 10/18/24 21:05

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	*103*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4135199-2 10/18/24 21:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1370	91.3	50.0-150	
(S) o-Terphenyl			*101*	*52.0-156*	

L1785334-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1785334-09 10/19/24 04:10 • (MS) R4135199-3 10/19/24 04:30 • (MSD) R4135199-4 10/19/24 04:49

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	ND	ND	7.34	5.34	1	50.0-150	J6	J3 J6	31.5	20
(S) o-Terphenyl					*106*	*109*		*52.0-156*				

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
J1	Surrogate recovery limits have been exceeded; values are outside upper 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.

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 - 2SA 2024

City/State Collected: Pasco, WA

Please Circle: (PT) MT CT ET

Phone: **503-969-6310**

Client Project #
60722666

Lab Project #
AECOMPORSSA-CPL

Collected by (print):
E Pinkerton
J Long

Site/Facility ID #

P.O. #
1639150

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	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-04- 241002	GRAB	GW	72.0	10/2/24	0941	12	X	X	X	X		X	X					-01
MW-06- 241002		GW	21.0	10/2/24	1240	12	X	X	X	X		X	X					-02
MW-06-MS - 241002		GW	21.0	10/2/24	1240	12	X	X	X	X		X	X					~~-03~~
MW-06-MSD - 241002		GW	21.0	10/2/24	1240	12	X	X	X	X		X	X					~~-04~~
MW-07- 241002		GW	72.0	10/2/24	0935	12	X	X	X	X		X	X					~~-05~~ -03
MW-08- 241002		GW	44.0	10/2/24	1505	12	X	X	X	X		X	X					~~-06~~ -04
MW-10- 241002		GW	68.0	10/2/24	1040	12	X	X	X	X		X	X					~~-07~~ -05
MW-14- 241002		GW	84.0	10/2/24	1147	12	X	X	X	X		X	X					~~-08~~ -06
MW-15- 241002		GW	21.0	10/2/24	1435	12	X	X	X	X		X	X					~~-09~~ -07
MW-16- 241002	↓	GW	31.0	10/2/24	1335	12	X	X	X	X		X	X			NP	10/5/24	~~-10~~ -08

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

Remarks:PO 1639150

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: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	10/3/2024	1051		2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 3.7+3.4=7.0 Bottles Received: 192	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher D Pollen	Date: 10/4/24 Time: 0902	Hold: Condition: NCF / OK

Chain of Custody Page 1 of 2

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 # L1765696
F193

Acctnum: **AECOMPORSSA**
Template: **T223778**
Prelogin: **P1098148**
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 - 2SA 2024

City/State Collected: Pasco, WA

Please Circle: (PT) MT CT ET

Phone: **503-969-6310**

Client Project #
60722666

Lab Project #
AECOMPORSSA-CPL

Collected by (print):
E. Richardson
J. Long

Site/Facility ID #

P.O. # 1639150

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

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-18-241003	GRAB	GW	86.5	10/3/24	0905	12	X	X	X	X		X	X					-10
MW-20-241003	"	GW	95.0	10/3/24	0845	12	X	X	X	X		X	X					-10
MW-21-241001	"	GW	93.0	10/1/24	1415	12	X	X	X	X		X	X					-11
MW-22-241001	"	GW	94.0	10/1/24	1625	12	X	X	X	X		X	X					-12
MW-23-241001		GW	92.0	10/1/24	1540	12	X	X	X	X		X	X					-13
MW-210-241001	↓	GW	93.0	10/1/24	1620	12	X	X	X	X		X	X					-14
TB-1-241003	—	GW	—	10/3/24	—	2					X			X				-15
TB-		GW				2					X			X				
TB-		GW				2					X			X				
Field Blank-		GW				7			X	X			X					

Chain of Custody Page 2 of 2

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 # L1765060

Table #

Acctnum: **AECOMPORSSA**
Template: **T223778**
Prelogin: **P1098148**
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 1639150

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP K 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: K Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	10/3/2024	1051			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 5.1+3=4.0	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher Mallin	Date: 10/4/24 Time: 0900	Hold: Condition: NCF / OK

Tracking Numbers	Temperature
404754418009	1.9+.3=2.2
8020	3.7+.3=4.0.

Name

Date

U7856166

Appendix D. Data Validation Reports

AECOM
1111 3rd Ave
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Memorandum

To	Nicky Moody, Project Manager	Info	FINAL
Subject	Summary Data Quality Review Chevron Pipeline 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*

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

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

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Memorandum

To	Nicky Moody, Project Manager	Info	FINAL
Subject	Summary Data Quality Review Chevron Pipeline Company Pasco Bulk Terminal October 2024 Semi-Annual Groundwater Sampling		
From	Christina Wheeler, Chemist Lucy Panteleeff, Chemist		
Date	November 7, 2024		

The summary data quality review of 14 groundwater samples and 1 trip blank collected between October 1 and October 3, 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., -20241001) will not be used unless needed for clarity. The following samples are associated with Pace laboratory group L1785666:

Sample ID	**Laboratory ID**	**Requested Analyses**
MW-04-241002	L1785666-01	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-06-241002	L1785666-02	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-07-241002	L1785666-03	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-08-241002	L1785666-04	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-10-241002	L1785666-05	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-14-241002	L1785666-06	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-15-241002	L1785666-07	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-16-241002	L1785666-08	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-18-241003	L1785666-09	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-20-241003	L1785666-10	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-21-241001	L1785666-11	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-22-241001	L1785666-12	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-23-241001	L1785666-13	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
MW-210-241001 (Field Duplicate of MW-21)	L1785666-14	VOCs, TPH-Gx, Methane, TPH-Dx, Manganese, Sulfate, Alkalinity
TB-1-241003 (trip blank)	L1785666-15	VOCs, TPH-Gx

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 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.

