

January 6, 2025

AECOM No. 60701804

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**Subject: Fourth Quarter and Annual 2024 Groundwater Monitoring Report
Chevron Bulk Plant USA 1348, Facility/Site ID 1234, Cleanup Site ID 3762
1656 E J St., Tacoma, Pierce County, WA 98421**

Dear Mr. Praisewater:

Please find enclosed the *Fourth Quarter and Annual 2024 Groundwater Monitoring Report* (Report), which has been prepared by AECOM Technical Services, Inc (AECOM) on behalf of Chevron Environmental Management Company (CEMC). This report presents the field activities and analytical results of the 2024 four-quarter groundwater monitoring event and an overall summary of 2024 groundwater data at the Former Chevron Bulk Terminal in Tacoma, Washington.

Please contact Brad Wynne at 214-971-1829 or via email below if you have any additional questions, comments, or concerns.

Sincerely,



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Fourth Quarter and Annual 2024 Groundwater Monitoring Report

Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington
Facility/Site ID 1234,
Ecology Cleanup Site ID 3762

Chevron Environmental Management Company (CEMC)

January 6, 2025

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Chevron Environmental Management Company

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Table of Contents

1.	Introduction.....	1
2.	Background and Environmental History.....	1
3.	Geology and Hydrogeology.....	2
4.	Fourth Quarter 2024 Gauging and Sampling.....	3
4.1	Groundwater and SPH Gauging.....	3
4.2	Groundwater Sampling and Analysis.....	3
4.2.1	Lateral Extent and Plume Stability Evaluation.....	5
5.	Silica Gel Cleanup.....	7
6.	2024 Waste Disposal Summary.....	7
7.	Summary and Recommendations.....	7

Figures

Figure 1 – Site Location Map

Figure 2A – Site Vicinity Map

Figure 2B – Site Plan

Figure 3A – Groundwater Elevation Contours – Perched Groundwater Bearing Unit – First Quarter, March 11, 2024

Figure 3B – Groundwater Elevation Contours – Perched Groundwater Bearing Unit – Second Quarter, June 17, 2024

Figure 3C – Groundwater Elevation Contours – Perched Groundwater Bearing Unit – Third Quarter, September 3, 2024

Figure 3D – Groundwater Elevation Contours – Perched Groundwater Bearing Unit – Fourth Quarter, November 4, 2024

Figure 4A -- Groundwater Elevation Contours – Sand Aquifer – First Quarter, March 11, 2024

Figure 4B -- Groundwater Elevation Contours – Sand Aquifer – Second Quarter, June 17, 2024

Figure 4C -- Groundwater Elevation Contours – Sand Aquifer – Third Quarter, September 3, 2024

Figure 4D -- Groundwater Elevation Contours – Sand Aquifer – Fourth Quarter, November 4, 2024

Figure 5A – Fourth Quarter and Cumulative 2024 Groundwater Analytical Data – Perched Groundwater Bearing Unit

Figure 5B – Fourth Quarter and Cumulative 2024 Groundwater Analytical Data – Sand Aquifer

Tables

Table 1 – Groundwater Monitoring Program

Table 2 – Cumulative 2024 Gauging and Groundwater Analytical Data

Table 3 – Fourth Quarter 2024 Water Quality Parameters

Appendices

Appendix A – Boring Logs

Appendix B – Groundwater Sampling Field Data

Appendix C – Laboratory Analytical Reports

Appendix D – Data Quality Reviews

Appendix E – Previous Groundwater Data 1992-2022

Appendix F – Trend Graphs

Appendix G – Waste Manifest

1. Introduction

Groundwater monitoring is conducted at the Former Chevron Bulk Terminal (Property), Facility Number 1001348, located in Tacoma, Washington (**Figure 1**), following the Washington State Department of Ecology (Ecology) Agreed Order (AO) No. DE7111¹ (**Table 1**). This Report includes a description of groundwater monitoring activities completed in the fourth quarter of 2024, a summary of corresponding water quality and analytical data, and a year-end summary of the Site. The Site boundary (based on Ecology Administrative Code²) is variable and is defined by the estimated horizontal extent of soil and groundwater with petroleum constituent concentrations exceeding Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs).

The Property is located at 1656 E J Street, adjacent to Richlite (formerly Rainier Plywood) to the north, Steeler, Inc. to the west, the Northwest Detention Center to the east, and a Burlington Northern Santa Fe (BNSF) railroad switchyard to the south. The Property and surrounding properties are zoned for heavy industrial, warehousing, and storage purposes³. The Property is currently used for vehicle storage for the Northwest Detention Center.

2. Background and Environmental History

The Property operated as a fuel storage and distribution facility from 1905 through 1988 with 13 above-ground storage tanks (ASTs), four underground storage tanks (USTs), two tanker truck-loading racks, two office buildings, several garages, and three pipelines that transported hydrocarbon products to the Thea Foss/Wheeler-Osgood Waterway (**Figure 2A and 2B**). Decommissioning and removal of historical Site infrastructure began in 1989, with all underground piping removed by April 27, 1989⁴.

Previous activities and investigations provided evidence of petroleum hydrocarbon releases at the Property, including:

- 1984: Visual evidence of hydrocarbon contamination was identified in soil during well installation and test pit digging activities⁴.
- 1989: The City of Tacoma identified petroleum product entering the municipal sewer system through a manhole adjacent to the Property⁵.
- 2010 – 2021: Remedial investigation activities indicated remaining gasoline-, diesel-, and oil-range hydrocarbons in soil and groundwater in exceedance of MTCA Method A CULs⁶.

Thirty-nine (39) groundwater monitoring wells, 25 hand-augured borings, and 103 test pits were dug/drilled/installed on the Property between 1984 and 2010⁶. Groundwater monitoring wells were later installed on adjacent properties and nearby streets to determine the extent of dissolved-phase hydrocarbon plume migration⁷.

As of 2024, the extent of petroleum hydrocarbons remaining in groundwater has not been fully delineated within the perched groundwater-bearing unit or the sand aquifer. Due to various logistical and access-related issues, several of the additional site characterization elements proposed in the Ecology-approved *2020 RI Work Plan*^{Error! Bookmark not defined.} had not been implemented. Based on AECOM's assessment of

¹Ecology. 2009. Agreed Order No. DE 7111. State of Washington Department of Ecology.

²Washington Administrative Code (WAC) 173-340-200

³PublicGIS. 2023. Pierce County PublicGIS. <https://matterhornwab.co.pierce.wa.us/publicgis/>. Visited on June 30.

⁴SAIC. 2006. Current Use and Site Summary for Former Standard Oil Bulk Fuel Terminal #100-1348, Tacoma, Washington. Science Applications International Corporation. Bothell, Washington. October 27.

⁵GeoEngineers. 1989. Report of Geotechnical Services Subsurface Contamination Study, Tacoma Bulk Fuel Terminal, Tacoma, Washington. March 22.

⁶SAIC. 2014. Draft Remedial Investigation. Science Application International Corporation. Bothell, Washington. December 15.

⁷Leidos. 2020. Remedial Investigation Work Plan Addendum, Former Chevron Bulk Terminal No. 1001348. January 30, 2020.

the conceptual site model (CSM⁸) and recent groundwater data through 2023, AECOM submitted a *Revised Remediation Investigation Work Plan Amendment*⁹, which Ecology approved. Due to ongoing access delays for the adjacent BNSF property, AECOM moved forward with Option 2 of the Work Plan Amendment, which included installing eight nested wells between the two groundwater-bearing zones.

In September 2024, following the third quarter sampling event, four monitoring wells were installed and developed within the perched groundwater-bearing unit (MW-27, MW-28, MW-33, MW-40), and four monitoring wells were installed and developed within the sand aquifer (D-11, D-16, D-23, D-28). Boring logs and survey information are included in **Appendix A**. The eight nested wells were first sampled during the fourth quarter sampling event and will be included in the quarterly groundwater monitoring program in **Table 1**.

3. Geology and Hydrogeology

Site geology consists of well-sorted, fine-to-coarse sand with less than 10 percent (%) silt fill above 10 feet (ft) below ground surface (bgs) that overlies native material alternating between silt and well-sorted sand below 10 ft bgs.

Two groundwater-bearing zones (GWBU) have been identified beneath the Site:

- An upper GWBU herein referred to as the perched GWBU.
- A lower confined to semi-confined GWBU, herein referred to as the sand aquifer.

The GWBUs are separated by a discontinuous, approximately 1 to 6 ft thick, semi-permeable to impermeable, organic-rich silt lens that likely represents the original ground surface (tidal flats) prior to infilling and commercial development.

Groundwater within the perched GWBU fluctuates seasonally from approximately 0.5 to 7 ft bgs and may become dry during prolonged periods of drought¹⁰. The estimated groundwater elevation contours and flow direction determined during the fourth quarter of 2024 for the perched GWBU are generally radially to the north and northeast. Groundwater elevation contours and apparent flow direction for the first through fourth quarters of 2024 are shown on **Figures 3A to 3D**.

Groundwater within the sand aquifer ranges from approximately 7 to 10 ft bgs and is influenced by tidal fluctuations from the Puyallup River and Wheeler-Osgood Waterway, confirming a hydraulic connection⁸. Groundwater gauging during the fourth quarter of 2024 was completed during a falling tide (shortly after high tide and near low tide) with the overall groundwater flow direction to the east and north, different from the previous three quarters which exhibited flow primarily to the north to northwest. This is likely due to tidal influence and timing of gauging of certain wells in relation to the tidal effects. Groundwater elevation contours and apparent flow direction for the first through fourth quarters of 2024 are shown on **Figures 4A to 4D**.

During October 2024, a professional State of Washington Licensed surveyor was contracted to survey the top-of-casing (TOC) and ground elevations for all remaining monitoring wells, including the newly installed monitoring wells, within the monitoring network in order to accurately derive groundwater elevations from the well gauging data.

⁸ The **Updated Draft Remedial Investigation and Data Gap Report** (Updated Draft RI/DG Report) submitted to Ecology on April 22, 2024.

⁹ The **Revised Remedial Investigation Work Plan Amendment** submitted to Ecology on August 28, 2024.

¹⁰ SAIC. 2010. Remedial Investigation Work Plan. Science Applications International Corporation. Bothell, Washington. June 4.

4. Fourth Quarter 2024 Gauging and Sampling

4.1 Groundwater and SPH Gauging

Fifty-two (52) monitoring wells were gauged, and forty-nine (49) monitoring wells were sampled during the fourth quarter 2024, in accordance with the groundwater monitoring program in **Table 1**. Monitoring wells MW-20 and D-13 were not sampled due to the presence of separate-phase hydrocarbons (SPH). Groundwater sampling field data sheets are included in **Appendix B**. Gauging data, including derived groundwater elevations for each quarterly sampling event through 2024 are presented in **Table 2**, and **Figures 5A** and **5B** present the fourth quarter 2024 groundwater elevations. Cumulative 2024 gauging data and groundwater elevations are presented in **Table 2**; the fourth quarter results are summarized below:

Perched GWBU

- Well MW-20 had trace SPH which is consistent with previous quarterly events.
- Well MW-11 was dry at the time of gauging.
- Groundwater depths during fourth quarter 2024 ranged from 5.28 ft (MW-36) to 10.26 ft below TOC (MW-27).
- Groundwater in the perched GWBU was observed to primarily flow in a north-northeasterly direction with a small component to the northwest.

Sand Aquifer

- Well D-13 had a measurable SPH thickness of approximately 0.75 ft. In the first quarter 2024, D-13 had measurable SPH thickness of 0.27 ft. In the second and third quarter 2024, SPH in D-13 was 0.02 ft. The apparent thickness of SPH in D-13 did exhibit a recent increase in thickness during the fourth quarter of 2024 which will be further monitoring/confirmed during the next monitoring event
- Groundwater depths during fourth quarter 2024 ranged from 6.34 ft (D-13) to 7.50 ft below TOC (D-14).
- Groundwater flow direction in the sand aquifer was observed to be variable during the fourth quarter whereas prior quarters exhibited a general northwesterly flow. The overall apparent flow direction was to the north to northeast; however, a component on the western portion of the Site appeared flowing to the east (likely a result of hightide effect on westernmost wells D-22 and D-23). As indicated, the differences observed during the fourth quarter over previous quarters, are likely due to the tidal influence and timing of the fourth quarter gauging event (gauging was completed over a longer period due to delays encountered). As mentioned above, groundwater gauging during the fourth quarter of 2024 was completed during a falling tide (shortly after high tide and near low tide).

4.2 Groundwater Sampling and Analysis

Fourth quarter groundwater sampling was conducted between November 4 and 7, 2024, at 49 monitoring wells, in accordance with the groundwater monitoring program (**Table 1**; **Figures 5A** and **5B**). Groundwater was not collected at MW-20 or D-13 due to the presence of SPH in both wells. Additionally, MW-11 was not sampled due to insufficient water. Monitoring wells were purged prior to sampling until water quality parameters (temperature, pH, specific conductance, turbidity, dissolved oxygen [DO], and oxidation-reduction potential [ORP]) stabilized. Water quality data (final reading prior to sampling) are presented in **Table 3** and groundwater sampling field sheets are included in **Appendix B**.

Groundwater samples were collected in laboratory-supplied containers after water quality parameter stabilization, placed on ice, and delivered under standard chain-of-custody procedures to Eurofins Seattle Laboratories Environmental Testing, LLC, in Tacoma, Washington for the following analyses:

- Gasoline-Range (TPH-g) via the Northwest Total Petroleum Hydrocarbon (NWTPH) Volatile Petroleum Products (NWTPH-Gx) Method.

- Diesel (TPH-d) and Motor Oil-Range (TPH-o) via the NWTPH Semi-Volatile Petroleum Products (NWTPH-Dx) Method.
- BTEX/Methyl tert-Butyl Ether (MTBE) via United States Environmental Protection Agency (EPA) Method 8260D.

Fourth quarter 2024 groundwater analytical results were compared to MTCA Method A CULs¹¹. Analytical results are summarized as follows:

Perched GWBU

- **TPH-g** was detected above the MTCA Method A CUL of 800 micrograms per liter (ug/L) in perched GWBU wells MW-19 and MW-25 at concentrations of 910 ug/L and 2,000 ug/L, respectively.
- **TPH-d** was detected above the MTCA Method A CUL of 500 ug/L in perched GWBU wells MW-10, MW-12, MW-13, MW-14, MW-18, MW-19, MW-21, MW-22, MW-25, MW-26, MW-27 (new well), MW-28 (new well), MW-29, MW-30, MW-32, MW-39 and MW-40 (new well). Concentrations ranged from 770 ug/L (MW-27) to 11,000 ug/L (MW-19 and MW-39).
 - TPH-d with silica gel clean-up (SGC) was not analyzed this quarter.
- **TPH-o** was detected above the MTCA Method A CUL of 500 ug/L in perched GWBU wells MW-10, MW-12, MW-13, MW-14, MW-18, MW-19, MW-21, MW-22, MW-26, MW-27 (new well), MW-28 (new well), MW-29, MW-30, MW-32, MW-37, and MW-39. Concentrations ranged from 520 ug/L (MW-37) to 3,100 ug/L (MW-19).
 - TPH-o with SGC was not analyzed this quarter.
- BTEX and MTBE were not detected above MTCA Method A CULs in any samples collected and analyzed during the fourth quarter.

Figure 5A presents 2024 groundwater analytical data for TPH-d, TPH-g, and TPH-o through the fourth quarter along with the groundwater exceedance contour for TPH based on the most recent results. The extent of impacted groundwater is not yet fully defined within the perched GWBU. The installation of the four new monitoring wells (MW-27, MW-28, MW-33, MW-40) completed delineation to the west (MW-33). The northern and southern delineation is not fully defined; however, an additional one to two sampling events are recommended to confirm concentrations in the newly installed wells and to determine if and/or where additional wells may be needed.

An analysis of the overall TPH trends indicates some variability in TPH concentrations in the plume and perimeter wells; however, several perimeter wells were only slightly above the CULs during the fourth quarter (i.e., MW-27, MW-37 and MW-40). Due to the consistent (albeit minimal/trace thickness) presence of SPH in MW-20, only one sample was collected from this well during 2024 (Q1). Trend graphs for select wells are presented in **Appendix F**.

General trends for BTEX concentrations show results consistently non-detect and/or below MTCA Method A CULs for all wells sampled and analyzed during 2024. BTEX have not been reported above MTCA Method A CULs since 2015 at MW-10 when benzene was detected at 16 ug/L. In addition, there have been no exceedances of the Method A CULs for MTBE in any well. In the past two years, MTBE was either non detect or flagged as UJ within the perched GWBU, indicating the analyte was not detected above the Method Detection Limit (MDL). **Table 4** presents 2023 analytical data and data from 1992 through 2022 is presented in **Appendix E**.

Sand Aquifer

- **TPH-d** was detected above the MTCA Method A CUL of 800 ug/L in sand aquifers wells D-01, D-02A, D-03A, D-06, D-07, D-08, D-09, D-10, D-11 (new well), D-12, D-15, D-16 (new well), D-17, D-18, D-19, D-22, D-24, D-25, D-27 and D-28 (new well). Concentrations ranged from 610 ug/L (D-24) to 6,900 ug/L (D-01).

¹¹ Ecology, Toxics Cleanup Program, 2013. *Model Toxics Control Act Regulations and Statute*. State of Washington Department of Ecology. December 20.

- TPH-d with SGC was not analyzed this quarter.
- **TPH-o** was detected above the MTCA Method A CUL of 500 ug/L in sand aquifer wells D-01, D-02A, D-03A, D-06, D-07, D-08, D-09, D-10, D-12, D-15, D-16 (new well), D-18, D-19, D-25, D-27 and D-28 (new well). Concentrations ranged from 560 ug/L (D-07) to 3,000 ug/L (D-09).
 - TPH-o with SGC was not analyzed this quarter.
- TPH-g, BTEX, and MTBE were not detected above MTCA Method A CULs in any samples collected and analyzed during the fourth quarter.

Figure 5B presents 2024 groundwater analytical data for TPH-d and TPH-o through the fourth quarter along with the groundwater exceedance contour for TPH based on the most recent results. As previously presented, the extent of impacted groundwater is not fully defined within the sand aquifer. The installation of the four wells (D-11, D-16, D-23, D-28) confirmed delineation to the west (D-23). The northern and southern delineation is still not fully defined; however, an additional one to two sampling events are recommended to confirm concentrations in the newly installed wells. It was also noted that several wells along the eastern extents (D-17, D-18 and D-24) were slightly above the CULs for TPH during the fourth quarter. Concentrations at these wells have exhibited some variability both above and below the CULs through 2024.

An analysis of the overall TPH trends indicated some variability of TPH concentrations in the plume and perimeter wells; however, several perimeter wells were only slightly above the CULs during the fourth quarter (i.e. D-11, D-16, D-17, and D-24). Due to the presence of SPH in D-13, no sample data was collected for this well during 2024 and as such no analytical data trends were observed.

General trends for BTEX concentrations show results consistently non-detect and/or below MTCA Method A CULs for all wells sampled and analyzed during 2024. BTEX have not been above MTCA Method A CULs since 2014 at D-6 and D-02A when benzene was reported above the Method A CUL at 7.6 ug/L and 140 ug/L, respectively. In addition, there has never been reported detections of MTBE in any well within the sand aquifer. Analytical data from 1992 through 2022 is presented in **Appendix E**.

Analytical data for the first through fourth quarter 2024 are presented in **Table 2** and the laboratory analytical report is provided in **Appendix C**. Data validation was completed for the fourth quarter 2024 groundwater samples and is summarized in the data quality review provided in **Appendix D**. Analytical data for 2023 are presented in **Table 4**.

4.2.1 Lateral Extent and Plume Stability Evaluation

Figures 5A and **5B** show TPH concentrations in the groundwater wells screened within the perched GWBU and sand aquifer for the first through fourth quarters of 2024. Interpolating analytical results between wells approximates the lateral extent of TPH-g, TPH-d and/or TPH-o in groundwater exceeding CULs and is shown on **Figures 5A** and **5B**.

To further assess the stability of the groundwater plume at the Site, a non-parametric Mann-Kendall (MK) statistical test was performed on select wells to identify temporal trends of TPH within the perched GWBU and the sand aquifer from 2016 to 2020 (depending on availability of data) to the present (4th quarter of 2024). Wells were selected based on two criteria: (a) sufficient data to perform statistical analysis and (b) spatial location (i.e., near plume center or perimeter). **Appendix F** presents a summary of the Mann-Kendall test results.

In addition, linear trend graphs were also prepared for the same wells and are included in **Appendix F**.

MK evaluation is currently showing an overall variable outcome (many with No Trend) along with a few increasing, a few decreasing, and a few locations indicating stable conditions as shown below in **Table A**. The linear trends are also presented in the below table. As with the MK analysis, the overall trends are variable across the plume. This may be in part due to the variable nature of the tidally influenced groundwater elevations and associated effect on concentrations as an inverse relationship between groundwater concentrations and elevations is apparent on the trend graphs. Overall, concentrations near the leading edges of the plume show a decreasing trend in relation to distance from the property/source

and although the trends appear somewhat variable, the plume characteristics indicate an old/stable and attenuating plume (as indicated by previous SGC results as further presented below). The trend graphs will be further monitored/confirmed during the next year.

Table A. Summary of Mann-Kendall Evaluation

Well ID	Location	MK Trend Analysis (TPH-d/TPH-o)	Linear Trends (TPH-d/TPH-o)
Perched GWBU			
MW-14	Western Extents	No Trend/ No Trend	sl. increasing/ sl. decreasing
MW-25		Increasing/ No Trend	increasing/ decreasing
MW-19	Mid-plume	Stable/ No Trend	decreasing/ stable
RMW-01		No Trend/ No Trend	increasing/ sl. increasing
MW-39	Northeastern Plume	Prob. Increasing/ No Trend	increasing/ sl. increasing
MW-21	Southern Extents	Prob. Increasing/ No Trend	decreasing/ decreasing
MW-26	Eastern Extents	No Trend/ Prob. Increasing	sl. decreasing/ sl. increasing
MW-37		No Trend/ No Trend	stable/ decreasing
MW-38		No Trend/ No Trend	increasing (but currently below CULs)
Sand Aquifer			
D-01	Plume	Increasing/ Increasing	decreasing/ stable
D-3A		Stable/ Prob. Increasing	--
D-08	Northern extents	Decreasing/ No Trend	decreasing/ sl. increasing
D-15	Northern Plume	No Trend/ No Trend	decreasing/ increasing
D-12	Mid-plume	No Trend/ No Trend	increasing/ increasing
D-27	Northeastern Plume	Increasing/ Increasing	increasing/ increasing
D-18	Eastern Extents	Stable/ Stable	decreasing/ stable
D-25		Increasing/ Increasing	increasing/ increasing
D-09	Eastern Plume	No Trend/ No Trend	increasing/ increasing

The MK evaluation and linear trends will continue to be assessed as additional data is obtained and further discussed within the updated RI report planned for submission in 2025. Completion of delineation and additional data will further assist with assessing the overall plume dynamics and concentration trends.

5. Silica Gel Cleanup

Using SGC as part of the TPH-d and TPH-o analyses helps quantify the proportion of petroleum hydrocarbons to non-petroleum polar organics (including polar metabolites) in groundwater samples to inform remedy decisions and monitoring timeframes. Silica gel procedures performed by Lancaster Laboratories in 2023 and Eurofins Laboratories in 2024 varied slightly. The 2024 procedure followed Ecology's most recent guidance on silica gel cleanup protocols, published in February 2024¹².

In 2024, SGC was performed on a subset of split TPH-d and TPH-o samples during the second quarter. The sampling results with and without SGC are summarized in **Table 2**. Significant differences in results between samples analyzed with and without SGC for TPH-d and TPH-o confirm results from 2023. They indicate natural attenuation (intrinsic biodegradation) occurring in groundwater at the Site as per the Ecology guidance and/or may indicate the presence of natural organic (non-petroleum) matter. Additional SGC data may be collected following completion of delineation and/or upon confirmation of a proposed remedial path forward.

6. 2024 Waste Disposal Summary

Soil from monitoring well installation drilling and groundwater accumulated from purging during sampling and well development was placed in sealed drums on-site and sampled for disposal characterization during 2024. Following proper waste profiling, the drums were labeled as non-hazardous and staged on-site for subsequent disposal. Six soil and nine water drums were picked up on November 18, 2024, by Clean Harbors and transported to Grantsville, Utah for disposal. A copy of the waste manifest is provided in **Appendix G**.

7. Summary and Recommendations

This section includes a summary of the first through fourth quarter 2024 groundwater monitoring results and recommendations for 2025.

- The observed trace SPH presence and thickness at MW-10 in the perched GWBU was consistent with previously recorded data. The observed SPH presence and thickness in the sand aquifer, D-13, had a measurable SPH thickness of approximately 0.75 ft. In the first quarter 2024, D-13 had measurable SPH thickness of 0.27 ft. In the second and third quarter 2024, SPH in D-13 was 0.02 ft. The apparent thickness of SPH in D-13 did exhibit a recent increase in thickness during the fourth quarter of 2024 which will be further monitoring/confirmed during the next monitoring event
- The 2024 analytical data was relatively consistent with previous results and indicates that the perched GWBU has CUL exceedances of TPH-g, TPH-d, and TPH-o across the Property and off-Property in each direction. The sand aquifer 2024 data indicates exceedances are primarily TPH-d and TPH-o and also extend off-Property in each direction.
- Based on the MK and linear trend analysis, some variability in concentrations and trends are evident. Further analysis of trends will continue as additional data is collected and within the updated RI report planned for 2025. Completion of delineation and additional data will further assist with assessing the overall plume dynamics and concentration trends. Overall, concentrations near the leading edges of the plume show a decreasing trend in relation to distance from the property/source and although the trends appear somewhat variable, the plume characteristics indicate an old/stable and attenuating plume (as indicated by previous SGC results). The trend graphs will be further updated during 2025.

¹² Guidance for WDOE NWTPH-Dx Method for Testing Groundwater – Silica Gel Cleanup Protocol Revision, (Revised April 2024), Publication 24-03-001.

- Laboratory analyses, including SGC in the second quarter of 2024, confirm residual petroleum impacts at the Site are highly weathered and degraded and indicate that natural attenuation has and likely is continuing to occur across the Site. This will be further explored following completion of delineation to the Method A CULs.
- COCs in the deeper well (D-14), screened from 29 to 32 ft bgs, continue to be non-detect or below the CULs, indicating that vertical migration of dissolved-phase hydrocarbons is stable and delineated.
- No exceedances of BTEX above the MTCA Method A CULs have been reported within the perched GWBU since 2014. And no exceedance of BTEX above MTCA Method A CUL have been reported within the sand aquifer since 2015. No exceedances of MTBE have been reported within either GWBU. In addition, most results of BTEX and MTBE over the last several years have been either non-detect or detected above the method detection limit but not the reporting limit (estimated J value).
- The four new wells in the perched and sand aquifer units installed in September 2024 will aid in further delineation of the groundwater plume; however, initial results were variable and additional sampling events are recommended to confirm concentrations prior to evaluating additional monitoring well locations for further delineation. The eight new wells have been added to the groundwater monitoring program.

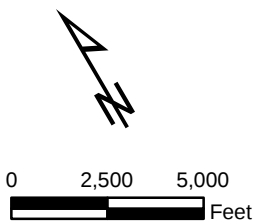
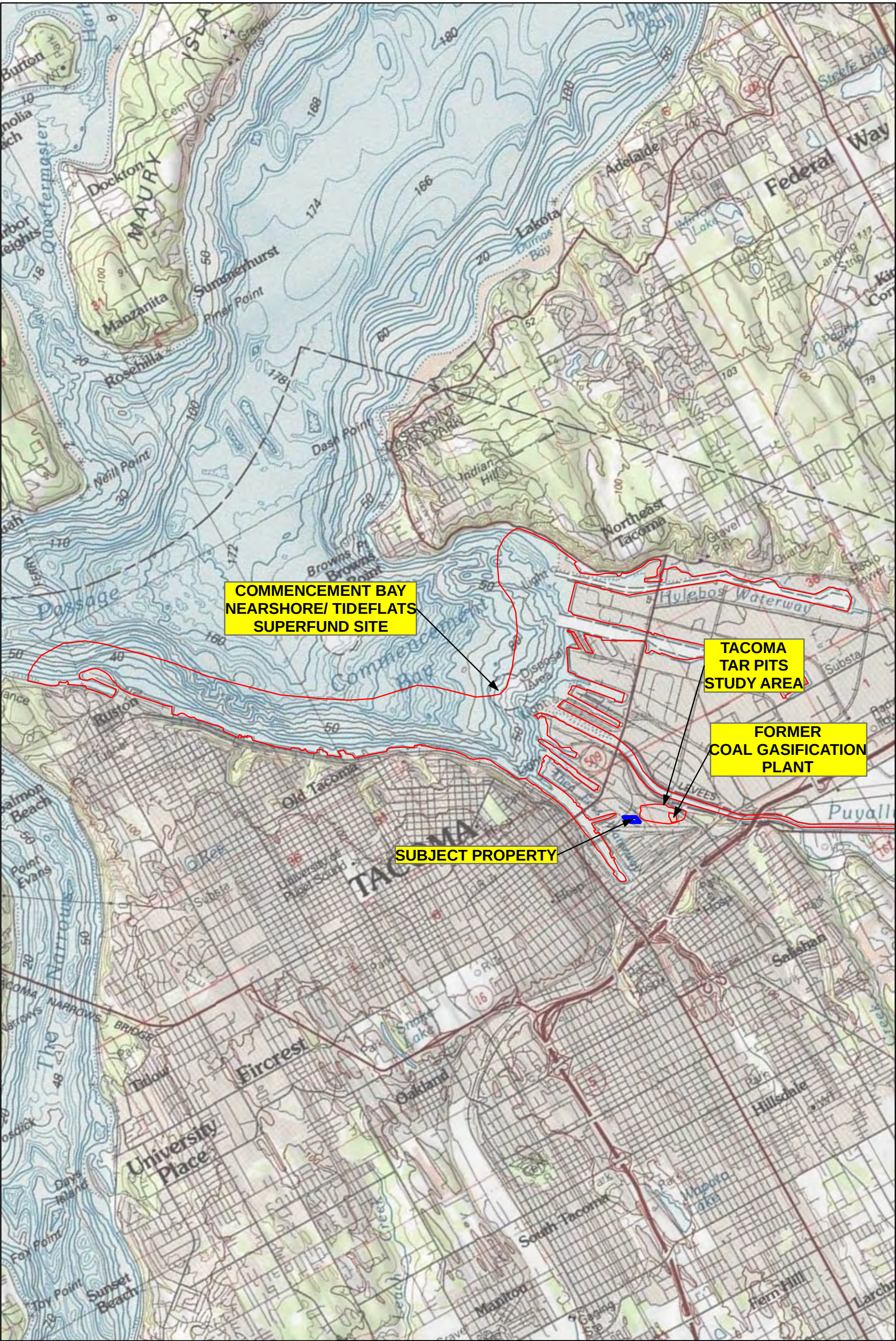
The following recommendations were developed based on observations and analytical results from the fourth quarter and annual 2024 groundwater monitoring:

- Continue quarterly groundwater monitoring during 2025 per the current schedule (**Table 1**).
- Reduce the reporting frequency to semi-annual. While groundwater monitoring would continue to occur quarterly, the reporting frequency would be decreased with each report presenting the previous two quarters and include updated trend graphs, etc.
- Conduct SPH transmissivity testing to assess product recovery rates.
- Further assess the need for additional tidal influence data following the installation of additional monitoring wells and collection of additional gauging data.
- Evaluate the need for additional monitoring wells for delineation following one to two additional sampling events from the newly installed wells and if access to the BNSF property is able to be obtained.
- Once data gaps are addressed and comments/approval for the Updated Draft RI received, a Final RI Report will be submitted, options for a remedial path forward will be evaluated, and a Feasibility Study (FS) will be developed to identify remedial action alternatives and develop future cleanup actions for the Site (and/or a combined RI/FS will be submitted).

As previously requested, AECOM/CEMC are also requesting Ecology approval to modify the sampling plan as follows:

- As requested by Ecology in 2023, analysis for SGC for TPH-d and TPH-o was conducted during the third and fourth quarters of 2023 and the second quarter of 2024. SGC data for the three quarters indicates natural attenuation (intrinsic biodegradation) has occurred/is occurring in groundwater at the Site. Based on discussion with Ecology, SGC can be utilized on an as needed/as desired basis and pending the planned remedial path forward. Therefore, SGC data will be obtained in the future only as needed.
- Eliminate BTEX and MTBE analysis from future quarterly monitoring events. The cumulative data since 2015 shows no exceedances for these analytes for the Site; as such, further analysis for these constituents no longer appears necessary.
- Unless otherwise communicated by Ecology, these sampling plan modifications will be assumed to be approved and are planned to be implemented during the first quarter of 2025.

Figures



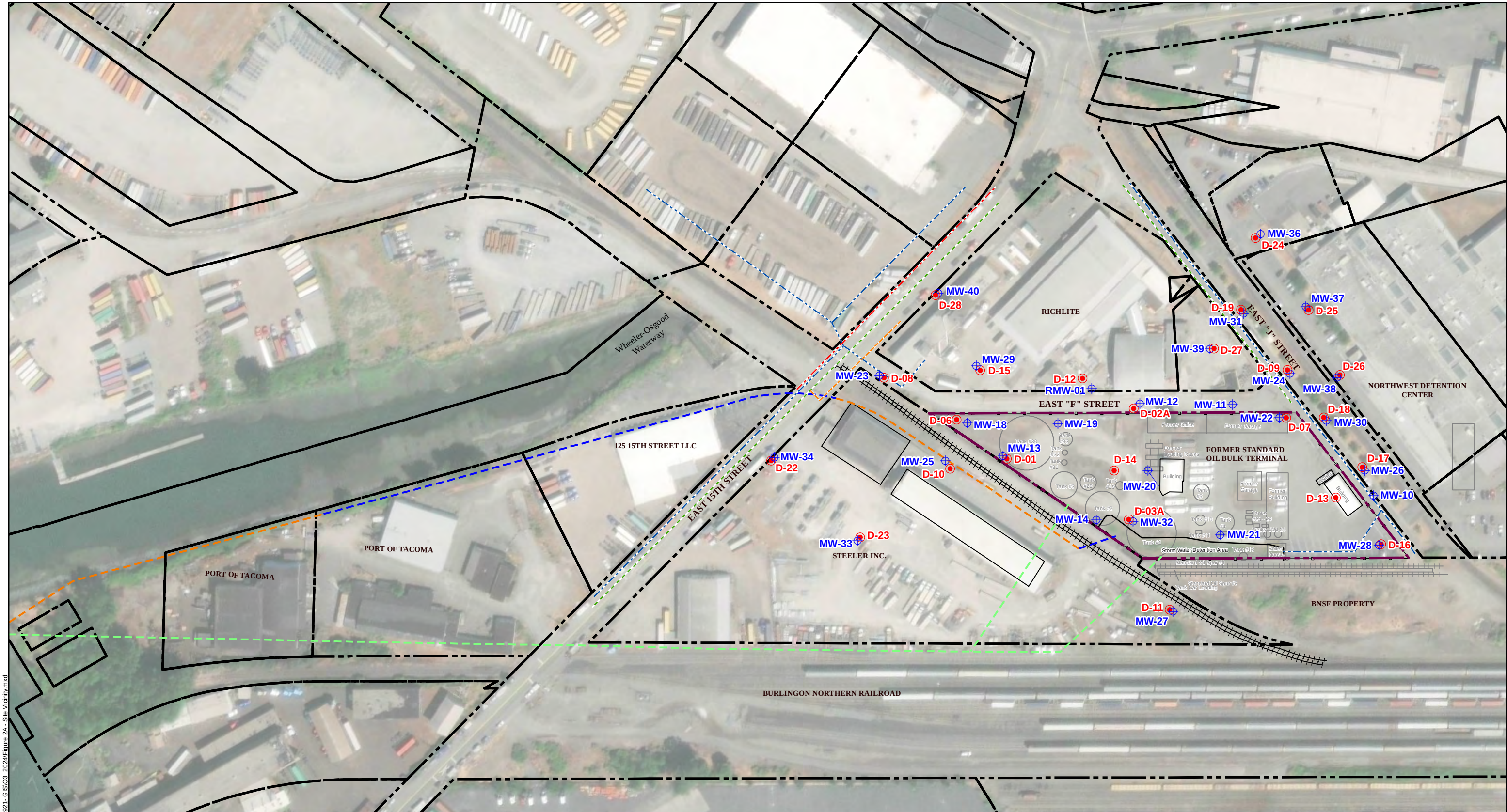
AECOM

Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 1
Site Location Map

Date: January 2025

Project No.: 60701804



C:\Users\hoersta\OneDrive - AECOM\900-CAD_GIS\921- GIS\Q3 2024\Figure 2A- Site Vicinity.mxd

LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures

Current Buildings and Structures

Parcel Boundary

Property Boundary
- Gas Line

Overhead Line

Sanitary Sewer Line

Storm Sewer Line

Former Pipeline Shown in 1921 Plan; Disposition Unknown

Former Pipeline Shown in 1988 Plan; Removed

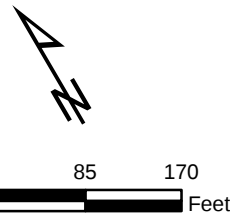
Former Pipeline Shown in 1988 Plan; Left in Place

- D-12

Sand Aquifer Monitoring Well
- MW-25

Perched Groundwater-bearing Unit Monitoring Well

Note:
Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23 and D-28 not installed until after third quarter sampling.



AECOM

Former Standard Oil Bulk Terminal/
Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 2A
Site Vicinity Map

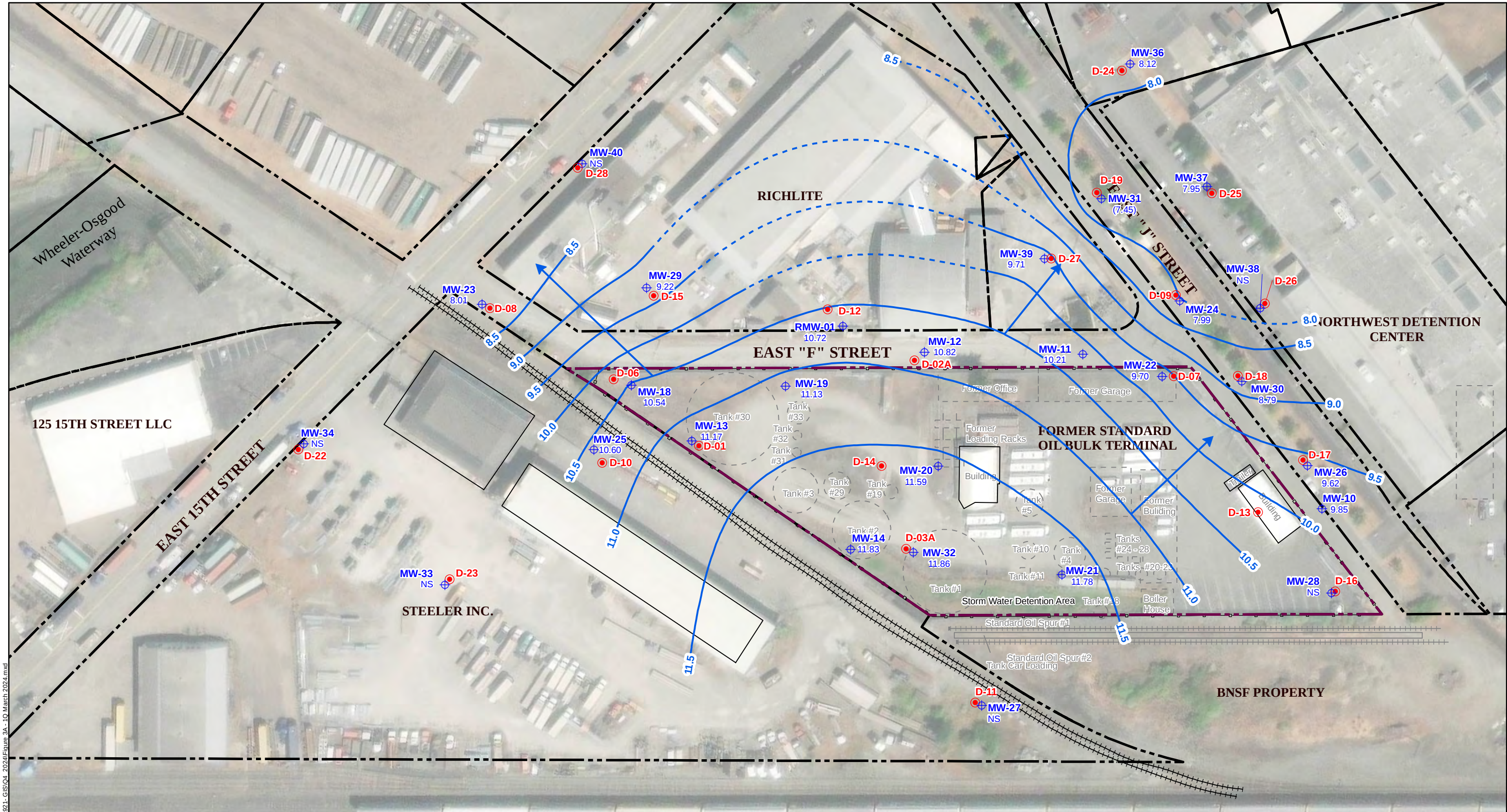
Date: January 2025

Project No.: 60701804



C:\Users\hoersta\OneDrive - AECOM\900-CAD_GIS\921- GIS\921- 2024\Figure 2B - Site Plan.mxd

LEGEND	D-12 Sand Aquifer Monitoring Well MW-25 Perched Groundwater-bearing Unit Monitoring Well Sanitary Sewer Line Storm Sewer Line Former Pipeline Shown in 1921 Plan; Disposition Unknown Former Pipeline Shown in 1988 Plan; Removed Former Pipeline Shown in 1988 Plan; Left in Place Former Above-Ground Storage Tanks, Buildings, and Structures Current Buildings and Structures Parcel Boundary Property Boundary	Note: Monitoring wells MW-27, MW-28, D-11 and D-16 not installed until after third quarter sampling. 0 30 60 Feet	AECOM Former Standard Oil Bulk Terminal/ Chevron Facility No. 1001348 1656 East J Street Tacoma, Washington	Figure 2B Site Plan Date: January 2025 Project No.: 60701804
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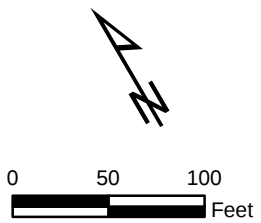
C:\Users\hoes\OneDrive - AECOM\900-CAD_GIS\921- GIS\Q4_2024\Figure 3A - 10 March 2024.mxd

LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary
- Property Boundary

- D-12** Deep Aquifer Monitoring Well
- MW-25** Shallow Aquifer Monitoring Well
- 10.60 Groundwater Elevation in feet NAVD88 (Perched Groundwater-bearing Unit)
- (7.45) Groundwater Elevation in feet NAVD88 Excluded from Contour Lines
- NS Not Surveyed

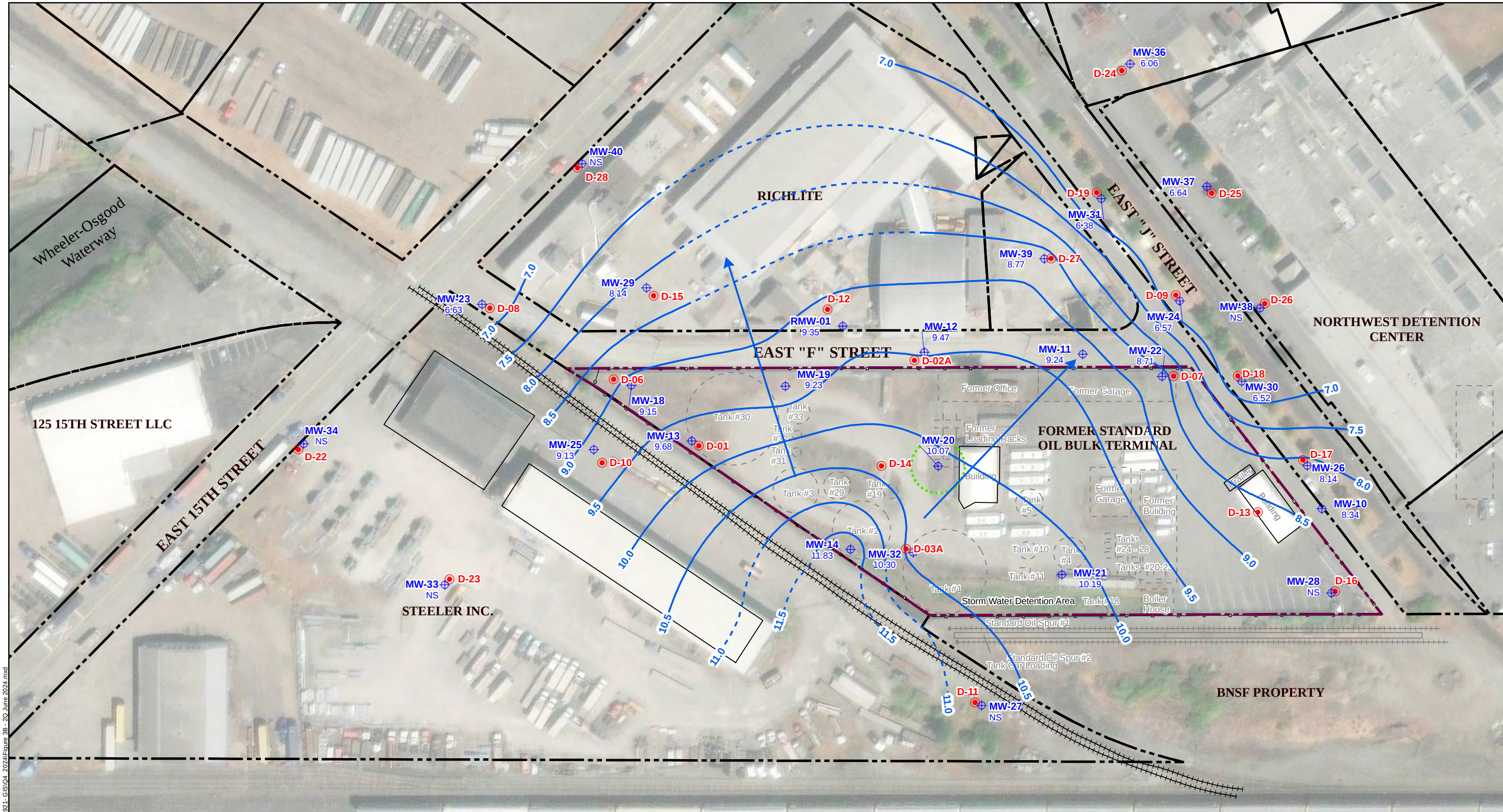
- Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)
- Approximate Groundwater Flow Direction
- Feet NAVD88 North American Vertical Datum 88 feet
- Note:** Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23, D-28 not installed until after third quarter sampling.



Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

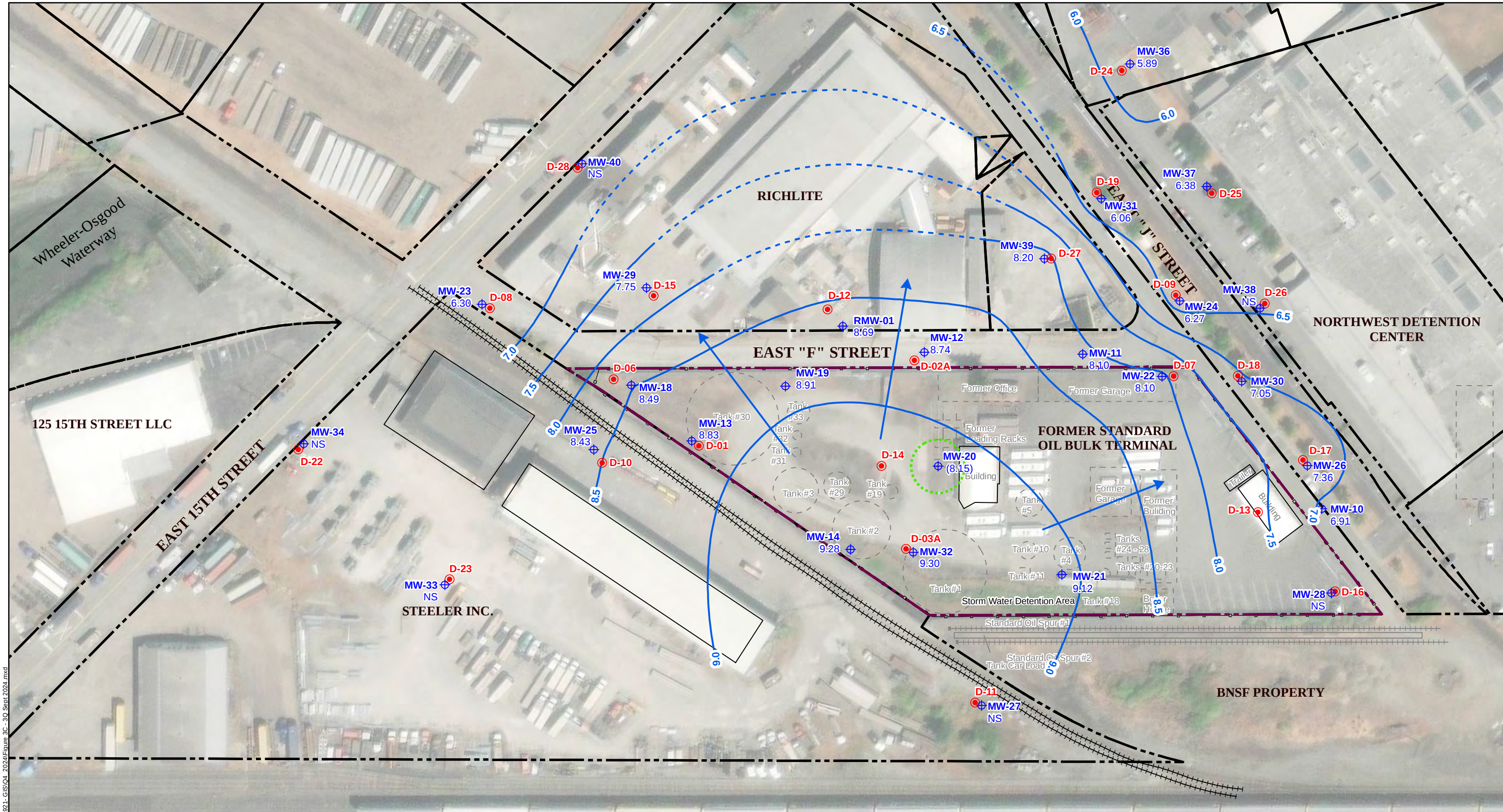
Figure 3A
Groundwater Elevation Contours -
Perched Groundwater Bearing Unit -
First Quarter, March 11, 2024

Date: January 2025 Project No.: 60701804



C:\Users\hoersto\OneDrive - AECOM\900-CAD_GIS\921-GIS\Q4_2024\Figure 3B - 20 June 2024.mxd

LEGEND			
Former Above-Ground Storage Tanks, Buildings, and Structures	D-12 Deep Aquifer Monitoring Well	Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)	
Current Buildings and Structures	MW-25 Shallow Aquifer Monitoring Well	Approximate Groundwater Flow Direction	
Parcel Boundary	11.83 Groundwater Elevation in feet NAVD88 (Perched Groundwater-bearing Unit)	Inferred SPH Area (0.01 to 0.5' thickness)	
Property Boundary	NS Not Surveyed	Feet NAVD88 North American Vertical Datum 88 feet	
		SPH Separate Phase Hydrocarbon	
		Note: Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23, D-28 not installed until after third quarter sampling.	
		0 50 100 Feet	
		Former Chevron Bulk Terminal Facility No. 1001348 1656 East J Street Tacoma, Washington	
		Figure 3B Groundwater Elevation Contours - Perched Groundwater Bearing Unit - Second Quarter, June 17, 2024	
		Date: January 2025	Project No.: 60701804



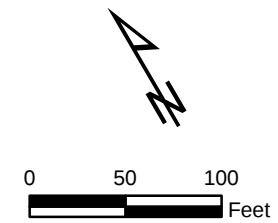
C:\Users\hoerstru\OneDrive - AECOM\900-CAD_GIS\921- GIS\Q4_2024\Figure 3C - 3Q Sept 2024.mxd

LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- ▭ Current Buildings and Structures
- ▭ Parcel Boundary
- ▭ Property Boundary

- D-12** Deep Aquifer Monitoring Well
- MW-25** Shallow Aquifer Monitoring Well
- 9.28** Groundwater Elevation in feet NAVD88 (Perched Groundwater-bearing Unit)
- (8.15)** Groundwater Elevation in feet NAVD88 Excluded from Contour Lines
- NS** Not Surveyed

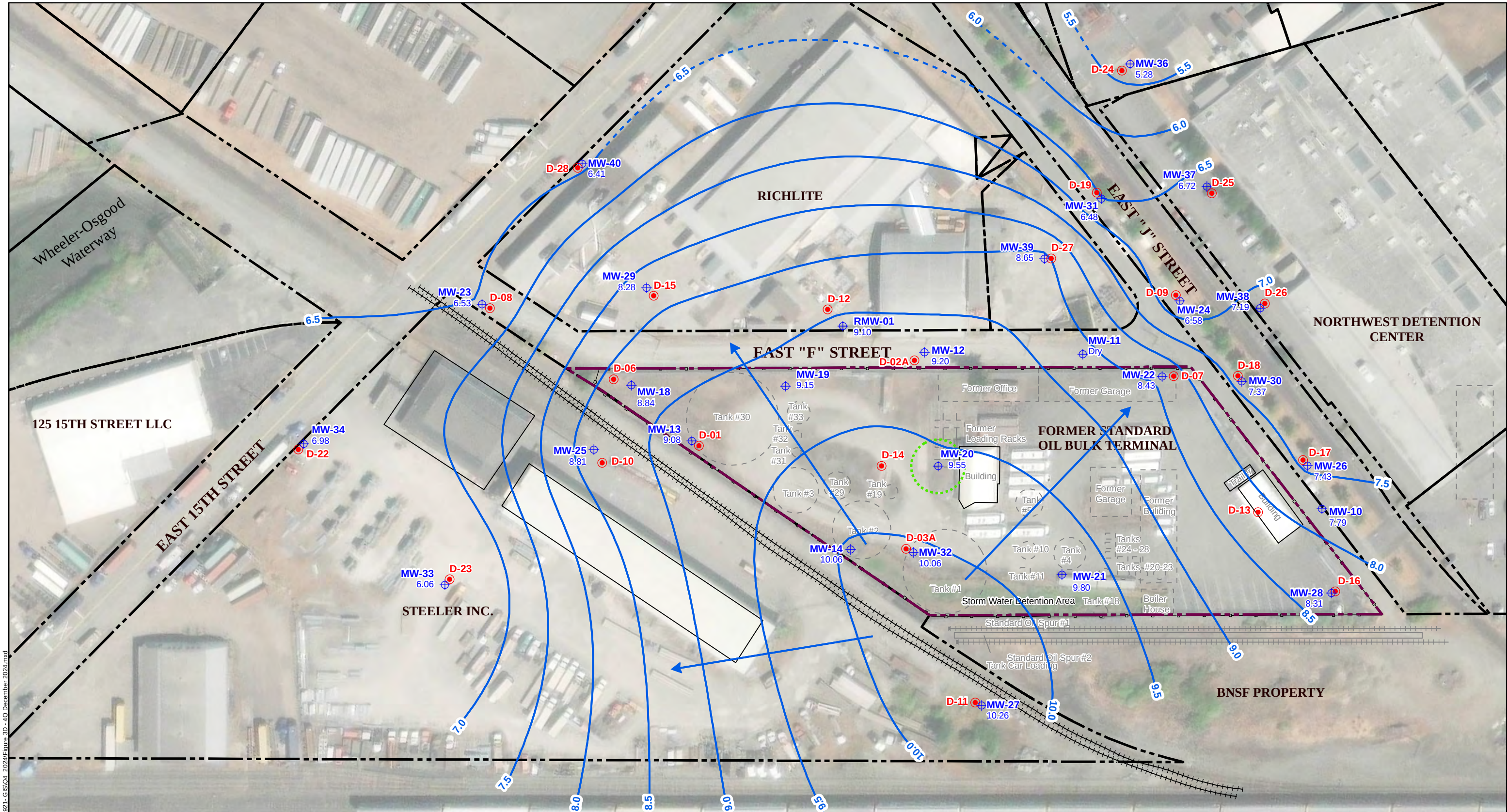
- Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)
- Approximate Groundwater Flow Direction
- Inferred SPH Area (0.01 to 0.5' thickness)
- Feet NAVD88 North American Vertical Datum 88 feet
- Note:** Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23 and D-28 not installed until after third quarter sampling.



Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 3C
Groundwater Elevation Contours -
Perched Groundwater Bearing Unit -
Third Quarter, September 3, 2024

Date: January 2025 Project No.: 60701804



C:\Users\hoerescu\OneDrive - AECOM\900-CAD_GIS\921- GIS\Q4_2024\Figure 3D - 4Q December 2024.mxd

LEGEND

Former Above-Ground Storage Tanks, Buildings, and Structures

Current Buildings and Structures

Parcel Boundary

Property Boundary

D-12

Deep Aquifer Monitoring Well

MW-25

Shallow Aquifer Monitoring Well

6.06

Groundwater Elevation in feet NAVD88 (Perched Groundwater-bearing Unit)

Dry

Dry well

Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)

Approximate Groundwater Flow Direction

Inferred SPH Area (0.01 to 0.5' thickness)

Feet NAVD88 North American Vertical Datum 88 feet

0

50

100

Feet

AECOM

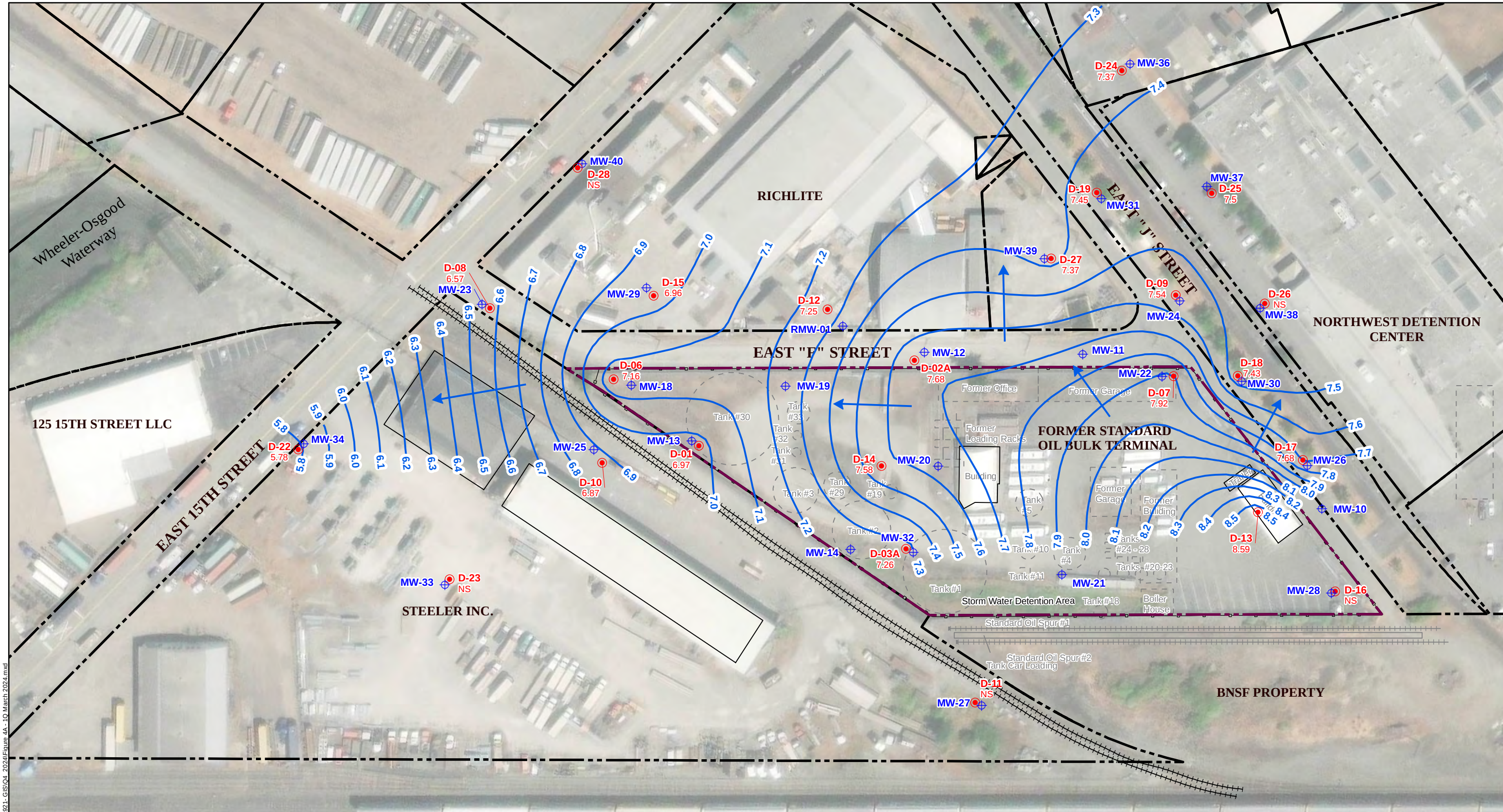
Former Chevron Bulk Terminal Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 3D

Groundwater Elevation Contours - Perched Groundwater Bearing Unit - Fourth Quarter, November 4, 2024

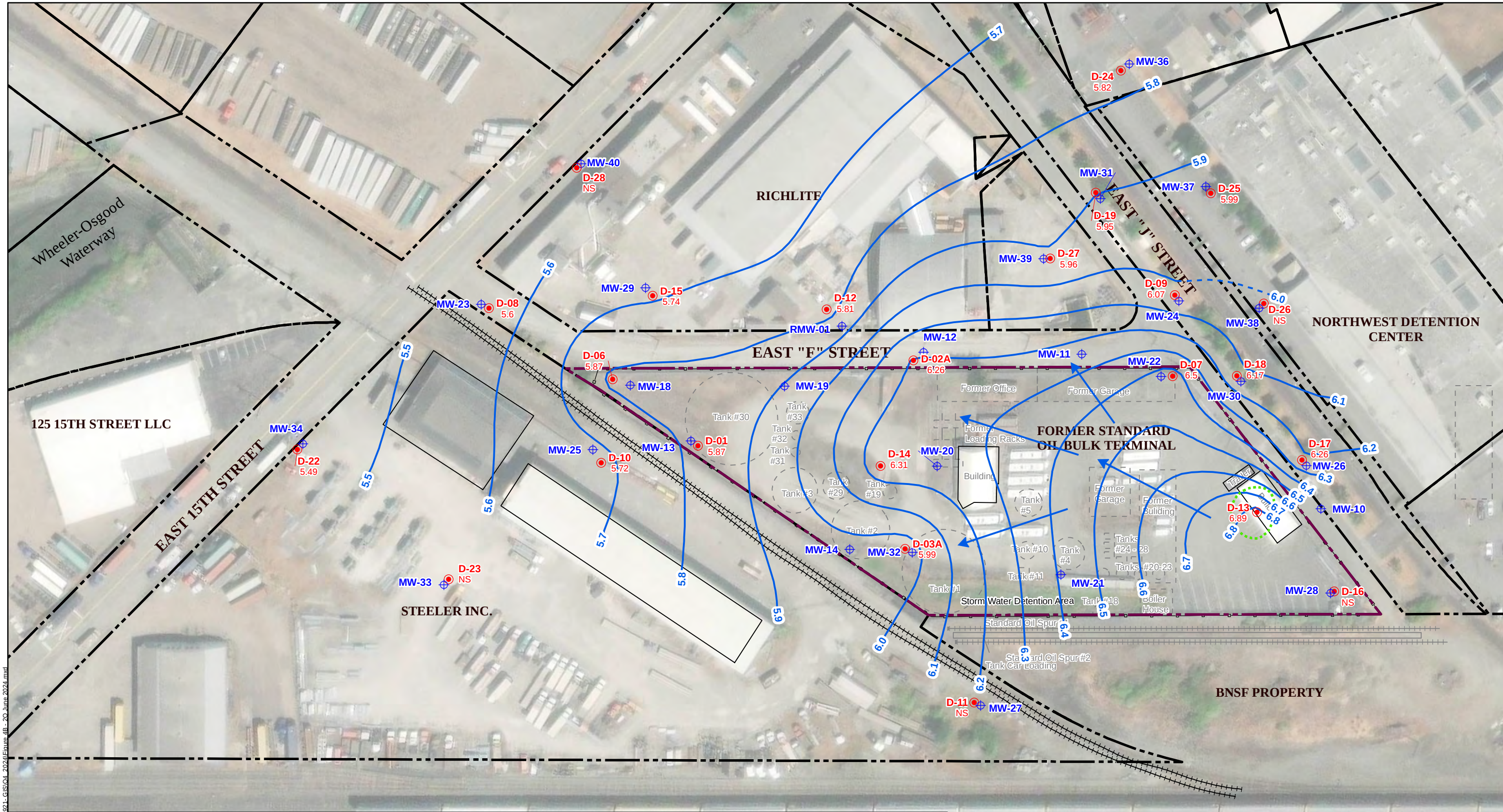
Date: January 2025

Project No.: 60701804



C:\Users\hoersc\OneDrive - AECOM\900-CAD_GIS\921- GIS\Q4 2024\Figure 4A - 10 March 2024.mxd

LEGEND Former Above-Ground Storage Tanks, Buildings, and Structures Current Buildings and Structures Parcel Boundary Property Boundary D-12 Deep Aquifer Monitoring Well MW-25 Shallow Aquifer Monitoring Well 7.25 Groundwater Elevation in feet NAVD88 (Sand Aquifer) NS Not Surveyed --- Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred) → Approximate Groundwater Flow Direction Feet NAVD88 North American Vertical Datum 88 feet Notes: Gauging completed on November 13, 2023 between 8:30 am and 11:00 am High tide registered at 5:21 am Low tide registered at 10:41 am (usharbors.com) Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23, D-28 not installed until after third quarter sampling.	AECOM Former Chevron Bulk Terminal Facility No. 1001348 1656 East J Street Tacoma, Washington	Figure 4A Groundwater Elevation Contours - Sand Aquifer - First Quarter, March 11, 2024 Date: January 2025 Project No.: 60701804
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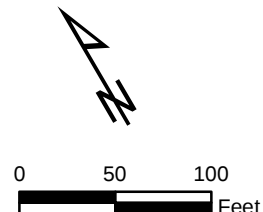
C:\Users\harsco\OneDrive - AECOM\900-CAD_GIS\921-GIS\04_2024\Figure 4B - 20 June 2024.mxd

LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary
- Property Boundary
- D-12** Deep Aquifer Monitoring Well
- MW-25** Shallow Aquifer Monitoring Well
- 5.72** Groundwater Elevation in feet NAVD88 (Sand Aquifer)
- NS** Not Surveyed
- Inferred SPH Area (0.01 to 0.5' thickness)

- Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)
- Approximate Groundwater Flow Direction
- SPH** Separate Phase Hydrocarbon
- Feet NAVD88 North American Vertical Datum 88 feet

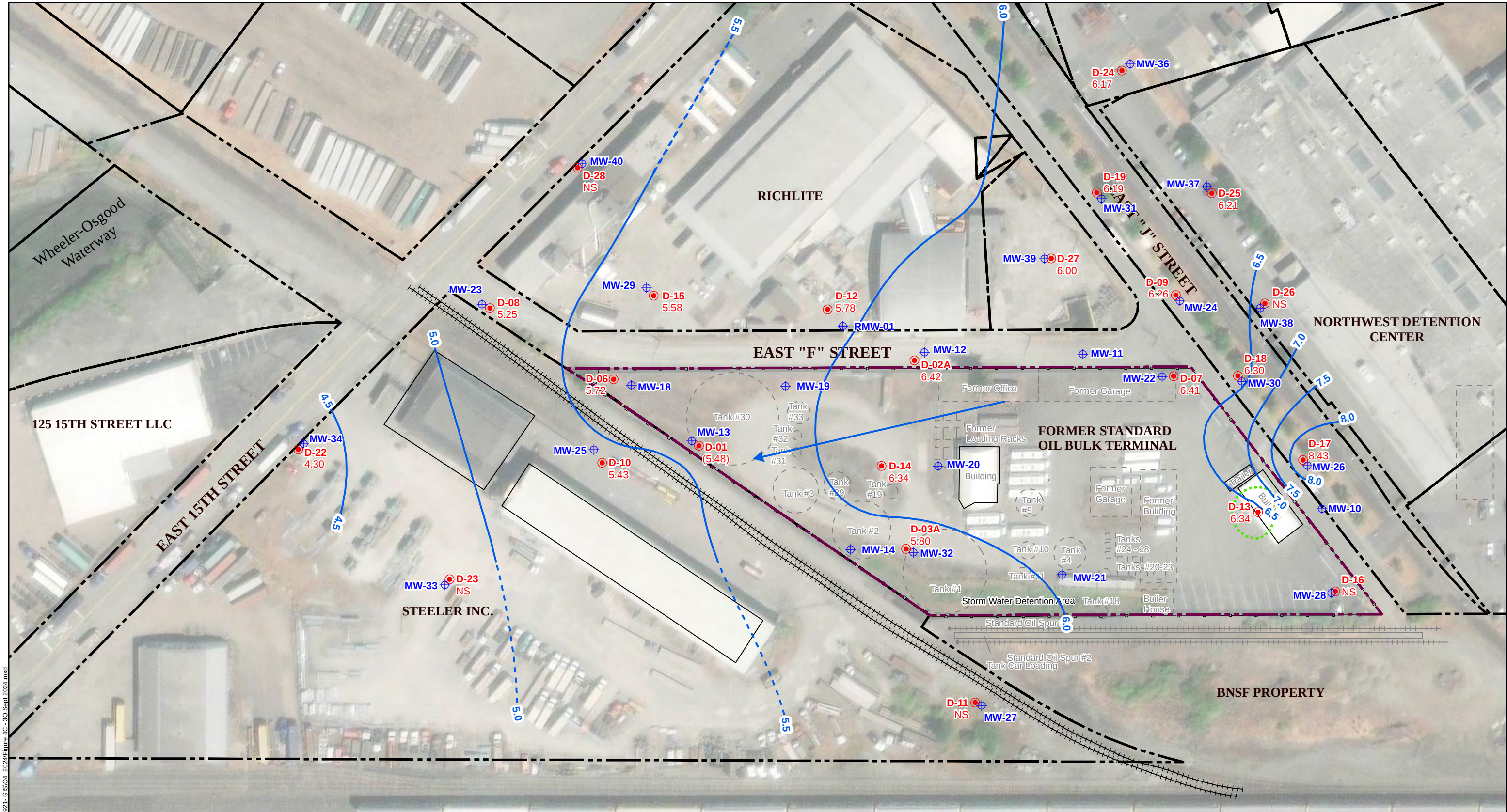
Notes:
Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23, D-28 not installed until after third quarter sampling.



Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 4B
Groundwater Elevation Contours -
Perched Groundwater Bearing Unit -
Second Quarter,
June 17, 2024

Date: January 2025 Project No.: 60701804



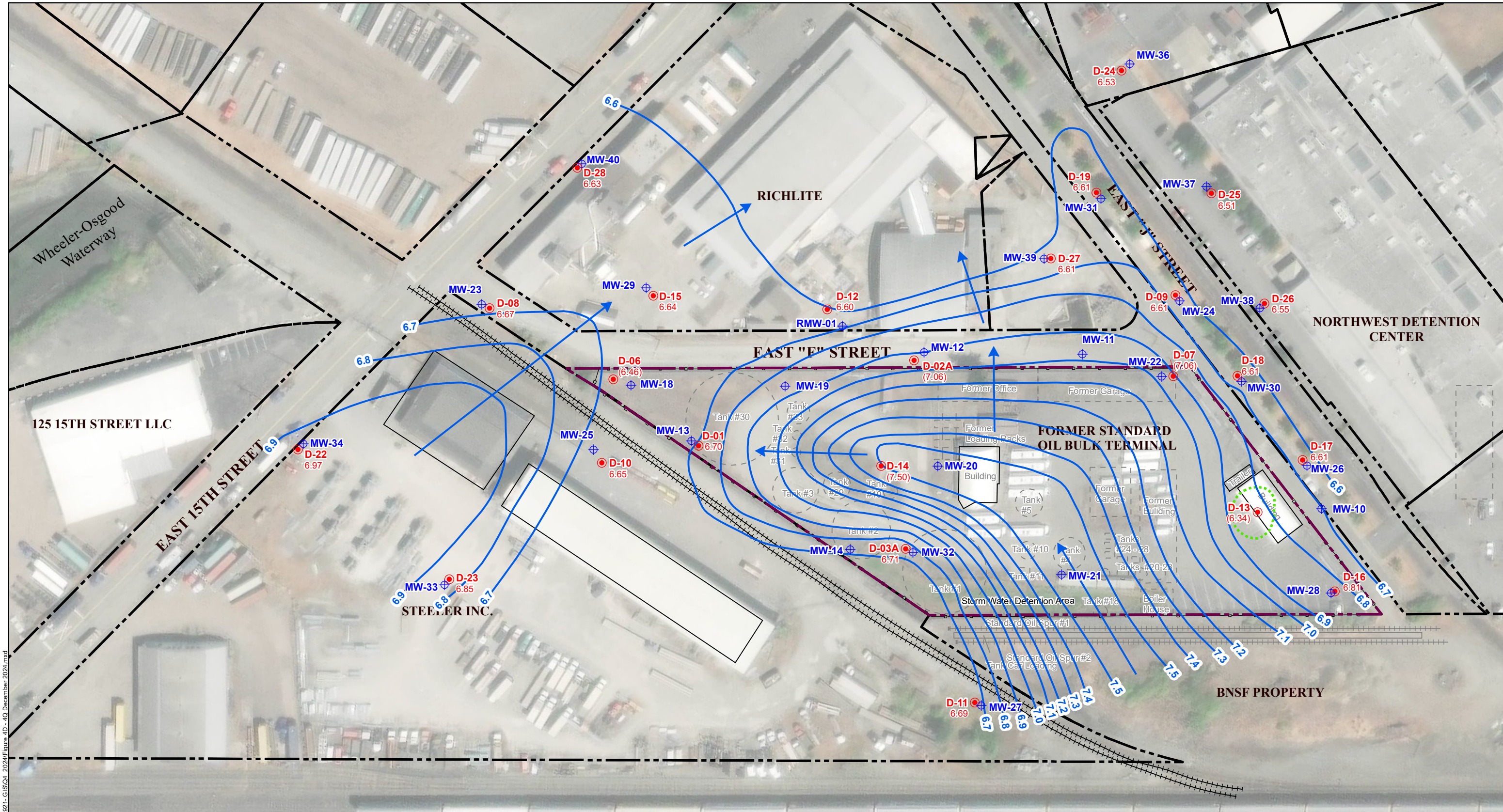
C:\Users\harsco\OneDrive - AECOM\100-CAD_GIS\921- GIS\Q4_2024\Figure 4C - 3Q Sept 2024.mxd

LEGEND	
Former Above-Ground Storage Tanks, Buildings, and Structures	D-12 Deep Aquifer Monitoring Well
Current Buildings and Structures	MW-25 Shallow Aquifer Monitoring Well
Parcel Boundary	5.80 Groundwater Elevation in feet NAVD88 (Sand Aquifer)
Property Boundary	(5.48) Groundwater Elevation excluded from contouring
	NS Not Surveyed
	Inferred SPH Area (0.01 to 0.5' thickness)
	Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)
	Approximate Groundwater Flow Direction
	SPH Feet NAVD88
	Note: Monitoring wells MW-27, MW-28, MW-33, MW-40, D-11, D-16, D-23 and D-28 not installed until after third quarter sampling.

Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 4C
Groundwater Elevation Contours -
Sand Aquifer -
Third Quarter, Septmeber 3, 2024

Date: January 2025Project No.: 60701804



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- LEGEND**
- Former Above-Ground Storage Tanks, Buildings, and Structures
 - ▭ Current Buildings and Structures
 - - - Parcel Boundary
 - - - Property Boundary

- D-12** Deep Aquifer Monitoring Well
- MW-25** Shallow Aquifer Monitoring Well
- 6.85** Groundwater Elevation in feet NAVD88 (Sand Aquifer)
- (7.50)** Groundwater Elevation excluded from contouring
- NS** Not Surveyed

- Inferred SPH Area (0.01 to 0.5' thickness)
- Groundwater Elevation Contour in feet NAVD88 (Dashed where inferred)
- Approximate Groundwater Flow Direction
- SPH
Feet NAVD88
Separate Phase Hydrocarbon
North American Vertical Datum 88 feet

DRAFT

0 50 100
Feet

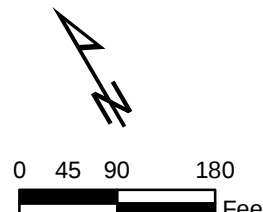
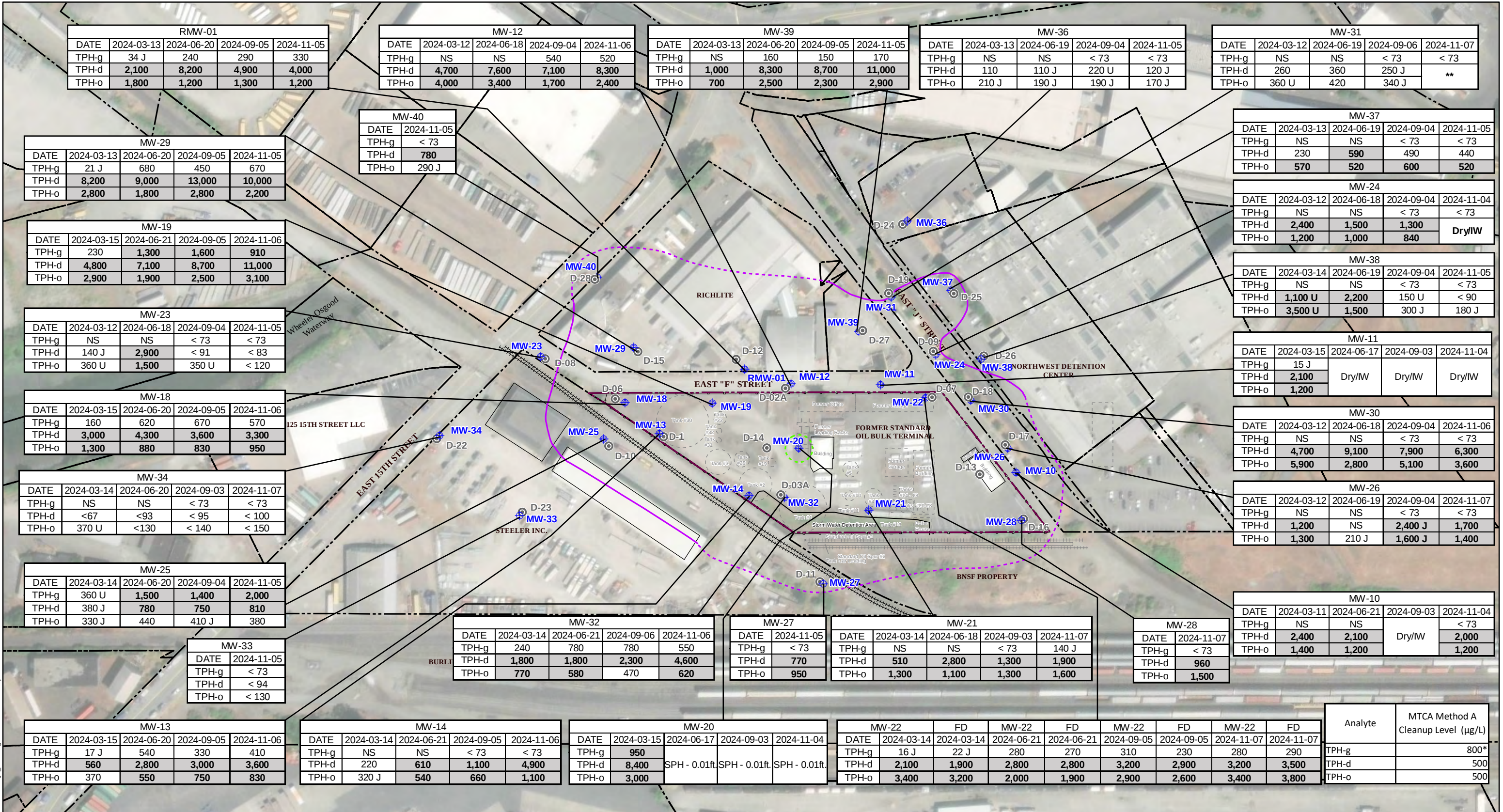
AECOM

Former Chevron Bulk Terminal
Facility No. 1001348
1656 East J Street
Tacoma, Washington

Figure 4D
Groundwater Elevation Contours -
Sand Aquifer -
Fourth Quarter, November 4, 2024

Date: December 2024	Project No.: 60701804
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C:\Users\boresc\OneDrive - AECOM\90-CAD_GIS\921 - GIS\Q4_2024\Figure 5A - Shallow Analytical.mxd



Tables

Table 1
Groundwater Monitoring Program
Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Work Area	TOC Elevation (feet, NAVD88)	Well Screen Interval (feet, bgs)	Measured Depth to Bottom ^a (feet, BTOC)	Depth to SPH/ Groundwater	Analytical Constituents Method			
						TPH-g NWTPH-Gx	TPH-d NWTPH-Dx	TPH-o NWTPH-Dx	BTEX/MTBE EPA 8260D
Perched Groundwater-bearing Unit Wells									
MW-10	Tacoma City Streets	13.31	2.50 - 8.07	7.60 ^b	X	X	X	X	X
MW-11	Chevron Tacoma Site	14.99	2.50 - 7.22	6.95 ^b	X	X	X	X	X
MW-12	Tacoma City Streets	15.05	2.50 - 8.28	7.98 ^b	X	X	X	X	X
MW-13	Chevron Tacoma Site	16.83	6.00 - 11.00	11.15 ^b	X	X	X	X	X
MW-14	Chevron Tacoma Site	17.61	3.50 - 8.80	12.22 ^b	X	X	X	X	X
MW-18	Chevron Tacoma Site	18.20	3.00 - 9.00	10.48 ^b	X	X	X	X	X
MW-19	Tacoma City Streets	15.46	3.00 - 9.00	9.58	X	X	X	X	X
MW-20	Chevron Tacoma Site	15.01	3.00 - 9.00	9.00 ^c	X	X	X	X	X
MW-21	Chevron Tacoma Site	14.60	3.00 - 9.00	9.22 ^b	X	X	X	X	X
MW-22	Chevron Tacoma Site	14.67	3.00 - 8.00	7.75	X	X	X	X	X
MW-23	Tacoma City Streets	13.50	4.00 - 9.00	8.90	X	X	X	X	X
MW-24	Tacoma City Streets	13.15	4.00 - 9.00	10.08 ^b	X	X	X	X	X
MW-25	Steeler Inc. Property	14.08	5.00 - 10.00	10.22	X	X	X	X	X
MW-26	Tacoma City Streets	12.70	4.00 - 9.00	9.25 ^b	X	X	X	X	X
MW-27	Steeler Inc. Property	13.87	5.00 - 10.00	15.00	X	X	X	X	X
MW-28	Chevron Tacoma Site	13.27	5.00 - 10.00	10.50	X	X	X	X	X
MW-29	Richlite	14.78	4.00 - 9.00	9.24	X	X	X	X	X
MW-30	Tacoma City Streets	13.07	4.00 - 9.00	9.00	X	X	X	X	X
MW-31	Tacoma City Streets	13.09	4.00 - 9.00	9.18 ^b	X	X	X	X	X
MW-32	Chevron Tacoma Site	13.82	4.00 - 9.00	9.13	X	X	X	X	X
MW-33	Steeler Inc. Property	14.70	5.00 - 9.00	9.00	X	X	X	X	X
MW-34	Steeler Inc. Property	15.62	4.00 - 9.00	12.70	X	X	X	X	X
MW-36	Detention Center Property	13.52	4.00 - 9.00	9.51	X	X	X	X	X
MW-37	Detention Center Property	14.54	4.00 - 9.00	9.90	X	X	X	X	X
MW-38	Detention Center Property	15.35	4.00 - 9.00	9.86	X	X	X	X	X
MW-39	Richlite	15.00	5.00 - 10.00	9.93	X	X	X	X	X
MW-40	Richlite	13.58	4.00 - 12.50	12.50	X	X	X	X	X
RMW-01	Richlite	14.97	5.00 - 10.00	9.85	X	X	X	X	X
Sand Aquifer Wells									
D-01	Chevron Tacoma Site	17.26	15.00 - 20.00	21.35 ^b	X	X	X	X	X
D-02A	Tacoma City Streets	15.16	15.00 - 20.00	19.53 ^b	X	X	X	X	X
D-03A	Chevron Tacoma Site	14.12	15.00 - 20.00	20.25	X	X	X	X	X
D-06	Chevron Tacoma Site	18.23	15.00 - 20.00	22.50 ^b	X	X	X	X	X
D-07	Chevron Tacoma Site	14.82	15.00 - 20.00	20.00	X	X	X	X	X
D-08	Tacoma City Streets	13.73	17.00 - 22.00	21.77	X	X	X	X	X
D-09	Tacoma City Streets	12.90	15.00 - 20.00	19.98	X	X	X	X	X
D-10	Steeler Inc. Property	14.03	14.00 - 24.00	24.50	X	X	X	X	X
D-11	Richlite	14.04	15.00 - 25.00	25.00	X	X	X	X	X
D-12	Richlite	14.85	24.00 - 29.00	28.28	X	X	X	X	X
D-13	Chevron Tacoma Site	13.84	14.00 - 19.00	19.89	X	X	X	X	X
D-14	Chevron Tacoma Site	14.82	29.00 - 32.00	31.56 ^b	X	X	X	X	X
D-15	Richlite	14.80	16.00 - 21.00	20.82	X	X	X	X	X
D-16	Chevron Tacoma Site	13.32	15.00 - 25.00	25.00	X	X	X	X	X
D-17	Tacoma City Streets	12.75	14.00 - 19.00	18.86	X	X	X	X	X
D-18	Tacoma City Streets	13.29	14.00 - 19.00	18.87	X	X	X	X	X
D-19	Tacoma City Streets	13.22	17.00 - 22.00	21.99	X	X	X	X	X
D-22	Steeler Inc. Property	15.43	15.00 - 20.00	20.19	X	X	X	X	X
D-23	Steeler Inc. Property	14.67	12.00 - 22.00	22.99	X	X	X	X	X
D-24	Detention Center Property	13.53	15.00 - 20.00	19.71 ^b	X	X	X	X	X
D-25	Detention Center Property	14.65	14.00 - 19.00	19.90	X	X	X	X	X
D-26	Detention Center Property	15.22	14.00 - 19.00	19.89	X	X	X	X	X
D-27	Richlite	14.99	14.00 - 19.00	19.85	X	X	X	X	X
D-28	Richlite	13.95	15.00 - 25.00	25.00	X	X	X	X	X