AECOM

Summary Data Quality Review
Chevron Pipeline Company Pasco Bulk Terminal
October 2024 Semi-Annual Groundwater Sampling
Laboratory Group: L1785666

A summary of qualifiers that may be assigned to results in the laboratory group is 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 using the methods identified in the introduction of this report.

1. Holding Times – Acceptable

2. Blanks – Acceptable

3. Surrogates – Acceptable except as noted below:

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

Sample	Recovery
MW-06	162%
MW-08	161%

   Diesel-range and residual-range TPHs were not detected in MW-06 and MW-08; therefore, data were not qualified based on these elevated surrogate recoveries.

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

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

General – MS/MSDs for all organic analyses were performed using MW-06 and/or samples from unrelated projects. Data are not qualified based on outliers in samples from unrelated projects. Results for MW-06 were acceptable.

6. Laboratory Duplicate – Acceptable where applicable

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

7. Field Duplicate – Acceptable

   General – A field duplicate was submitted for MW-21 and identified as MW-210. Results were comparable for all analytes.

8. Reporting Limits – Acceptable

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

   MS/MSDs were performed using MW-06 and MW-210. Results were acceptable.

5. Field Duplicate – Acceptable

   A field duplicate was submitted for MW-21 and identified as MW-210. Results were comparable.

6. Reporting Limits – Acceptable

Conventional Analyses

Samples were analyzed for sulfate and alkalinity using 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 – MSs and/or MS/MSDs were performed using MW-06 and three samples from unrelated projects. Data are not qualified based on outliers in samples from unrelated projects. The following percent recoveries were below the control limits in the MS/MSD performed using MW-06:

Sample	MS Recovery	MSD Recovery	Control Limits
MW-06	51.5%	41.4%	90.0-100%

   The result for sulfate in MW-06 was 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-06 and three samples from unrelated projects. Results were comparable.

   Alkalinity by SM 2320B – Laboratory duplicates were performed using MW-04 and three samples from unrelated projects. Results were comparable.

6. Field Duplicate – Acceptable

   General – A field duplicate was submitted for MW-21 and identified as MW-210. 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 L1785666 is 100%.

AECOM

Summary Data Quality Review
Chevron Pipeline Company Pasco Bulk Terminal
October 2024 Semi-Annual Groundwater Sampling
Laboratory Group: L1785666

Table 1 – Summary of Qualified Data

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
MW-04-241002	L1785666-01	SM2320B	Total Alkalinity	194,000	ug/L	194,000 J	hs
MW-06-241002	L1785666-02	SM2320B	Total Alkalinity	176,000	ug/L	176,000 J	hs
MW-07-241002	L1785666-03	SM2320B	Total Alkalinity	236,000	ug/L	236,000 J	hs
MW-08-241002	L1785666-04	SM2320B	Total Alkalinity	195,000	ug/L	195,000 J	hs
MW-10-241002	L1785666-05	SM2320B	Total Alkalinity	191,000	ug/L	191,000 J	hs
MW-14-241002	L1785666-06	SM2320B	Total Alkalinity	240,000	ug/L	240,000 J	hs
MW-15-241002	L1785666-07	SM2320B	Total Alkalinity	213,000	ug/L	213,000 J	hs
MW-16-241002	L1785666-08	SM2320B	Alkalinity, total	209,000	ug/L	209,000 J	hs
MW-18-241003	L1785666-09	SM2320B	Total Alkalinity	233,000	ug/L	233,000 J	hs
MW-20-241003	L1785666-10	SM2320B	Total Alkalinity	187,000	ug/L	187,000 J	hs
MW-21-241001	L1785666-11	SM2320B	Total Alkalinity	190,000	ug/L	190,000 J	hs
MW-22-241001	L1785666-12	SM2320B	Total Alkalinity	190,000	ug/L	190,000 J	hs
MW-23-241001	L1785666-13	SM2320B	Total Alkalinity	192,000	ug/L	192,000 J	hs
MW-210-241001	L1785666-14	SM2320B	Total Alkalinity	190,000	ug/L	190,000 J	hs
MW-06-241002	L1785666-02	SM2320B	Total Alkalinity	113,000	ug/L	113,000 J	hs
MW-04-241002	L1785666-01	SM2320B	Total Alkalinity	194,000	ug/L	194,000 J	hs
MW-06-241002	L1785666-02	E300.0	Sulfate	176,000	ug/L	176,000 J	m

Notes:
hs – headspace
ID - identification
J – estimated value
m – matrix spike/matrix spike duplicate recoveries
ug/L – microgram per liter