Notes:
Sampling will be completed on a quarterly basis unless otherwise noted. Monitoring wells with detectable SPH at the time of gauging will not be sampled.
-- = Not measured/ not sampled.
^a Depth to bottom measured during the first quarter 2024 sampling event, unless noted otherwise.
^b Depth to bottom measured after well re-development in August 2023.
^c Depth to bottom reported from historical boring/well construction logs.
X = Collect measurement / collect sample.
bgs = below ground surface
BTEX = benzene, toluene, ethylbenzene, and xylenes
BTOC = below top of casing
EPA = United States Environmental Protection Agency
ID = identification
MTBE = Methyl tert-Butyl Ether
NAVD88 = North American Vertical Datum of 1988, feet
NWTPH-DX = Northwest - Semi-Volatile Petroleum Products Method
NWTPH-GX = Northwest - Volatile Petroleum Products Method
TOC = top of casing
TPH-d = diesel-range total petroleum hydrocarbons
TPH-g = gasoline-range total petroleum hydrocarbons
TPH-o = oil-range total petroleum hydrocarbons

Table 3 - Fourth Quarter 2024 Water Quality Parameters
Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington

Well ID	Date	Temperature	pH	Conductivity	Dissolved Oxygen	ORP	Turbidity
Units		°C	su	µS/cm	mg/L	mV	NTU
Perched Groundwater-bearing Unit Wells							
MW-10	11/04/2024	16.3	6.75	0.847	1.75	20.1	93.10
MW-11	--	--	--	--	--	--	--
MW-12	11/06/2024	16.1	6.77	0.810	0.24	-76.3	5.17
MW-13	11/06/2024	15.4	7.18	0.469	0.24	-78.6	8.39
MW-14	11/06/2024	16.3	6.85	0.383	0.49	-62.7	9.21
MW-18	11/06/2024	15.5	7.02	0.420	0.31	-76.8	4.71
MW-19	11/06/2024	17.0	6.77	0.860	0.13	-81.3	7.44
MW-20	--	--	--	--	--	--	--
MW-21	11/07/2024	16.1	7.15	0.553	0.18	-63.4	3.00
MW-22	11/07/2024	17.4	7.03	0.833	0.18	-57.8	1.15
MW-23	11/05/2024	16.0	7.97	0.632	0.56	-103.9	1.51
MW-24	11/04/2024	15.6	6.32	0.830	10.90	-39.6	32.20
MW-25	11/05/2024	16.5	8.42	0.359	0.24	-164.3	1.62
MW-26	11/07/2024	15.7	6.68	0.760	0.47	-5.8	5.09
MW-27	11/05/2024	14.9	7.36	0.798	0.15	-122.6	10.10
MW-28	11/07/2024	17.0	7.20	0.658	0.12	-57.8	9.14
MW-29	11/05/2024	17.0	6.79	0.681	0.43	-11.5	5.39
MW-30	11/06/2024	16.0	6.59	0.816	0.26	-61.1	44.00
MW-31	11/07/2024	15.6	6.29	0.600	0.64	-5.8	21.90
MW-32	11/06/2024	15.2	6.01	0.450	0.17	0.5	25.70
MW-33	11/05/2024	0.8	6.98	0.780	0.01	-99.5	4.76
MW-34	11/07/2024	15.0	7.31	0.713	0.65	30.5	2.08
MW-36	11/05/2024	18.6	6.74	1.392	0.23	-30.0	4.62
MW-37	11/05/2024	18.7	6.74	1.304	0.28	-116.4	7.24
MW-38	11/05/2024	16.7	6.13	0.421	0.40	79.5	1.12
MW-39	11/05/2024	17.2	7.00	0.992	0.34	-53.4	0.37
MW-40	11/05/2024	15.0	7.03	0.730	0.36	-94.5	22.90
RMW-01	11/05/2024	15.8	6.89	0.660	0.35	-66.3	1.35
Sand Aquifer Wells							
D-01	11/06/2024	14.7	7.17	0.822	0.19	-92.9	7.42
D-02A	11/06/2024	15.7	6.88	0.638	0.19	-146.2	1.62
D-03A	11/07/2024	14.3	7.20	0.766	0.11	-102.7	6.13
D-06	11/06/2024	13.6	6.94	0.510	0.33	-110.2	6.33
D-07	11/07/2024	15.2	6.69	0.660	0.15	-113.5	14.90
D-08	11/05/2024	14.3	7.13	0.701	0.26	-113.2	12.70
D-09	11/06/2024	14.8	6.73	0.914	0.29	-69.0	2.25
D-10	11/05/2024	14.8	7.28	1.092	0.16	-116.2	25.30
D-11	11/05/2024	14.2	7.28	0.916	0.16	-123.7	24.10
D-12	11/05/2024	14.5	7.03	0.790	0.26	-137.5	2.98
D-14	11/06/2024	15.4	7.86	1.877	0.15	-87.2	2.91
D-15	11/05/2024	15.1	7.06	0.604	0.14	-105.4	7.61
D-16	11/07/2024	16.8	7.86	0.946	0.11	-96.2	5.81
D-17	11/04/2024	16.0	6.62	0.639	0.25	-57.2	32.30
D-18	11/06/2024	15.8	6.71	0.932	0.20	-55.2	1.98
D-19	11/07/2024	13.9	6.34	0.700	0.14	-45.2	7.06
D-22	11/07/2024	13.6	7.33	0.493	0.19	-28.3	21.90
D-23	11/05/2024	13.4	7.09	0.820	0.13	-139.0	8.55
D-24	11/05/2024	18.5	6.80	13.535	0.06	-325.4	0.41
D-25	11/05/2024	17.3	6.58	0.729	0.16	-70.3	1.31
D-26	11/05/2024	15.7	6.31	0.585	0.28	-30.7	0.56
D-27	11/05/2024	16.2	6.74	0.789	0.21	-96.2	16.60
D-28	11/05/2024	14.9	7.01	0.790	0.39	-80.1	27.30

Notes: °C = degrees Celsius
µS/cm = microSiemens per centimeter
ID = identification
mg/L = milligram per liter

mV = millivolt
NTU = nephelometric turbidity unit
ORP = oxidation reduction potentia
su = standard unit

Table 2 - Cumulative 2024 Gauging and Groundwater Analytical Data
Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington

Well ID	Sample ID	Sample Date	TOC Elevation** (ft. NAVD88)	Depth to SPH (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft. NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
							Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE	TPH-g	TPH-d (w/out Silica gel)	TPH-d (w Silica gel)	TPH-o (w/out Silica gel)	TPH-o (w Silica gel)
MTCA Method A Cleanup Levels* (µg/L)							5	1000	700	1000	20	800 ^b	500		500	
Perched Groundwater Unit																
MW-10	MW-10-W-240311	03/11/2024	13.31	ND	3.46	9.85	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,400	--	1,400	--
	MW-10-W-240621	06/21/2024	13.31	ND	4.97	8.34	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,100	450	1,200	< 140
	N/A	09/03/2024	13.31	ND	6.40	6.91	Well went dry during sampling. Sample not collected.									
	MW-10-W-241104	11/04/2024	13.31	ND	5.52	7.79	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,000	--	1,200	--
MW-11	MW-11-W-240315	03/15/2024	14.99	ND	4.78	10.21	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	15 J	2,100	--	1,200	--
	N/A	06/17/2024	14.99	ND	5.75	9.24	Well went dry during sampling. Sample not collected.									
	N/A	09/03/2024	14.99	ND	6.89	8.10	Well went dry during sampling. Sample not collected.									
	N/A	11/04/2024	14.99	ND	ND	N/A	Well dry during gauging.									
MW-12	MW-12-W-240312	03/12/2024	15.05	ND	4.23	10.82	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	4,700	--	4,000	--
	MW-12-W-240618	06/18/2024	15.05	ND	5.58	9.47	< 2.4	< 3.9	< 5.0	< 5.3	< 4.4	< 730	7,600	3,100	3,400	200 J
	MW-12-W-240904	09/04/2024	15.05	ND	6.31	8.74	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	540	7,100	--	1,700	--
	MW-12-W-241106	11/06/2024	15.05	ND	5.85	9.20	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	520	8,300	--	2,400	--
MW-13	MW-13-W-240315	03/15/2024	16.83	ND	5.66	11.17	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	17 J	560	--	370 J	--
	MW-13-W-240620	06/20/2024	16.83	ND	7.15	9.68	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	540	2,800	1,000	550 J	< 130
	MW-13-W-240905	09/05/2024	16.83	ND	8.00	8.83	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	330	3,000	--	750	--
	MW-13-W-241106	11/06/2024	16.83	ND	7.75	9.08	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	410	3,600	--	830	--
MW-14	MW-14-W-240314	03/14/2024	17.61	ND	5.78	11.83	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	220	--	320 J	--
	MW-14-W-240621	06/21/2024	17.61	ND	5.78	11.83	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	610	140 J	540 J	130 J
	MW-14-W-240905	09/05/2024	17.61	ND	8.33	9.28	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,100	--	660	--
	MW-14-W-241106	11/06/2024	17.61	ND	7.55	10.06	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	4,900	--	1,100	--
MW-18	MW-18-W-240315	03/15/2024	18.20	ND	7.66	10.54	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	160	3,000	--	1,300	--
	MW-18-W-240620	06/20/2024	18.20	ND	9.05	9.15	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	620	4,300	1,600	880	130 J
	MW-18-W-240905	09/05/2024	18.20	ND	9.71	8.49	< 0.24	< 0.39	< 0.50	0.61 J	< 0.44	670	3,600	--	830	--
	MW-18-W-241106	11/06/2024	18.2	ND	9.36	8.84	< 0.24	< 0.39	< 0.50	0.53 J	< 0.44	570	3,300	--	950	--
MW-19	MW-19-W-240315	03/15/2024	15.46	ND	4.33	11.13	< 0.24	< 0.39	< 0.50	0.53 J	< 0.44	230	4,800	--	2,900	--
	MW-19-W-240621	06/21/2024	15.46	ND	6.23	9.23	0.30 J	< 0.39	< 0.50	1.3 J	< 0.44	1,300	7,100	2,400	1,900	200 J
	MW-19-W-240905	09/05/2024	15.46	ND	6.55	8.91	0.45 J	0.40 J	0.51 J	1.6 J	< 0.44	1,600	8,700	--	2,500	--
	MW-19-W-241106	11/06/2024	15.46	ND	6.31	9.15	0.38 J	< 0.39	< 0.50	0.97 J	< 0.44	910	11,000	--	3,100	--
MW-20	MW-20-W-240315	03/15/2024	15.01	ND	3.42	11.59	< 0.24	< 0.39	1.6	0.64 J	< 0.44	950	8,400	--	3,000	--
	N/A	06/17/2024	15.01	trace	4.95	10.06	Not sampled due to presence of SPH									
	N/A	09/03/2024	15.09	trace	6.94	8.15	Not sampled due to presence of SPH									
	N/A	11/04/2024	15.09	trace	5.54	9.55	Not sampled due to presence of SPH									
MW-21	MW-21-W-0240314	03/14/2024	14.60	ND	2.82	11.78	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	510	--	1,300	--
	MW-21-W-240618	06/18/2024	14.60	ND	4.41	10.19	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,800	420	1,100	< 130
	MW-21-W-240904	09/03/2024	14.60	ND	5.48	9.12	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,300	--	1,300	--
	MW-21-W-241107	11/07/2024	14.6	ND	4.80	9.80	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	140 J	1,900	--	1,600	--
MW-22	MW-22-W-240314	03/14/2024	14.67	ND	4.97	9.70	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	16 J	2,100	--	3,400	--
	DUP-1-WD-240314						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	22 J	1,900	--	3,200	--
	MW-22-W-240621	06/21/2024	14.67	ND	5.96	8.71	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	270	2,800	1,100	1,900	220 J
	DUP-2-WD-240621						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	280	2,800	780	2,000	170 J
	MW-22-W-240905	09/05/2024	14.67	ND	6.57	8.10	< 0.24	< 0.39	< 0.50	0.63 J	< 0.44	310	3,200	--	2,900	--
	DUP-01-WD-240905						< 0.24	< 0.39	< 0.50	0.59 J	< 0.44	230	2,900	--	2,600	--
	MW-22-W-241107						11/07/2024	14.67	ND	6.24	8.43	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44
	DUP-1-WD-241107	< 0.24	< 0.39	< 0.50	0.54 J	< 0.44						290	3,500	--	3,800	--
MW-23	MW-23-W-240312	03/12/2024	13.50	ND	5.49	8.01	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	140 J	--	360 U	--
	MW-23-W-240618	06/18/2024	13.50	ND	6.87	6.63	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,900	< 95	1,500	< 140
	MW-23-W-240904	09/04/2024	13.50	ND	7.20	6.30	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 91	--	350 U	--
	MW-23-W-241105	11/05/2024	13.5	ND	6.97	6.53	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 83	--	< 120	--
MW-24	MW-24-W-240312	03/12/2024	13.15	ND	5.16	7.99	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,400	--	1,200	--
	MW-24-W-240618	06/18/2024	13.15	ND	6.58	6.57	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,500	290	1,000	< 140
	MW-24-W-240904	09/04/2024	13.15	ND	6.88	6.27	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,300	--	840	--
	MW-24-W-241104	11/04/2024	13.15	ND	6.57	6.58	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	--	--	--	--
MW-25	MW-25-W-240314	03/14/2024	14.08	ND	3.48	10.60	0.79 J	< 0.39	0.81 J	< 0.53	< 0.44	360	380	--	360 U	--
	MW-25-W-240620	06/20/2024	14.08	ND	4.95	9.13	1.8	0.60 J	2.5	0.60 J	< 0.44	1,500	780	250	440 J	< 130
	MW-25-W-240904	09/04/2024	14.08	ND	5.65	8.43	2.5	0.70 J	2.8	0.69 J	< 0.44	1,400	750	--	410 J	--
	MW-25-W-241105	11/05/2024	14.08	ND	5.27	8.81	2.2	0.74 J	2.9	0.87 J	< 0.44	2,000	810	--	380	--
MW-26	MW-26-W-240312	03/12/2024	12.70	ND	3.08	9.62	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	1,200	--	1,300	--
	MW-26-W-240619	06/19/2024	12.70	ND	4.56	8.14	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 95	830*	370 U	< 140
	MW-26-W-240904	09/04/2024	12.70	ND	5.34	7.36	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,400 J	--	1,600 J	--
	MW-26-W-241107	11/07/2024	12.7	ND	5.27	7.43	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,700	--	1,400	--
MW-27	MW-27-W-241105	11/05/2024	13.87	ND	3.61	10.26	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	770	--	950	--
MW-28	MW-28-W-241107	11/07/2024	13.27	ND	4.96	8.31	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	960	--		

Table 2 - Cumulative 2024 Gauging and Groundwater Analytical Data
Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington

Well ID	Sample ID	Sample Date	TOC Elevation** (ft. NAVD88)	Depth to SPH (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft. NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
							Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE	TPH-g	TPH-d (w/out Silica gel)	TPH-d (w Silica gel)	TPH-o (w/out Silica gel)	TPH-o (w Silica gel)
							5	1000	700	1000	20	800 ⁹	500		500	
MW-31	MW-31-W-240312	03/12/2024	13.09	ND	5.64	7.45	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	260	--	360 U	--
	MW-31-W-240619	06/19/2024	13.09	ND	6.71	6.38	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	360 J	< 90	420 J	< 130
	MW-31-W-240906	09/06/2024	13.09	ND	7.03	6.06	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	250 J	--	340 J	--
	MW-31-W-241107	11/07/2024	13.09	ND	6.61	6.48	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	--	--	--	--
MW-32	MW-32-W-240314	03/14/2024	13.82	ND	1.96	11.86	0.46 J	< 0.39	< 0.50	< 0.53	< 0.44	240	1,800	--	770	--
	MW-32-W-240621	06/21/2024	13.82	ND	3.52	10.30	0.58 J	< 0.39	< 0.50	< 0.53	< 0.44	780	1,800	730	580 J	< 140
	MW-32-W-240906	09/06/2024	13.82	ND	4.52	9.30	1.2	0.43 J	< 0.50	< 0.53	< 0.44	780	2,300	--	470	--
	MW-32-W-241106	11/06/2024	13.82	ND	3.76	10.06	0.82 J	< 0.39	< 0.50	< 0.53	< 0.44	550	4,600	--	620	--
MW-33	MW-33-W-241105	11/05/2024	14.7	ND	6.49	8.21	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 94	--	< 130	--
MW-34	MW-34-W-240314	03/14/2024	NS	ND	7.11	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	< 67	--	370 U	--
	MW-34-W-240620	06/20/2024	NS	ND	8.48	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 93	< 93	< 130	< 130
	MW-34-W-240904	09/04/2024	NS	ND	8.74	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 95	--	< 140	--
	MW-34-W-241107	11/07/2024	15.62	ND	8.64	6.98	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 100	--	< 150	--
MW-36	MW-36-W-240313	03/13/2024	13.52	ND	5.40	8.12	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	110	--	210 J	--
	MW-36-W-240619	06/19/2024	13.52	ND	7.46	6.06	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	200 U	< 90	350 U	< 130
	MW-36-W-240904	09/04/2024	13.52	ND	7.63	5.89	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	220 U	--	190 J	--
	MW-36-W-241105	11/05/2024	13.52	ND	8.24	5.28	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	120 J	--	170 J	--
MW-37	MW-37-W-240313	03/13/2024	14.54	ND	6.59	7.95	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	230	--	570	--
	MW-37-W-240619	06/19/2024	14.54	ND	7.90	6.64	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	590	< 95	520 J	< 140
	MW-37-W-240904	09/04/2024	14.54	ND	8.16	6.38	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	490	--	600	--
	MW-37-W-241105	11/05/2024	14.54	ND	7.82	6.72	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	440	--	520	--
MW-38	MW-38-W-240314	03/14/2024	NS	ND	7.25	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	1,100 U	--	3,500 U	--
	MW-38-W-240619	06/19/2024	NS	ND	8.29	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,200	< 92	1,500	< 130
	MW-38-W-240904	09/04/2024	NS	ND	8.66	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	150 J	--	300 J	--
	MW-38-W-241105	11/05/2024	15.35	ND	8.16	7.19	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 90	--	180 J	--
MW-39	MW-39-W-240313	03/13/2024	15.00	ND	5.29	9.71	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	1,000	--	700	--
	MW-39-W-240620	06/20/2024	15.00	ND	6.23	8.77	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	160	8,300	1,700	2,500	160 J
	MW-39-W-240905	09/05/2024	15.00	ND	6.80	8.20	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	150	8,700	--	2,300	--
	MW-39-W-241105	11/05/2024	15.00	ND	6.35	8.65	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	170	11,000	--	2,900	--
MW-40	MW-40-W-241105	11/05/2024	13.58	ND	7.17	6.41	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	780	--	290 J	--
RMW-01	RMW-01-W-240313	03/13/2024	14.97	ND	4.25	10.72	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	34 J	2,100	--	1,800	--
	RMW-01-W-240620	06/20/2024	14.97	ND	5.62	9.35	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	240	8,200	3,000	1,200	150 J
	RMW-01-W-240905	09/05/2024	14.97	ND	6.28	8.69	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	290	4,900	--	1,300	--
	RMW-1-W-241105	11/05/2024	14.97	ND	5.87	9.10	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	330	4,000	--	1,200	--

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Tacoma, Washington

Well ID	Sample ID	Sample Date	TOC Elevation** (ft. NAVD88)	Depth to SPH (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft. NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
							Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE	TPH-g	TPH-d (w/out Silica gel)	TPH-d (w Silica gel)	TPH-o (w/out Silica gel)	TPH-o (w Silica gel)
							5	1000	700	1000	20	800 ^b	500		500	
MTCA Method A Cleanup Levels* (µg/L)							Sand Aquifer Wells									
D-01	D-01-W-240315	03/15/2024	17.26	ND	10.29	6.97	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	72 J	5,500	--	1,900	--
	DUP-2-WD-240315						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	78 J	5,800	--	2,000	--
	D-01-W-240620	06/20/2024	17.26	ND	11.39	5.87	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	93 J	6,300	1,900	1,500	< 130
	DUP-1-WD-240620						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	93 J	6,600	1,800	1,500	< 130
	D-01-W-240905	09/05/2024	17.26	ND	11.78	5.48	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	6,300	--	1,800	--
	DUP-02-WD-240905						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	75 J	6,400	--	1,700	--
D-02A	D-01-241106	11/06/2024	17.26	ND	10.56	6.70	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	6,900	--	1,800	--
	DUP-2-WD-241106						< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	6,800	--	1,800	--
	D-02A-W-240312	03/12/2024	15.16	ND	7.48	7.68	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,600	--	1,800	--
	D-02A-W-240618	06/18/2024	15.16	ND	8.90	6.26	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,700	430	1,300	< 140
	D-02A-W-240904	09/04/2024	15.16	ND	8.74	6.42	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,700	--	1,200	--
	D-2A-W-241106	11/06/2024	15.16	ND	8.10	7.06	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,800	--	1,600	--
D-03A	D-03A-W-240314	03/14/2024	14.12	ND	6.86	7.26	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,700	--	2,300	--
	D-03A-W-240621	06/21/2024	14.12	ND	8.13	5.99	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,200	500	1,300	< 140
	D-03A-W-240906	09/06/2024	14.12	ND	8.32	5.80	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,400	--	1,400	--
	D-03A-W-241107	11/07/2024	14.12	ND	7.41	6.71	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	3,000	--	1,700	--
D-06	D-06-W-240315	03/15/2024	18.23	ND	11.07	7.16	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	130	5,300	--	1,700	--
	D-6-W-240620	06/20/2024	18.23	ND	12.36	5.87	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	220	4,800	1,800	1,000	< 140
	D-06-W-240905	09/05/2024	18.23	ND	12.51	5.72	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	180	5,000	--	1,400	--
	D-06-W-241106	11/06/2024	18.23	ND	11.77	6.46	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	250	5,200	--	1,200	--
D-07	D-7-W-240314	03/14/2024	14.82	ND	6.90	7.92	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	530	--	650	--
	D-07-W-240621	06/21/2024	14.82	ND	8.32	6.50	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	560	< 95	530 J	< 140
	D-07-W-240905	09/05/2024	14.82	ND	8.41	6.41	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	610	--	560	--
	D-07-W-241107	11/07/2024	14.82	ND	7.76	7.06	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	680	--	560	--
D-08	D-08-W-240312	03/12/2024	13.73	ND	7.16	6.57	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	4,000	--	1,800	--
	D-08-W-240618	06/18/2024	13.73	ND	8.13	5.60	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,300	690	1,400	< 130
	D-08-W-240904	09/04/2024	13.73	ND	8.48	5.25	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,800	--	1,100	--
	D-8-W-241105	11/05/2024	13.73	ND	7.06	6.67	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,200	--	1,200	--
D-09	D-09-W-240312	03/12/2024	12.90	ND	5.36	7.54	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,700	--	2,300	--
	D-09-W-240618	06/18/2024	12.90	ND	6.83	6.07	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	3,200	660	2,200	< 140
	D-09-W-240904	09/04/2024	12.90	ND	6.64	6.26	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	3,900	--	2,400	--
	D-09-W-241106	11/06/2024	12.9	ND	6.29	6.61	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	4,300	--	3,000	--
D-10	D-10-W-240314	03/14/2024	14.03	ND	7.16	6.87	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	1,800	--	860	--
	D-10-W-240620	06/20/2024	14.03	ND	8.31	5.72	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,100	530	730	< 130
	D-10-W-240904	09/04/2024	14.03	ND	8.60	5.43	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,100 J	--	820 J	--
	D-10-W-241105	11/05/2024	14.03	ND	7.38	6.65	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,400	--	960	--
D-11	D-11-W-241105	11/05/2024	14.04	ND	7.35	6.69	0.71 J	< 0.39	< 0.50	< 0.53	< 0.44	< 73	880	--	390 J	--
D-12	D-12-W-240314	03/14/2024	14.85	ND	7.60	7.25	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	720	--	1,300	--
	D-12-W-240620	06/20/2024	14.85	ND	9.04	5.81	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	750	< 96	840	< 140
	D-12-W-240905	09/05/2024	14.85	ND	9.07	5.78	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	790	--	940	--
	D-12-W-241105	11/05/2024	14.85	ND	8.25	6.60	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	910	--	980	--
D-13	N/A	03/11/2024	13.84	5.21	5.48	8.59	Not sampled due to presence of SPH									
	N/A	06/17/2024	13.84	6.95	6.97	6.89	Not sampled due to presence of SPH									
	N/A	09/03/2024	13.84	7.48	7.50	6.36	Not sampled due to presence of SPH									
	N/A	11/04/2024	13.84	7.40	8.15	6.34	Not sampled due to presence of SPH									
D-14	D-14-W-240315	03/15/2024	14.82	ND	7.24	7.58	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	170 J	--	350 U	--
	D-14-W-240621	06/21/2024	14.82	ND	8.51	6.31	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	210 U	< 96	370 U	< 140
	D-14-W-240906	09/06/2024	14.82	ND	8.48	6.34	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	200 U	--	< 130	--
	D-14-W-241106	11/06/2024	14.82	ND	7.32	7.50	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	360	--	150 J	--
D-15	D-15-W-240313	03/13/2024	14.80	ND	7.84	6.96	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	3,600	--	2,000	--
	D-15-W-240620	06/20/2024	14.80	ND	9.06	5.74	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,100	340	1,200	< 130
	D-15-W-240905	09/05/2024	14.80	ND	9.22	5.58	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,600	--	1,300	--
	D-15-W-241105	11/05/2024	14.8	ND	8.16	6.64	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,700	--	1,200	--
D-16	D-16-W-241107	11/07/2024	13.32	ND	6.51	6.81	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	760	--	1,200	--
D-17	D-17-W-240312	03/12/2024	12.75	ND	5.07	7.68	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	410	--	490	--
	D-17-W-240618	06/19/2024	12.75	ND	6.49	6.26	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	220 J	< 96	370 U	< 140
	D-17-W-240904	09/04/2024	12.75	ND	4.32	8.43	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	440	--	380	--
	D-17-W-241104	11/04/2024	12.75	ND	6.14	6.61	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	740	--	400	--
D-18	D-18-W-240312	03/12/2024	13.29	ND	5.86	7.43	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,000	--	1,600	--
	D-18-W-240618	06/18/2024	13.29	ND	7.12	6.17	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	< 97			

Table 2 - Cumulative 2024 Gauging and Groundwater Analytical Data
Former Chevron Bulk Terminal, Facility No. 1001348
Tacoma, Washington

Well ID	Sample ID	Sample Date	TOC Elevation** (ft. NAVD88)	Depth to SPH (ft BTOC)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft. NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
							Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE	TPH-g	TPH-d (w/out Silica gel)	TPH-d (w Silica gel)	TPH-o (w/out Silica gel)	TPH-o (w Silica gel)
MTCA Method A Cleanup Levels* (µg/L)							5	1000	700	1000	20	800 ^b	500		500	
D-22	D-22-W-240314	03/14/2024	15.39	ND	9.61	5.78	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	400	--	360 U	--
	D-22-W-240620	06/20/2024	15.39	ND	9.9	5.49	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	790	180 J	370 U	< 140
	D-22-W-240904	09/04/2024	15.39	ND	11.09	4.30	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	480	--	360 U	--
	D-22-W-241107	11/07/2024	15.39	ND	8.42	6.97	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	650	--	230 J	--
D-23	D-23-W-241105	11/05/2024	14.67	ND	7.82	6.85	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	480	--	390	--
D-24	D-24-W-240313	03/13/2024	13.53	ND	6.16	7.37	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	300	--	380	--
	D-24-W-240619	06/19/2024	13.53	ND	7.71	5.82	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	82 J	430	< 94	410 J	< 130
	D-24-W-240904	09/04/2024	13.53	ND	7.36	6.17	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	530	--	400	--
	D-24-W-241105	11/05/2024	13.53	ND	7.00	6.53	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	610	--	470	--
D-25	D-25-W-240313	03/13/2024	14.65	ND	7.15	7.50	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,000	--	1,700	--
	D-25-W-240619	06/19/2024	14.65	ND	8.66	5.99	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,300	330	1,600	< 140
	D-25-W-240904	09/04/2024	14.65	ND	8.44	6.21	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,600	--	1,000	--
	D-25-W-241105	11/05/2024	14.65	ND	8.14	6.51	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	1,500	--	1,200	--
D-26	D-26-W-240313	03/13/2024	NS	ND	7.61	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	490	--	700	--
	D-26-W-240619	06/19/2024	NS	ND	9.05	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	420	< 91	350 U	< 130
	D-26-W-240904	09/04/2024	NS	ND	8.92	NS	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	490	--	440	--
	D-26-W-241105	11/05/2024	15.22	ND	8.67	6.55	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	500	--	420	--
D-27	D-27-W-240313	03/13/2024	14.99	ND	7.62	7.37	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 14	2,600	--	1,900	--
	D-27-W-240620	06/20/2024	14.99	ND	9.03	5.96	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,000	410	1,000	140 J
	D-27-W-240905	09/05/2024	14.99	ND	8.99	6.00	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,200	--	1,300	--
	D-27-W-241105	11/05/2024	14.99	ND	8.38	6.61	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,300	--	1,300	--
D-28	D-28-W-241105	11/05/2024	13.95	ND	7.32	6.63	< 0.24	< 0.39	< 0.50	< 0.53	< 0.44	< 73	2,900	--	990	--

Notes:

TPH-g (or TPH-GRO) = Total Petroleum Hydrocarbons, Gasoline-Range; reported as (C7-C12) via the NWTPH-Gx Volatile Petroleum Products Method in the laboratory analytical report.

TPH-d (or TPH-DRO) = Total Petroleum Hydrocarbons, Diesel Range; reported as (C12-C24) via the NWTPH-Dx Semi-Volatile Petroleum Products Method in the laboratory analytical report.

TPH-o (or TPH-HRO) = Total Petroleum Hydrocarbons, Oil-Range; reported as (C24-C40) via the NWTPH-Dx Semi-Volatile Petroleum Products Method in the laboratory analytical report.

** Top of Casing (TOC) elevations were (re-)surveyed by Bush, Roed & Hitching, Inc. on October 16-17, 2023.

^a Department of Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels

^b Two TPH-g cleanup levels exist in MTCA Method A Cleanup Levels. The more conservative cleanup level of 800 µg/L, for use when benzene is detected, is presented in this table.

When benzene is not detected, however, the cleanup level is 1,000 µg/L.

^c Corrected groundwater elevation for wells containing SPH: $TOC - DTW + (T_{SPH} * SG_{SPH})$

TOC = top of casing elevation

DTW = depth to water (ft btoc)

Abbreviations:

µg/L = micrograms per liter

TOC = top of casing

NAVD88 = North American Vertical Datum of 1988

ft btoc = feet below top of casing

SPH = separate-phase hydrocarbon

NWTPH = Northwest Total Petroleum Hydrocarbons

N/A = not applicable (sample not collected)

NS = not surveyed

NA = not analyzed

ND = SPH not detected in well

DUP = duplicate sample

* = Possible lab/sampling error as results appear reversed. Results to be confirmed during subsequent sample events

1. All TPH concentrations are reported in units of µg/L.
2. Reported values not detected above the laboratory Method Detection Limit (MDL) are preceded by "<".
3. Reported values followed by "J" indicate estimated concentrations above the MDL.
4. Reported values followed by "UJ" indicate analyte is qualified as not detected, based on the data validation review.
5. Reported values followed by "UJ" indicate the analyte was not detected above the MDL, but the MDL is estimated.

6. Results that are greater than the MTCA Method A Cleanup Levels are indicated by bolded and shaded values.

7. Results in *Italics* indicate non-detect value is greater than CUL

Table 4
Cumulative 2023 Gauging and Groundwater Analytical Data Former Chevron
Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Sample ID	Sample Date	TOC Elevation** (ft, NAVD88)	Depth to SPH (ft btoc)	SPH Thickness (ft)	Depth to Water (ft btoc)	Groundwater Elevation (ft, NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
								Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	TPH-g	TPH-d	TPH-d (w/ SGT)	TPH-o	TPH-o (w/ SGT)
MTCA Method A Cleanup Levels ^a (µg/L)								5	1000	700	1000	20	800 ^b	500		500	
Perched Groundwater-bearing Unit Wells																	
MW-10	MW-10-W-230313	03/13/2023	13.46	ND	0.00	4.19	9.27	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,500	NA	410	NA
	MW-10-W-230522	05/22/2023		ND	0.00	4.64	8.82	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	1,500	NA	540	NA
	N/A	N/A		ND	0.00	6.15	7.31	Insufficient water to sample									
	MW-10-W-231113	11/13/2023	13.31	ND	0.00	4.47	8.84	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	280	< 46 UJ	240	< 100 UJ
MW-11	MW-11-W-230313	03/13/2023	15.10	ND	0.00	5.13	9.97	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	43 UJ	1,800 J	NA	360	NA
	MW-11-W-230522	05/22/2023		ND	0.00	5.47	9.63	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	NA	NA	NA	NA
	N/A	N/A		ND	0.00	6.83	8.27	Insufficient water to sample									
	MW-11-W-231114	11/14/2023	14.99	ND	0.00	5.48	9.51	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	430	< 46 UJ	280	< 100 UJ
MW-12	MW-12-W-230314	03/14/2023	NS	ND	0.00	4.52	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	61 J	3,200	NA	2,000 J	NA
	DUP-2-WD-230314			< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	53 J	3,900	NA	1,400 J	NA				
	MW-12-W-230523	05/23/2023		ND	0.00	5.09	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	110 J	5,300	NA	1,400	NA
	MW-12-W-230808	08/08/2023		ND	0.00	6.16	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	580	5,500	< 47	660	< 100
	MW-12-W-231114	11/14/2023	15.05	ND	0.00	4.77	10.28	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	82 J	1,500	< 46	630	< 100
MW-13	MW-13-W-230321	03/21/2023	16.88	ND	0.00	6.20	10.68	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	160 J	790	NA	170 J	NA
	MW-13-W-230524	05/24/2023		ND	0.00	6.69	10.19	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	270	740	NA	< 110	NA
	MW-13-W-230810	08/10/2023		ND	0.00	7.81	9.07	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	660	1,400	72 J	180 J	250 U
	MW-13-W-231117	11/17/2023	16.83	ND	0.00	6.43	10.40	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	1,300 U	3,900	< 46 UJ	440	< 100 UJ
MW-14	MW-14-W-230315	03/15/2023	17.64	ND	0.00	5.66	11.98	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	110	NA	< 100	NA
	MW-14-W-230526	05/26/2023		ND	0.00	6.84	10.80	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	< 43	140	NA	< 100	NA
	MW-14-W-230810	08/10/2023		ND	0.00	8.19	9.45	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	510	77 J	130 J	250 U
	MW-14-W-231116	11/16/2023	17.61	ND	0.00	5.71	11.90	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	170 J	< 46	< 100	< 100
MW-18	MW-18-W-230317	03/17/2023	18.25	ND	0.00	8.23	10.02	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	360	2,100	NA	530	NA
	MW-18-W-230524	05/24/2023		ND	0.00	8.66	9.59	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	590	2,600	NA	380	NA
	MW-18-W-230810	08/10/2023		ND	0.00	9.60	8.65	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	920 ^b	2,700	120	250	< 100
	MW-18-W-231116	11/16/2023	18.20	ND	0.00	8.34	9.86	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	550	1,300	59 J	240 J	< 100
MW-19	MW-19-W-230321	03/21/2023	15.53	ND	0.00	4.85	10.68	0.35 J	0.32 J	< 0.40	< 1.4	< 0.20	1,100	6,500	NA	1,600	NA
	MW-19-W-230526	05/26/2023		ND	0.00	5.27	10.26	0.39 J	0.32 J	< 0.40	1.4 J	< 0.20 UJ	1,300	7,100	NA	1,200	NA
	MW-19-W-230810	08/10/2023		ND	0.00	6.39	9.14	0.48 J	0.42 J	< 0.40	1.5 J	< 0.20	1,400	7,800	85 J	1,100	< 100
	MW-19-W-231117	11/17/2023	15.46	ND	0.00	5.06	10.40	0.68 J	0.43 J	0.40 J	1.4 J	< 0.20	970	8,600	81 J	1,500	< 100
MW-20 ^c	N/A	N/A	15.09	3.67	0.02	3.69	11.42	Not sampled due to presence of SPH									
	N/A	N/A		4.40	0.01	4.41	10.69	Not sampled due to presence of SPH									
	N/A	N/A		5.71	0.03	5.74	9.38	Not sampled due to presence of SPH									
	N/A	N/A	15.01	4.07	0.01	4.08	10.94	Not sampled due to presence of SPH									
MW-21	MW-21-W-230313	03/13/2023	14.70	ND	0.00	2.86	11.84	< 0.30 UJ	< 0.30 UJ	< 0.40 UJ	< 1.4 UJ	< 0.20 UJ	< 43	200 J	NA	280	NA
	MW-21-W-230526	05/26/2023		ND	0.00	3.95	10.75	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	< 43	390	NA	340	NA
	MW-21-W-230807	08/07/2023		ND	0.00	6.37	8.33	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	500	< 45	280	< 100
	MW-21-W-231116	11/16/2023	14.60	ND	0.00	3.00	11.60	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	250	< 45	340	< 100
MW-22	MW-22-W-230315	03/15/2023	14.72	ND	0.00	5.30	9.42	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	180 J	1,700	NA	1,400	NA
	MW-22-W-230526	05/26/2023		ND	0.00	5.58	9.14	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	190 J	1,800	NA	900	NA
	DUP-2-WD-230526			< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	200 J	1,900	NA	1,000	NA				
	MW-22-W-230811	08/11/2023	ND	0.00	6.45	8.27	< 0.30	< 0.30	< 0.40	0.47 J	< 0.20	310	1,600	< 46	890	< 100	
	DUP-2-WD-230811		< 0.30	< 0.30	< 0.40	0.50 J	< 0.20	310	1,600	< 45	960	< 100					
	MW-22-W-231116	11/16/2023	14.67	ND	0.00	6.67	8.00	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250 U	4,100	< 47	1,200	< 100
	DUP-1-WD-231116			< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	2,500 U	3,900	< 47	1,300	< 100				

Table 4
Cumulative 2023 Gauging and Groundwater Analytical Data Former Chevron
Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Sample ID	Sample Date	TOC Elevation** (ft, NAVD88)	Depth to SPH (ft btoc)	SPH Thickness (ft)	Depth to Water (ft btoc)	Groundwater Elevation (ft, NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
								Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	TPH-g	TPH-d	TPH-d (w/ SGT)	TPH-o	TPH-o (w/ SGT)
MTCA Method A Cleanup Levels ^a (µg/L)								5	1000	700	1000	20	800 ^b	500		500	
MW-23	MW-23-W-230314	03/14/2023	NS	ND	0.00	6.19	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 46	NA	< 100	NA
	MW-23-W-230523	05/23/2023		ND	0.00	6.32	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	< 46	NA	< 100	NA
	MW-23-W-230808	08/08/2023		ND	0.00	7.06	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 47	< 47	< 100	< 100
	MW-23-W-231114	11/14/2023	13.50	ND	0.00	6.29	7.21	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	NA	< 100	NA
MW-24	MW-24-W-230314	03/14/2023	NS	ND	0.00	5.56	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,000	NA	220 J	NA
	N/A	N/A		ND	0.00	5.68	NS	Insufficient water to sample									
	MW-24-W-230808	08/08/2023	13.15	ND	0.00	6.98	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	870	< 46	230 J	< 100
	MW-24-W-231114	11/14/2023		ND	0.00	5.92	7.23	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	400	< 46 UJ	170 J	< 100 UJ
MW-25	MW-25-W-230317	03/17/2023	NS	ND	0.00	3.96	NS	1.10	0.33 J	1.20	< 1.4	< 0.20	720	87 J	NA	< 100	NA
	MW-25-W-230525	05/25/2023		ND	0.00	4.32	NS	1.50	0.51 J	1.80	< 1.4	< 0.20	1,200	160	NA	< 100	NA
	MW-25-W-230809	08/09/2023		ND	0.00	5.54	NS	2.40	0.88 J	3.30	< 0.40	< 0.20	1,700	340	47 J	< 100	< 100
	MW-25-W-231116	11/16/2023	14.08	ND	0.00	4.34	9.74	1.40	0.46 J	1.50	< 0.40	< 0.20	900	150 J	< 46	< 100	< 100
MW-26	MW-26-W-230314	03/14/2023	NS	ND	0.00	3.49	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	990	NA	360	NA
	MW-26-W-230523	05/23/2023		ND	0.00	3.99	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	1,400	NA	470	NA
	MW-26-W-230808	08/08/2023		ND	0.00	5.22	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	1,500	< 46	470	< 100
	MW-26-W-231114	11/14/2023	12.70	ND	0.00	4.07	8.63	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	470	100 U	270	330 U
MW-29	MW-29-W-230316	03/16/2023	NS	ND	0.00	6.15	NS	< 0.30 UJ	< 0.30 UJ	< 0.40 UJ	< 1.4 UJ	< 0.20 UJ	1,100	4,800	NA	930	NA
	MW-29-W-230524	05/24/2023		ND	0.00	6.41	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	720	4,500	NA	420	NA
	MW-29-W-230809	08/09/2023		ND	0.00	6.99	NS	0.35 J	< 0.30	< 0.40	< 0.40	< 0.20	640	7,000	< 46	560	< 100
	MW-29-W-231115	11/15/2023	14.78	ND	0.00	5.98	8.80	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	580	3,000	< 46	470	< 100
MW-30	MW-30-W-230314	03/14/2023	NS	ND	0.00	4.79	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	79 J	9,000	NA	2,000	NA
	MW-30-W-230523	05/23/2023		ND	0.00	4.97	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	68 J	4,400 J	NA	1,200 J	NA
	MW-30-W-230808	08/08/2023		ND	0.00	5.95	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	85 J	6,300	NA	2,200	NA
	MW-30-W-231114	11/14/2023	13.07	ND	0.00	5.13	7.94	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	59 J	5,300	< 46 UJ	1,600	< 100 UJ
MW-31	MW-31-W-230315	03/15/2023	NS	ND	0.00	6.16	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	NA	NA	NA	NA
	N/A	N/A		ND	0.00	6.03	NS	Insufficient water to sample									
	MW-31-W-230808	08/08/2023		ND	0.00	6.88	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	NA	100 U	< 45	< 100	480
	MW-31-W-231114	11/14/2023	13.09	ND	0.00	6.17	6.92	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 220	100 U	< 46 UJ	< 100 UJ	< 100 UJ
MW-32	MW-32-W-230317	03/17/2023	NS	ND	0.00	2.13	NS	1.40	0.33 J	< 0.40	< 1.4	< 0.20	1,400	1,200	NA	140 J	NA
	MW-32-W-230526	05/26/2023		ND	0.00	3.00	NS	0.69 J	< 0.30	< 0.40	< 0.40	< 0.20 UJ	1,000 J	660	NA	< 110	NA
	MW-32-W-230811	08/11/2023		ND	0.00	4.39	NS	0.77 J	< 0.30	< 0.40	< 0.40	< 0.20	670	450	70 J	< 100	< 100
	MW-32-W-231116	11/16/2023	13.82	ND	0.00	1.99	11.83	1.10	0.48 J	< 0.40	< 0.40	< 0.20	1,300	4,900	73 J	220 J	< 100
MW-34	MW-34-W-230317	03/17/2023	NS	ND	0.00	7.84	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 47	NA	< 100	NA
	MW-34-W-230525	05/25/2023		ND	0.00	7.92	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 47	NA	< 100	NA
	MW-34-W-230809	08/09/2023		ND	0.00	8.54	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 47	< 47	< 100	< 100
	MW-34-W-231116	11/16/2023		ND	0.00	7.98	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	< 46	< 100	< 100
MW-36	MW-36-W-230315	03/15/2023	NS	ND	0.00	6.09	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 47	NA	< 100	NA
	MW-36-W-230525	05/25/2023		ND	0.00	6.08	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 50	NA	< 110	NA
	MW-36-W-230810	08/10/2023		ND	0.00	6.80	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	< 46	< 100	< 100
	MW-36-W-231115	11/15/2023	13.52	ND	0.00	5.80	7.72	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	NA	< 100	NA
MW-37	MW-37-W-230315	03/15/2023	NS	ND	0.00	7.13	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 46	NA	< 100	NA
	MW-37-W-230525	05/25/2023		ND	0.00	7.12	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	84 J	NA	< 110	NA
	MW-37-W-230810	08/10/2023		ND	0.00	7.82	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	140 J	< 46	< 100	< 100
	MW-37-W-231115	11/15/2023	14.54	ND	0.00	6.92	7.62	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	100 U	< 46	< 100	< 100

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Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Sample ID	Sample Date	TOC Elevation** (ft, NAVD88)	Depth to SPH (ft btoc)	SPH Thickness (ft)	Depth to Water (ft btoc)	Groundwater Elevation (ft, NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
								Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	TPH-g	TPH-d	TPH-d (w/ SGT)	TPH-o	TPH-o (w/ SGT)
MTCA Method A Cleanup Levels ^a (µg/L)								5	1000	700	1000	20	800 ^b	500		500	
MW-38	MW-38-W-230315	03/15/2023	NS	ND	0.00	7.62	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	46 UJ	NA	100 UJ	NA
	MW-38-W-230525	05/25/2023		ND	0.00	7.83	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	< 47	NA	< 100	NA
	MW-38-W-230810	08/10/2023		ND	0.00	8.77	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 47	< 47	< 100	< 100
	MW-38-W-231115	11/15/2023		ND	0.00	7.45	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	NA	< 100	NA
MW-39	MW-39-W-230316	03/16/2023	NS	ND	0.00	5.62	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	59 J	1,200	NA	120 J	NA
	MW-39-W-230525	05/25/2023		ND	0.00	5.91	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	82 J	2,000	NA	410	NA
	MW-39-W-230809	08/09/2023		ND	0.00	6.70	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	180 J	5,200	< 45	760	< 100
	MW-39-W-231115	11/15/2023	15.00	ND	0.00	5.75	9.25	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	63 J	2,300	< 46	310	< 100
RMW-1	RMW-01-W-230316	03/16/2023	NS	ND	0.00	4.70	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	110 J	930	NA	550	NA
	RMW-01-W-230524	05/24/2023		ND	0.00	5.08	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	230 J	1,600	NA	320	NA
	RMW-01-W-230809	08/09/2023		ND	0.00	6.11	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	370	2,900	< 46	400	< 100
	RWM-01-W-231115	11/15/2023	14.97	ND	0.00	4.86	10.11	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250	1,300	54 J	210 J	1000 U
Sand Aquifer Wells																	
D-1	D-01-W-230321	03/21/2023	17.33	ND	0.00	9.96	7.37	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	190 J	4,600	NA	720	NA
	DUP-1-WD-230321							< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	180 J	4,800	NA	730	NA
	D-01-W-230524	05/24/2023		ND	0.00	10.17	7.16	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	180 J	4,200	NA	650	NA
	DUP-1-WD-230524							< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	180 J	4,400	NA	620	NA
	D-01-W-230811	08/11/2023	17.26	ND	0.00	11.46	5.87	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	200 J	3,400	< 46	380	< 100
	DUP-1-WD-230811							< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	220 J	3,300	< 46	440	< 100
	D-01-W-231117	11/17/2023		ND	0.00	10.22	7.04	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 430	4,300	52 UJ	780	920 J
	DUP-2-WD-231117							< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 430	4,500	< 47 UJ	850	< 100 UJ
D-2A	D-02A-W-230314	03/14/2023	14.90	ND	0.00	7.59	7.31	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,400	NA	580	NA
	D-02A-W-230523	05/23/2023		ND	0.00	7.77	7.13	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	43 J	1,400	NA	520	NA
	D-02A-W-230808	08/08/2023		ND	0.00	8.76	6.14	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	75 J	1,200	< 45	390	< 100
	D-02A-W-231114	11/14/2023	15.16	ND	0.00	7.78	7.38	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	1,200	< 46	540	< 100
D-3A	D-03A-W-230317	03/17/2023	NS	ND	0.00	6.87	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	74 J	3,000	NA	730	NA
	D-03A-W-230526	05/26/2023		ND	0.00	6.93	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	< 43	1,900	NA	460	NA
	D-03A-W-230811	08/11/2023		ND	0.00	8.18	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	59 J	1,500	< 46	520	< 100
	D-03A-W-231116	11/16/2023	14.12	ND	0.00	7.05	7.07	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250 U	1,100	< 46	290	< 100
D-6	D-06-W-230317	03/17/2023	18.26	ND	0.00	10.90	7.36	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	200 J	3,300	NA	420	NA
	D-06-W-230524	05/24/2023		ND	0.00	12.87	5.39	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	210 J	2,100 J	NA	220 J	NA
	D-06-W-230810	08/10/2023		ND	0.00	12.54	5.72	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	260	3,500	< 45	410	< 100
	D-06-W-231116	11/16/2023	18.23	ND	0.00	11.01	7.22	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250 J	2,600	54 J	280	130 J
D-7	D-07-W-230315	03/15/2023	14.47	ND	0.00	7.24	7.23	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	210	NA	130 J	NA
	D-07-W-230526	05/26/2023		ND	0.00	7.55	6.92	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	< 43	290	NA	100 J	NA
	D-07-W-230811	08/11/2023		ND	0.00	8.34	6.13	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	170 J	< 45	< 100	< 100
	D-7-W-231116	11/16/2023	14.82	ND	0.00	7.34	7.48	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	420	< 47	110 J	< 100
D-8	D-08-W-230314	03/14/2023	NS	ND	0.00	6.84	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,700	NA	440	NA
	D-08-W-230523	05/23/2023		ND	0.00	7.57	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	920	NA	230 J	NA
	D-08-W-230808	08/08/2023		ND	0.00	7.72	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	62 J	1,200	< 45	290	< 100
	D-08-W-231114	11/14/2023	13.73	ND	0.00	7.07	6.66	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	50 J	1,100	< 47	360	< 100
D-9	D-09-W-230315	03/15/2023	NS	ND	0.00	5.71	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	2,400	NA	1,100	NA
	D-09-W-230523	05/23/2023		ND	0.00	5.70	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	1,700	NA	520	NA
	D-09-W-230808	08/08/2023		ND	0.00	6.83	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	51 J	2,300	130	710	2000
	D-09-W-231114	11/14/2023	12.90	ND	0.00	5.81	7.09	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	2,400	< 46	1,100	< 100
D-10	D-10-W-230317	03/17/2023	NS	ND	0.00	7.02	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	43 J	870	NA	150 J	NA
	D-10-W-230525	05/25/2023		ND	0.00	7.45	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	43 J	1,200	NA	190 J	NA
	D-10-W-230809	08/09/2023		ND	0.00	8.00	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	110 J	2,200	< 45	230 J	< 100
	D-10-W-231116	11/16/2023	14.03	ND	0.00	7.26	6.77	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250 U	1,900	< 46	190 J	< 100

Table 4
Cumulative 2023 Gauging and Groundwater Analytical Data Former Chevron
Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Sample ID	Sample Date	TOC Elevation** (ft, NAVD88)	Depth to SPH (ft btoc)	SPH Thickness (ft)	Depth to Water (ft btoc)	Groundwater Elevation (ft, NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
								Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	TPH-g	TPH-d	TPH-d (w/ SGT)	TPH-o	TPH-o (w/ SGT)
MTCA Method A Cleanup Levels ^a (µg/L)								5	1000	700	1000	20	800 ^b	500		500	
D-12	D-12-W-230316	03/16/2023	NS	ND	0.00	7.80	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	280	NA	270	NA
	D-12-W-230524	05/24/2023		ND	0.00	8.17	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	330	NA	270	NA
	D-12-W-230809	08/09/2023		ND	0.00	8.79	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	280	< 46	190 J	< 100
	D-12-W-231115	11/15/2023	14.85	ND	0.00	7.93	6.92	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	270	< 46	190 J	< 100
D-13 ^c	N/A	N/A	NS	5.68	0.46	6.14	NS	Not sampled due to presence of SPH									
	N/A	N/A		5.90	0.01	5.91	NS	Not sampled due to presence of SPH									
	N/A	N/A		7.39	0.04	7.43	NS	Not sampled due to presence of SPH									
	N/A	N/A	13.84	6.00	0.01	6.01	7.84	Not sampled due to presence of SPH									
D-14	D-14-W-230321	03/21/2023	NS	ND	0.00	8.17	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	71 J	NA	< 110	NA
	D-14-W-230526	05/26/2023		ND	0.00	7.75	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20 UJ	45 J	< 48	NA	< 110	NA
	D-14-W-230810	08/10/2023		ND	0.00	8.94	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	< 46	< 100	< 100
	D-14-W-231117	11/17/2023	14.82	ND	0.00	8.01	6.81	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	< 46	< 46	< 100	< 100
D-15	D-15-W-230316	03/16/2023	NS	ND	0.00	7.85	NS	< 0.30 UJ	< 0.30 UJ	< 0.40 UJ	< 1.4 UJ	< 0.20 UJ	< 43	2,000	NA	500	NA
	D-15-W-230524	05/24/2023		ND	0.00	8.43	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,900	NA	800	NA
	D-15-W-230809	08/09/2023		ND	0.00	8.76	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	67 J	1,400	< 45	270	< 100
	D-15-W-231115	11/15/2023	14.80	ND	0.00	7.98	6.82	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	1,300	< 46	260	< 100
D-17	D-17-W-230314	03/14/2023	NS	ND	0.00	5.50	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	150	NA	< 100	NA
	D-17-W-230523	05/23/2023		ND	0.00	5.43	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	81 J	NA	110 UJ	NA
	D-17-W-230808	08/08/2023		ND	0.00	6.57	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	100 U	< 46	< 100	< 100
	D-17-W-231114	11/14/2023	12.75	ND	0.00	5.58	7.17	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	180 J	< 46	< 100	< 100
D-18	D-18-W-230314	03/14/2023	NS	ND	0.00	6.07	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	500	NA	300	NA
	D-18-W-230523	05/23/2023		ND	0.00	6.04	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	650	NA	200 J	NA
	D-18-W-230808	08/08/2023		ND	0.00	7.17	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	870	< 45	300	< 100
	D-18-W-231114	11/14/2023	13.29	ND	0.00	6.18	7.11	< 0.30	< 0.30	< 0.40	< 0.30	< 0.20	< 43	640	< 46	320	< 100
D-19	D-19-W-230314	03/14/2023	NS	ND	0.00	6.04	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	420	NA	160 J	NA
	D-19-W-230523	05/23/2023		ND	0.00	6.10	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20 UJ	< 43	610	NA	180 J	NA
	D-19-W-230808	08/08/2023		ND	0.00	7.18	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	380	< 46	130 J	< 100
	D-19-W-231114	11/14/2023	13.22	ND	0.00	6.16	7.06	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	410	< 46 UJ	140 J	< 100 UJ
D-22	D-22-W-230317	03/17/2023	NS	ND	0.00	8.92	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	89 J	NA	< 100	NA
	D-22-W-230525	05/25/2023		ND	0.00	10.27	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	230	NA	< 110	NA
	D-22-W-230809	08/09/2023		ND	0.00	9.27	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	72 J	330	< 46	< 100	< 100
	D-22-W-231116	11/16/2023	15.39	ND	0.00	8.97	6.42	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	250 U	500	< 46 UJ	< 100	< 100 UJ
D-24	D-24-W-230315	03/15/2023	NS	ND	0.00	6.42	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	65 J	NA	< 100	NA
	D-24-W-230525	05/25/2023		ND	0.00	6.66	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	260	NA	< 110	NA
	D-24-W-230810	08/10/2023		ND	0.00	7.49	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	100 J	< 47	< 100	< 100
	D-24-W-231115	11/15/2023	13.53	ND	0.00	6.49	7.04	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	250	< 46	< 100	400 U

Table 4
Cumulative 2023 Gauging and Groundwater Analytical Data Former Chevron
Bulk Terminal, Facility No. 1001348
Tacoma, Washington



Well ID	Sample ID	Sample Date	TOC Elevation** (ft, NAVD88)	Depth to SPH (ft btoc)	SPH Thickness (ft)	Depth to Water (ft btoc)	Groundwater Elevation (ft, NAVD88)	Volatile Organic Compounds (VOCs)					Total Petroleum Hydrocarbons (TPH)				
								Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	TPH-g	TPH-d	TPH-d (w/ SGT)	TPH-o	TPH-o (w/ SGT)
MTCA Method A Cleanup Levels ^a (µg/L)								5	1000	700	1000	20	800 ^b	500		500	
D-25	D-25-W-230315	03/15/2023	NS	ND	0.00	7.50	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	960	NA	360	NA
	D-25-W-230525	05/25/2023		ND	0.00	7.62	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,200	NA	380	NA
	D-25-W-230810	08/10/2023		ND	0.00	8.55	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	900	< 46	280	< 100
	D-25-W-231115	11/15/2023	14.65	ND	0.00	7.60	7.05	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	1200	64 U	420	< 100
D-26	D-26-W-230315	03/15/2023	NS	ND	0.00	7.99	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	240	NA	140 J	NA
	D-26-W-230525	05/25/2023		ND	0.00	8.02	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	230	NA	120 J	NA
	D-26-W-230810	08/10/2023		ND	0.00	9.05	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	130 J	< 47 UJ	< 100	< 100
	D-26-W-231115	11/15/2023		ND	0.00	8.12	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	170 J	< 46 UJ	< 100	250 U
D-27	D-27-W-230315	03/15/2023	NS	ND	0.00	7.86	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	< 43	1,900	NA	800	NA
	D-27-W-230525	05/25/2023		ND	0.00	8.03	NS	< 0.30	< 0.30	< 0.40	< 1.4	< 0.20	47 J	2,000	NA	560	NA
	D-27-W-230809	08/09/2023		ND	0.00	8.91	NS	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	51 J	1,700	< 46	410	< 100
	D-27-W-231115	11/15/2023	14.99	ND	0.00	7.98	7.01	< 0.30	< 0.30	< 0.40	< 0.40	< 0.20	< 43	1,300	< 46	360	< 100

Notes:
TPH-g (or TPH-GRO) = Total Petroleum Hydrocarbons, Gasoline-Range; reported as (C7-C12) via the NWTPH-Gx Volatile Petroleum Products Method in the laboratory analytical report.
TPH-d (or TPH-DRO) = Total Petroluem Hydrocarbons, Diesel Range; reported as (C12-C24) via the NWTPH-Dx Semi-Volatile Petroleum Products Method in the laboratory analytical report.
TPH-o (or TPH-HRO) = Total Petroleum Hydrocarbons, Oil-Range; reported as (C24-C40) via the NWTPH-Dx Semi-Volatile Petroleum Products Method in the laboratory analytical report.

** Top of Casing (TOC) elevations were (re-)surveyed by Bush, Roed & Hitching, Inc. on October 16-17, 2023.

^a Department of Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels

^b Two TPH-g cleanup levels exist in MTCA Method A Cleanup Levels. The more conservative cleanup level of 800 µg/L, for use when benzene is detected, is presented in this table.
When benzene is not detected, however, the cleanup level is 1,000 µg/L.

^c Corrected groundwater elevation for wells containing SPH: TOC - DTW + (T_{SPH} * SG_{SPH})
TOC = top of casing elevation T_{SPH} = SPH thickness (DTW - Depth to SPH)
DTW = depth to water (ft btoc) SG_{SPH} = specific gravity of SPH (assumes an average specific gravity of 0.87)

1. All TPH concentrations are reported in units of µg/L.
2. Reported values not detected above the laboratory Method Detection Limit (MDL) are preceded by "<".
3. Reported values followed by "J" indicate estimated concentrations above the MDL.
4. Reported values followed by "U" indicate analyte is qualified as not detected, based on the data validation review.
5. Reported values followed by "UJ" indicate the analyte was not detected above the MDL, but the MDL is estimated.
6. Results that are greater than the MTCA Method A Cleanup Levels are indicated by bolded and shaded values.
7. Results in *Italics* indicate non-detect value is greater than CUL

Abbreviations:
µg/L = micrograms per liter
TOC = top of casing
NAVD88 = North American Vertical Datum of 1988
ft btoc = feet below top of casing
SPH = separate-phase hydrocarbon
SGT = Silica Gel Treatment
NWTPH = Northwest Total Petroleum Hydrocarbons
N/A = not applicable (sample not collected)
NS = not surveyed
NA = not analyzed
ND = SPH not detected in well
DUP = duplicate sample

Appendix A

Boring Logs



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER D-11

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/23/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 13.97 ftCOMPLETED 09/24/24 DRILLING METHOD SonicTOC ELEVATION 14.27 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 8.21 ftNOTES BQH 763, DTB 24.08'LATITUDE 52.9447161LONGITUDE -110.9854904

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6"-8"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0									Debris/soil surface. Air Knife + vac to 6' bgs	0.5	
				3.2				ML	0.5-4' Gray SILT with little fine to medium sand (~35%) and clay. ML. Dense, moist, no odor or stain. Some organics present.		
				28.4				SP-SM	4-6' Black SAND, fine to medium, with few silt (~10%). SP-SM. Loose, wet. Hydrocarbon odor, no stain.	4.0	
5				100				ML	5' Grading trace SILT (<5%). Wet, hydrocarbon odor, no stain.	6.0	
				0.5				ML	6-10' Gray-brown SILT with little fine sand (~20%). ML. Soft, non-plastic, very moist, No odor or stain, Woody debris/organics present.		
				3.6					7' Sand grades trace (<5%).		
									8' Some hydrocarbon odor present, moist, abundant organics.		
10				100				SP-SM	10'-12' Dark brown SAND, medium-fine, with few silt (~10-15%) and few fine to coarse rounded gravel (~10%). SP-SM. Loose, wet, no odor/stain.	10.0	
				0.1				ML	12-13' Dark gray SILT with few fine sand (~15%). ML. Soft, non-plastic, wet. Faint hydrocarbon odor, no stain.	12.0	
				0.2				SM	13' Grades to brownish-gray fine SAND with little silt (~30%). SM. Loose, wet. No odor/stain.	13.0	
15				100				SP	14.5 - Brownish-black SAND, fine to medium, (medium to fine) with trace silt (<5%). SP. Loose, wet. No odor or stain. Some red sand grains throughout.	14.5	
				0.2							
20				100					21' Faint hydrocarbon odor present		
				0.0							
				0.2							
				0.1					23' Odor vanishes; grades wet.		
25				0.3					Bottom of borehole at 25.0 feet.	25.0	

Well-Screened Interval(ft):
15-25



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER D-16

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/23/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 13.51 ftCOMPLETED 09/23/24 DRILLING METHOD SonicTOC ELEVATION 13.54 ftLOGGED BY D. BehrensCHECKED BY BWAT TIME OF DRILLING — 7.18 ftNOTES BQH 761, DTB 25.39'LATITUDE 52.9434408LONGITUDE -110.9798743

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6"-8"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0									Asphalt Surface Cover. Air Knife to 6' bgs	0.5	
				0.5				SM	0.5-4' Brown SAND, fine to coarse, with few silt (~15%) and trace fine subrounded gravel (<5%). SM. Loose, moist. No odor or stain.		
				0.0				SP-SM	4-6' Brown SAND, fine to coarse, with few silt (~10%) and trace fine subrounded gravel (<5%). SP-SM. Very loose, moist. No odor or stain.	4.0	
5			75	1.0				SP-SM	6-9.25' Gray-black SAND, fine to medium, with few silt (~10%) and trace shell fragments. SP-SM. Loose, wet. Organic odor, no stain. 7' Silt grades to <5% (SP). Some red sand grains visible, moist, no odor or stain. 8' Grades wet, abundant shell fragments.	6.0	
				0.0							
				0.3				ML	9-9.25' Sand grades gray, fine. 9.25-12.5' Dark gray SILT with trace fine sand (~5%). ML. Moderate stiffness, non-plastic, moist. No odor or stain. Some organics/woody debris present. 10' Grades very soft.	9.3	
10			100	0.0							
				0.1				SM	12' Grades with few angular gravel.	12.5	
				0.0				SP	12.5-13' Gray SAND, fine, with little silt (~20%). SM. Loose, damp. No odor or stain. 13 - 25' Dark gray to black SAND, medium to fine. SP. Very loose, wet. Faint hydrocarbon odor present, no stain. Few red sand grains throughout. SP. very/loose, wet, some faint HC odor present, no stain.	13.0	
15			100	0.0					16' Grading with trace silt (<5%).		
				0.0							
				0.0					21' Grading with very few silt (~5%), wet, no odor or staining.		
20			100	0.0							
25										25.0	

Well-Screened
Interval(ft):
15-25

Bottom of borehole at 26.0 feet.



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER D-23

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/24/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 14.79 ftCOMPLETED 09/25/24 DRILLING METHOD SonicTOC ELEVATION 14.92 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 9.13 ftNOTES BQH 765, 4.55' DTB 21.03'LATITUDE 52.9487491LONGITUDE -110.9909184

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6" - 8"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0											
								GW	Gravel Surface Cover. Air Knife/vac to 6' bgs.	0.5	
				1.5				SP-SM	0.5-9' Dark brown SAND, fine to medium, with few silt (~10%). SP-SM. Loose, moist. No odor or stain. Trace shell fragments present.		
				1.9					4' Grading more shell fragments.		
5			100	2.4					6' Grades wet.		
				0.3						9.0	
								ML	9-10' Brownish-gray SILT with few fine sand (~10-15%). ML. Soft, non-plastic, moist. No odor/stain. Abundant woody debris present.	10.0	
10			100	2.8				SM	10-13.5' Brown-gray SAND, fine to coarse, with little silt (~20-30%) and few fine to coarse rounded gravel (~10%). SM. Loose, wet. No odor or stain. Shell fragments, wood debris present.		
				0.1							
				0.1				ML	13.5-14' Brown-gray SILT with some fine sand (~30-40%). ML. Soft, non-plastic, wet. No odor or stain.	13.5	
15			80					SP	14-16.5' Brownish-black SAND, fine to medium, with trace silt (<5%). SP. Loose, wet. No odor or stain. Some red sand present.	14.0	
								SP-SM	16.5' Grading with few silt (~10%). SP-SM.	16.5	
				0.6					Sand heave to 14' bgs.		
				0.4					21-21.5' Shell fragments reappear.	21.5	
20				0.0				SM	21.5-22' Grading brownish-gray SAND with little silt (~25%). Loose, wet. No odor or stain.	22.0	
									Bottom of borehole at 22.0 feet.		

Well-Screened Interval(ft): 12-22



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER D-28

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/24/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 14.20 ftCOMPLETED 09/26/24 DRILLING METHOD SonicTOC ELEVATION 14.21 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 8.22 ftNOTES BQH 767, DTB 24.30'LATITUDE 52.951122LONGITUDE -110.9852946

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6" - 8"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0											
								GW	Gravel fill at surface. Air Knife/vac to 6' bgs.	0.5	
								SP-SM	0.5-7' Black-brown SAND, fine to medium, with few silt (~10%). SP-SM. Loose, moist. No odor or stain. Trace shell fragments present.		
				1.6							
				2.4							
5											
				100					6' Larger shell fragments present.		
										7.0	
								SP	7-9' Grading black-brown SAND, fine to medium, with trace silt (~5%) and few fine rounded gravel (~10%). SP. Moist. No odor or stain.		
				1.0							
				0.9							
10				100					9.5' Grades wet.		
				1.0					12' Abundant shell fragments present (~15%). Sand grades fine.		
										13.0	
				0.9				ML	13-14.5' Brownish-gray SILT with few fine sand (~10%). ML. Soft, non-plastic, moist. No odor or stain.		
15				100					14.5' Sand grades fine to medium.	14.5	
								SW	14.5 - 24' Brown-black SAND, fine to coarse, with trace silt (~5%) and trace fine subrounded gravel (~5%). SW. Loose, wet. No odor or stain. Few shell fragments present.		
				1.0							
				0.7							
20				100							
				0.9							
				1.1					22' Faint hydrocarbon odor. Silt grades to <5%.		
										24.0	
				1.1				SM	24' Grades brownish-gray SAND, medium to fine, with little silt (~25-30%). SM. Loose, wet. No odor or stain. Shell fragments present.	25.0	
25											
				0.5					Bottom of borehole at 25.0 feet.		

Well-Screened
Interval(ft):
15-25



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER MW-27

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/23/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 13.68 ftCOMPLETED 09/24/24 DRILLING METHOD SonicTOC ELEVATION 14.06 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 5.00 ftNOTES BQH 764, DTB 11.05'LATITUDE 52.9446594LONGITUDE -110.9854424

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0											
								GW	Debris and gravel surface cover. Air knife/vac to 4' bgs.	0.5	
				1.1				SP-SM	0.5-4' Brown SAND, medium to coarse, with few silt (<10%) and few fine subrounded gravel. SP-SM. Loose, moist. No odor or stain.		
			30	0						4.0	
5								ML	4-10' Gray SILT with little fine to medium sand (~20%). ML. Medium-dense, medium plasticity, moist. No odor or stain. Rock encountered (2' bgs) that pushed sample out of way. Tried another run but unclear what interval exactly it is from. Poor recovery.		
				2.3				SM	8-8.5' Dark brown-gray SAND, fine to medium, with little silt (~20%) and few fine to coarse rounded gravel (~10%). SM. Loose, wet. No odor. Some woody debris present.	8.5	
				0.6				ML	8.5-10' Dark brown-gray SILT with few medium to fine sand (~15%). ML. Soft, non-plastic, wet. Faint hydrocarbon odor, no stain.	10.0	
10								SM	10-11' Dark brown-gray SAND, medium to fine, with some silt (~30%) and few fine rounded gravel. SM. Soft, wet. Faint hydrocarbon odor, no stain.	11.0	
				2.3				ML	11-13' Brown-gray SILT with few fine to medium sand (~15%). ML. Very soft, non-plastic, wet. Faint hydrocarbon odor, no stain. Woody debris present.		
									12' Grades very soft, sand grades trace (<5%)	13.0	
				0.4				SM	13-14' Brown-gray SAND, fine, with some silt (~30%). SM. Loose, wet. Some hydrocarbon odor, no stain.	14.0	
15								SP-SM	14-15' Brown-black SAND, medium to fine, with trace silt (<5%). SP. Loose, wet. Faint hydrocarbon odor, no stain. Wood debris present.	15.0	
				0.4					Bottom of borehole at 15.0 feet.		

Well-Screened Interval(ft): 5-10



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER MW-28

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/23/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 13.48 ftCOMPLETED 09/24/24 DRILLING METHOD SonicTOC ELEVATION 13.50 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 6.44NOTES BQH 762, DTB 9.01', 60' bottom 9/24/24LATITUDE 52.943451LONGITUDE -110.9799379

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0									Asphalt Surface cover. Air knife/vac to 6' bgs.	0.5	
				397.4				SM	0.5-4' Gray-brown SAND, fine to coarse, with some silt (~35%). SM. Medium-dense, non-plastic, wet. Hydrocarbon odor, no stain.		
				20.5				SP-SM	2-4' Black SAND, fine to medium, with few silt (~10%) and trace fine subrounded gravel (<5%). SP-SM. Loose, moist. No odor or stain. Trace woody debris.		
5			100	8.6				SP-SM	4-6.5' Black SAND, fine to medium, with few silt (~10%) and trace fine subrounded gravel (<5%). SP-SM. Loose, moist. No odor or stain.	6.5	
				0.2				ML	6.5-10' Gray-brown SILT with trace fine sand (~5%). ML. Soft, non-plastic, very moist to wet. No odor or stain. Some woody debris present.		
10				0.3					9' Black organics present.	10.5	
									Bottom of borehole at 10.5 feet.		

Well-Screened Interval(ft): 5-10

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0											
								GW	Gravel/compacted surface cover. Air Knife/vac to 6' bgs	0.5	
				2.0				SP-SM	0.5-8' Dark Brown SAND, fine to medium, with few silt (~10%). SP-SM. Loose, moist. No odor or stain. Trace shell fragments present.		
				0.0					4' Grades more shell fragments.		
5			60	0.7					Poor recovery 6-9' bgs.		
				1.5				SM	8-9' Grades brownish-gray SAND with little silt (~30%). SM. Loose, wet. No odor/stain.	8.0	
				0.9					8-5' Grades few rounded gravel (~10%).	9.0	
									Bottom of borehole at 9.0 feet.		

Well-Screened Interval(ft): 5-9



BORING LOG - WELL CONSTRUCTION DIAGRAM

BORING NUMBER MW-40

PAGE 1 OF 1

CLIENT Chevron TacomaPROJECT NAME CEMC Legacy - TacomaPROJECT NUMBER 60701804PROJECT LOCATION TacomaDATE STARTED 09/24/24 DRILLING CONTRACTOR HoltGROUND ELEVATION 14.11 ftCOMPLETED 09/26/24 DRILLING METHOD SonicTOC ELEVATION 14.18 ftLOGGED BY D. BehrensCHECKED BY BW

GROUND WATER LEVEL

AT TIME OF DRILLING — 7.40 ftNOTES BQH 768, DTB 11.81'LATITUDE 52.9511308LONGITUDE -110.9851999

Sample Type: HA-Hand Auger; HSA-Hollow Stem Auger; SSA - Solid Stem Auger; DP- Direct Push

BOREHOLE DIAMETER 6"WELL DIAMETER 2"

Depth (ft)	Sample Type	Drilling Log	Push/ Recovery (in.)	PID ppm	Sampled Interval	Analysis	Graphic Log	USCS	MATERIAL DESCRIPTION	Contact Depth	Casing Top Elev: 0 (ft) Casing Type: PVC
0											
								GW	Gravel surface cover. Air knife/vac to 6' bgs.	0.5	
				1.2				SP-SM	0.5-12' Black-brown SAND, fine to medium, with little silt (~10%). SP-SM. Loose, moist. No odor or stain. Trace shell fragments.		
				2.0							
5				1.7							
				0.8					7.5' Grading moist, few shell fragments. No odor or staining.		
10				1.0					10' Grades wet.		
				0.4					11' Faint hydrocarbon odor.		
								SM	12-12.5' Brown-black SAND, medium to fine, with little silt (~20%). SM. Loose, wet. No odor or stain.	12.0	
									Bottom of borehole at 12.5 feet.	12.5	

Well-Screened Interval(ft): 4-12.5

Appendix B

Groundwater Sampling Field Data



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-01-W-241106	Date:	11/6/2024 1:07:00 PM
Well ID:	D-01	Location Type:	Monitoring Well
Duplicate ID:	Dup-2-wd-241106	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 12:31:00 PM	Measured Well Depth:	21.23 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	10.71 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 12:36:00 PM	End Date and Time:	11/6/2024 1:05:00 PM
Initial Pump Depth:	17.5 ft btoc	Final Pump Depth:	17.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:38 PM	180		0.00	14.50	7.19	817.00	0.38	-44.5	21.60	10.73		
12:41 PM	180		0.00	14.50	7.19	821.00	0.24	-56.7	18.10	10.75		
12:44 PM	180		0.00	14.40	7.20	824.00	0.21	-67.7	14.60	10.74		
12:47 PM	180		0.00	14.50	7.19	820.00	0.38	-71.9	13.10	10.75		
12:50 PM	180		0.00	14.50	7.19	821.00	0.24	-77.6	10.20	10.75		
12:53 PM	180		0.00	14.60	7.20	824.00	0.21	-83.2	8.42	10.74		

Time	Purge Rate (ml/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)
12:56 PM	180		0.00	14.40	7.20	824.00	0.18	-84.7	6.33	10.73		
12:59 PM	180		0.00	14.50	7.20	821.00	0.18	-87.5	7.28	10.74		
1:02 PM	180		0.00	14.70	7.18	823.00	0.18	-92.4	7.91	10.75		
1:05 PM	180		0.00	14.70	7.17	822.00	0.19	-92.9	7.42	10.74		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-2A-W-241106	Date:	11/6/2024 10:38:00 AM
Well ID:	D-02A	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/6/2024 10:02:00 AM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.47 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/6/2024 10:14:00 AM	End Date and Time:	11/6/2024 10:35:00 AM
Initial Pump Depth:	17.5 ft btoc	Final Pump Depth:	17.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
10:15 AM	150		0.00	15.60	6.85	736.00	2.05	-118.3	12.80	8.47	Slight hc	most clr w particle
10:20 AM	150		0.00	15.70	6.81	643.00	0.24	-143.5	2.99	8.46	None	More clear
10:25 AM	150		0.00	15.70	6.85	636.00	0.21	-146.3	1.56	8.46	"	"
10:30 AM	150		0.00	15.60	6.88	638.00	0.17	-146.3	1.51	8.45	"	"
10:35 AM	150		0.00	15.70	6.88	638.00	0.19	-146.2	1.62	8.45	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-03a-w-241107	Date:	11/7/2024 11:05:00 AM
Well ID:	D-03A	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Equis crashed after purging for 25 minutes and parameters stabilized. Took final reading before sample.		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/7/2024 11:04:00 AM	Measured Well Depth:	20.15 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.82 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	Not Recorded	End Date and Time:	Not Recorded
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Not Recorded	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:04 AM	150		0.00	14.30	7.20	766.00	0.11	-102.7	6.13	7.82		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-06-W-241106	Date:	11/6/2024 12:00:00 PM
Well ID:	D-06	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # a02016		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/6/2024 11:22:00 AM	Measured Well Depth:	22.39 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	11.67 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/6/2024 11:33:00 AM	End Date and Time:	11/6/2024 11:57:00 AM
Initial Pump Depth:	17.5 ft btoc	Final Pump Depth:	17.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:37 AM	90		0.00	14.30	6.98	0.57	0.92	-99.0	15.60	12.09	Mild hc odor	None
11:42 AM	80		0.00	14.00	6.91	0.54	0.39	-106.5	8.71	12.57	"	"
11:47 AM	80		0.00	14.10	6.92	0.52	0.29	-111.4	6.41	13.03	"	"
11:52 AM	80		0.00	13.90	6.92	0.51	0.30	-111.6	6.70	13.26	"	"
11:57 AM	80		0.00	13.60	6.94	0.51	0.33	-110.2	6.33	13.30		"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-07-W-241107	Date:	11/7/2024 11:50:00 PM
Well ID:	D-07	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # a02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 11:10:00 AM	Measured Well Depth:	20.00 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.08 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 11:19:00 AM	End Date and Time:	11/7/2024 11:47:00 AM
Initial Pump Depth:	17.5 ft btoc	Final Pump Depth:	17.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:21 AM	80		0.00	15.10	6.65	0.62	0.25	-77.1	73.50	8.06	Mild hc odor	None
11:26 AM	80		0.00	15.00	6.69	0.64	0.25	-103.9	22.50	8.03		
11:31 AM	80		0.00	15.30	6.69	0.64	0.22	-108.8	16.00	8.03	"	"
11:36 AM	80		0.00	15.30	6.67	0.65	0.44	-111.3	14.00	8.02		
11:41 AM	80		0.00	15.20	6.69	0.64	0.40	-110.8	12.80	8.01		
11:44 AM	80		0.00	15.10	6.69	0.66	0.23	-110.5	13.90	8.01		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
11:47 AM	80		0.00	15.20	6.69	0.66	0.15	-113.5	14.90	8.00		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-08-w-241105	Date:	11/5/2024 2:50:00 PM
Well ID:	D-08	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 2:23:00 PM	Measured Well Depth:	21.65 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.30 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 2:29:00 PM	End Date and Time:	11/5/2024 2:42:00 PM
Initial Pump Depth:	15 ft btoc	Final Pump Depth:	15 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:30 PM	180	0.00	0.00	14.50	7.08	684.00	0.43	-69.9	21.00	7.32		
2:33 PM	180	0.00	0.00	14.50	7.09	690.00	0.21	-90.4	13.80	7.32		
2:36 PM	180	0.00	0.00	14.40	7.12	693.00	0.20	-97.5	12.80	7.32		
2:39 PM	180	0.00	0.00	14.40	7.13	696.00	0.18	-104.5	13.80	7.32		
2:42 PM	180	0.00	0.00	14.30	7.13	701.00	0.26	-113.2	12.70	7.32		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-09-W-241106	Date:	11/6/2024 12:00:00 PM
Well ID:	D-09	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/6/2024 11:29:00 AM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.47 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/6/2024 11:35:00 AM	End Date and Time:	11/6/2024 11:57:00 AM
Initial Pump Depth:	18 ft btoc	Final Pump Depth:	18 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:37 AM	120		0.00	14.60	6.65	890.00	2.34	-52.1	19.90	6.48	None	Particles
11:42 AM	120		0.00	14.70	6.70	910.00	0.63	-61.6	5.43	6.48	"	More clear
11:47 AM	120		0.00	14.77	6.72	911.00	0.38	-65.9	2.86	6.48	"	"
11:52 AM	120		0.00	14.60	6.72	913.00	0.34	-67.8	3.53	6.47	"	"
11:57 AM	120	2.50	2.50	14.80	6.73	914.00	0.29	-69.0	2.25	6.47	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-10-W-241105	Date:	11/5/2024 11:10:00 AM
Well ID:	D-10	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 10:32:00 AM	Measured Well Depth:	24.25 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.44 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 10:40:00 AM	End Date and Time:	11/5/2024 11:08:00 AM
Initial Pump Depth:	20 ft btoc	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
10:45 AM	120	1.00	1.00	14.60	7.41	1414.00	0.35	-50.4	74.80	7.44		
10:50 AM	120	1.00	2.00	14.70	7.31	1209.00	0.20	-88.8	50.60	7.44		
10:53 AM	120	1.00	3.00	14.70	7.32	1187.00	0.23	-98.3	40.50	7.44		
10:56 AM	150	1.00	4.00	14.80	7.33	1196.00	0.25	-102.0	37.20	7.44		
10:59 AM	150	1.00	5.00	14.80	7.29	1141.00	0.21	-107.6	30.50	7.44		
11:02 AM	150	1.00	6.00	14.90	7.29	1129.00	0.18	-111.4	25.10	7.44		
11:05 AM	150	1.00	7.00	14.80	7.30	1117.00	0.18	-114.1	27.10	7.45		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
11:08 AM	150	1.00	8.00	14.80	7.28	1092.00	0.16	-116.2	25.30	7.45		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-11-W-241105	Date:	11/5/2024 1:27:00 PM
Well ID:	D-11	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	E. Richardson
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 12:50:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.33 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Measuring point - TOC		

Purge Information

Begin Date and Time:	11/5/2024 12:53:00 PM	End Date and Time:	11/5/2024 1:25:00 PM
Initial Pump Depth:	20 ft btoc	Final Pump Depth:	20 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:55 PM	180		0.00	14.00	7.62	1708.00	0.41	-53.2	56.90	7.38		
12:58 PM	150		0.00	13.90	7.54	1631.00	0.27	-76.5	65.10	7.38		
1:01 PM	150		0.00	14.00	7.46	1400.00	0.22	-100.7	84.00	7.38		
1:04 PM	150		0.00	14.10	7.46	1302.00	0.20	-112.7	93.00	7.38		
1:07 PM	150		0.00	14.20	7.38	1171.00	0.20	-114.7	114.00	7.39		
1:10 PM	200		0.00	14.10	7.31	991.00	0.30	-116.9	67.90	7.39		
1:13 PM	200		0.00	14.10	7.30	933.00	0.20	-118.0	46.90	7.39		

Time	Purge Rate (ml/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)
1:16 PM	200		0.00	14.10	7.30	927.00	0.18	-119.9	37.60	7.38		
1:19 PM	200		0.00	14.20	7.30	926.00	0.18	-121.0	26.10	7.39		
1:22 PM	200		0.00	14.10	7.28	913.00	0.17	-123.0	24.10	7.39		
1:25 PM	200		0.00	14.20	7.28	916.00	0.16	-123.7		7.39		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-12-W-241105	Date:	11/5/2024 9:00:00 AM
Well ID:	D-12	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 8:25:00 AM	Measured Well Depth:	28.25 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.51 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 8:33:00 AM	End Date and Time:	11/5/2024 8:59:00 AM
Initial Pump Depth:	25.5 ft btoc	Final Pump Depth:	25.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
8:36 AM	90		0.00	14.50	7.07	0.73	1.20	-86.3	10.50	8.54	Mild hc odor	None
8:41 AM	90		0.00	14.50	6.96	0.76	0.53	-123.1	8.19	8.54	"	"
8:46 AM	90		0.00	14.60	6.98	0.78	0.37	-131.3	3.18	8.53	"	"
8:51 AM	90		0.00	14.50	6.99	0.78	0.41	-134.1	2.92	8.53	"	"
8:56 AM	90		0.00	14.40	7.03	0.79	0.36	-136.1	3.31	8.52	"	"
8:59 AM	90		0.00	14.50	7.03	0.79	0.26	-137.5	2.98	8.52	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-14-w-241106	Date:	11/6/2024 2:57:00 PM
Well ID:	D-14	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 2:28:00 PM	Measured Well Depth:	31.35 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.41 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 2:38:00 PM	End Date and Time:	11/6/2024 2:56:00 PM
Initial Pump Depth:	30 ft btoc	Final Pump Depth:	30 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:41 PM	150		0.00	15.30	7.72	1856.00	0.34	-42.7	16.20	8.95		
2:44 PM	150		0.00	15.30	7.78	1873.00	0.25	-50.7	11.90	9.42		
2:47 PM	150		0.00	15.30	7.85	1879.00	0.19	-68.4	5.43	10.00		
2:50 PM	150		0.00	15.30	7.84	1880.00	0.17	-76.0	1.31	10.53		
2:53 PM	150		0.00	15.50	7.86	1873.00	0.15	-83.8	3.06	11.11		
2:56 PM	150		0.00	15.40	7.86	1877.00	0.15	-87.2	2.91	11.53		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-15-w-241105	Date:	11/5/2024 9:35:00 AM
Well ID:	D-15	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 9:05:00 AM	Measured Well Depth:	20.75 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.33 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 9:06:00 AM	End Date and Time:	11/5/2024 9:32:00 AM
Initial Pump Depth:	15 ft btoc	Final Pump Depth:	15 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
9:10 AM	150	1.00	1.00	15.40	6.95	589.00	0.32	-55.3	22.40	8.33		
9:13 AM	150	1.00	2.00	15.50	6.97	592.00	0.27	-72.0	15.30	8.33		
9:16 AM	150	1.00	3.00	15.30	6.97	593.00	0.20	-81.8	14.20	8.33		
9:19 AM	150	1.00	4.00	15.30	7.00	595.00	0.17	-89.0	11.40	8.33		
9:22 AM	150	1.00	5.00	15.30	7.03	600.00	0.15	-95.3	9.50	8.33		
9:25 AM	150	1.00	6.00	15.20	7.02	603.00	0.15	-99.2	7.43	8.33		
9:29 AM	150	1.00	7.00	15.10	7.05	604.00	0.15	-102.3	8.16	8.33		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
9:32 AM	150	1.00	8.00	15.10	7.06	604.00	0.14	-105.4	7.61	8.33		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-16-W-241107	Date:	11/7/2024 2:50:00 PM
Well ID:	D-16	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	E. Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/7/2024 2:20:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.68 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/7/2024 2:25:00 PM	End Date and Time:	11/7/2024 2:49:00 PM
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Not Recorded
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:28 PM	200		0.00	17.00	7.70	1231.00	0.54	-37.4	37.70	6.68		
2:31 PM	200		0.00	16.80	7.96	1359.00	0.22	-47.5	59.20	6.68		
2:34 PM	200		0.00	17.00	8.01	1293.00	0.15	-74.2	8.00	6.68		
2:37 PM	200		0.00	16.90	8.02	1171.00	0.13	-87.1	5.68	6.68		
2:40 PM	200		0.00	16.90	8.02	1120.00	0.12	-91.7	6.39	6.68		
2:43 PM	200		0.00	16.80	8.01	1025.00	0.11	-94.9	5.79	6.68		
2:46 PM	200		0.00	16.80	7.90	997.00	0.11	-96.0	5.66	6.68		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
2:49 PM	200		0.00	16.80	7.86	946.00	0.11	-96.2	5.81	6.68		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-17-W-241104	Date:	11/4/2024 2:20:00 PM
Well ID:	D-17	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/4/2024 1:56:00 PM	Measured Well Depth:	18.80 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.01 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/4/2024 1:59:00 PM	End Date and Time:	11/4/2024 2:14:00 PM
Initial Pump Depth:	13 ft btoc	Final Pump Depth:	13 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:02 PM	175	0.00	0.00	15.90	6.80	567.00	0.73	-32.7	22.80	6.01		
2:05 PM	175	0.00	0.00	16.20	6.44	571.00	0.46	-45.7	22.30	6.01		
2:08 PM	175	0.00	0.00	16.00	6.64	589.00	0.26	-52.4	30.00	6.01		
2:11 PM	175	0.00	0.00	15.90	6.67	605.00	0.32	-54.7	32.60	6.02		
2:14 PM	175	0.00	0.00	16.00	6.62	639.00	0.25	-57.2	32.30	6.01		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-18-W-241106	Date:	11/6/2024 1:22:00 PM
Well ID:	D-18	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/6/2024 12:53:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.76 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/6/2024 12:59:00 PM	End Date and Time:	11/6/2024 1:20:00 PM
Initial Pump Depth:	16.5 ft btoc	Final Pump Depth:	16.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:00 PM	120		0.00	15.80	6.70	946.00	2.53	-33.9	12.90	6.78	None	Mostly clear
1:05 PM	120		0.00	15.90	6.71	944.00	0.62	-47.6	3.90	6.76	"	"
1:10 PM	120		0.00	15.80	6.70	940.00	0.24	-51.3	3.14	6.76	"	"
1:15 PM	120		0.00	15.80	6.70	935.00	0.20	-53.8	2.91	6.77	"	"
1:20 PM	120		0.00	15.80	6.71	932.00	0.20	-55.2	1.98	6.77	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-19-W-241107	Date:	11/7/2024 1:02:00 PM
Well ID:	D-19	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/7/2024 8:54:00 AM	Measured Well Depth:	21.89 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.09 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/7/2024 9:01:00 AM	End Date and Time:	11/7/2024 9:40:00 AM
Initial Pump Depth:	19 ft btoc	Final Pump Depth:	19 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
9:03 AM	75		0.00	13.00	5.99	0.59	0.76	-2.7	147.00	7.12	Mils hc odor	Yellow,
9:08 AM	75		0.00	13.30	6.18	0.61	0.48	-19.8	120.00	7.12	"	"
9:13 AM	75		0.00	13.50	6.23	0.65	0.32	-27.2	92.70	7.12	"	"
9:18 AM	75		0.00	13.70	6.27	0.67	0.24	-34.6	76.80	7.10	"	"
9:23 AM	75		0.00	13.80	6.30	0.67	0.23	-37.6	55.90	7.10	"	"
9:28 AM	75		0.00	14.00	6.31	0.69	0.17	-40.8	39.00	7.09	"	"
9:31 AM	75		0.00	14.00	6.32	0.69	0.21	-42.2	37.90	7.09	"	"

Time	Purge Rate (ml/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)
9:34 AM	75		0.00	14.00	6.33	0.69	0.16	-42.9	33.40	7.08	"	"
9:37 AM	75		0.00	13.90	6.34	0.70	0.15	-44.4	34.90	7.07	"	"
9:40 AM	75		0.00	13.90	6.34	0.70	0.14	-45.3	34.00	7.06		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-22-w-241107	Date:	11/7/2024 10:10:00 AM
Well ID:	D-22	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 9:50:00 AM	Measured Well Depth:	20.18 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.79 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 9:51:00 AM	End Date and Time:	11/7/2024 10:07:00 AM
Initial Pump Depth:	19 ft btoc	Final Pump Depth:	19 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
9:52 AM	160	1.00	1.00	13.70	7.36	431.40	0.59	36.6	53.00	8.79		
9:55 AM	160	1.00	2.00	13.70	7.29	452.30	0.26	11.2	29.70	8.78		
9:58 AM	160	1.00	3.00	13.70	7.32	477.10	0.24	-6.4	20.20	8.79		
10:01 AM	160	1.00	4.00	13.70	7.33	486.70	0.24	-23.5	22.80	8.79		
10:04 AM	160	1.00	5.00	13.60	7.33	492.60	0.19	-28.3	21.90	8.78		
10:07 AM	160	1.00	6.00	13.60	7.33	494.10	0.16	-36.4	20.10	8.79		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-23-W-241105	Date:	11/5/2024 12:44:00 PM
Well ID:	D-23	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 11:57:00 AM	Measured Well Depth:	21.06 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.01 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 12:03:00 PM	End Date and Time:	11/5/2024 12:46:00 PM
Initial Pump Depth:	16 ft btoc	Final Pump Depth:	16 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:05 PM	90		0.00	13.60	7.16	0.81	0.21	-93.2	69.20	8.02	Hc odor	Yellow
12:10 PM	90		0.00	13.60	7.10	0.81	0.47	-116.7	49.70	8.03	"	"
12:15 PM	90		0.00	13.50	7.12	0.81	0.25	-127.3	38.50	8.04	"	"
12:20 PM	90		0.00	13.60	7.12	0.82	0.20	-132.7	22.30	8.06	"	"
12:25 PM	90		0.00	13.40	7.12	0.82	0.21	-135.2	19.70	8.06	"	"
12:28 PM	90		0.00	13.50	7.13	0.82	0.22	-137.3	15.30	8.07	"	"
12:31 PM	90		0.00	13.50	7.11	0.82	0.22	-137.5	13.20	8.07		

Time	Purge Rate (ml/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)
12:34 PM	90		0.00	13.50	7.11	0.82	0.20	-138.6	10.90	8.08		
12:37 PM	90		0.00	13.50	7.09	0.82	0.17	-139.0	9.92	8.08		
12:40 PM	90		0.00	13.40	7.10	0.82	0.14	-138.8	8.95	8.09		
12:43 PM	90		0.00	13.40	7.09	0.82	0.14	-139.0	8.36	8.09	"	"
12:46 PM	90		0.00	13.40	7.09	0.82	0.13	-139.0	8.55	8.09		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-24-W-241105	Date:	11/5/2024 3:51:00 PM
Well ID:	D-24	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 3:23:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.96 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 3:28:00 PM	End Date and Time:	11/5/2024 3:49:00 PM
Initial Pump Depth:	16.5 ft btoc	Final Pump Depth:	16.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
3:29 PM	120		0.00	18.40	6.60	15378.00	1.56	-154.5	1.35	6.97	Strong sulfur	Mostly clear w dark
3:34 PM	120		0.00	18.70	6.91	15716.00	0.00	-301.2	1.04	6.97	"	Clear w dark partic
3:39 PM	120		0.00	18.50	6.89	14791.00	0.00	-319.6	0.66	6.97	"	Dark gray
3:44 PM	120		0.00	18.60	6.86	14041.00	0.00	-323.1	0.64	6.97	"	"



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
3:49 PM	120		0.00	18.50	6.80	13535.00	0.06	-325.4	0.41	6.97	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-25-W-241105	Date:	11/5/2024 11:40:00 PM
Well ID:	D-25	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 11:10:00 AM	Measured Well Depth:	19.90 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.19 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 11:15:00 AM	End Date and Time:	11/5/2024 11:36:00 AM
Initial Pump Depth:	16.5 ft btoc	Final Pump Depth:	16.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:16 AM	100		0.00	17.30	6.66	706.00	2.67	-53.8	3.75	8.20	None	Clear
11:21 AM	100		0.00	17.30	6.59	713.00	0.38	-61.7	1.73	8.20	"	"
11:26 AM	100		0.00	17.40	6.58	719.00	0.19	-65.8	0.55	8.20	"	"
11:31 AM	100		0.00	17.50	6.58	724.00	0.21	-68.0	1.27	8.20	"	"
11:36 AM	100	4.00	4.00	17.30	6.58	729.00	0.16	-70.3	1.31	8.20		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-26-W-241105	Date:	11/5/2024 1:50:00 PM
Well ID:	D-26	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	MS/MSD collected		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 1:22:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.59 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 1:27:00 PM	End Date and Time:	11/5/2024 1:48:00 PM
Initial Pump Depth:	16.5 ft btoc	Final Pump Depth:	16.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:28 PM	100		0.00	15.50	6.28	574.50	2.25	-3.8	5.69	8.60	None	Clear w particles
1:33 PM	100		0.00	15.60	6.30	592.20	0.40	-17.1	2.19	8.60	"	"
1:38 PM	100		0.00	15.70	6.32	591.00	0.29	-24.6	1.14	8.60	"	Clear
1:43 PM	100		0.00	15.60	6.31	589.60	0.28	-27.6	0.78	8.60	"	"
1:48 PM	100		0.00	15.70	6.31	585.40	0.28	-30.7	0.56		"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	D-27-W-241105	Date:	11/5/2024 9:00:00 AM
Well ID:	D-27	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 8:18:00 AM	Measured Well Depth:	19.75 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.76 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 8:31:00 AM	End Date and Time:	11/5/2024 8:55:00 AM
Initial Pump Depth:	16.5 ft btoc	Final Pump Depth:	16.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
8:32 AM	100		0.00	15.80	6.40	740.00	27.40	-27.9	41.00	8.66	None	Mostly clear w part
8:37 AM	100		0.00	16.10	6.64	781.00	0.49	-78.4	13.70	8.65	"	"
8:42 AM	100		0.00	16.10	6.69	789.00	0.28	-88.4	14.50	8.64	"	"
8:47 AM	100		0.00	16.10	6.71	788.00	0.23	-91.9	16.60	8.64	"	"
8:52 AM	100		0.00	16.10	6.73	789.00	0.27	-94.6	16.30	8.63	"	"
8:55 AM	100		0.00	16.20	6.74	789.00	0.21	-96.2	16.60	8.62	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	D-28-W-241105	Date:	11/5/2024 3:33:00 PM
Well ID:	D-28	Location Type:	Not In Database
Duplicate ID:	Not Applicable	Sampler:	Lauren Landreneau
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 2:40:00 PM	Measured Well Depth:	24.20 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.46 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Measuring point - TOC, LDPE Tubing		

Purge Information

Begin Date and Time:	11/5/2024 2:44:00 PM	End Date and Time:	11/5/2024 3:35:00 PM
Initial Pump Depth:	20 ft btoc	Final Pump Depth:	Not Recorded
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:46 PM	90		0.00	14.60	7.01	789.00	1.12	-47.3	93.10	7.43		
2:51 PM	90		0.00	15.00	6.99	800.00	0.59	-64.7	96.10	7.43		
2:56 PM	75		0.00	15.00	6.98	797.00	0.57	-73.6	48.90	7.46		
3:01 PM	75		0.00	15.00	6.98	797.00	0.57	-73.6	48.90	7.46		
3:06 PM	75		0.00	15.00	7.00	796.00	0.56	-76.6	34.50	7.46		
3:11 PM	75		0.00	14.90	7.01	774.00	0.37	-80.1	27.30	7.47		
3:14 PM	75		0.00	15.00	7.00	796.00	0.51	-80.5	15.20	7.46		

Time	Purge Rate (ml/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)
3:17 PM	75		0.00	15.00	6.99	769.00	0.47	-80.8	17.90	7.46		
3:20 PM	75		0.00	14.90	7.00	797.00	0.47	-83.7	11.80	7.47		
3:23 PM	75		0.00	14.90	6.99	797.00	0.46	-86.1	8.30	7.47		
3:26 PM	75		0.00	14.90	6.99	796.00	0.44	-87.1	6.39	7.47		
3:29 PM	75		0.00	14.90	7.00	797.00	0.45	-88.8	5.27	7.48		
3:32 PM	75		0.00	14.80	7.01	798.00	0.42	-90.0	3.54	7.48		
3:35 PM	75		0.00	14.80	7.00	798.00	0.42	-90.0	3.74	7.49		
3:11 PM	75		0.00	14.90	7.01	0.79	0.39	-80.1	27.30	7.47		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-10-	Date:	11/4/2024 1:18:00 PM
Well ID:	MW-10	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Well ran dry		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/4/2024 1:18:00 PM	Measured Well Depth:	7.45 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	5.48 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/4/2024 1:24:00 PM	End Date and Time:	11/4/2024 1:39:00 PM
Initial Pump Depth:	6.5 ft btoc	Final Pump Depth:	7.45 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Not Recorded
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
3:07 PM	150	0.30	0.30	20.40	6.81	0.85	2.23	-66.2	12.08	7.11	None	Clear
1:27 PM	200	0.00	0.00	16.50	6.65	833.00	1.76	112.7	7.97	6.14		
1:30 PM	100	0.00	0.00	16.10	6.64	809.00	1.50	77.1	5.15	6.69		
1:33 PM	100	0.00	0.00	16.10	6.63	765.00	2.13	63.3	6.96	6.90		
1:36 PM	100	0.00	0.00	15.80	6.65	791.00	1.69	44.6	44.60	7.15		
1:39 PM	100	0.00	0.00	16.30	6.75	847.00	1.75	20.1	93.10	7.45		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-12-W-241106	Date:	11/6/2024 10:45:00 AM
Well ID:	MW-12	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	fair	Well Locked (if Stick-Up?)	yes
Lid Condition:	fair	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 10:06:00 AM	Measured Well Depth:	7.94 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	5.83 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 10:15:00 AM	End Date and Time:	11/6/2024 10:45:00 AM
Initial Pump Depth:	6.9 ft btoc	Final Pump Depth:	6.9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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	75		0.00	15.60	6.73	0.80	1.55	43.6	30.30	5.94	Hc odor	Yellow
10:24 AM	75		0.00	16.00	6.76	0.81	0.79	-20.7	18.20	5.95	"	"
10:29 AM	75		0.00	16.10	6.76	0.82	0.39	-58.8	10.80	5.96	"	"
10:34 AM	75		0.00	16.10	6.79	0.81	0.31	-66.9	7.98	5.98	"	None
10:39 AM	75		0.00	16.10	6.77	0.81	0.27	-73.0	5.48	5.99	"	"
10:42 AM	75		0.00	16.20	6.78	0.81	0.26	-74.1	5.12	5.99	"	"
10:45 AM	75		0.00	16.10	6.77	0.81	0.24	-76.3	5.17	5.99	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:		Date:	
Well ID:	MW-13	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:		Not Recorded	
Comments:		Not Recorded	

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:		Not Recorded	

Water Level			
Date:	11/6/2024 11:30:00 PM	Measured Well Depth:	11.20 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.65 ft btoc	Depth to LNAPL:	Not Encountered
Notes:		Not Recorded	

Purge Information			
Begin Date and Time:	Not Recorded	End Date and Time:	Not Recorded
Initial Pump Depth:	Not Recorded	Final Pump Depth:	Not Recorded
Purge Method:	Not Recorded	Sample Method:	Not Recorded
Notes:		Not Recorded	

Time	Purge Rate (ml/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)
11:47 AM	150		0.00	15.10	7.40	475.50	0.46	-68.9	8.11	7.75		
11:50 AM	150		0.00	15.20	7.14	465.50	0.27	-73.7	9.07	7.76		
11:53 AM	150		0.00	15.20	7.16	456.30	0.21	-74.8	9.95	7.74		
11:56 AM	150		0.00	15.10	7.22	460.00	0.22	-73.9	10.70	7.76		
11:59 AM	150		0.00	15.50	7.22	462.50	0.21	-75.9	11.30	7.77		
12:02 PM	150		0.00	15.40	7.20	463.60	0.33	-76.1	9.43	7.75		

Time	Purge Rate (ml/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)
12:05 PM	150		0.00	15.40	7.17	473.60	0.32	-77.1	9.09	7.76		
12:08 PM	150		0.00	15.40	7.18	469.00	0.24	-78.6	8.39	7.75		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	Mw-14-w-241106	Date:	11/6/2024 2:10:00 PM
Well ID:	MW-14	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 1:47:00 PM	Measured Well Depth:	12.15 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.51 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 1:48:00 PM	End Date and Time:	11/6/2024 2:08:00 PM
Initial Pump Depth:	10 ft btoc	Final Pump Depth:	10 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:50 PM	180		0.00	16.20	7.01	317.60	0.91	-51.0	17.00	7.65		
1:53 PM	180		0.00	16.20	6.89	330.30	0.66	-48.9	14.40	7.66		
1:56 PM	180		0.00	16.20	6.85	349.30	0.52	-45.4	11.30	7.67		
1:59 PM	180		0.00	16.30	6.84	359.70	0.47	-59.4	11.30	7.68		
2:02 PM	180		0.00	16.30	6.83	375.10	0.42	-59.6	10.10	7.67		
2:05 PM	180		0.00	16.30	6.84	375.40	0.49	-61.3	9.90	7.67		
2:08 PM	180		0.00	16.30	6.85	383.20	0.49	-62.7	9.21	7.68		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-18-W-241106	Date:	11/6/2024 1:10:00 PM
Well ID:	MW-18	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # a02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 12:33:00 PM	Measured Well Depth:	10.85 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	9.35 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 12:44:00 PM	End Date and Time:	11/6/2024 1:09:00 PM
Initial Pump Depth:	10 ft btoc	Final Pump Depth:	10 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:46 PM	80		0.00	15.00	7.22	0.41	0.62	-64.6	19.50	9.36	Strong hc odor	None
12:51 PM	80		0.00	15.20	7.04	0.41	0.49	-67.2	12.40	9.37	"	"
12:56 PM	80		0.00	15.40	7.02	0.42	0.29	-76.6	7.61	9.37	'	"
1:01 PM	80		0.00	15.40	7.02	0.42	0.30	-75.3	5.24	9.37		""
1:06 PM	80		0.00	15.50	7.03	0.42	0.30	-76.9	4.86	9.38	"	"



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
1:09 PM	80		0.00	15.50	7.02	0.42	0.31	-76.8	4.71	9.37	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-19-W-241106	Date:	11/6/2024 2:18:00 PM
Well ID:	MW-19	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # a02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	fair	Well Locked (if Stick-Up?)	yes
Lid Condition:	fair	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 1:42:00 PM	Measured Well Depth:	9.39 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.21 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 1:49:00 PM	End Date and Time:	11/6/2024 2:17:00 PM
Initial Pump Depth:	8 ft btoc	Final Pump Depth:	8 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:51 PM	80		0.00	16.70	6.68	0.87	1.15	-66.8	17.60	6.24		None
1:56 PM	80		0.00	16.80	6.76	0.87	0.40	-78.6	16.00	6.25	Very mild hc odor	
2:01 PM	80		0.00	16.90	6.77	0.87	0.25	-82.5	13.40	6.27	"	""
2:06 PM	80		0.00	17.00	6.77	0.87	0.19	-84.0	9.37	6.28	"	""
2:11 PM	80		0.00	16.90	6.78	0.86	0.17	-82.9	7.72	6.28	"	"

Time	Purge Rate (ml/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)
2:14 PM	80		0.00	17.00	6.78	0.86	0.15	-81.9	7.84	6.28		
2:17 PM	80		0.00	17.00	6.77	0.86	0.13	-81.3	7.44	6.29		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	Mw-21-w-241107	Date:	11/7/2024 11:50:00 AM
Well ID:	MW-21	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/7/2024 11:24:00 AM	Measured Well Depth:	9.15 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	4.77 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/7/2024 11:27:00 AM	End Date and Time:	11/7/2024 11:49:00 AM
Initial Pump Depth:	6 ft btoc	Final Pump Depth:	6 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:29 AM	120		0.00	15.90	7.10	572.00	0.38	-43.9	24.40	5.01		
11:34 AM	120		0.00	16.00	7.10	580.00	0.19	-52.9	10.70	5.20		
11:37 AM	120		0.00	16.00	7.11	574.00	0.19	-56.9	6.97	5.25		
11:40 AM	120		0.00	16.10	7.12	571.00	0.25	-58.1	5.92	5.31		
11:43 AM	120		0.00	16.10	7.13	564.00	0.18	-60.9	3.86	5.37		
11:46 AM	120		0.00	16.10	7.14	559.00	0.14	-62.5	2.72	5.40		
11:49 AM	120		0.00	16.10	7.15	553.00	0.18	-63.4	3.00	5.45		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	Mw-22-w-241107	Date:	11/7/2024 12:40:00 PM
Well ID:	MW-22	Location Type:	Monitoring Well
Duplicate ID:	Dup-1-wd-241107	Sampler:	Emily Richardson
Equipment:	Not Recorded		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 12:13:00 PM	Measured Well Depth:	7.75 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.15 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 12:13:00 PM	End Date and Time:	11/7/2024 12:35:00 PM
Initial Pump Depth:	7.5 ft btoc	Final Pump Depth:	7 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:14 PM	120		0.00	17.30	7.10	870.00	0.40	-1.3	189.00	6.37		
12:17 PM	120		0.00	17.30	7.09	857.00	0.28	-12.1	89.50	6.41		
12:20 PM	120		0.00	17.40	7.04	847.00	0.37	-25.8	17.70	6.42		
12:23 PM	120		0.00	17.40	7.03	838.00	0.41	-34.4	5.49	6.43		
12:26 PM	120		0.00	17.40	7.03	835.00	0.39	-38.7	2.52	6.43		
12:29 PM	120		0.00	17.40	7.03	834.00	0.18	-50.0	2.08	6.46		

Time	Purge Rate (ml/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)
12:32 PM	120		0.00	17.40	7.03	836.00	0.18	-54.5	1.64	6.47		
12:35 PM	120		0.00	17.40	7.03	833.00	0.18	-57.8	1.15			



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	Mw-23-w-241105	Date:	11/5/2024 3:35:00 PM
Well ID:	MW-23	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 3:05:00 PM	Measured Well Depth:	8.90 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.95 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 3:06:00 PM	End Date and Time:	11/5/2024 3:32:00 PM
Initial Pump Depth:	8 ft btoc	Final Pump Depth:	8 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
3:08 PM	120	0.00	0.00	15.40	7.65	689.00	0.44	-84.0	115.00	6.95		
3:11 PM	150	0.00	0.00	15.60	7.81	662.00	0.38	-90.4	20.20	6.95		
3:14 PM	150	0.00	0.00	15.90	7.91	621.00	0.26	-99.2	6.99	6.95		
3:17 PM	150	0.00	0.00	15.80	7.92	627.00	0.45	-96.7	24.70	6.95		
3:20 PM	150	0.00	0.00	15.90	7.93	626.00	0.38	-100.7	8.56	6.95		
3:23 PM	150	0.00	0.00	15.90	7.95	622.00	0.42	-102.9	2.84	6.99		
3:26 PM	150	0.00	0.00	16.00	7.95	629.00	0.51	-103.7	1.62	7.00		

Time	Purge Rate (ml/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)
3:29 PM	150	0.00	0.00	15.90	7.97	630.00	0.54	-104.2	1.51	7.00		
3:32 PM	150	0.00	0.00	16.00	7.97	632.00	0.56	-103.9	1.51			



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	Mw-25-w-241105	Date:	11/5/2024 12:10:00 PM
Well ID:	MW-25	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 11:29:00 AM	Measured Well Depth:	10.13 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	5.20 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 11:30:00 AM	End Date and Time:	11/5/2024 12:09:00 PM
Initial Pump Depth:	7.5 ft btoc	Final Pump Depth:	7.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:33 AM	150	1.00	1.00	16.10	7.62	369.30	0.44	-44.4	47.30	5.45		
11:36 AM	150	1.00	2.00	16.30	7.71	365.00	0.22	-60.4	35.60	5.53		
11:39 AM	150	1.00	3.00	16.30	7.73	363.90	0.39	-72.8	32.30	5.57		
11:42 AM	150	1.00	4.00	16.10	7.77	364.30	0.35	-80.1	19.90	5.57		
11:45 AM	150	1.00	5.00	16.40	7.84	363.40	0.35	-88.8	19.80	5.58		
11:48 AM	150	1.00	6.00	16.30	8.04	362.20	0.22	-106.7	11.00	5.60		
11:51 AM	150	1.00	7.00	16.40	8.07	361.90	0.24	-111.5	7.11	5.61		

Time	Purge Rate (ml/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)
11:54 AM	150	1.00	8.00	16.40	8.13	361.00	0.22	-119.8	6.18	5.62		
11:57 AM	150	1.00	9.00	16.60	8.24	360.30	0.19	-132.8	2.34	5.64		
12:00 PM	150	1.00	10.00	16.50	8.29	358.60	0.21	-149.6	1.80	5.65		
12:03 PM	150	1.00	11.00	16.50	8.37	359.20	0.28	-156.7	1.16	5.66		
12:06 PM	150	1.00	12.00	16.50	8.39	359.40	0.29	-160.7	0.99	5.67		
12:09 PM	150	1.00	13.00	16.50	8.42	359.10	0.24	-164.3	1.62			



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-26-W-21107	Date:	11/7/2024 1:45:00 PM
Well ID:	MW-26	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 1:04:00 PM	Measured Well Depth:	9.19 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	4.95 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 1:11:00 PM	End Date and Time:	11/7/2024 1:40:00 PM
Initial Pump Depth:	7 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:14 PM	75		0.00	15.10	6.71	0.78	0.65	16.9	7.76	5.21	None	None
1:19 PM	75		0.00	15.40	6.71	0.78	0.44	16.3	8.75	5.61	"	"
1:24 PM	75		0.00	15.40	6.72	0.78	0.34	10.0	6.63	5.90	"	"
1:29 PM	75		0.00	15.20	6.70	0.78	0.37	2.5	5.78	6.38	"	""
1:34 PM	75		0.00	15.60	6.68	0.76	0.44	-6.6	5.60	6.82		
1:37 PM	75		0.00	15.60	6.61	0.74	0.45	-6.1	5.07	6.81		
1:40 PM	75		0.00	15.70	6.68	0.76	0.47	-5.8	5.09	7.06		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-27-W-241105	Date:	11/5/2024 1:55:00 PM
Well ID:	MW-27	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	F. Richardson
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 11:35:00 AM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	3.37 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Measuring point - TOC		

Purge Information

Begin Date and Time:	11/5/2024 1:35:00 PM	End Date and Time:	11/5/2024 1:54:00 PM
Initial Pump Depth:	11 ft btoc	Final Pump Depth:	11 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:36 PM	150	0.15	0.15	14.90	8.38	1392.00	0.26	-87.2		3.50		
1:39 PM	150	0.45	0.60	14.90	8.12	1311.00	0.20	-110.0	547.00	3.48		
1:42 PM	150	0.45	1.05	14.90	7.91	1241.00	0.20	-112.4	148.00	3.49		
1:45 PM	150	0.45	1.50	14.90	7.39	917.00	0.18	-109.1	26.30	3.51		
1:48 PM	150	0.45	1.95	14.90	7.37	842.00	0.16	-121.5	10.20	3.52		
1:51 PM	150	0.45	2.40	14.90	7.36	800.00	0.16	-122.9	10.20	3.52		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
1:54 PM	150	0.45	2.85	14.90	7.36	798.00	0.15	-122.6	10.10	3.53		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	MW-27-W-241105	Date:	11/5/2024 1:55:00 PM
Well ID:	MW-27	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	F. Richardson
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 11:35:00 AM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	3.37 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Measuring point - TOC		

Purge Information			
Begin Date and Time:	11/5/2024 1:35:00 PM	End Date and Time:	11/5/2024 1:54:00 PM
Initial Pump Depth:	11 ft btoc	Final Pump Depth:	11 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:36 PM	150	0.15	0.15	14.90	8.38	1392.00	0.26	-87.2		3.50		
1:39 PM	150	0.45	0.60	14.90	8.12	1311.00	0.20	-110.0	547.00	3.48		
1:42 PM	150	0.45	1.05	14.90	7.91	1241.00	0.20	-112.4	148.00	3.49		
1:45 PM	150	0.45	1.50	14.90	7.39	917.00	0.18	-109.1	26.30	3.51		
1:48 PM	150	0.45	1.95	14.90	7.37	842.00	0.16	-121.5	10.20	3.52		
1:51 PM	150	0.45	2.40	14.90	7.36	800.00	0.16	-122.9	10.20	3.52		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
1:54 PM	150	0.45	2.85	14.90	7.36	798.00	0.15	-122.6	10.10	3.53		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-28-W-241107	Date:	11/7/2024 2:15:00 PM
Well ID:	MW-28	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	E. Richardson
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 1:35:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	4.80 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 1:37:00 PM	End Date and Time:	11/7/2024 2:15:00 PM
Initial Pump Depth:	9 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:38 PM	200		0.00	16.90	7.35	661.00	0.29	-20.0		4.87		
1:43 PM	200		0.00	17.00	7.31	660.00	0.37	-36.2		4.95		
1:48 PM	200		0.00	17.00	7.34	658.00	0.34	-39.7		5.00		
1:51 PM	200		0.00	16.90	7.38	658.00	0.38	-45.8	706.00	5.01		
1:54 PM	200		0.00	16.90	7.37	658.00	0.34	-47.2	159.00	5.04		
1:57 PM	200		0.00	16.90	7.37	658.00	0.34	-47.2	67.20	5.05		
2:00 PM	200		0.00	16.70	7.37	658.00	0.21	-52.4	38.70	5.07		

Time	Purge Rate (ml/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)
2:03 PM	200		0.00	16.90	7.41	658.00	0.18	-57.1	21.30	5.05		
2:06 PM	200		0.00	17.00	7.21	658.00	0.16	-55.3	13.60	5.05		
2:09 PM	200		0.00	17.00	7.21	658.00	0.16	-56.6	9.93	5.06		
2:12 PM	200		0.00	16.90	7.21	657.00	0.16	-57.7	9.95	5.07		
2:15 PM	200		0.00	17.00	7.20	658.00	0.12	-57.8	9.14	5.07		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-28-W-241107	Date:	11/7/2024 2:15:00 PM
Well ID:	MW-28	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	E. Richardson
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 #		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level

Date:	11/7/2024 1:35:00 PM	Measured Well Depth:	Not Measured
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	4.80 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/7/2024 1:37:00 PM	End Date and Time:	11/7/2024 2:15:00 PM
Initial Pump Depth:	9 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:38 PM	200		0.00	16.90	7.35	661.00	0.29	-20.0		4.87		
1:43 PM	200		0.00	17.00	7.31	660.00	0.37	-36.2		4.95		
1:48 PM	200		0.00	17.00	7.34	658.00	0.34	-39.7		5.00		
1:51 PM	200		0.00	16.90	7.38	658.00	0.38	-45.8	706.00	5.01		
1:54 PM	200		0.00	16.90	7.37	658.00	0.34	-47.2	159.00	5.04		
1:57 PM	200		0.00	16.90	7.37	658.00	0.34	-47.2	67.20	5.05		
2:00 PM	200		0.00	16.70	7.37	658.00	0.21	-52.4	38.70	5.07		

Time	Purge Rate (ml/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)
2:03 PM	200		0.00	16.90	7.41	658.00	0.18	-57.1	21.30	5.05		
2:06 PM	200		0.00	17.00	7.21	658.00	0.16	-55.3	13.60	5.05		
2:09 PM	200		0.00	17.00	7.21	658.00	0.16	-56.6	9.93	5.06		
2:12 PM	200		0.00	16.90	7.21	657.00	0.16	-57.7	9.95	5.07		
2:15 PM	200		0.00	17.00	7.20	658.00	0.12	-57.8	9.14	5.07		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	Mw-29-w-241105	Date:	11/5/2024 9:00:00 AM
Well ID:	MW-29	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 8:23:00 AM	Measured Well Depth:	9.23 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.49 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 8:29:00 AM	End Date and Time:	11/5/2024 8:55:00 AM
Initial Pump Depth:	7.5 ft btoc	Final Pump Depth:	9.3 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
8:30 AM	160		0.00	16.90	6.83	704.00	0.32	87.3	126.00	7.00		
8:33 AM	150	1.00	1.00	16.90	6.82	685.00	0.30	43.9	22.30	7.31		
8:36 AM	120	1.00	2.00	16.60	6.81	679.00	0.38	22.6	16.20	7.61		
8:39 AM	120	1.00	3.00	16.70	6.82	678.00	0.33	8.3	14.40	7.81		
8:42 AM	120	1.00	4.00	16.70	6.81	677.00	0.33	0.5	6.50	8.06		
8:45 AM	120	1.00	5.00	16.70	6.80	678.00	0.38	-4.2	4.19	8.26		
8:48 AM	120	1.00	6.00	16.90	6.79	679.00	0.38	-7.6	5.60	8.47		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
8:52 AM	120	1.00	7.00	17.00	6.79	680.00	0.42	-10.4	5.37	8.75		
8:55 AM	120	1.00	8.00	17.00	6.79	681.00	0.43	-11.5	5.39	9.03		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-30-W-241106	Date:	11/6/2024 1:40:00 PM
Well ID:	MW-30	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 12:22:00 PM	Measured Well Depth:	9.04 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	5.74 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 12:28:00 PM	End Date and Time:	11/6/2024 12:45:00 PM
Initial Pump Depth:	7.4 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:30 PM	80		0.00	15.20	6.63	814.00	1.75	-51.5	51.50	6.08	None	Particles
12:35 PM	80		0.00	16.00	6.61	825.00	0.54	-43.8	51.40	6.79	"	"
12:40 PM	80		0.00	16.00	6.63	830.00	0.26	-41.7	43.90	7.51	"	"
12:45 PM	80		0.00	16.00	6.59	816.00	0.26	-61.1	44.00	8.40	"	"

Client: Chevron Environmental Management Company

Project #: 60701804



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-32-W-241106	Date:	11/6/2024 3:39:00 PM
Well ID:	MW-32	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/6/2024 2:47:00 PM	Measured Well Depth:	9.28 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	3.75 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/6/2024 2:52:00 PM	End Date and Time:	11/6/2024 3:19:00 PM
Initial Pump Depth:	6.5 ft btoc	Final Pump Depth:	6.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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) Light hc odor	Color (none)
2:55 PM	80		0.00	15.00	5.94	0.42	0.62	28.5	27.90	3.80		None
3:00 PM	80		0.00	15.20	5.88	0.43	0.34	42.3	26.40	3.81		
3:05 PM	80		0.00	15.20	5.91	0.44	0.25	23.6	24.20	3.82		
3:10 PM	80		0.00	15.20	5.93	0.45	0.21	16.5	23.20	3.82		
3:13 PM	80		0.00	15.20	5.94	0.45	0.18	12.5	24.80	3.82		
3:16 PM	80		0.00	15.20	6.00	0.45	0.19	1.4	25.70	3.83		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
3:19 PM	80		0.00	15.20	6.01	0.45	0.17	0.5		3.83		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-33-W-241105	Date:	11/5/2024 11:35:00 AM
Well ID:	MW-33	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 10:56:00 AM	Measured Well Depth:	9.06 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.44 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 11:04:00 AM	End Date and Time:	11/5/2024 11:33:00 AM
Initial Pump Depth:	8 ft btoc	Final Pump Depth:	7.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
11:07 AM	90		0.00	14.00	6.95	0.76	1.09	-91.4	24.30	6.55	Hc like odor	Light yellow tint
11:12 AM	90		0.00	13.80	6.98	0.79	0.01	-92.2	11.90	6.70	"	"
11:17 AM	75		0.00	13.80	6.99	0.78	0.00	-95.6	8.01	6.72	"	"
11:22 AM	75		0.00	13.80	6.99	0.78	0.01	-96.9	5.04	6.75		
11:27 AM	75		0.00	13.90	7.00	0.78	0.56	-100.1	4.06	6.81		
11:30 AM	90		0.00	13.90	6.98	0.78	0.35	-100.2	3.78	6.83		



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
11:33 AM	90		0.00	13.90	6.98	0.78	0.01	-99.5	4.76	6.85		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	Mw-34-w-241107	Date:	11/7/2024 9:25:00 AM
Well ID:	MW-34	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Emily Richardson
Equipment:	Field param meter: YSI Pro Plus # WL/int meter: Solinst 101 # 39547		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	Not Recorded	Well Action Needed?	Not Recorded
Box Condition:	Not Recorded	Well Locked (if Stick-Up?)	N/A
Lid Condition:	Not Recorded	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	Not Recorded
Notes:	Not Recorded		

Water Level			
Date:	11/7/2024 8:48:00 AM	Measured Well Depth:	12.90 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.61 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/7/2024 8:51:00 AM	End Date and Time:	11/7/2024 9:21:00 AM
Initial Pump Depth:	11 ft btoc	Final Pump Depth:	11 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
8:54 AM	160	1.00	1.00	14.40	6.87	722.00	0.89	108.1	68.20	8.62		
8:57 AM	160	1.00	2.00	14.80	7.21	725.00	0.71	95.4	33.90	8.62		
9:00 AM	160	1.00	3.00	14.90	7.27	718.00	0.61	82.5	18.60	8.63		
9:03 AM	160	1.00	4.00	15.00	7.29	715.00	0.57	69.8	9.32	8.63		
9:06 AM	160	1.00	5.00	15.10	7.30	714.00	0.58	63.1	9.01	8.63		
9:09 AM	160	1.00	6.00	15.00	7.30	714.00	0.57	55.7	5.94	8.63		
9:12 AM	160	1.00	7.00	14.90	7.34	717.00	0.64	47.0	4.41	8.63		

GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
9:15 AM	160	1.00	8.00	15.00	7.30	713.00	0.71	40.1	3.71	8.63		
9:18 AM	160	1.00	9.00	14.90	7.30	715.00	0.70	34.5	2.88	8.63		
9:21 AM	160	1.00	10.00	15.00	7.31	713.00	0.64	30.5	2.08	8.63		



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	MW-36-W-241105	Date:	11/5/2024 3:07:00 PM
Well ID:	MW-36	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	Yes
Box Condition:	poor	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Well casing crooked		

Water Level			
Date:	11/5/2024 2:29:00 PM	Measured Well Depth:	9.48 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.21 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 2:36:00 PM	End Date and Time:	11/5/2024 3:04:00 PM
Initial Pump Depth:	8.35 ft btoc	Final Pump Depth:	8.95 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
2:38 PM	80		0.00	17.20	6.94	756.00	1.23	54.0	10.60	7.49	None	Mostly clear
2:43 PM	80		0.00	18.20	6.90	807.00	0.37	26.0	15.90	7.69	"	"
2:48 PM	80		0.00	18.30	6.77	1062.00	0.35	2.3	17.10	7.71	"	"
2:53 PM	80		0.00	18.50	6.78	1179.00	0.35	-16.0	9.47	7.77	"	"
2:58 PM	80		0.00	18.60	6.76	1274.00	0.33	-24.9	5.46	7.82	"	"



GROUNDWATER SAMPLING LOG

Time	Purge Rate (ml/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)
3:01 PM	80		0.00	18.60	6.74	1322.00	0.28	-27.4	5.01	7.84	"	"
3:04 PM	80		0.00	18.60	6.74	1392.00	0.23	-30.0	4.62	7.86	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information			
Sample ID:	MW-37-W-241105	Date:	11/5/2024 11:55:00 AM
Well ID:	MW-37	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	grab after well ran dry		

Well Inspection			
Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level			
Date:	11/5/2024 10:39:00 AM	Measured Well Depth:	9.89 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.80 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information			
Begin Date and Time:	11/5/2024 10:52:00 AM	End Date and Time:	11/5/2024 11:05:00 AM
Initial Pump Depth:	8.85 ft btoc	Final Pump Depth:	9.8 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
10:55 AM	80		0.00	16.90	6.76	1268.00	1.39	-113.5	3.18	8.09	None	Clear
11:00 AM	80		0.00	18.30	6.73	1292.00	0.43	-111.5	3.52	8.72	"	"
11:05 AM	80		0.00	18.70	6.74	1304.00	0.28	-116.4	7.24	9.59	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-38-W-241105	Date:	11/5/2024 1:05:00 PM
Well ID:	MW-38	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 12:31:00 PM	Measured Well Depth:	9.80 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	8.15 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 12:35:00 PM	End Date and Time:	11/5/2024 1:01:00 PM
Initial Pump Depth:	8.98 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
12:38 PM	80		0.00	16.20	6.22	459.30	1.55	-11.8	53.50	8.19	None	Cloudy
12:43 PM	80		0.00	16.50	6.15	432.20	0.80	39.9	8.52	8.19	"	More clear
12:48 PM	80		0.00	16.60	6.13	423.30	0.52	81.2	1.60	8.20	"	Clear
12:53 PM	80		0.00	16.50	6.13	421.90	0.42	77.7	1.06	8.20	"	"
12:58 PM	80		0.00	16.70	6.13	421.00	0.42	78.5	1.27	8.20	"	"
1:01 PM	80	3.00	3.00	16.70	6.13	421.20	0.40	79.5	1.12	8.20	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-39-W-241105	Date:	11/5/2024 9:58:00 AM
Well ID:	MW-39	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	CelovskyL
Equipment:	Field param meter: YSI Pro Plus # 34641 WL/int meter: Solinst 101 # A04015		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 9:20:00 AM	Measured Well Depth:	9.91 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	6.36 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 9:24:00 AM	End Date and Time:	11/5/2024 9:53:00 AM
Initial Pump Depth:	8.14 ft btoc	Final Pump Depth:	8.34 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
9:27 AM	80		0.00	16.20	6.95	989.00	2.52	-4.8	9.83	6.52	HC	mostl clear
9:32 AM	80		0.00	17.50	6.95	999.00	0.70	-26.3	7.00	6.59	"	"
9:37 AM	80		0.00	17.20	6.99	999.00	0.93	-40.6	2.58	6.62	"	Clear
9:42 AM	80		0.00	17.20	6.99	993.00	0.55	-46.7	1.39	6.59	"	"
9:47 AM	80		0.00	17.30	7.00	993.00	0.47	-50.5	0.78	6.60	"	"
9:50 AM	80		0.00	17.40	7.00	992.00	0.37	-52.4	0.54	6.60	"	"
9:53 AM	80	5.00	5.00	17.20	7.00	992.00	0.34	-53.4	0.37	6.58	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	MW-40-W-241105	Date:	11/5/2024 2:02:00 PM
Well ID:	MW-40	Location Type:	Not In Database
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	2 in
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 1:23:00 PM	Measured Well Depth:	11.09 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	7.01 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 1:28:00 PM	End Date and Time:	11/5/2024 1:58:00 PM
Initial Pump Depth:	9 ft btoc	Final Pump Depth:	9 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
1:32 PM	90		0.00	14.60	6.99	0.72	0.89	-61.0	111.00	7.03	Mild hc like odor	Yellow
1:37 PM	90		0.00	15.20	6.99	0.73	0.39	-83.1	66.30	7.05	"	"
1:42 PM	90		0.00	15.20	6.99	0.73	0.38	-85.2	38.80	7.06	"	"
1:47 PM	90		0.00	15.20	7.00	0.73	0.35	-89.2	27.90	7.07	"	Less yellow
1:52 PM	90		0.00	15.20	7.01	0.73	0.36	-93.9	25.50	7.08	"	"

Time	Purge Rate (ml/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)
1:55 PM	90		0.00	15.20	7.02	0.73	0.37	-94.9	23.60	7.07	"	"
1:58 PM	90		0.00	15.00	7.03	0.73	0.36	-94.5	22.90	7.07	"	"



GROUNDWATER SAMPLING LOG

Client: Chevron Environmental Management Company
Site: Chevron Tacoma

Project #: 60701804
Event: 2024-Q4-GW

Sample Information

Sample ID:	RMW-1-W-241105	Date:	11/5/2024 10:10:00 AM
Well ID:	RMW-01	Location Type:	Monitoring Well
Duplicate ID:	Not Applicable	Sampler:	Molly Mcdonald
Equipment:	Field param meter: YSI Pro Plus # 43945 WL/int meter: Solinst 101 # A02016		
Comments:	Not Recorded		

Well Inspection

Well Located?	Yes	Well Diameter:	Not In Database
Pad Condition:	good	Well Action Needed?	No
Box Condition:	good	Well Locked (if Stick-Up?)	yes
Lid Condition:	good	Lid Type:	Not Recorded
Cap Condition:	Not Recorded	Well Labeled?	yes
Notes:	Not Recorded		

Water Level

Date:	11/5/2024 9:34:00 AM	Measured Well Depth:	9.88 ft btoc
Is Well Dry?	No	Depth to DNAPL:	Not Encountered
Depth to Water:	5.86 ft btoc	Depth to LNAPL:	Not Encountered
Notes:	Not Recorded		

Purge Information

Begin Date and Time:	11/5/2024 9:41:00 AM	End Date and Time:	11/5/2024 10:07:00 AM
Initial Pump Depth:	7 ft btoc	Final Pump Depth:	7.5 ft btoc
Purge Method:	Low flow (pump : Peristaltic)	Sample Method:	Low flow
Notes:	Not Recorded		

Time	Purge Rate (ml/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)
9:44 AM	90		0.00	15.00	6.93	0.66	0.85	-27.8	4.45	5.91	Hc like odor	Mild yellow
9:49 AM	90		0.00	15.50	6.86	0.66	0.41	-48.4	2.81	5.91	"	"
9:54 AM	90		0.00	15.70	6.88	0.66	0.37	-57.3	1.78	5.91	"	"
9:59 AM	90		0.00	15.70	6.88	0.66	0.22	-61.1	1.87	5.92	"	"
10:04 AM	90		0.00	15.70	6.89	0.66	0.26	-64.2	1.99	5.92	"	"
10:07 AM	90		0.00	15.80	6.89	0.66	0.35	-66.3	1.35	5.92	"	Nine

Appendix C

Laboratory Analytical Reports



ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Bradley Wynne
AECOM
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JOB DESCRIPTION

CEMREC Legacy Sites – Tacoma

JOB NUMBER

410-151795-1

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Authorized for release by
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Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	4
Definitions/Glossary	5
Case Narrative	6
Detection Summary	8
Client Sample Results	11
Surrogate Summary	30
QC Sample Results	34
QC Association Summary	47
Lab Chronicle	54
Certification Summary	62
Method Summary	63
Sample Summary	64
Chain of Custody	65
Receipt Checklists	68



Definitions/Glossary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Qualifiers

GC VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

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

Case Narrative

Client: AECOM
Project: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Job ID: 410-151795-1

Eurofins Lancaster Laboratories Environment

Job Narrative 410-151795-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Revision

The report being provided is a revision of the original report sent on 12/13/2023. The report (revision 1) is being revised due to: Correct sample ID for MW-10.

Receipt

The samples were received on 11/17/2023 9:57 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4°C, 0.5°C, 1.2°C and 4.8°C

GC/MS VOA

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

GC VOA

Method NWTPH_Gx: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-31-W-231114 (410-151795-6). Elevated reporting limits (RLs) are provided.

Method NWTPH_Gx: The continuing calibration verification (CCV) analyzed on 410-446883 is compliant under 8260C/D method criteria for C7-C12. The software does not display the % Drift data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the check passes the criteria with a value of 20% Drift.

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

GC Semi VOA

Method NWTPH_Dx: The surrogate recovery for the blank and laboratory control sample (LCS) associated with preparation batch 410-446260 and 410-447811 and analytical batch 410-448229 was outside the lower control limits.

Method NWTPH_Dx: Surrogate recovery for the following sample was outside of acceptance limits: MW-1D-W-231113 (410-151795-1). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method NWTPH_Dx: The method blank for preparation batch 410-448167 and 410-449581 contained C24-C40 with Silica Gel clean up above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. MW-38-W-231115 (410-151795-9), D-27-W-231115 (410-151795-18), MW-39-W-231115 (410-151795-19), D-12-W-231115 (410-151795-21), D-15-W-231115 (410-151795-22), MW-36-W-231115 (410-151795-23) and MW-37-W-231115 (410-151795-24)

Method NWTPH_Dx: Surrogate recovery for the following sample was outside control limits: MW-31-W-231114 (410-151795-6). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

Method NWTPH_Dx: The method blank for preparation batch 410-447356 and 410-449353 contained C12-C24 with Silica Gel clean up and C24-C40 with Silica Gel clean up above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. MW-31-W-231114 (410-151795-6), MW-12-W-231114 (410-151795-7) and D-08-W-231114 (410-151795-8)

Method NWTPH_Dx: The method blank for preparation batch 410-447356 and 410-449353 contained C12-C24 with Silica Gel clean up and C24-C40 with Silica Gel clean up above the reporting limit (RL). None of the samples associated with this method

Eurofins Lancaster Laboratories Environment Testing, LLC

Case Narrative

Client: AECOM
Project: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Job ID: 410-151795-1 (Continued)

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blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. D-02A-W-231114 (410-151795-16)

Method NWTPH_Dx: The software does not display the % Drift data to the whole number as is listed in the method (i.e. limit of 15%). When the -15.1% drift is evaluated to the whole number, the continuing calibration verification (CCV) passes the method criteria for o- terphenyl (Surr). D-02A-W-231114 (410-151795-16), D-25-W-231115 (410-151795-25), MW-29-W-231115 (410-151795-27), (410-151795-H-25-C DU) and (410-151795-H-27-C DU)

Method NWTPH_Dx: The method blank for preparation batch 410-447356 and 410-449353 contained C12-C24 with Silica Gel clean up and C24-C40 with Silica Gel clean up above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

Method NWTPH_Dx: Samples D-26-W-231115 (410-151795-10) and RMW-01-W-231115 (410-151795-20) had a detection for the C24-C40 range due to silica gel contamination. Sample was re-extracted outside of the method hold time. Re-extract was non-detect for the C24-C40 range.

Method NWTPH_Dx: Sample D-24-W-231115 (410-151795-11) had a detection for the C24-C40 range due to silica gel contamination. Sample was re-extracted outside of the method hold time. Re-extract had a detection for the C24-C40 range due to silica gel contamination.

Method NWTPH_Dx: Samples MW-26-W-231114 (410-151795-2) had a detection for the C24-C40 range due to silica gel contamination. Sample was re-extracted outside of the method hold time. Re-extract was non-detect for the C24-C40 range.

Method NWTPH_Dx: The continuing calibration verification (CCV) associated with batch 410-449762 recovered outside acceptance criteria, low biased, for C12-C24 with Silica Gel clean up, C24-C40 with Silica Gel clean up and o- terphenyl (Surr). There was no extract volume available to re-analyze the samples; therefore, the samples were re-extracted outside of method holding time. The data for the re-extraction is not usable due to laboratory error. There is no sample volume for a third trial. The original data is reported. D-17-W-231114 (410-151795-3), D-18-W-231114 (410-151795-12) and D-09-W-231114 (410-151795-14)

Method NWTPH_Dx: The method blank for preparation batch 410-446264 contained C12-C24 above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

MW-1D-W-231113 (410-151795-1) and (410-151795-H-1-B DU)

Method NWTPH_Dx: Surrogate recovery for the following sample was outside control limits: MW-31-W-231114 (410-151795-6). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Since holding time expired prior to re-analysis, results are reported from the initial trial.

Method NWTPH_Dx: The sample results were non-detect for C12-C24 and C24-C40, therefore the silica gel cleanup is not needed.

MW-38-W-231115 (410-151795-9) and MW-36-W-231115 (410-151795-23)

Method NWTPH_Dx: The sample results were non-detect for C12-C24 and C24-C40, therefore the silica gel cleanup is not needed. MW-23-W-231114 (410-151795-17)

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

Detection Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: MW-10-W-231113

Lab Sample ID: 410-151795-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	280	B cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	240	J	250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-26-W-231114

Lab Sample ID: 410-151795-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	470	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	90	J B *1 cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	270		250	100	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	330	B cn	250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-17-W-231114

Lab Sample ID: 410-151795-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	180	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-11-W-231114

Lab Sample ID: 410-151795-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	430	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	280		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-19-W-231114

Lab Sample ID: 410-151795-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	410	*1	100	45	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	140	J	250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-31-W-231114

Lab Sample ID: 410-151795-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	71	J *1 cn	100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-12-W-231114

Lab Sample ID: 410-151795-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	82	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1500	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	630		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-08-W-231114

Lab Sample ID: 410-151795-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	50	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1100	*1	100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	360		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-38-W-231115

Lab Sample ID: 410-151795-9

No Detections.

Client Sample ID: D-26-W-231115

Lab Sample ID: 410-151795-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	170	F1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	250	B cn	250	100	ug/L	1		NWTPH-Dx	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-24-W-231115

Lab Sample ID: 410-151795-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	250		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	400	B cn	250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-18-W-231114

Lab Sample ID: 410-151795-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	640	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	320		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-30-W-231114

Lab Sample ID: 410-151795-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	59	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	5300	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	1600		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-09-W-231114

Lab Sample ID: 410-151795-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	2400	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	1100		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-24-W-231114

Lab Sample ID: 410-151795-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	400	*1	100	45	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	170	J	250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-02A-W-231114

Lab Sample ID: 410-151795-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	1200	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	540		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-23-W-231114

Lab Sample ID: 410-151795-17

No Detections.

Client Sample ID: D-27-W-231115

Lab Sample ID: 410-151795-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	1300		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	360		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-39-W-231115

Lab Sample ID: 410-151795-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	63	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	2300		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	310		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RMW-01-W-231115

Lab Sample ID: 410-151795-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	250	cn	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1300		100	46	ug/L	1		NWTPH-Dx	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: RMW-01-W-231115 (Continued)

Lab Sample ID: 410-151795-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24 with Silica Gel clean up	54	J cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	210	J	260	100	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	1000	B cn	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-12-W-231115

Lab Sample ID: 410-151795-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	270		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	190	J	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-15-W-231115

Lab Sample ID: 410-151795-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	1300		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	260		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-36-W-231115

Lab Sample ID: 410-151795-23

No Detections.

Client Sample ID: MW-37-W-231115

Lab Sample ID: 410-151795-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	73	J	100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-25-W-231115

Lab Sample ID: 410-151795-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	1200	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	64	J cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	420		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: TB-1-T-231115

Lab Sample ID: 410-151795-26

No Detections.

Client Sample ID: MW-29-W-231115

Lab Sample ID: 410-151795-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	580	cn	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	3000	*1	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	470		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: TB2-T-231115

Lab Sample ID: 410-151795-28

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-10-W-231113

Lab Sample ID: 410-151795-1

Date Collected: 11/13/23 13:25

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 19:35	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 19:35	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 19:35	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 19:35	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 19:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		11/22/23 19:35	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/22/23 19:35	1
Dibromofluoromethane (Surr)	99		80 - 120		11/22/23 19:35	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 19:35	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150		11/20/23 17:11	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	280	B cn	100	46	ug/L		11/22/23 07:54	11/22/23 23:47	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/22/23 07:47	11/30/23 06:45	1
C24-C40	240	J	250	100	ug/L		11/22/23 07:54	11/22/23 23:47	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/22/23 07:47	11/30/23 06:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	79		50 - 150	11/22/23 07:54	11/22/23 23:47	1
o- terphenyl (Surr)	49	S1- cn	50 - 150	11/22/23 07:47	11/30/23 06:45	1

Client Sample ID: MW-26-W-231114

Lab Sample ID: 410-151795-2

Date Collected: 11/14/23 09:35

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 19:59	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 19:59	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 19:59	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 19:59	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/22/23 19:59	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/22/23 19:59	1
Dibromofluoromethane (Surr)	99		80 - 120		11/22/23 19:59	1
Toluene-d8 (Surr)	100		80 - 120		11/22/23 19:59	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 17:36	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-26-W-231114

Lab Sample ID: 410-151795-2

Date Collected: 11/14/23 09:35

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150		11/20/23 17:36	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	470	*1	100	46	ug/L		11/28/23 08:09	11/29/23 00:52	1
C12-C24 with Silica Gel clean up	90	J B *1 cn	100	46	ug/L		11/28/23 08:04	12/06/23 21:27	1
C24-C40	270		250	100	ug/L		11/28/23 08:09	11/29/23 00:52	1
C24-C40 with Silica Gel clean up	330	B cn	250	100	ug/L		11/28/23 08:04	12/06/23 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	79		50 - 150	11/28/23 08:09	11/29/23 00:52	1
o- terphenyl (Surr)	101	cn	50 - 150	11/28/23 08:04	12/06/23 21:27	1

Client Sample ID: D-17-W-231114

Lab Sample ID: 410-151795-3

Date Collected: 11/14/23 10:45

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 20:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 20:23	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 20:23	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 20:23	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/22/23 20:23	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/22/23 20:23	1
Dibromofluoromethane (Surr)	97		80 - 120		11/22/23 20:23	1
Toluene-d8 (Surr)	100		80 - 120		11/22/23 20:23	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150		11/20/23 18:01	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	180	*1	100	46	ug/L		11/28/23 08:09	11/29/23 01:15	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/28/23 08:04	12/04/23 16:52	1
C24-C40	ND		250	100	ug/L		11/28/23 08:09	11/29/23 01:15	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/28/23 08:04	12/04/23 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	83		50 - 150	11/28/23 08:09	11/29/23 01:15	1
o- terphenyl (Surr)	70	cn	50 - 150	11/28/23 08:04	12/04/23 16:52	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-11-W-231114

Lab Sample ID: 410-151795-4

Date Collected: 11/14/23 11:30

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 20:47	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 20:47	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 20:47	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 20:47	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 20:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/22/23 20:47	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/22/23 20:47	1
Dibromofluoromethane (Surr)	97		80 - 120		11/22/23 20:47	1
Toluene-d8 (Surr)	101		80 - 120		11/22/23 20:47	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150		11/20/23 18:27	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	430	*1	100	46	ug/L		11/28/23 08:09	11/29/23 01:38	1
C12-C24 with Silica Gel clean up	ND	H	100	46	ug/L		12/07/23 15:43	12/09/23 01:30	1
C24-C40	280		260	100	ug/L		11/28/23 08:09	11/29/23 01:38	1
C24-C40 with Silica Gel clean up	ND	H	260	100	ug/L		12/07/23 15:43	12/09/23 01:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	73		50 - 150	11/28/23 08:09	11/29/23 01:38	1
o-terphenyl (Surr)	66		50 - 150	12/07/23 15:43	12/09/23 01:30	1

Client Sample ID: D-19-W-231114

Lab Sample ID: 410-151795-5

Date Collected: 11/14/23 13:00

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 21:11	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 21:11	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 21:11	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 21:11	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/22/23 21:11	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/22/23 21:11	1
Dibromofluoromethane (Surr)	97		80 - 120		11/22/23 21:11	1
Toluene-d8 (Surr)	100		80 - 120		11/22/23 21:11	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 18:52	1

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-19-W-231114

Lab Sample ID: 410-151795-5

Date Collected: 11/14/23 13:00

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150					11/20/23 18:52	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	410	*1	100	45	ug/L		11/28/23 08:09	11/29/23 02:01	1
C12-C24 with Silica Gel clean up	ND	H	100	46	ug/L		12/07/23 15:43	12/09/23 01:53	1
C24-C40	140	J	250	100	ug/L		11/28/23 08:09	11/29/23 02:01	1
C24-C40 with Silica Gel clean up	ND	H	250	100	ug/L		12/07/23 15:43	12/09/23 01:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	82		50 - 150				11/28/23 08:09	11/29/23 02:01	1
o- terphenyl (Surr)	64		50 - 150				12/07/23 15:43	12/09/23 01:53	1

Client Sample ID: MW-31-W-231114

Lab Sample ID: 410-151795-6

Date Collected: 11/14/23 13:50

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 21:35	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 21:35	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 21:35	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 21:35	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 21:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120					11/22/23 21:35	1
4-Bromofluorobenzene (Surr)	98		80 - 120					11/22/23 21:35	1
Dibromofluoromethane (Surr)	97		80 - 120					11/22/23 21:35	1
Toluene-d8 (Surr)	100		80 - 120					11/22/23 21:35	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	1300	220	ug/L			11/20/23 23:58	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97	cn	50 - 150					11/20/23 23:58	5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	71	J *1 cn	100	46	ug/L		11/28/23 08:09	11/29/23 02:23	1
C12-C24 with Silica Gel clean up	ND	*1 cn	100	46	ug/L		11/28/23 08:04	12/06/23 22:59	1
C24-C40	ND	cn	260	100	ug/L		11/28/23 08:09	11/29/23 02:23	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/28/23 08:04	12/06/23 22:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	34	S1- cn	50 - 150				11/28/23 08:09	11/29/23 02:23	1
o-terphenyl (Surr)	31	S1- cn	50 - 150				11/28/23 08:04	12/06/23 22:59	1
n-Decanoic Acid (Surr)	0.0009	cn	0 - 1				11/28/23 08:04	12/06/23 22:59	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-12-W-231114

Lab Sample ID: 410-151795-7

Date Collected: 11/14/23 15:40

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 21:58	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 21:58	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 21:58	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 21:58	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		11/22/23 21:58	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/22/23 21:58	1
Dibromofluoromethane (Surr)	98		80 - 120		11/22/23 21:58	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 21:58	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	82	J	250	43	ug/L			11/21/23 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/21/23 19:34	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1500	*1	100	46	ug/L		11/28/23 08:09	11/29/23 02:46	1
C12-C24 with Silica Gel clean up	ND	*1 cn	100	46	ug/L		11/28/23 08:04	12/06/23 23:22	1
C24-C40	630		260	100	ug/L		11/28/23 08:09	11/29/23 02:46	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/28/23 08:04	12/06/23 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	51		50 - 150	11/28/23 08:09	11/29/23 02:46	1
o-terphenyl (Surr)	53		50 - 150	11/28/23 08:04	12/06/23 23:22	1
n-Decanoic Acid (Surr)	0.002		0 - 1	11/28/23 08:04	12/06/23 23:22	1

Client Sample ID: D-08-W-231114

Lab Sample ID: 410-151795-8

Date Collected: 11/14/23 16:35

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 22:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 22:23	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 22:23	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 22:23	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 22:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		11/22/23 22:23	1
4-Bromofluorobenzene (Surr)	95		80 - 120		11/22/23 22:23	1
Dibromofluoromethane (Surr)	99		80 - 120		11/22/23 22:23	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 22:23	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	50	J	250	43	ug/L			11/21/23 20:52	1

Euofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-08-W-231114

Lab Sample ID: 410-151795-8

Date Collected: 11/14/23 16:35

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/21/23 20:52	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1100	*1	100	47	ug/L		11/28/23 08:09	11/29/23 03:09	1
C12-C24 with Silica Gel clean up	ND	*1 cn	100	47	ug/L		11/28/23 08:04	12/06/23 23:45	1
C24-C40	360		260	100	ug/L		11/28/23 08:09	11/29/23 03:09	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/28/23 08:04	12/06/23 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	68		50 - 150	11/28/23 08:09	11/29/23 03:09	1
o-terphenyl (Surr)	76		50 - 150	11/28/23 08:04	12/06/23 23:45	1
n-Decanoic Acid (Surr)	0.0006		0 - 1	11/28/23 08:04	12/06/23 23:45	1

Client Sample ID: MW-38-W-231115

Lab Sample ID: 410-151795-9

Date Collected: 11/15/23 09:25

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 15:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 15:06	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 15:06	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 15:06	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 15:06	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/26/23 15:06	1
Dibromofluoromethane (Surr)	96		80 - 120		11/26/23 15:06	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 15:06	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/27/23 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/27/23 14:50	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND	cn	100	46	ug/L		11/29/23 15:22	12/01/23 11:36	1
C24-C40	ND	cn	260	100	ug/L		11/29/23 15:22	12/01/23 11:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	72		50 - 150	11/29/23 15:22	12/01/23 11:36	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-26-W-231115

Lab Sample ID: 410-151795-10

Date Collected: 11/15/23 10:25

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 15:30	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 15:30	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 15:30	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 15:30	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/26/23 15:30	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/26/23 15:30	1
Dibromofluoromethane (Surr)	98		80 - 120		11/26/23 15:30	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 15:30	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	F1	250	43	ug/L			11/27/23 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/27/23 15:15	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	170	F1	100	46	ug/L		11/29/23 15:22	12/01/23 11:59	1
C12-C24 with Silica Gel clean up	ND	F1 cn	100	46	ug/L		11/29/23 15:27	12/04/23 16:06	1
C24-C40	ND		250	100	ug/L		11/29/23 15:22	12/01/23 11:59	1
C24-C40 with Silica Gel clean up	250	B cn	250	100	ug/L		11/29/23 15:27	12/04/23 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	80		50 - 150	11/29/23 15:22	12/01/23 11:59	1
o-terphenyl (Surr)	81	cn	50 - 150	11/29/23 15:27	12/04/23 16:06	1

Client Sample ID: D-24-W-231115

Lab Sample ID: 410-151795-11

Date Collected: 11/15/23 12:00

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 16:42	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 16:42	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 16:42	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 16:42	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/26/23 16:42	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/26/23 16:42	1
Dibromofluoromethane (Surr)	98		80 - 120		11/26/23 16:42	1
Toluene-d8 (Surr)	99		80 - 120		11/26/23 16:42	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/27/23 16:32	1

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-24-W-231115

Lab Sample ID: 410-151795-11

Date Collected: 11/15/23 12:00

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150					11/27/23 16:32	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	250		100	46	ug/L		11/29/23 15:22	12/01/23 12:22	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/29/23 15:27	12/04/23 17:15	1
C24-C40	ND		250	100	ug/L		11/29/23 15:22	12/01/23 12:22	1
C24-C40 with Silica Gel clean up	400	B cn	250	100	ug/L		11/29/23 15:27	12/04/23 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	75		50 - 150				11/29/23 15:22	12/01/23 12:22	1
o- terphenyl (Surr)	75	cn	50 - 150				11/29/23 15:27	12/04/23 17:15	1

Client Sample ID: D-18-W-231114

Lab Sample ID: 410-151795-12

Date Collected: 11/14/23 10:01

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 17:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 17:06	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 17:06	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 17:06	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 17:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					11/26/23 17:06	1
4-Bromofluorobenzene (Surr)	98		80 - 120					11/26/23 17:06	1
Dibromofluoromethane (Surr)	96		80 - 120					11/26/23 17:06	1
Toluene-d8 (Surr)	98		80 - 120					11/26/23 17:06	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 21:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150					11/21/23 21:18	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	640	*1	100	46	ug/L		11/28/23 08:09	11/29/23 03:32	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/28/23 08:04	12/04/23 19:33	1
C24-C40	320		250	100	ug/L		11/28/23 08:09	11/29/23 03:32	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/28/23 08:04	12/04/23 19:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	74		50 - 150				11/28/23 08:09	11/29/23 03:32	1
o- terphenyl (Surr)	50	cn	50 - 150				11/28/23 08:04	12/04/23 19:33	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-30-W-231114

Lab Sample ID: 410-151795-13

Date Collected: 11/14/23 11:01

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 17:30	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 17:30	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 17:30	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 17:30	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 17:30	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/26/23 17:30	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 17:30	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 17:30	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	59	J	250	43	ug/L			11/21/23 21:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/21/23 21:43	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	5300	*1	100	46	ug/L		11/28/23 08:09	11/29/23 03:54	1
C12-C24 with Silica Gel clean up	ND	H	100	46	ug/L		12/07/23 15:43	12/09/23 02:39	1
C24-C40	1600		250	100	ug/L		11/28/23 08:09	11/29/23 03:54	1
C24-C40 with Silica Gel clean up	ND	H	250	100	ug/L		12/07/23 15:43	12/09/23 02:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	62		50 - 150	11/28/23 08:09	11/29/23 03:54	1
o-terphenyl (Surr)	68		50 - 150	12/07/23 15:43	12/09/23 02:39	1

Client Sample ID: D-09-W-231114

Lab Sample ID: 410-151795-14

Date Collected: 11/14/23 12:25

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 17:54	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 17:54	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 17:54	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 17:54	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 17:54	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/26/23 17:54	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 17:54	1
Toluene-d8 (Surr)	99		80 - 120		11/26/23 17:54	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 22:09	1

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-09-W-231114

Lab Sample ID: 410-151795-14

Date Collected: 11/14/23 12:25

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150					11/21/23 22:09	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	2400	*1	100	46	ug/L		11/28/23 08:09	11/29/23 04:17	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/28/23 08:04	12/04/23 20:19	1
C24-C40	1100		260	100	ug/L		11/28/23 08:09	11/29/23 04:17	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/28/23 08:04	12/04/23 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	65		50 - 150				11/28/23 08:09	11/29/23 04:17	1
o- terphenyl (Surr)	62	cn	50 - 150				11/28/23 08:04	12/04/23 20:19	1

Client Sample ID: MW-24-W-231114

Lab Sample ID: 410-151795-15

Date Collected: 11/14/23 14:03

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 18:18	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 18:18	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 18:18	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 18:18	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 18:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					11/26/23 18:18	1
4-Bromofluorobenzene (Surr)	97		80 - 120					11/26/23 18:18	1
Dibromofluoromethane (Surr)	99		80 - 120					11/26/23 18:18	1
Toluene-d8 (Surr)	100		80 - 120					11/26/23 18:18	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 22:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150					11/21/23 22:34	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	400	*1	100	45	ug/L		11/28/23 08:09	11/29/23 05:02	1
C12-C24 with Silica Gel clean up	ND	H	100	46	ug/L		12/07/23 15:43	12/09/23 03:25	1
C24-C40	170	J	250	100	ug/L		11/28/23 08:09	11/29/23 05:02	1
C24-C40 with Silica Gel clean up	ND	H	250	100	ug/L		12/07/23 15:43	12/09/23 03:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	75		50 - 150				11/28/23 08:09	11/29/23 05:02	1
o- terphenyl (Surr)	59		50 - 150				12/07/23 15:43	12/09/23 03:25	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-02A-W-231114

Lab Sample ID: 410-151795-16

Date Collected: 11/14/23 15:21

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 18:42	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 18:42	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 18:42	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 18:42	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 18:42	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/26/23 18:42	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 18:42	1
Toluene-d8 (Surr)	97		80 - 120		11/26/23 18:42	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 23:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/21/23 23:00	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1200	*1	100	46	ug/L		11/28/23 08:09	11/29/23 05:25	1
C12-C24 with Silica Gel clean up	ND	*1 cn	100	46	ug/L		11/28/23 08:04	12/06/23 21:50	1
C24-C40	540		260	100	ug/L		11/28/23 08:09	11/29/23 05:25	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/28/23 08:04	12/06/23 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	67		50 - 150	11/28/23 08:09	11/29/23 05:25	1
o-terphenyl (Surr)	79	cn	50 - 150	11/28/23 08:04	12/06/23 21:50	1

Client Sample ID: MW-23-W-231114

Lab Sample ID: 410-151795-17

Date Collected: 11/14/23 16:33

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 19:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 19:06	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 19:06	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 19:06	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/26/23 19:06	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/26/23 19:06	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 19:06	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 19:06	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 23:26	1

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-23-W-231114

Lab Sample ID: 410-151795-17

Date Collected: 11/14/23 16:33

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150		11/21/23 23:26	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D
C12-C24	ND	*1 cn	100	46	ug/L	
C24-C40	ND	cn	250	100	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	79		50 - 150	11/28/23 08:09	11/29/23 05:48	1

Client Sample ID: D-27-W-231115

Lab Sample ID: 410-151795-18

Date Collected: 11/15/23 09:17

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Benzene	ND		1.0	0.30	ug/L	
Ethylbenzene	ND		1.0	0.40	ug/L	
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L	
Toluene	ND		1.0	0.30	ug/L	
Xylenes, Total	ND		6.0	0.40	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 19:30	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/26/23 19:30	1
Dibromofluoromethane (Surr)	98		80 - 120		11/26/23 19:30	1
Toluene-d8 (Surr)	99		80 - 120		11/26/23 19:30	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D
C7-C12 (1C)	ND		250	43	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150		11/27/23 16:57	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D
C12-C24	1300		100	46	ug/L	
C12-C24 with Silica Gel clean up	ND		100	46	ug/L	
C24-C40	360		250	100	ug/L	
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	65		50 - 150	11/29/23 15:22	12/01/23 12:44	1
o- terphenyl (Surr)	72		50 - 150	11/29/23 15:27	12/04/23 17:38	1

Client Sample ID: MW-39-W-231115

Lab Sample ID: 410-151795-19

Date Collected: 11/15/23 10:12

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Benzene	ND		1.0	0.30	ug/L	

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-39-W-231115

Lab Sample ID: 410-151795-19

Date Collected: 11/15/23 10:12

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 19:54	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 19:54	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 19:54	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 19:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120					11/26/23 19:54	1
4-Bromofluorobenzene (Surr)	98		80 - 120					11/26/23 19:54	1
Dibromofluoromethane (Surr)	100		80 - 120					11/26/23 19:54	1
Toluene-d8 (Surr)	99		80 - 120					11/26/23 19:54	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	63	J	250	43	ug/L			11/27/23 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	104		50 - 150					11/27/23 17:22	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	2300		100	46	ug/L		11/29/23 15:22	12/01/23 13:07	1
C12-C24 with Silica Gel clean up	ND		100	46	ug/L		11/29/23 15:27	12/04/23 18:01	1
C24-C40	310		250	100	ug/L		11/29/23 15:22	12/01/23 13:07	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/29/23 15:27	12/04/23 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	62		50 - 150				11/29/23 15:22	12/01/23 13:07	1
o- terphenyl (Surr)	78		50 - 150				11/29/23 15:27	12/04/23 18:01	1

Client Sample ID: RMW-01-W-231115

Lab Sample ID: 410-151795-20

Date Collected: 11/15/23 11:41

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 20:18	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 20:18	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 20:18	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 20:18	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 20:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					11/26/23 20:18	1
4-Bromofluorobenzene (Surr)	99		80 - 120					11/26/23 20:18	1
Dibromofluoromethane (Surr)	101		80 - 120					11/26/23 20:18	1
Toluene-d8 (Surr)	97		80 - 120					11/26/23 20:18	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	250	cn	250	43	ug/L			11/27/23 18:39	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: RMW-01-W-231115

Lab Sample ID: 410-151795-20

Date Collected: 11/15/23 11:41

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150					11/27/23 18:39	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1300		100	46	ug/L		11/29/23 15:22	12/01/23 13:30	1
C12-C24 with Silica Gel clean up	54	J cn	100	46	ug/L		11/29/23 15:27	12/04/23 18:24	1
C24-C40	210	J	260	100	ug/L		11/29/23 15:22	12/01/23 13:30	1
C24-C40 with Silica Gel clean up	1000	B cn	260	100	ug/L		11/29/23 15:27	12/04/23 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	72		50 - 150				11/29/23 15:22	12/01/23 13:30	1
o- terphenyl (Surr)	64	cn	50 - 150				11/29/23 15:27	12/04/23 18:24	1

Client Sample ID: D-12-W-231115

Lab Sample ID: 410-151795-21

Date Collected: 11/15/23 12:43

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 20:42	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 20:42	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 20:42	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 20:42	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 20:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					11/26/23 20:42	1
4-Bromofluorobenzene (Surr)	97		80 - 120					11/26/23 20:42	1
Dibromofluoromethane (Surr)	99		80 - 120					11/26/23 20:42	1
Toluene-d8 (Surr)	98		80 - 120					11/26/23 20:42	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	250	43	ug/L			11/27/23 19:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150					11/27/23 19:04	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	270		100	46	ug/L		11/29/23 15:22	12/01/23 13:52	1
C12-C24 with Silica Gel clean up	ND		100	46	ug/L		11/29/23 15:27	12/04/23 18:47	1
C24-C40	190	J	260	100	ug/L		11/29/23 15:22	12/01/23 13:52	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/29/23 15:27	12/04/23 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	71		50 - 150				11/29/23 15:22	12/01/23 13:52	1
o- terphenyl (Surr)	64		50 - 150				11/29/23 15:27	12/04/23 18:47	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-15-W-231115

Lab Sample ID: 410-151795-22

Date Collected: 11/15/23 13:58

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 21:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 21:06	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 21:06	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 21:06	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/26/23 21:06	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/26/23 21:06	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 21:06	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 21:06	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	250	43	ug/L			11/27/23 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/27/23 19:29	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1300		100	46	ug/L		11/29/23 15:22	12/01/23 14:15	1
C12-C24 with Silica Gel clean up	ND		100	46	ug/L		11/29/23 15:27	12/04/23 19:10	1
C24-C40	260		250	100	ug/L		11/29/23 15:22	12/01/23 14:15	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/29/23 15:27	12/04/23 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	64		50 - 150	11/29/23 15:22	12/01/23 14:15	1
o-terphenyl (Surr)	74		50 - 150	11/29/23 15:27	12/04/23 19:10	1

Client Sample ID: MW-36-W-231115

Lab Sample ID: 410-151795-23

Date Collected: 11/15/23 12:55

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 21:30	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 21:30	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 21:30	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 21:30	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 21:30	1
4-Bromofluorobenzene (Surr)	95		80 - 120		11/26/23 21:30	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 21:30	1
Toluene-d8 (Surr)	98		80 - 120		11/26/23 21:30	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	250	43	ug/L			11/27/23 19:55	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-36-W-231115

Lab Sample ID: 410-151795-23

Date Collected: 11/15/23 12:55

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/27/23 19:55	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D
C12-C24	ND	cn	100	46	ug/L	
C24-C40	ND	cn	260	100	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	73		50 - 150	11/29/23 15:22	12/01/23 14:38	1

Client Sample ID: MW-37-W-231115

Lab Sample ID: 410-151795-24

Date Collected: 11/15/23 13:55

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Benzene	ND		1.0	0.30	ug/L	
Ethylbenzene	ND		1.0	0.40	ug/L	
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L	
Toluene	ND		1.0	0.30	ug/L	
Xylenes, Total	ND		6.0	0.40	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 21:54	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/26/23 21:54	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 21:54	1
Toluene-d8 (Surr)	99		80 - 120		11/26/23 21:54	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D
C7-C12 (1C)	ND	cn	250	43	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/27/23 20:20	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D
C12-C24	73	J	100	46	ug/L	
C12-C24 with Silica Gel clean up	ND		100	46	ug/L	
C24-C40	ND		260	100	ug/L	
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L	
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	73		50 - 150	11/29/23 15:22	12/01/23 15:01	1
o- terphenyl (Surr)	58		50 - 150	11/29/23 15:27	12/04/23 19:56	1

Client Sample ID: D-25-W-231115

Lab Sample ID: 410-151795-25

Date Collected: 11/15/23 14:50

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Benzene	ND		1.0	0.30	ug/L	

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-25-W-231115

Lab Sample ID: 410-151795-25

Date Collected: 11/15/23 14:50

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 22:18	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 22:18	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 22:18	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 22:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/26/23 22:18	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/26/23 22:18	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 22:18	1
Toluene-d8 (Surr)	99		80 - 120		11/26/23 22:18	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	250	43	ug/L			11/27/23 20:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/27/23 20:46	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1200	*1	100	46	ug/L		11/28/23 08:09	11/29/23 06:11	1
C12-C24 with Silica Gel clean up	64	J cn	100	46	ug/L		11/28/23 08:04	12/06/23 22:36	1
C24-C40	420		250	100	ug/L		11/28/23 08:09	11/29/23 06:11	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/28/23 08:04	12/06/23 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	66		50 - 150	11/28/23 08:09	11/29/23 06:11	1
o-terphenyl (Surr)	80	cn	50 - 150	11/28/23 08:04	12/06/23 22:36	1
n-Decanoic Acid (Surr)	0.0001		0 - 1	11/28/23 08:04	12/06/23 22:36	1

Client Sample ID: TB-1-T-231115

Lab Sample ID: 410-151795-26

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 15:59	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 15:59	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 15:59	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 15:59	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 15:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		11/22/23 15:59	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/22/23 15:59	1
Dibromofluoromethane (Surr)	99		80 - 120		11/22/23 15:59	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 15:59	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	H H3	250	43	ug/L			11/20/23 16:44	1

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Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: TB-1-T-231115

Lab Sample ID: 410-151795-26

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		11/20/23 16:44	1

Client Sample ID: MW-29-W-231115

Lab Sample ID: 410-151795-27

Date Collected: 11/15/23 14:58

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 22:42	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 22:42	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 22:42	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 22:42	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 22:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/26/23 22:42	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/26/23 22:42	1
Dibromofluoromethane (Surr)	99		80 - 120		11/26/23 22:42	1
Toluene-d8 (Surr)	96		80 - 120		11/26/23 22:42	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	580	cn	250	43	ug/L			11/27/23 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/27/23 21:11	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	3000	*1	100	46	ug/L		11/28/23 08:09	11/29/23 06:56	1
C12-C24 with Silica Gel clean up	ND		100	46	ug/L		11/28/23 08:04	12/06/23 23:22	1
C24-C40	470		250	100	ug/L		11/28/23 08:09	11/29/23 06:56	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		11/28/23 08:04	12/06/23 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	59		50 - 150	11/28/23 08:09	11/29/23 06:56	1
o-terphenyl (Surr)	71	cn	50 - 150	11/28/23 08:04	12/06/23 23:22	1
n-Decanoic Acid (Surr)	0.01		0 - 1	11/28/23 08:04	12/06/23 23:22	1

Client Sample ID: TB2-T-231115

Lab Sample ID: 410-151795-28

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/17/23 09:57

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 16:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 16:23	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 16:23	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 16:23	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 16:23	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: TB2-T-231115

Lab Sample ID: 410-151795-28

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/17/23 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		11/22/23 16:23	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/22/23 16:23	1
Dibromofluoromethane (Surr)	98		80 - 120		11/22/23 16:23	1
Toluene-d8 (Surr)	100		80 - 120		11/22/23 16:23	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	H H3	250	43	ug/L			11/20/23 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150		11/20/23 17:09	1

Surrogate Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	BFB (80-120)	DBFM (80-120)	TOL (80-120)
410-151795-1	MW-10-W-231113	94	97	99	99
410-151795-2	MW-26-W-231114	93	98	99	100
410-151795-3	D-17-W-231114	93	96	97	100
410-151795-4	MW-11-W-231114	92	98	97	101
410-151795-5	D-19-W-231114	93	97	97	100
410-151795-6	MW-31-W-231114	94	98	97	100
410-151795-7	MW-12-W-231114	95	97	98	99
410-151795-8	D-08-W-231114	95	95	99	99
410-151795-9	MW-38-W-231115	91	100	96	98
410-151795-10	D-26-W-231115	92	98	98	98
410-151795-10 MS	D-26-W-231115	95	98	98	99
410-151795-10 MSD	D-26-W-231115	94	99	98	96
410-151795-11	D-24-W-231115	93	98	98	99
410-151795-12	D-18-W-231114	92	98	96	98
410-151795-13	MW-30-W-231114	91	97	99	98
410-151795-14	D-09-W-231114	91	100	99	99
410-151795-15	MW-24-W-231114	92	97	99	100
410-151795-16	D-02A-W-231114	91	97	99	97
410-151795-17	MW-23-W-231114	93	99	99	98
410-151795-18	D-27-W-231115	91	98	98	99
410-151795-19	MW-39-W-231115	93	98	100	99
410-151795-20	RMW-01-W-231115	92	99	101	97
410-151795-21	D-12-W-231115	92	97	99	98
410-151795-22	D-15-W-231115	92	100	99	98
410-151795-23	MW-36-W-231115	91	95	99	98
410-151795-24	MW-37-W-231115	91	99	99	99
410-151795-25	D-25-W-231115	91	97	99	99
410-151795-26	TB-1-T-231115	94	96	99	99
410-151795-27	MW-29-W-231115	92	100	99	96
410-151795-28	TB2-T-231115	94	97	98	100
LCS 410-446440/4	Lab Control Sample	95	99	99	99
LCS 410-446766/4	Lab Control Sample	93	100	99	98
LCSD 410-446440/5	Lab Control Sample Dup	98	98	100	99
LCSD 410-446766/5	Lab Control Sample Dup	95	100	98	98
MB 410-446440/6	Method Blank	94	96	101	98
MB 410-446766/6	Method Blank	93	98	98	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TFT-F1 (50-150)			
410-151795-1	MW-10-W-231113	98			

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Surrogate Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TFT-F1 (50-150)
410-151795-2	MW-26-W-231114	98
410-151795-3	D-17-W-231114	97
410-151795-4	MW-11-W-231114	97
410-151795-5	D-19-W-231114	97
410-151795-6	MW-31-W-231114	97 cn
410-151795-7	MW-12-W-231114	99
410-151795-8	D-08-W-231114	100
410-151795-9	MW-38-W-231115	99
410-151795-10	D-26-W-231115	99
410-151795-10 MS	D-26-W-231115	94
410-151795-10 MSD	D-26-W-231115	96
410-151795-11	D-24-W-231115	100
410-151795-12	D-18-W-231114	101
410-151795-13	MW-30-W-231114	100
410-151795-14	D-09-W-231114	101
410-151795-15	MW-24-W-231114	99
410-151795-16	D-02A-W-231114	100
410-151795-17	MW-23-W-231114	101
410-151795-18	D-27-W-231115	101
410-151795-19	MW-39-W-231115	104
410-151795-20	RMW-01-W-231115	99
410-151795-21	D-12-W-231115	98
410-151795-22	D-15-W-231115	100
410-151795-23	MW-36-W-231115	99
410-151795-24	MW-37-W-231115	99
410-151795-25	D-25-W-231115	100
410-151795-26	TB-1-T-231115	100
410-151795-27	MW-29-W-231115	99
410-151795-28	TB2-T-231115	101
LCS 410-445458/6	Lab Control Sample	91
LCS 410-445460/6	Lab Control Sample	91
LCS 410-445905/6	Lab Control Sample	92
LCS 410-446883/6	Lab Control Sample	90
LCS 410-448447/6	Lab Control Sample	93
LCSD 410-445458/7	Lab Control Sample Dup	91
LCSD 410-445460/7	Lab Control Sample Dup	91
LCSD 410-445905/7	Lab Control Sample Dup	93
LCSD 410-446883/7	Lab Control Sample Dup	91
LCSD 410-448447/7	Lab Control Sample Dup	96
MB 410-445458/5	Method Blank	102
MB 410-445460/5	Method Blank	98
MB 410-445905/5	Method Blank	102
MB 410-446883/5	Method Blank	99
MB 410-448447/5	Method Blank	102

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Surrogate Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTP (50-150)	NDA (0-1)
410-151795-1	MW-10-W-231113	79	
410-151795-1	MW-10-W-231113	49 S1- cn	
410-151795-1 DU	MW-10-W-231113	84	
410-151795-2	MW-26-W-231114	79	
410-151795-2	MW-26-W-231114	101 cn	
410-151795-3	D-17-W-231114	83	
410-151795-3	D-17-W-231114	70 cn	
410-151795-4	MW-11-W-231114	73	
410-151795-4	MW-11-W-231114	66	
410-151795-5	D-19-W-231114	82	
410-151795-5	D-19-W-231114	64	
410-151795-6	MW-31-W-231114	34 S1- cn	
410-151795-6	MW-31-W-231114	31 S1- cn	0.0009 cn
410-151795-7	MW-12-W-231114	51	
410-151795-7	MW-12-W-231114	53	0.002
410-151795-8	D-08-W-231114	68	
410-151795-8	D-08-W-231114	76	0.0006
410-151795-9	MW-38-W-231115	72	
410-151795-10	D-26-W-231115	80	
410-151795-10	D-26-W-231115	81 cn	
410-151795-10 MS	D-26-W-231115	72	
410-151795-10 MS	D-26-W-231115	60	
410-151795-10 MSD	D-26-W-231115	65	
410-151795-10 MSD	D-26-W-231115	60	
410-151795-11	D-24-W-231115	75	
410-151795-11	D-24-W-231115	75 cn	
410-151795-12	D-18-W-231114	74	
410-151795-12	D-18-W-231114	50 cn	
410-151795-13	MW-30-W-231114	62	
410-151795-13	MW-30-W-231114	68	
410-151795-14	D-09-W-231114	65	
410-151795-14	D-09-W-231114	62 cn	
410-151795-15	MW-24-W-231114	75	
410-151795-15	MW-24-W-231114	59	
410-151795-16	D-02A-W-231114	67	
410-151795-16	D-02A-W-231114	79 cn	
410-151795-17	MW-23-W-231114	79	
410-151795-18	D-27-W-231115	65	
410-151795-18	D-27-W-231115	72	
410-151795-19	MW-39-W-231115	62	
410-151795-19	MW-39-W-231115	78	
410-151795-20	RMW-01-W-231115	72	
410-151795-20	RMW-01-W-231115	64 cn	
410-151795-21	D-12-W-231115	71	
410-151795-21	D-12-W-231115	64	
410-151795-22	D-15-W-231115	64	
410-151795-22	D-15-W-231115	74	
410-151795-23	MW-36-W-231115	73	
410-151795-24	MW-37-W-231115	73	
410-151795-24	MW-37-W-231115	58	

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Surrogate Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTP (50-150)	NDA (0-1)
410-151795-25	D-25-W-231115	66	
410-151795-25	D-25-W-231115	80 cn	0.0001
410-151795-25 DU	D-25-W-231115	71	
410-151795-25 DU	D-25-W-231115	55 cn	0.0001
410-151795-27	MW-29-W-231115	59	
410-151795-27	MW-29-W-231115	71 cn	0.01
410-151795-27 DU	MW-29-W-231115	72	
410-151795-27 DU	MW-29-W-231115	70 cn	0.02
LCS 410-446260/2-B	Lab Control Sample	47 S1-	
LCS 410-446264/2-A	Lab Control Sample	76	
LCS 410-447356/2-B	Lab Control Sample	57	
LCS 410-447356/2-B	Lab Control Sample	86	0.02
LCS 410-447360/2-A	Lab Control Sample	67	
LCS 410-448163/2-A	Lab Control Sample	81	
LCS 410-448167/2-B	Lab Control Sample	76	
LCS 410-451387/2-B	Lab Control Sample	65	
LCSD 410-447356/3-C	Lab Control Sample Dup	58	
LCSD 410-447356/3-C	Lab Control Sample Dup	87	0.01
LCSD 410-447360/3-A	Lab Control Sample Dup	82	
LCSD 410-451387/3-B	Lab Control Sample Dup	55	
MB 410-446260/1-B	Method Blank	46 S1-	
MB 410-446264/1-A	Method Blank	81	
MB 410-447356/1-B	Method Blank	60	
MB 410-447356/1-B	Method Blank	97	0.02
MB 410-447360/1-A	Method Blank	78	
MB 410-448163/1-A	Method Blank	72	
MB 410-448167/1-B	Method Blank	81	
MB 410-451387/1-B	Method Blank	53	

Surrogate Legend

OTP = o- terphenyl (Surr)

NDA = n-Decanoic Acid (Surr)

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-446440/6

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 14:24	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 14:24	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 14:24	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 14:24	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 14:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		11/22/23 14:24	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/22/23 14:24	1
Dibromofluoromethane (Surr)	101		80 - 120		11/22/23 14:24	1
Toluene-d8 (Surr)	98		80 - 120		11/22/23 14:24	1

Lab Sample ID: LCS 410-446440/4

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	19.0		ug/L		95	80 - 120
Ethylbenzene	20.0	18.6		ug/L		93	80 - 120
Methyl tertiary butyl ether	20.0	19.9		ug/L		100	69 - 122
Toluene	20.0	18.9		ug/L		94	80 - 120
Xylenes, Total	60.0	57.5		ug/L		96	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 410-446440/5

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	20.0	18.6		ug/L		93	80 - 120	2	30
Ethylbenzene	20.0	18.0		ug/L		90	80 - 120	3	30
Methyl tertiary butyl ether	20.0	18.7		ug/L		93	69 - 122	7	30
Toluene	20.0	18.4		ug/L		92	80 - 120	2	30
Xylenes, Total	60.0	55.9		ug/L		93	80 - 120	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

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QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-446766/6

Matrix: Water

Analysis Batch: 446766

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/26/23 13:54	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/26/23 13:54	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/26/23 13:54	1
Toluene	ND		1.0	0.30	ug/L			11/26/23 13:54	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/26/23 13:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/26/23 13:54	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/26/23 13:54	1
Dibromofluoromethane (Surr)	98		80 - 120		11/26/23 13:54	1
Toluene-d8 (Surr)	97		80 - 120		11/26/23 13:54	1

Lab Sample ID: LCS 410-446766/4

Matrix: Water

Analysis Batch: 446766

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	17.0		ug/L		85	80 - 120
Ethylbenzene	20.0	16.9		ug/L		85	80 - 120
Methyl tertiary butyl ether	20.0	18.2		ug/L		91	69 - 122
Toluene	20.0	16.8		ug/L		84	80 - 120
Xylenes, Total	60.0	52.0		ug/L		87	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: LCSD 410-446766/5

Matrix: Water

Analysis Batch: 446766

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	20.0	18.9		ug/L		95	80 - 120	10	30
Ethylbenzene	20.0	18.7		ug/L		93	80 - 120	10	30
Methyl tertiary butyl ether	20.0	19.7		ug/L		99	69 - 122	8	30
Toluene	20.0	18.6		ug/L		93	80 - 120	10	30
Xylenes, Total	60.0	57.7		ug/L		96	80 - 120	10	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	98		80 - 120

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 410-151795-10 MS

Matrix: Water

Analysis Batch: 446766

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		20.0	19.1		ug/L		95	80 - 120
Ethylbenzene	ND		20.0	18.7		ug/L		94	80 - 120
Methyl tertiary butyl ether	ND		20.0	18.7		ug/L		94	69 - 122
Toluene	ND		20.0	18.5		ug/L		92	80 - 120
Xylenes, Total	ND		60.0	57.6		ug/L		96	80 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 410-151795-10 MSD

Matrix: Water

Analysis Batch: 446766

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		20.0	20.3		ug/L		102	80 - 120	6	30
Ethylbenzene	ND		20.0	19.9		ug/L		100	80 - 120	6	30
Methyl tertiary butyl ether	ND		20.0	20.1		ug/L		101	69 - 122	7	30
Toluene	ND		20.0	19.2		ug/L		96	80 - 120	4	30
Xylenes, Total	ND		60.0	60.1		ug/L		100	80 - 120	4	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	96		80 - 120

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-445458/5

Matrix: Water

Analysis Batch: 445458

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 12:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150		11/20/23 12:58	1

Lab Sample ID: LCS 410-445458/6

Matrix: Water

Analysis Batch: 445458

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	1100	1110		ug/L		101	64 - 131

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QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-445458/6

Matrix: Water

Analysis Batch: 445458

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

Lab Sample ID: LCSD 410-445458/7

Matrix: Water

Analysis Batch: 445458

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	1110		ug/L		101	64 - 131	1	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

Lab Sample ID: MB 410-445460/5

Matrix: Water

Analysis Batch: 445460

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/20/23 12:57	1

	MB	MB					Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150					11/20/23 12:57	1

Lab Sample ID: LCS 410-445460/6

Matrix: Water

Analysis Batch: 445460

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)	1100	928		ug/L		84	64 - 131		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

Lab Sample ID: LCSD 410-445460/7

Matrix: Water

Analysis Batch: 445460

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	911		ug/L		83	64 - 131	2	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-445905/5
Matrix: Water
Analysis Batch: 445905

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 13:08	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150					11/21/23 13:08	1

Lab Sample ID: LCS 410-445905/6
Matrix: Water
Analysis Batch: 445905

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	1100	1080		ug/L		98	64 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene (fid) (1C)	92		50 - 150				

Lab Sample ID: LCSD 410-445905/7
Matrix: Water
Analysis Batch: 445905

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	1110		ug/L		101	64 - 131	3	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	93		50 - 150						

Lab Sample ID: MB 410-446883/5
Matrix: Water
Analysis Batch: 446883

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/27/23 11:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150					11/27/23 11:01	1

Lab Sample ID: LCS 410-446883/6
Matrix: Water
Analysis Batch: 446883

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	1100	897		ug/L		82	64 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene (fid) (1C)	90		50 - 150				

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 410-446883/7

Matrix: Water

Analysis Batch: 446883

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	927		ug/L		84	64 - 131	3	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150						

Lab Sample ID: MB 410-448447/5

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/30/23 12:27	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150				11/30/23 12:27	1	

Lab Sample ID: LCS 410-448447/6

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
C7-C12 (1C)			1100	1090		ug/L	-	99	64 - 131		
Surrogate	LCS	LCS									
	%Recovery	Qualifier	Limits								
a.a.a-Trifluorotoluene (fid) (1C)	93		50 - 150								

Lab Sample ID: LCSD 410-448447/7

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	1140		ug/L		104	64 - 131	4	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	96		50 - 150						

Lab Sample ID: 410-151795-10 MS

Matrix: Water

Analysis Batch: 448447

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)	ND	F1	1120	1250	H	ug/L	-	112	80 - 120		
Surrogate	MS %Recovery	MS Qualifier	Limits								
a.a.a-Trifluorotoluene (fid) (1C)	94		50 - 150								

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 410-151795-10 MSD

Matrix: Water

Analysis Batch: 448447

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	ND	F1	1120	1270	H	ug/L		114	80 - 120	2	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid) (1C)	96		50 - 150								

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-446260/1-B

Matrix: Water

Analysis Batch: 448229

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 446260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		11/22/23 07:47	11/29/23 23:28	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		11/22/23 07:47	11/29/23 23:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	46	S1-	50 - 150				11/22/23 07:47	11/29/23 23:28	1

Lab Sample ID: LCS 410-446260/2-B

Matrix: Water

Analysis Batch: 448229

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 446260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24 with Silica Gel clean up	600	338		ug/L		56	14 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
o- terphenyl (Surr)	47	S1-	50 - 150						

Lab Sample ID: MB 410-446264/1-A

Matrix: Water

Analysis Batch: 446556

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 446264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	45.2	J	100	45	ug/L		11/22/23 07:54	11/22/23 16:37	1
C24-C40	ND		250	100	ug/L		11/22/23 07:54	11/22/23 16:37	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	81		50 - 150				11/22/23 07:54	11/22/23 16:37	1

Lab Sample ID: LCS 410-446264/2-A

Matrix: Water

Analysis Batch: 446556

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 446264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24	600	457		ug/L		76	14 - 115		

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-446264/2-A

Matrix: Water

Analysis Batch: 446556

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 446264

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
<i>o</i> -terphenyl (Surr)	76		50 - 150

Lab Sample ID: 410-151795-1 DU

Matrix: Water

Analysis Batch: 446556

Client Sample ID: MW-10-W-231113

Prep Type: Total/NA

Prep Batch: 446264

	Sample	Sample		DU	DU					RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D		RPD	Limit
C12-C24	280	B cn		270	cn	ug/L			4	20
C24-C40	240	J		251		ug/L			4	20
	DU	DU								
Surrogate	%Recovery	Qualifier	Limits							
<i>o</i> -terphenyl (Surr)	84		50 - 150							

Lab Sample ID: MB 410-447356/1-B

Matrix: Water

Analysis Batch: 449762

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 447356

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		11/28/23 08:04	12/04/23 15:19	1	
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		11/28/23 08:04	12/04/23 15:19	1	
	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
<i>o</i> -terphenyl (Surr)	60		50 - 150				11/28/23 08:04	12/04/23 15:19	1	

Lab Sample ID: MB 410-447356/1-B

Matrix: Water

Analysis Batch: 450931

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 447356

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
C12-C24 with Silica Gel clean up	80.5	J	100	45	ug/L		11/28/23 08:04	12/06/23 20:18	1	
C24-C40 with Silica Gel clean up	337		250	100	ug/L		11/28/23 08:04	12/06/23 20:18	1	
	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
<i>o</i> -terphenyl (Surr)	97		50 - 150				11/28/23 08:04	12/06/23 20:18	1	
<i>n</i> -Decanoic Acid (Surr)	0.02		0 - 1				11/28/23 08:04	12/06/23 20:18	1	

Lab Sample ID: LCS 410-447356/2-B

Matrix: Water

Analysis Batch: 449762

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 447356

		Spike	LCS	LCS					%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
C12-C24 with Silica Gel clean up		600	186		ug/L		31	14 - 115		
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
<i>o</i> -terphenyl (Surr)	57		50 - 150							

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-447356/2-B

Matrix: Water

Analysis Batch: 450931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 447356

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24 with Silica Gel clean up			600	296		ug/L		49	14 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
o- terphenyl (Surr)	86		50 - 150								
n-Decanoic Acid (Surr)	0.02		0 - 1								

Lab Sample ID: LCSD 410-447356/3-C

Matrix: Water

Analysis Batch: 449762

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 447356

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up			600	203		ug/L		34	14 - 115	9	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
o- terphenyl (Surr)	58		50 - 150								

Lab Sample ID: LCSD 410-447356/3-C

Matrix: Water

Analysis Batch: 450931

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 447356

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up			600	429	*1	ug/L		72	14 - 115	37	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
o- terphenyl (Surr)	87		50 - 150								
n-Decanoic Acid (Surr)	0.01		0 - 1								

Lab Sample ID: 410-151795-25 DU

Matrix: Water

Analysis Batch: 450932

Client Sample ID: D-25-W-231115

Prep Type: Total/NA

Prep Batch: 447356

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24 with Silica Gel clean up	64	J cn	ND		ug/L		NC	20
C24-C40 with Silica Gel clean up	ND	cn	ND		ug/L		NC	20
Surrogate	%Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	55	cn	50 - 150					
n-Decanoic Acid (Surr)	0.0001		0 - 1					

Lab Sample ID: 410-151795-27 DU

Matrix: Water

Analysis Batch: 450932

Client Sample ID: MW-29-W-231115

Prep Type: Total/NA

Prep Batch: 447356

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24 with Silica Gel clean up	ND		ND		ug/L		NC	20
C24-C40 with Silica Gel clean up	ND		ND		ug/L		NC	20

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QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 410-151795-27 DU

Matrix: Water

Analysis Batch: 450932

Client Sample ID: MW-29-W-231115

Prep Type: Total/NA

Prep Batch: 447356

	DU	DU	
Surrogate	%Recovery	Qualifier	Limits
o- terphenyl (Surr)	70	cn	50 - 150
n-Decanoic Acid (Surr)	0.02		0 - 1

Lab Sample ID: MB 410-447360/1-A

Matrix: Water

Analysis Batch: 447751

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 447360

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND				100	45	ug/L		11/28/23 08:09	11/28/23 23:44	1
C24-C40	ND				250	100	ug/L		11/28/23 08:09	11/28/23 23:44	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)			78		50 - 150				11/28/23 08:09	11/28/23 23:44	1

Lab Sample ID: LCS 410-447360/2-A

Matrix: Water

Analysis Batch: 447751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 447360

Analyte	Spike	LCS	LCS	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits
C12-C24	600				215		ug/L		36		14 - 115
Surrogate	LCS	LCS	%Recovery	Qualifier	Limits						
o- terphenyl (Surr)			67		50 - 150						

Lab Sample ID: LCSD 410-447360/3-A

Matrix: Water

Analysis Batch: 447751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 447360

Analyte	Spike	LCSD	LCSD	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	RPD	Limit
C12-C24	600				283	*1	ug/L		47		14 - 115	27	20
Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits								
o- terphenyl (Surr)			82		50 - 150								

Lab Sample ID: 410-151795-25 DU

Matrix: Water

Analysis Batch: 447751

Client Sample ID: D-25-W-231115

Prep Type: Total/NA

Prep Batch: 447360

Analyte	Sample	Sample	Result	Qualifier	DU	DU	Result	Qualifier	Unit	D	RPD	Limit
C12-C24	1200	*1			1220	*1			ug/L		6	20
C24-C40	420				478				ug/L		12	20
Surrogate	DU	DU	%Recovery	Qualifier	Limits							
o- terphenyl (Surr)			71		50 - 150							

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 410-151795-27 DU

Matrix: Water

Analysis Batch: 447751

Client Sample ID: MW-29-W-231115

Prep Type: Total/NA

Prep Batch: 447360

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
C12-C24	3000	*1	3390	*1	ug/L		12	20
C24-C40	470		555		ug/L		17	20
Surrogate	%Recovery	Qualifier	Limits					
o- terphenyl (Surr)	72		50 - 150					

Lab Sample ID: MB 410-448163/1-A

Matrix: Water

Analysis Batch: 448780

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		11/29/23 15:22	12/01/23 05:32	1
C24-C40	ND		250	100	ug/L		11/29/23 15:22	12/01/23 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	72		50 - 150				11/29/23 15:22	12/01/23 05:32	1

Lab Sample ID: LCS 410-448163/2-A

Matrix: Water

Analysis Batch: 448780

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24	600	274		ug/L		46	14 - 115
Surrogate	%Recovery	Qualifier	Limits				
o- terphenyl (Surr)	81		50 - 150				

Lab Sample ID: 410-151795-10 MS

Matrix: Water

Analysis Batch: 448780

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Prep Batch: 448163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24	170	F1	622	311	F1	ug/L		23	30 - 115
Surrogate	%Recovery	Qualifier	Limits						
o- terphenyl (Surr)	72		50 - 150						

Lab Sample ID: 410-151795-10 MSD

Matrix: Water

Analysis Batch: 448780

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Prep Batch: 448163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C12-C24	170	F1	618	298	F1	ug/L		21	30 - 115	4	20
Surrogate	%Recovery	Qualifier	Limits								
o- terphenyl (Surr)	65		50 - 150								

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-448167/1-B

Matrix: Water

Analysis Batch: 449747

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		11/29/23 15:27	12/04/23 12:38	1
C24-C40 with Silica Gel clean up	359		250	100	ug/L		11/29/23 15:27	12/04/23 12:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	81		50 - 150				11/29/23 15:27	12/04/23 12:38	1

Lab Sample ID: LCS 410-448167/2-B

Matrix: Water

Analysis Batch: 449747

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448167

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	600	218		ug/L		36	14 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr)	76		50 - 150				

Lab Sample ID: 410-151795-10 MS

Matrix: Water

Analysis Batch: 449747

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Prep Batch: 448167

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	ND	F1 cn	621	173	F1	ug/L		28	30 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
o- terphenyl (Surr)	60		50 - 150						

Lab Sample ID: 410-151795-10 MSD

Matrix: Water

Analysis Batch: 449747

Client Sample ID: D-26-W-231115

Prep Type: Total/NA

Prep Batch: 448167

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up	ND	F1 cn	618	160	F1	ug/L		26	30 - 115	8	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o- terphenyl (Surr)	60		50 - 150								

Lab Sample ID: MB 410-451387/1-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 451387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		12/07/23 15:43	12/08/23 23:12	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		12/07/23 15:43	12/08/23 23:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	53		50 - 150				12/07/23 15:43	12/08/23 23:12	1

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-451387/2-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 451387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	600	192		ug/L		32	14 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o- terphenyl (Surr)	65		50 - 150

Lab Sample ID: LCSD 410-451387/3-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 451387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up	600	164		ug/L		27	14 - 115	16	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o- terphenyl (Surr)	55		50 - 150

QC Association Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

GC/MS VOA

Analysis Batch: 446440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	8260D/UST	
410-151795-2	MW-26-W-231114	Total/NA	Water	8260D/UST	
410-151795-3	D-17-W-231114	Total/NA	Water	8260D/UST	
410-151795-4	MW-11-W-231114	Total/NA	Water	8260D/UST	
410-151795-5	D-19-W-231114	Total/NA	Water	8260D/UST	
410-151795-6	MW-31-W-231114	Total/NA	Water	8260D/UST	
410-151795-7	MW-12-W-231114	Total/NA	Water	8260D/UST	
410-151795-8	D-08-W-231114	Total/NA	Water	8260D/UST	
410-151795-26	TB-1-T-231115	Total/NA	Water	8260D/UST	
410-151795-28	TB2-T-231115	Total/NA	Water	8260D/UST	
MB 410-446440/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-446440/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-446440/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

Analysis Batch: 446766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-9	MW-38-W-231115	Total/NA	Water	8260D/UST	
410-151795-10	D-26-W-231115	Total/NA	Water	8260D/UST	
410-151795-11	D-24-W-231115	Total/NA	Water	8260D/UST	
410-151795-12	D-18-W-231114	Total/NA	Water	8260D/UST	
410-151795-13	MW-30-W-231114	Total/NA	Water	8260D/UST	
410-151795-14	D-09-W-231114	Total/NA	Water	8260D/UST	
410-151795-15	MW-24-W-231114	Total/NA	Water	8260D/UST	
410-151795-16	D-02A-W-231114	Total/NA	Water	8260D/UST	
410-151795-17	MW-23-W-231114	Total/NA	Water	8260D/UST	
410-151795-18	D-27-W-231115	Total/NA	Water	8260D/UST	
410-151795-19	MW-39-W-231115	Total/NA	Water	8260D/UST	
410-151795-20	RMW-01-W-231115	Total/NA	Water	8260D/UST	
410-151795-21	D-12-W-231115	Total/NA	Water	8260D/UST	
410-151795-22	D-15-W-231115	Total/NA	Water	8260D/UST	
410-151795-23	MW-36-W-231115	Total/NA	Water	8260D/UST	
410-151795-24	MW-37-W-231115	Total/NA	Water	8260D/UST	
410-151795-25	D-25-W-231115	Total/NA	Water	8260D/UST	
410-151795-27	MW-29-W-231115	Total/NA	Water	8260D/UST	
MB 410-446766/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-446766/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-446766/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	
410-151795-10 MS	D-26-W-231115	Total/NA	Water	8260D/UST	
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	8260D/UST	

GC VOA

Analysis Batch: 445458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-26	TB-1-T-231115	Total/NA	Water	NWTPH-Gx	
410-151795-28	TB2-T-231115	Total/NA	Water	NWTPH-Gx	
MB 410-445458/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-445458/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-445458/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

QC Association Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC VOA

Analysis Batch: 445460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	NWTPH-Gx	
410-151795-2	MW-26-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-3	D-17-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-4	MW-11-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-5	D-19-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-6	MW-31-W-231114	Total/NA	Water	NWTPH-Gx	
MB 410-445460/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-445460/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-445460/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 445905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-7	MW-12-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-8	D-08-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-12	D-18-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-13	MW-30-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-14	D-09-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-15	MW-24-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-16	D-02A-W-231114	Total/NA	Water	NWTPH-Gx	
410-151795-17	MW-23-W-231114	Total/NA	Water	NWTPH-Gx	
MB 410-445905/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-445905/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-445905/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 446883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-9	MW-38-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-10	D-26-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-11	D-24-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-18	D-27-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-19	MW-39-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-20	RMW-01-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-21	D-12-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-22	D-15-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-23	MW-36-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-24	MW-37-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-25	D-25-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-27	MW-29-W-231115	Total/NA	Water	NWTPH-Gx	
MB 410-446883/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-446883/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-446883/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 448447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-448447/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-448447/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-448447/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
410-151795-10 MS	D-26-W-231115	Total/NA	Water	NWTPH-Gx	
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	NWTPH-Gx	

QC Association Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

GC Semi VOA

Prep Batch: 446260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	3510C	
MB 410-446260/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-446260/2-B	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 446264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	3510C	
MB 410-446264/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-446264/2-A	Lab Control Sample	Total/NA	Water	3510C	
410-151795-1 DU	MW-10-W-231113	Total/NA	Water	3510C	

Analysis Batch: 446556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	NWTPH-Dx	446264
MB 410-446264/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	446264
LCS 410-446264/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	446264
410-151795-1 DU	MW-10-W-231113	Total/NA	Water	NWTPH-Dx	446264

Prep Batch: 447356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-2	MW-26-W-231114	Total/NA	Water	3510C	
410-151795-3	D-17-W-231114	Total/NA	Water	3510C	
410-151795-6	MW-31-W-231114	Total/NA	Water	3510C	
410-151795-7	MW-12-W-231114	Total/NA	Water	3510C	
410-151795-8	D-08-W-231114	Total/NA	Water	3510C	
410-151795-12	D-18-W-231114	Total/NA	Water	3510C	
410-151795-14	D-09-W-231114	Total/NA	Water	3510C	
410-151795-16	D-02A-W-231114	Total/NA	Water	3510C	
410-151795-25	D-25-W-231115	Total/NA	Water	3510C	
410-151795-27	MW-29-W-231115	Total/NA	Water	3510C	
MB 410-447356/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-447356/2-B	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-447356/3-C	Lab Control Sample Dup	Total/NA	Water	3510C	
410-151795-25 DU	D-25-W-231115	Total/NA	Water	3510C	
410-151795-27 DU	MW-29-W-231115	Total/NA	Water	3510C	

Prep Batch: 447360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-2	MW-26-W-231114	Total/NA	Water	3510C	
410-151795-3	D-17-W-231114	Total/NA	Water	3510C	
410-151795-4	MW-11-W-231114	Total/NA	Water	3510C	
410-151795-5	D-19-W-231114	Total/NA	Water	3510C	
410-151795-6	MW-31-W-231114	Total/NA	Water	3510C	
410-151795-7	MW-12-W-231114	Total/NA	Water	3510C	
410-151795-8	D-08-W-231114	Total/NA	Water	3510C	
410-151795-12	D-18-W-231114	Total/NA	Water	3510C	
410-151795-13	MW-30-W-231114	Total/NA	Water	3510C	
410-151795-14	D-09-W-231114	Total/NA	Water	3510C	
410-151795-15	MW-24-W-231114	Total/NA	Water	3510C	
410-151795-16	D-02A-W-231114	Total/NA	Water	3510C	
410-151795-17	MW-23-W-231114	Total/NA	Water	3510C	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA (Continued)

Prep Batch: 447360 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-25	D-25-W-231115	Total/NA	Water	3510C	
410-151795-27	MW-29-W-231115	Total/NA	Water	3510C	
MB 410-447360/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-447360/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-447360/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
410-151795-25 DU	D-25-W-231115	Total/NA	Water	3510C	
410-151795-27 DU	MW-29-W-231115	Total/NA	Water	3510C	

Analysis Batch: 447751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-2	MW-26-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-3	D-17-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-4	MW-11-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-5	D-19-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-6	MW-31-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-7	MW-12-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-8	D-08-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-12	D-18-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-13	MW-30-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-14	D-09-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-15	MW-24-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-16	D-02A-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-17	MW-23-W-231114	Total/NA	Water	NWTPH-Dx	447360
410-151795-25	D-25-W-231115	Total/NA	Water	NWTPH-Dx	447360
410-151795-27	MW-29-W-231115	Total/NA	Water	NWTPH-Dx	447360
MB 410-447360/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	447360
LCS 410-447360/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	447360
LCSD 410-447360/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	447360
410-151795-25 DU	D-25-W-231115	Total/NA	Water	NWTPH-Dx	447360
410-151795-27 DU	MW-29-W-231115	Total/NA	Water	NWTPH-Dx	447360

Cleanup Batch: 447811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	3630C	446260
MB 410-446260/1-B	Method Blank	Total/NA	Water	3630C	446260
LCS 410-446260/2-B	Lab Control Sample	Total/NA	Water	3630C	446260

Prep Batch: 448163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-9	MW-38-W-231115	Total/NA	Water	3510C	
410-151795-10	D-26-W-231115	Total/NA	Water	3510C	
410-151795-11	D-24-W-231115	Total/NA	Water	3510C	
410-151795-18	D-27-W-231115	Total/NA	Water	3510C	
410-151795-19	MW-39-W-231115	Total/NA	Water	3510C	
410-151795-20	RMW-01-W-231115	Total/NA	Water	3510C	
410-151795-21	D-12-W-231115	Total/NA	Water	3510C	
410-151795-22	D-15-W-231115	Total/NA	Water	3510C	
410-151795-23	MW-36-W-231115	Total/NA	Water	3510C	
410-151795-24	MW-37-W-231115	Total/NA	Water	3510C	
MB 410-448163/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-448163/2-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

GC Semi VOA (Continued)

Prep Batch: 448163 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-10 MS	D-26-W-231115	Total/NA	Water	3510C	
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	3510C	

Prep Batch: 448167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-10	D-26-W-231115	Total/NA	Water	3510C	
410-151795-11	D-24-W-231115	Total/NA	Water	3510C	
410-151795-18	D-27-W-231115	Total/NA	Water	3510C	
410-151795-19	MW-39-W-231115	Total/NA	Water	3510C	
410-151795-20	RMW-01-W-231115	Total/NA	Water	3510C	
410-151795-21	D-12-W-231115	Total/NA	Water	3510C	
410-151795-22	D-15-W-231115	Total/NA	Water	3510C	
410-151795-24	MW-37-W-231115	Total/NA	Water	3510C	
MB 410-448167/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-448167/2-B	Lab Control Sample	Total/NA	Water	3510C	
410-151795-10 MS	D-26-W-231115	Total/NA	Water	3510C	
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	3510C	

Analysis Batch: 448229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-1	MW-10-W-231113	Total/NA	Water	NWTPH-Dx	447811
MB 410-446260/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	447811
LCS 410-446260/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	447811

Analysis Batch: 448780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-9	MW-38-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-10	D-26-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-11	D-24-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-18	D-27-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-19	MW-39-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-20	RMW-01-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-21	D-12-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-22	D-15-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-23	MW-36-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-24	MW-37-W-231115	Total/NA	Water	NWTPH-Dx	448163
MB 410-448163/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	448163
LCS 410-448163/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	448163
410-151795-10 MS	D-26-W-231115	Total/NA	Water	NWTPH-Dx	448163
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	NWTPH-Dx	448163

Cleanup Batch: 449353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-2	MW-26-W-231114	Total/NA	Water	3630C	447356
410-151795-3	D-17-W-231114	Total/NA	Water	3630C	447356
410-151795-6	MW-31-W-231114	Total/NA	Water	3630C	447356
410-151795-7	MW-12-W-231114	Total/NA	Water	3630C	447356
410-151795-8	D-08-W-231114	Total/NA	Water	3630C	447356
410-151795-12	D-18-W-231114	Total/NA	Water	3630C	447356
410-151795-14	D-09-W-231114	Total/NA	Water	3630C	447356
410-151795-16	D-02A-W-231114	Total/NA	Water	3630C	447356

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

GC Semi VOA (Continued)

Cleanup Batch: 449353 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-25	D-25-W-231115	Total/NA	Water	3630C	447356
410-151795-27	MW-29-W-231115	Total/NA	Water	3630C	447356
MB 410-447356/1-B	Method Blank	Total/NA	Water	3630C	447356
LCS 410-447356/2-B	Lab Control Sample	Total/NA	Water	3630C	447356
LCSD 410-447356/3-C	Lab Control Sample Dup	Total/NA	Water	3630C	447356
410-151795-25 DU	D-25-W-231115	Total/NA	Water	3630C	447356
410-151795-27 DU	MW-29-W-231115	Total/NA	Water	3630C	447356

Cleanup Batch: 449581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-10	D-26-W-231115	Total/NA	Water	3630C	448167
410-151795-11	D-24-W-231115	Total/NA	Water	3630C	448167
410-151795-18	D-27-W-231115	Total/NA	Water	3630C	448167
410-151795-19	MW-39-W-231115	Total/NA	Water	3630C	448167
410-151795-20	RMW-01-W-231115	Total/NA	Water	3630C	448167
410-151795-21	D-12-W-231115	Total/NA	Water	3630C	448167
410-151795-22	D-15-W-231115	Total/NA	Water	3630C	448167
410-151795-24	MW-37-W-231115	Total/NA	Water	3630C	448167
MB 410-448167/1-B	Method Blank	Total/NA	Water	3630C	448167
LCS 410-448167/2-B	Lab Control Sample	Total/NA	Water	3630C	448167
410-151795-10 MS	D-26-W-231115	Total/NA	Water	3630C	448167
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	3630C	448167

Analysis Batch: 449747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-10	D-26-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-11	D-24-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-18	D-27-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-19	MW-39-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-20	RMW-01-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-21	D-12-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-22	D-15-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-24	MW-37-W-231115	Total/NA	Water	NWTPH-Dx	449581
MB 410-448167/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	449581
LCS 410-448167/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	449581
410-151795-10 MS	D-26-W-231115	Total/NA	Water	NWTPH-Dx	449581
410-151795-10 MSD	D-26-W-231115	Total/NA	Water	NWTPH-Dx	449581

Analysis Batch: 449762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-3	D-17-W-231114	Total/NA	Water	NWTPH-Dx	449353
410-151795-12	D-18-W-231114	Total/NA	Water	NWTPH-Dx	449353
410-151795-14	D-09-W-231114	Total/NA	Water	NWTPH-Dx	449353
MB 410-447356/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	449353
LCS 410-447356/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	449353
LCSD 410-447356/3-C	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	449353

Analysis Batch: 450931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-2	MW-26-W-231114	Total/NA	Water	NWTPH-Dx	449353
410-151795-6	MW-31-W-231114	Total/NA	Water	NWTPH-Dx	449353

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

GC Semi VOA (Continued)

Analysis Batch: 450931 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-7	MW-12-W-231114	Total/NA	Water	NWTPH-Dx	449353
410-151795-8	D-08-W-231114	Total/NA	Water	NWTPH-Dx	449353
MB 410-447356/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	449353
LCS 410-447356/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	449353
LCSD 410-447356/3-C	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	449353

Analysis Batch: 450932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-16	D-02A-W-231114	Total/NA	Water	NWTPH-Dx	449353
410-151795-25	D-25-W-231115	Total/NA	Water	NWTPH-Dx	449353
410-151795-27	MW-29-W-231115	Total/NA	Water	NWTPH-Dx	449353
410-151795-25 DU	D-25-W-231115	Total/NA	Water	NWTPH-Dx	449353
410-151795-27 DU	MW-29-W-231115	Total/NA	Water	NWTPH-Dx	449353

Prep Batch: 451387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-4	MW-11-W-231114	Total/NA	Water	3510C	
410-151795-5	D-19-W-231114	Total/NA	Water	3510C	
410-151795-13	MW-30-W-231114	Total/NA	Water	3510C	
410-151795-15	MW-24-W-231114	Total/NA	Water	3510C	
MB 410-451387/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	3510C	

Cleanup Batch: 451524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-4	MW-11-W-231114	Total/NA	Water	3630C	451387
410-151795-5	D-19-W-231114	Total/NA	Water	3630C	451387
410-151795-13	MW-30-W-231114	Total/NA	Water	3630C	451387
410-151795-15	MW-24-W-231114	Total/NA	Water	3630C	451387
MB 410-451387/1-B	Method Blank	Total/NA	Water	3630C	451387
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	3630C	451387
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	3630C	451387

Analysis Batch: 451978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151795-4	MW-11-W-231114	Total/NA	Water	NWTPH-Dx	451524
410-151795-5	D-19-W-231114	Total/NA	Water	NWTPH-Dx	451524
410-151795-13	MW-30-W-231114	Total/NA	Water	NWTPH-Dx	451524
410-151795-15	MW-24-W-231114	Total/NA	Water	NWTPH-Dx	451524
MB 410-451387/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	451524
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	451524
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	451524

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-10-W-231113

Lab Sample ID: 410-151795-1

Date Collected: 11/13/23 13:25

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 19:35
Total/NA	Analysis	NWTPH-Gx		1	445460	SE8S	ELLE	11/20/23 17:11
Total/NA	Prep	3510C			446260	QKX3	ELLE	11/22/23 07:47
Total/NA	Cleanup	3630C			447811	USL7	ELLE	11/29/23 00:30
Total/NA	Analysis	NWTPH-Dx		1	448229	UHEW	ELLE	11/30/23 06:45
Total/NA	Prep	3510C			446264	QKX3	ELLE	11/22/23 07:54
Total/NA	Analysis	NWTPH-Dx		1	446556	IUSB	ELLE	11/22/23 23:47

Client Sample ID: MW-26-W-231114

Lab Sample ID: 410-151795-2

Date Collected: 11/14/23 09:35

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 19:59
Total/NA	Analysis	NWTPH-Gx		1	445460	SE8S	ELLE	11/20/23 17:36
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/06/23 21:27
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 00:52

Client Sample ID: D-17-W-231114

Lab Sample ID: 410-151795-3

Date Collected: 11/14/23 10:45

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 20:23
Total/NA	Analysis	NWTPH-Gx		1	445460	SE8S	ELLE	11/20/23 18:01
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 01:15
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	449762	KP5X	ELLE	12/04/23 16:52

Client Sample ID: MW-11-W-231114

Lab Sample ID: 410-151795-4

Date Collected: 11/14/23 11:30

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 20:47
Total/NA	Analysis	NWTPH-Gx		1	445460	SE8S	ELLE	11/20/23 18:27
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 01:38

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-11-W-231114

Lab Sample ID: 410-151795-4

Date Collected: 11/14/23 11:30

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			451387	QJZ6	ELLE	12/07/23 15:43
Total/NA	Cleanup	3630C			451524	USL7	ELLE	12/08/23 00:38
Total/NA	Analysis	NWTPH-Dx		1	451978	IUSB	ELLE	12/09/23 01:30

Client Sample ID: D-19-W-231114

Lab Sample ID: 410-151795-5

Date Collected: 11/14/23 13:00

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 21:11
Total/NA	Analysis	NWTPH-Gx		1	445460	SE8S	ELLE	11/20/23 18:52
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 02:01
Total/NA	Prep	3510C			451387	QJZ6	ELLE	12/07/23 15:43
Total/NA	Cleanup	3630C			451524	USL7	ELLE	12/08/23 00:38
Total/NA	Analysis	NWTPH-Dx		1	451978	IUSB	ELLE	12/09/23 01:53

Client Sample ID: MW-31-W-231114

Lab Sample ID: 410-151795-6

Date Collected: 11/14/23 13:50

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 21:35
Total/NA	Analysis	NWTPH-Gx		5	445460	SE8S	ELLE	11/20/23 23:58
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/06/23 22:59
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 02:23

Client Sample ID: MW-12-W-231114

Lab Sample ID: 410-151795-7

Date Collected: 11/14/23 15:40

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 21:58
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 19:34
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/06/23 23:22
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 02:46

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-08-W-231114

Lab Sample ID: 410-151795-8

Date Collected: 11/14/23 16:35

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 22:23
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 20:52
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/06/23 23:45
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 03:09

Client Sample ID: MW-38-W-231115

Lab Sample ID: 410-151795-9

Date Collected: 11/15/23 09:25

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 15:06
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 14:50
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 11:36

Client Sample ID: D-26-W-231115

Lab Sample ID: 410-151795-10

Date Collected: 11/15/23 10:25

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 15:30
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 15:15
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 16:06
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 11:59

Client Sample ID: D-24-W-231115

Lab Sample ID: 410-151795-11

Date Collected: 11/15/23 12:00

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 16:42
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 16:32
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 17:15
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 12:22

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-18-W-231114

Lab Sample ID: 410-151795-12

Date Collected: 11/14/23 10:01

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 17:06
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 21:18
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 03:32
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	449762	KP5X	ELLE	12/04/23 19:33

Client Sample ID: MW-30-W-231114

Lab Sample ID: 410-151795-13

Date Collected: 11/14/23 11:01

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 17:30
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 21:43
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 03:54
Total/NA	Prep	3510C			451387	QJZ6	ELLE	12/07/23 15:43
Total/NA	Cleanup	3630C			451524	USL7	ELLE	12/08/23 00:38
Total/NA	Analysis	NWTPH-Dx		1	451978	IUSB	ELLE	12/09/23 02:39

Client Sample ID: D-09-W-231114

Lab Sample ID: 410-151795-14

Date Collected: 11/14/23 12:25

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 17:54
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 22:09
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 04:17
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	449762	KP5X	ELLE	12/04/23 20:19

Client Sample ID: MW-24-W-231114

Lab Sample ID: 410-151795-15

Date Collected: 11/14/23 14:03

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 18:18
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 22:34
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 05:02

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-24-W-231114

Lab Sample ID: 410-151795-15

Date Collected: 11/14/23 14:03

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			451387	QJZ6	ELLE	12/07/23 15:43
Total/NA	Cleanup	3630C			451524	USL7	ELLE	12/08/23 00:38
Total/NA	Analysis	NWTPH-Dx		1	451978	IUSB	ELLE	12/09/23 03:25

Client Sample ID: D-02A-W-231114

Lab Sample ID: 410-151795-16

Date Collected: 11/14/23 15:21

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 18:42
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 23:00
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 05:25
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/06/23 21:50

Client Sample ID: MW-23-W-231114

Lab Sample ID: 410-151795-17

Date Collected: 11/14/23 16:33

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 19:06
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 23:26
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 05:48

Client Sample ID: D-27-W-231115

Lab Sample ID: 410-151795-18

Date Collected: 11/15/23 09:17

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 19:30
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 16:57
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 17:38
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 12:44

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: MW-39-W-231115

Lab Sample ID: 410-151795-19

Date Collected: 11/15/23 10:12

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 19:54
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 17:22
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 18:01
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 13:07

Client Sample ID: RMW-01-W-231115

Lab Sample ID: 410-151795-20

Date Collected: 11/15/23 11:41

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 20:18
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 18:39
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 18:24
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 13:30

Client Sample ID: D-12-W-231115

Lab Sample ID: 410-151795-21

Date Collected: 11/15/23 12:43

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 20:42
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 19:04
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 18:47
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 13:52

Client Sample ID: D-15-W-231115

Lab Sample ID: 410-151795-22

Date Collected: 11/15/23 13:58

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 21:06
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 19:29
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 19:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: D-15-W-231115

Lab Sample ID: 410-151795-22

Date Collected: 11/15/23 13:58

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 14:15

Client Sample ID: MW-36-W-231115

Lab Sample ID: 410-151795-23

Date Collected: 11/15/23 12:55

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 21:30
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 19:55
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 14:38

Client Sample ID: MW-37-W-231115

Lab Sample ID: 410-151795-24

Date Collected: 11/15/23 13:55

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 21:54
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 20:20
Total/NA	Prep	3510C			448167	T9CY	ELLE	11/29/23 15:27
Total/NA	Cleanup	3630C			449581	USL7	ELLE	12/04/23 01:15
Total/NA	Analysis	NWTPH-Dx		1	449747	KP5X	ELLE	12/04/23 19:56
Total/NA	Prep	3510C			448163	T9CY	ELLE	11/29/23 15:22
Total/NA	Analysis	NWTPH-Dx		1	448780	UHEW	ELLE	12/01/23 15:01

Client Sample ID: D-25-W-231115

Lab Sample ID: 410-151795-25

Date Collected: 11/15/23 14:50

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 22:18
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 20:46
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 06:11
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/06/23 22:36

Client Sample ID: TB-1-T-231115

Lab Sample ID: 410-151795-26

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/17/23 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 15:59

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Client Sample ID: TB-1-T-231115

Date Collected: 10/26/23 00:00

Date Received: 11/17/23 09:57

Lab Sample ID: 410-151795-26

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	NWTPH-Gx		1	445458	SE8S	ELLE	11/20/23 16:44

Client Sample ID: MW-29-W-231115

Date Collected: 11/15/23 14:58

Date Received: 11/17/23 09:57

Lab Sample ID: 410-151795-27

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446766	UKAD	ELLE	11/26/23 22:42
Total/NA	Analysis	NWTPH-Gx		1	446883	SE8S	ELLE	11/27/23 21:11
Total/NA	Prep	3510C			447360	QKX3	ELLE	11/28/23 08:09
Total/NA	Analysis	NWTPH-Dx		1	447751	IUSB	ELLE	11/29/23 06:56
Total/NA	Prep	3510C			447356	QKX3	ELLE	11/28/23 08:04
Total/NA	Cleanup	3630C			449353	USL7	ELLE	12/02/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/06/23 23:22

Client Sample ID: TB2-T-231115

Date Collected: 10/26/23 00:00

Date Received: 11/17/23 09:57

Lab Sample ID: 410-151795-28

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 16:23
Total/NA	Analysis	NWTPH-Gx		1	445458	SE8S	ELLE	11/20/23 17:09

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C457	04-11-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: AECOM

Job ID: 410-151795-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method	Method Description	Protocol	Laboratory
8260D/UST	Volatile Organic Compounds by GC/MS	SW846	ELLE
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ELLE
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
3630C	Silica Gel Cleanup	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: AECOM

Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151795-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-151795-1	MW-10-W-231113	Water	11/13/23 13:25	11/17/23 09:57
410-151795-2	MW-26-W-231114	Water	11/14/23 09:35	11/17/23 09:57
410-151795-3	D-17-W-231114	Water	11/14/23 10:45	11/17/23 09:57
410-151795-4	MW-11-W-231114	Water	11/14/23 11:30	11/17/23 09:57
410-151795-5	D-19-W-231114	Water	11/14/23 13:00	11/17/23 09:57
410-151795-6	MW-31-W-231114	Water	11/14/23 13:50	11/17/23 09:57
410-151795-7	MW-12-W-231114	Water	11/14/23 15:40	11/17/23 09:57
410-151795-8	D-08-W-231114	Water	11/14/23 16:35	11/17/23 09:57
410-151795-9	MW-38-W-231115	Water	11/15/23 09:25	11/17/23 09:57
410-151795-10	D-26-W-231115	Water	11/15/23 10:25	11/17/23 09:57
410-151795-11	D-24-W-231115	Water	11/15/23 12:00	11/17/23 09:57
410-151795-12	D-18-W-231114	Water	11/14/23 10:01	11/17/23 09:57
410-151795-13	MW-30-W-231114	Water	11/14/23 11:01	11/17/23 09:57
410-151795-14	D-09-W-231114	Water	11/14/23 12:25	11/17/23 09:57
410-151795-15	MW-24-W-231114	Water	11/14/23 14:03	11/17/23 09:57
410-151795-16	D-02A-W-231114	Water	11/14/23 15:21	11/17/23 09:57
410-151795-17	MW-23-W-231114	Water	11/14/23 16:33	11/17/23 09:57
410-151795-18	D-27-W-231115	Water	11/15/23 09:17	11/17/23 09:57
410-151795-19	MW-39-W-231115	Water	11/15/23 10:12	11/17/23 09:57
410-151795-20	RMW-01-W-231115	Water	11/15/23 11:41	11/17/23 09:57
410-151795-21	D-12-W-231115	Water	11/15/23 12:43	11/17/23 09:57
410-151795-22	D-15-W-231115	Water	11/15/23 13:58	11/17/23 09:57
410-151795-23	MW-36-W-231115	Water	11/15/23 12:55	11/17/23 09:57
410-151795-24	MW-37-W-231115	Water	11/15/23 13:55	11/17/23 09:57
410-151795-25	D-25-W-231115	Water	11/15/23 14:50	11/17/23 09:57
410-151795-26	TB-1-T-231115	Water	10/26/23 00:00	11/17/23 09:57
410-151795-27	MW-29-W-231115	Water	11/15/23 14:58	11/17/23 09:57
410-151795-28	TB2-T-231115	Water	10/26/23 00:00	11/17/23 09:57

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Chain of Custody Record

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Environment Testing

Client: SC, LLC		Lab PM: Carter, Amek		Carrier Tracking No(s):		COC No: 410-101297-22634.5	
Client Contact: Mr. Bradley Wynne		Phone:		E-Mail: Loran.Carter@et.eurofinsus.com		State of Origin:	
Company: AECOM		PWSID:		Analysis Requested:		Job #:	
Address: 13355 Noel Road Suite 400		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) NWTPH_Dx - NWTPH-Gx NWTPH_Gx - NWTPH-Gx 8250D_UST - BTEX/MTBE NWTPH_Dx - NWTPH-Dx		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)	
City: Dallas		TAT Requested (days):					
State, Zip: TX, 75240		Compliance Project: ☐ Yes ☐ No					
Phone: 972-735-7068(Tel)		PO #: 152363					
Email: bradley.wynne@aecom.com		WO #: 60701804					
Project Name: CEMREC Legacy Sites - Tacoma		Project #: 41014252		Total Number of containers		Special Instructions/Note:	
Site:		SSOW#:					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)		
				Preservation Code:			
MW-10-W-231113		11/13/23	1325	G	W		8
MW-26-W-231114		11/14/23	0935	G	W		8
D-17-W-231114			1045				8
MW-11-W-231114			1130				8
D-19-W-231114			1300				8
MW-31-W-231114			1350				6
D MW-12-W-231114			1540				8
D-08-W-231114			1635				8
MW-38-W-231115		11/15/23	0925	G	W		8
D-26-W-231115			1025				24
D-24-W-231115			1200				8
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 11/15/23 1640		Company: AECOM		Received by: <i>[Signature]</i> Date/Time: 11/17/23 9:57 Company: CEMREC	
Relinquished by:		Date/Time:		Company:		Received by: <i>[Signature]</i> Date/Time: 11/17/23 Company:	
Relinquished by:		Date/Time:		Company:		Received by: <i>[Signature]</i> Date/Time: 11/17/23 9:57 Company: CEMREC	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: Raw 0-4 - 4.8			

Eurofins Lancaster Laboratories Environme

2425 New Holland Pike

Lancaster, PA 17601

Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record



Environmental Testing

Client Information		Sampler: SC, LC		Lab PM: Carter, Amek		Carrier Tracking No(s):		COC No: 410-101297-22634 6											
Client Contact: Mr. Bradley Wynne		Phone:		E-Mail: Loran Carter@et.eurofinsus.com		State of Origin:		Page: 6 of 6 Page 2 of 3											
Company: AECOM		PWSID:		Analysis Requested						Job #:									
Address: 13355 Noel Road Suite 400		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) NWTPH_Dx - NWTPH-Gx NWTPH_Gx - NWTPH-Gx 8260D_UST - BTEX/MTBE NWTPH_Dx - NWTPH-Dx Total Number of containers						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)									
City: Dallas		TAT Requested (days):																	
State, Zip: TX, 75240		Compliance Project: ☐ Yes ☐ No																	
Phone: 972-735-7068(Tel)		PO #: 152363																	
Email: bradley.wynne@aecom.com		WO #: 60701804																	
Project Name: CEMREC Legacy Sites - Tacoma		Project #: 41014252		Special Instructions/Note:															
Site:		SSOW#:																	
Sample Identification		Sample Date								Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)					
D-18-W-231114		11/14/23		1001		G		W											
MW-30-W-231114		11/14/23		1101		G		W											
D-09-W-231114		11/14/23		1225		G		W											
MW-24-W-231114		11/14/23		1403		G		W											
D-02A-W-231114		11/14/23		1521		G		W											
MW-23-W-231114		11/14/23		1633		G		W											
D-27-W-231115		11/15/23		97		G		W											
MW-39-W-231115		11/15/23		1012		G		W											
BMW-01-W-231115		11/15/23		1141		G		W											
D-12-W-231115		11/15/23		1243		G		W											
D-15-W-231115		11/15/23		1358		G		W											
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological										☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:									
Empty Kit Relinquished by:										Date:									
Relinquished by: [Signature]										Date/Time: 11/15/23 1640									
Relinquished by:										Date/Time:									
Relinquished by:										Date/Time:									
Custody Seals Intact: ☐ Yes ☐ No										Custody Seal No.:									
Cooler Temperature(s) °C and Other Remarks:										Raw 0.4 - 4.8									

Environment Testing

Page 67 of 68

Login Sample Receipt Checklist

Client: AECOM

Job Number: 410-151795-1

Login Number: 151795

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Kanagy, Nicholas

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	True	



ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Bradley Wynne
AECOM
13355 Noel Road
Suite 400
Dallas, Texas 75240

Generated 12/12/2023 12:53:35 AM

JOB DESCRIPTION

CEMREC Legacy Sites – Tacoma

JOB NUMBER

410-151876-1

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Authorized for release by
Amek Carter, Project Manager
Loran.Carter@et.eurofinsus.com
(717)556-7252

Generated
12/12/2023 12:53:35 AM

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



Table of Contents

Cover Page	1
Table of Contents	4
Definitions/Glossary	5
Case Narrative	6
Detection Summary	7
Client Sample Results	10
Surrogate Summary	24
QC Sample Results	28
QC Association Summary	40
Lab Chronicle	47
Certification Summary	54
Method Summary	55
Sample Summary	56
Chain of Custody	57
Receipt Checklists	60



Definitions/Glossary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

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

Case Narrative

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Job ID: 410-151876-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-151876-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 11/18/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.3°C, 0.5°C and 1.9°C

GC/MS VOA

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

GC VOA

Method NWTPH_Gx: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: DUP-1-WD-231116 (410-151876-17), DUP-2-WD-231117 (410-151876-18), MW-13-W-231117 (410-151876-19) and D-01-W-231117 (410-151876-20). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA

Method NWTPH_Dx: The CCV bracketing samples D-22-W-231116 (410-151876-1), MW-34-W-231116 (410-151876-2), MW-34-W-231116 (410-151876-2[MS]), MW-34-W-231116 (410-151876-2[MSD]), MW-21-W-231116 (410-151876-3), MW-32-W-231116 (410-151876-4), D-03A-W-231116 (410-151876-5), MW-14-W-231116 (410-151876-6), MW-25-W-231116 (410-151876-11), D-10-W-231116 (410-151876-12), D-7-W-231116 (410-151876-13), MW-22-W-231116 (410-151876-14), MW-18-W-231116 (410-151876-16), DUP-1-WD-231116 (410-151876-17), (LCS 410-448723/2-B), (MB 410-448723/1-B) and (410-151876-B-1-E DU) had a detection for o-terphenyl below the control limits. Only one vial of extract was provided, so reanalysis is not possible. Re-extraction would occur outside of the method hold time.

Method NWTPH_Dx: Samples D-06-W-231116 (410-151876-15) had a detection for the C24-C40 range due to silica gel contamination. Sample was re-extracted outside of the method hold time. Re-extract was non-detect for the C24-C40 range.

Method NWTPH_Dx: Surrogate recovery for the following samples were outside control limits (low): RB-1-R-231117 (410-151876-10), DUP-2-WD-231117 (410-151876-18) and D-01-W-231117 (410-151876-20). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

Method NWTPH_Dx: Surrogate recovery for the following sample was outside control limits (low): MW-13-W-231117 (410-151876-19). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

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

Detection Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: D-22-W-231116

Lab Sample ID: 410-151876-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	72	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	500		100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-34-W-231116

Lab Sample ID: 410-151876-2

No Detections.

Client Sample ID: MW-21-W-231116

Lab Sample ID: 410-151876-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	250		100	45	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	340		250	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-32-W-231116

Lab Sample ID: 410-151876-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1		1.0	0.30	ug/L	1		8260D/UST	Total/NA
Toluene	0.48	J	1.0	0.30	ug/L	1		8260D/UST	Total/NA
C7-C12 (1C)	1300		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	4900		100	46	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	73	J cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	220	J	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-03A-W-231116

Lab Sample ID: 410-151876-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	49	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1100		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	290		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-14-W-231116

Lab Sample ID: 410-151876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	170		100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-19-W-231117

Lab Sample ID: 410-151876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.0	0.30	ug/L	1		8260D/UST	Total/NA
Ethylbenzene	0.40	J	1.0	0.40	ug/L	1		8260D/UST	Total/NA
Toluene	0.43	J	1.0	0.30	ug/L	1		8260D/UST	Total/NA
Xylenes, Total	1.4	J	6.0	0.40	ug/L	1		8260D/UST	Total/NA
C7-C12 (1C)	970		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	8600		200	92	ug/L	2		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	81	J	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	1500		510	200	ug/L	2		NWTPH-Dx	Total/NA

Client Sample ID: D-14-W-231117

Lab Sample ID: 410-151876-8

No Detections.

Client Sample ID: FB-1-O-231117

Lab Sample ID: 410-151876-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: RB-1-R-231117

Lab Sample ID: 410-151876-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	59	J	100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-25-W-231116

Lab Sample ID: 410-151876-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4		1.0	0.30	ug/L	1		8260D/UST	Total/NA
Ethylbenzene	1.5		1.0	0.40	ug/L	1		8260D/UST	Total/NA
Toluene	0.46	J	1.0	0.30	ug/L	1		8260D/UST	Total/NA
C7-C12 (1C)	900		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	150		100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-10-W-231116

Lab Sample ID: 410-151876-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	93	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1900		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	190	J	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-7-W-231116

Lab Sample ID: 410-151876-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	420		100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	110	J	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-22-W-231116

Lab Sample ID: 410-151876-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	76	J	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	4100		100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	1200		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-06-W-231116

Lab Sample ID: 410-151876-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	250		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	2600		100	47	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	54	J cn	100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	280		260	100	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	130	J cn	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-18-W-231116

Lab Sample ID: 410-151876-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	550		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	1300		100	46	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	59	J cn	100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	240	J	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: DUP-1-WD-231116

Lab Sample ID: 410-151876-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	660	J cn	2500	430	ug/L	10		NWTPH-Gx	Total/NA
C12-C24	3900		100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	1300		260	100	ug/L	1		NWTPH-Dx	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: DUP-2-WD-231117

Lab Sample ID: 410-151876-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	4500		100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	850		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-13-W-231117

Lab Sample ID: 410-151876-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	220	J cn	1300	220	ug/L	5		NWTPH-Gx	Total/NA
C12-C24	3900		100	46	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	440		260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: D-01-W-231117

Lab Sample ID: 410-151876-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	4300		100	47	ug/L	1		NWTPH-Dx	Total/NA
C12-C24 with Silica Gel clean up	52	J cn	100	47	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	780		260	100	ug/L	1		NWTPH-Dx	Total/NA
C24-C40 with Silica Gel clean up	920	cn	260	100	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: TB-4-T-231117

Lab Sample ID: 410-151876-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	49	J	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: TB-3-T-231117

Lab Sample ID: 410-151876-22

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: D-22-W-231116

Lab Sample ID: 410-151876-1

Date Collected: 11/16/23 09:35

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 18:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 18:15	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 18:15	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 18:15	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		11/29/23 18:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 18:15	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 18:15	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 18:15	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	72	J	250	43	ug/L			11/28/23 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	103		50 - 150		11/28/23 15:00	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	500		100	46	ug/L		11/30/23 15:28	12/01/23 21:16	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 01:40	1
C24-C40	ND		260	100	ug/L		11/30/23 15:28	12/01/23 21:16	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	83		50 - 150	11/30/23 15:28	12/01/23 21:16	1
o-terphenyl (Surr)	73	cn	50 - 150	11/30/23 15:33	12/07/23 01:40	1

Client Sample ID: MW-34-W-231116

Lab Sample ID: 410-151876-2

Date Collected: 11/16/23 10:36

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 18:39	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 18:39	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 18:39	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 18:39	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 18:39	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/29/23 18:39	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 18:39	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 18:39	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 15:26	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: MW-34-W-231116

Lab Sample ID: 410-151876-2

Date Collected: 11/16/23 10:36

Matrix: Water

Date Received: 11/18/23 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/28/23 15:26	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	46	ug/L		11/30/23 15:28	12/01/23 22:02	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 02:26	1
C24-C40	ND		250	100	ug/L		11/30/23 15:28	12/01/23 22:02	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/30/23 15:33	12/07/23 02:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	63		50 - 150	11/30/23 15:28	12/01/23 22:02	1
o- terphenyl (Surr)	56	cn	50 - 150	11/30/23 15:33	12/07/23 02:26	1

Client Sample ID: MW-21-W-231116

Lab Sample ID: 410-151876-3

Date Collected: 11/16/23 12:05

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 19:50	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 19:50	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 19:50	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 19:50	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 19:50	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/29/23 19:50	1
Dibromofluoromethane (Surr)	100		80 - 120		11/29/23 19:50	1
Toluene-d8 (Surr)	98		80 - 120		11/29/23 19:50	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150		11/28/23 16:42	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	250		100	45	ug/L		11/30/23 15:28	12/01/23 23:11	1
C12-C24 with Silica Gel clean up	ND	cn	100	45	ug/L		11/30/23 15:33	12/07/23 03:35	1
C24-C40	340		250	100	ug/L		11/30/23 15:28	12/01/23 23:11	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/30/23 15:33	12/07/23 03:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	79		50 - 150	11/30/23 15:28	12/01/23 23:11	1
o- terphenyl (Surr)	61	cn	50 - 150	11/30/23 15:33	12/07/23 03:35	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: MW-32-W-231116

Lab Sample ID: 410-151876-4

Date Collected: 11/16/23 14:09

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1		1.0	0.30	ug/L			11/29/23 20:14	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 20:14	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 20:14	1
Toluene	0.48	J	1.0	0.30	ug/L			11/29/23 20:14	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 20:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 20:14	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 20:14	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 20:14	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 20:14	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	1300		250	43	ug/L			11/28/23 17:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150					11/28/23 17:08	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	4900		100	46	ug/L		11/30/23 15:28	12/01/23 23:34	1
C12-C24 with Silica Gel clean up	73	J cn	100	46	ug/L		11/30/23 15:33	12/07/23 03:58	1
C24-C40	220	J	260	100	ug/L		11/30/23 15:28	12/01/23 23:34	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 03:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	76		50 - 150				11/30/23 15:28	12/01/23 23:34	1
o- terphenyl (Surr)	68	cn	50 - 150				11/30/23 15:33	12/07/23 03:58	1

Client Sample ID: D-03A-W-231116

Lab Sample ID: 410-151876-5

Date Collected: 11/16/23 13:07

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 20:38	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 20:38	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 20:38	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 20:38	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 20:38	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 20:38	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 20:38	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 20:38	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	49	J	250	43	ug/L			11/28/23 17:33	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: D-03A-W-231116

Lab Sample ID: 410-151876-5

Date Collected: 11/16/23 13:07

Matrix: Water

Date Received: 11/18/23 10:00

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150					11/28/23 17:33	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1100		100	46	ug/L		11/30/23 15:28	12/01/23 23:57	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 04:44	1
C24-C40	290		260	100	ug/L		11/30/23 15:28	12/01/23 23:57	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 04:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	53		50 - 150				11/30/23 15:28	12/01/23 23:57	1
o- terphenyl (Surr)	57	cn	50 - 150				11/30/23 15:33	12/07/23 04:44	1

Client Sample ID: MW-14-W-231116

Lab Sample ID: 410-151876-6

Date Collected: 11/16/23 15:15

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 21:01	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 21:01	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 21:01	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 21:01	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 21:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120					11/29/23 21:01	1
4-Bromofluorobenzene (Surr)	96		80 - 120					11/29/23 21:01	1
Dibromofluoromethane (Surr)	101		80 - 120					11/29/23 21:01	1
Toluene-d8 (Surr)	98		80 - 120					11/29/23 21:01	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 17:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150					11/28/23 17:59	1

Methd: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	170		100	46	ug/L		11/30/23 15:28	12/02/23 00:20	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 05:07	1
C24-C40	ND		250	100	ug/L		11/30/23 15:28	12/02/23 00:20	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/30/23 15:33	12/07/23 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	74		50 - 150				11/30/23 15:28	12/02/23 00:20	1
o- terphenyl (Surr)	62	cn	50 - 150				11/30/23 15:33	12/07/23 05:07	1

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: MW-19-W-231117

Lab Sample ID: 410-151876-7

Date Collected: 11/17/23 09:10

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.68	J	1.0	0.30	ug/L			11/29/23 21:25	1
Ethylbenzene	0.40	J	1.0	0.40	ug/L			11/29/23 21:25	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 21:25	1
Toluene	0.43	J	1.0	0.30	ug/L			11/29/23 21:25	1
Xylenes, Total	1.4	J	6.0	0.40	ug/L			11/29/23 21:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 21:25	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/29/23 21:25	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 21:25	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 21:25	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	970		250	43	ug/L			11/28/23 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150					11/28/23 18:24	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	8600		200	92	ug/L		12/01/23 08:10	12/05/23 00:55	2
C12-C24 with Silica Gel clean up	81	J	100	46	ug/L		12/01/23 08:06	12/07/23 05:07	1
C24-C40	1500		510	200	ug/L		12/01/23 08:10	12/05/23 00:55	2
C24-C40 with Silica Gel clean up	ND		260	100	ug/L		12/01/23 08:06	12/07/23 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	66		50 - 150				12/01/23 08:10	12/05/23 00:55	2
o- terphenyl (Surr)	62		50 - 150				12/01/23 08:06	12/07/23 05:07	1

Client Sample ID: D-14-W-231117

Lab Sample ID: 410-151876-8

Date Collected: 11/17/23 10:15

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 13:17	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 13:17	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 13:17	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 13:17	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/30/23 13:17	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/30/23 13:17	1
Dibromofluoromethane (Surr)	100		80 - 120		11/30/23 13:17	1
Toluene-d8 (Surr)	95		80 - 120		11/30/23 13:17	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 18:50	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: D-14-W-231117

Lab Sample ID: 410-151876-8

Date Collected: 11/17/23 10:15

Matrix: Water

Date Received: 11/18/23 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150		11/28/23 18:50	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	46	ug/L		12/01/23 08:10	12/02/23 00:20	1
C12-C24 with Silica Gel clean up	ND		100	46	ug/L		12/01/23 08:06	12/07/23 05:54	1
C24-C40	ND		260	100	ug/L		12/01/23 08:10	12/02/23 00:20	1
C24-C40 with Silica Gel clean up	ND		260	100	ug/L		12/01/23 08:06	12/07/23 05:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	72		50 - 150	12/01/23 08:10	12/02/23 00:20	1
o- terphenyl (Surr)	53		50 - 150	12/01/23 08:06	12/07/23 05:54	1

Client Sample ID: FB-1-O-231117

Lab Sample ID: 410-151876-9

Date Collected: 11/17/23 11:24

Matrix: Water

Date Received: 11/18/23 10:00

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 20:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150		11/28/23 20:06	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		12/01/23 08:10	12/02/23 01:29	1
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		12/01/23 08:06	12/07/23 06:40	1
C24-C40	ND		250	100	ug/L		12/01/23 08:10	12/02/23 01:29	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		12/01/23 08:06	12/07/23 06:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	73		50 - 150	12/01/23 08:10	12/02/23 01:29	1
o- terphenyl (Surr)	62		50 - 150	12/01/23 08:06	12/07/23 06:40	1

Client Sample ID: RB-1-R-231117

Lab Sample ID: 410-151876-10

Date Collected: 11/17/23 11:34

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 11:41	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 11:41	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 11:41	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 11:41	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 11:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		11/30/23 11:41	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/30/23 11:41	1
Dibromofluoromethane (Surr)	98		80 - 120		11/30/23 11:41	1
Toluene-d8 (Surr)	97		80 - 120		11/30/23 11:41	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: RB-1-R-231117

Lab Sample ID: 410-151876-10

Date Collected: 11/17/23 11:34

Matrix: Water

Date Received: 11/18/23 10:00

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 20:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150					11/28/23 20:31	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	59	J	100	46	ug/L		12/01/23 08:10	12/02/23 01:52	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		12/01/23 08:06	12/07/23 07:03	1
C24-C40	ND		260	100	ug/L		12/01/23 08:10	12/02/23 01:52	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		12/01/23 08:06	12/07/23 07:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	61		50 - 150				12/01/23 08:10	12/02/23 01:52	1
o-terphenyl (Surr)	44	S1- cn	50 - 150				12/01/23 08:06	12/07/23 07:03	1
o-terphenyl (Surr)	54		50 - 150				12/08/23 15:16	12/11/23 13:32	1

Client Sample ID: MW-25-W-231116

Lab Sample ID: 410-151876-11

Date Collected: 11/16/23 09:25

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.4		1.0	0.30	ug/L			11/29/23 21:49	1
Ethylbenzene	1.5		1.0	0.40	ug/L			11/29/23 21:49	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 21:49	1
Toluene	0.46	J	1.0	0.30	ug/L			11/29/23 21:49	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 21:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120					11/29/23 21:49	1
4-Bromofluorobenzene (Surr)	99		80 - 120					11/29/23 21:49	1
Dibromofluoromethane (Surr)	101		80 - 120					11/29/23 21:49	1
Toluene-d8 (Surr)	98		80 - 120					11/29/23 21:49	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	900		250	43	ug/L			11/28/23 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	97		50 - 150					11/28/23 20:57	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	150		100	46	ug/L		11/30/23 15:28	12/02/23 01:06	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 05:30	1
C24-C40	ND		250	100	ug/L		11/30/23 15:28	12/02/23 01:06	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/30/23 15:33	12/07/23 05:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	72		50 - 150				11/30/23 15:28	12/02/23 01:06	1
o-terphenyl (Surr)	65	cn	50 - 150				11/30/23 15:33	12/07/23 05:30	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: D-10-W-231116

Lab Sample ID: 410-151876-12

Date Collected: 11/16/23 10:25

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 22:12	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 22:12	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 22:12	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 22:12	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 22:12	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 22:12	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 22:12	1
Toluene-d8 (Surr)	98		80 - 120		11/29/23 22:12	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	93	J	250	43	ug/L			11/28/23 21:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	103		50 - 150		11/28/23 21:22	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1900		100	46	ug/L		11/30/23 15:28	12/02/23 01:29	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		11/30/23 15:33	12/07/23 05:54	1
C24-C40	190	J	260	100	ug/L		11/30/23 15:28	12/02/23 01:29	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 05:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	62		50 - 150	11/30/23 15:28	12/02/23 01:29	1
o-terphenyl (Surr)	62	cn	50 - 150	11/30/23 15:33	12/07/23 05:54	1

Client Sample ID: D-7-W-231116

Lab Sample ID: 410-151876-13

Date Collected: 11/16/23 11:40

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 22:36	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 22:36	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 22:36	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 22:36	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		11/29/23 22:36	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 22:36	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 22:36	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 22:36	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 21:48	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: D-7-W-231116

Lab Sample ID: 410-151876-13

Date Collected: 11/16/23 11:40

Matrix: Water

Date Received: 11/18/23 10:00

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	98		50 - 150					11/28/23 21:48	1
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	420		100	47	ug/L		11/30/23 15:28	12/02/23 01:52	1
C12-C24 with Silica Gel clean up	ND	cn	100	47	ug/L		11/30/23 15:33	12/07/23 06:17	1
C24-C40	110	J	260	100	ug/L		11/30/23 15:28	12/02/23 01:52	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 06:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	73		50 - 150				11/30/23 15:28	12/02/23 01:52	1
o- terphenyl (Surr)	65	cn	50 - 150				11/30/23 15:33	12/07/23 06:17	1

Client Sample ID: MW-22-W-231116

Lab Sample ID: 410-151876-14

Date Collected: 11/16/23 12:40

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 23:00	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 23:00	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 23:00	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 23:00	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 23:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120					11/29/23 23:00	1
4-Bromofluorobenzene (Surr)	98		80 - 120					11/29/23 23:00	1
Dibromofluoromethane (Surr)	100		80 - 120					11/29/23 23:00	1
Toluene-d8 (Surr)	98		80 - 120					11/29/23 23:00	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	76	J	250	43	ug/L			11/28/23 22:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150					11/28/23 22:13	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	4100		100	47	ug/L		11/30/23 15:28	12/02/23 03:01	1
C12-C24 with Silica Gel clean up	ND	cn	100	47	ug/L		11/30/23 15:33	12/07/23 06:40	1
C24-C40	1200		260	100	ug/L		11/30/23 15:28	12/02/23 03:01	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 06:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	56		50 - 150				11/30/23 15:28	12/02/23 03:01	1
o- terphenyl (Surr)	63	cn	50 - 150				11/30/23 15:33	12/07/23 06:40	1

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: D-06-W-231116

Lab Sample ID: 410-151876-15

Date Collected: 11/16/23 14:25

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 23:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 23:23	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 23:23	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 23:23	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 23:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 23:23	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 23:23	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 23:23	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 23:23	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	250		250	43	ug/L			11/28/23 22:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	96		50 - 150		11/28/23 22:39	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	2600		100	47	ug/L		11/30/23 15:28	12/02/23 02:15	1
C12-C24 with Silica Gel clean up	54	J cn	100	47	ug/L		11/30/23 15:33	12/07/23 07:03	1
C24-C40	280		260	100	ug/L		11/30/23 15:28	12/02/23 02:15	1
C24-C40 with Silica Gel clean up	130	J cn	260	100	ug/L		11/30/23 15:33	12/07/23 07:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	75		50 - 150	11/30/23 15:28	12/02/23 02:15	1
o-terphenyl (Surr)	67	cn	50 - 150	11/30/23 15:33	12/07/23 07:03	1
o-terphenyl (Surr)	62		50 - 150	12/07/23 15:43	12/09/23 03:47	1
n-Decanoic Acid (Surr)	0.005		0 - 1	12/07/23 15:43	12/09/23 03:47	1

Client Sample ID: MW-18-W-231116

Lab Sample ID: 410-151876-16

Date Collected: 11/16/23 15:28

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 23:47	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 23:47	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 23:47	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 23:47	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 23:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		11/29/23 23:47	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/29/23 23:47	1
Dibromofluoromethane (Surr)	101		80 - 120		11/29/23 23:47	1
Toluene-d8 (Surr)	99		80 - 120		11/29/23 23:47	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: MW-18-W-231116

Lab Sample ID: 410-151876-16

Date Collected: 11/16/23 15:28

Matrix: Water

Date Received: 11/18/23 10:00

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	550		250	43	ug/L			11/28/23 23:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	96		50 - 150					11/28/23 23:04	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	1300		100	46	ug/L		11/30/23 15:28	12/02/23 02:38	1
C12-C24 with Silica Gel clean up	59	J cn	100	46	ug/L		11/30/23 15:33	12/07/23 07:26	1
C24-C40	240	J	260	100	ug/L		11/30/23 15:28	12/02/23 02:38	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 07:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	75		50 - 150				11/30/23 15:28	12/02/23 02:38	1
o- terphenyl (Surr)	66	cn	50 - 150				11/30/23 15:33	12/07/23 07:26	1

Client Sample ID: DUP-1-WD-231116

Lab Sample ID: 410-151876-17

Date Collected: 11/16/23 12:10

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 00:11	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 00:11	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 00:11	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 00:11	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120					11/30/23 00:11	1
4-Bromofluorobenzene (Surr)	99		80 - 120					11/30/23 00:11	1
Dibromofluoromethane (Surr)	100		80 - 120					11/30/23 00:11	1
Toluene-d8 (Surr)	99		80 - 120					11/30/23 00:11	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	660	J cn	2500	430	ug/L			11/30/23 15:00	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102	cn	50 - 150					11/30/23 15:00	10

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	3900		100	47	ug/L		11/30/23 15:28	12/02/23 03:24	1
C12-C24 with Silica Gel clean up	ND	cn	100	47	ug/L		11/30/23 15:33	12/07/23 07:49	1
C24-C40	1300		260	100	ug/L		11/30/23 15:28	12/02/23 03:24	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		11/30/23 15:33	12/07/23 07:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	53		50 - 150				11/30/23 15:28	12/02/23 03:24	1
o- terphenyl (Surr)	61	cn	50 - 150				11/30/23 15:33	12/07/23 07:49	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: DUP-2-WD-231117

Lab Sample ID: 410-151876-18

Date Collected: 11/17/23 09:30

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 13:41	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 13:41	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 13:41	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 13:41	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 13:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/30/23 13:41	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/30/23 13:41	1
Dibromofluoromethane (Surr)	97		80 - 120		11/30/23 13:41	1
Toluene-d8 (Surr)	96		80 - 120		11/30/23 13:41	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	2500	430	ug/L			11/30/23 15:26	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	104	cn	50 - 150					11/30/23 15:26	10

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	4500		100	47	ug/L		12/01/23 08:10	12/02/23 02:15	1
C12-C24 with Silica Gel clean up	ND	cn	100	47	ug/L		12/01/23 08:06	12/07/23 07:26	1
C24-C40	850		260	100	ug/L		12/01/23 08:10	12/02/23 02:15	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		12/01/23 08:06	12/07/23 07:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	74		50 - 150				12/01/23 08:10	12/02/23 02:15	1
o- terphenyl (Surr)	49	S1- cn	50 - 150				12/01/23 08:06	12/07/23 07:26	1
o- terphenyl (Surr)	51		50 - 150				12/08/23 15:16	12/11/23 13:55	1

Client Sample ID: MW-13-W-231117

Lab Sample ID: 410-151876-19

Date Collected: 11/17/23 09:15

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 14:05	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 14:05	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 14:05	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 14:05	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		80 - 120		11/30/23 14:05	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/30/23 14:05	1
Dibromofluoromethane (Surr)	96		80 - 120		11/30/23 14:05	1
Toluene-d8 (Surr)	97		80 - 120		11/30/23 14:05	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	220	J cn	1300	220	ug/L			11/30/23 15:51	5

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: MW-13-W-231117

Lab Sample ID: 410-151876-19

Date Collected: 11/17/23 09:15

Matrix: Water

Date Received: 11/18/23 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102	cn	50 - 150		11/30/23 15:51	5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	3900		100	46	ug/L		12/01/23 08:10	12/02/23 02:38	1
C12-C24 with Silica Gel clean up	ND	cn	100	46	ug/L		12/01/23 08:06	12/07/23 07:49	1
C24-C40	440		260	100	ug/L		12/01/23 08:10	12/02/23 02:38	1
C24-C40 with Silica Gel clean up	ND	cn	260	100	ug/L		12/01/23 08:06	12/07/23 07:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	61		50 - 150	12/01/23 08:10	12/02/23 02:38	1
o-terphenyl (Surr)	47	S1- cn	50 - 150	12/01/23 08:06	12/07/23 07:49	1
o-terphenyl (Surr)	41	S1-	50 - 150	12/08/23 15:16	12/11/23 14:18	1

Client Sample ID: D-01-W-231117

Lab Sample ID: 410-151876-20

Date Collected: 11/17/23 10:10

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 14:29	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 14:29	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 14:29	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 14:29	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		11/30/23 14:29	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/30/23 14:29	1
Dibromofluoromethane (Surr)	96		80 - 120		11/30/23 14:29	1
Toluene-d8 (Surr)	95		80 - 120		11/30/23 14:29	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	cn	2500	430	ug/L			11/30/23 16:17	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	104	cn	50 - 150		11/30/23 16:17	10

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	4300		100	47	ug/L		12/01/23 08:10	12/02/23 03:01	1
C12-C24 with Silica Gel clean up	52	J cn	100	47	ug/L		12/01/23 08:06	12/07/23 08:12	1
C24-C40	780		260	100	ug/L		12/01/23 08:10	12/02/23 03:01	1
C24-C40 with Silica Gel clean up	920	cn	260	100	ug/L		12/01/23 08:06	12/07/23 08:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr)	70		50 - 150	12/01/23 08:10	12/02/23 03:01	1
o-terphenyl (Surr)	35	S1- cn	50 - 150	12/01/23 08:06	12/07/23 08:12	1
o-terphenyl (Surr)	74		50 - 150	12/08/23 15:16	12/11/23 14:41	1

Client Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: TB-4-T-231117

Lab Sample ID: 410-151876-21

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 16:47	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 16:47	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 16:47	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 16:47	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/22/23 16:47	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/22/23 16:47	1
Dibromofluoromethane (Surr)	100		80 - 120		11/22/23 16:47	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 16:47	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	49	J	250	43	ug/L			11/21/23 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150		11/21/23 14:52	1

Client Sample ID: TB-3-T-231117

Lab Sample ID: 410-151876-22

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/18/23 10:00

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 17:10	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 17:10	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 17:10	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 17:10	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		11/22/23 17:10	1
4-Bromofluorobenzene (Surr)	97		80 - 120		11/22/23 17:10	1
Dibromofluoromethane (Surr)	98		80 - 120		11/22/23 17:10	1
Toluene-d8 (Surr)	99		80 - 120		11/22/23 17:10	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150		11/21/23 15:17	1

Surrogate Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	BFB (80-120)	DBFM (80-120)	TOL (80-120)
410-151876-1	D-22-W-231116	98	98	101	99
410-151876-2	MW-34-W-231116	99	97	101	99
410-151876-2 MS	MW-34-W-231116	101	100	101	99
410-151876-2 MSD	MW-34-W-231116	100	100	100	99
410-151876-3	MW-21-W-231116	99	96	100	98
410-151876-4	MW-32-W-231116	99	98	101	99
410-151876-5	D-03A-W-231116	99	98	101	99
410-151876-6	MW-14-W-231116	100	96	101	98
410-151876-7	MW-19-W-231117	99	100	101	99
410-151876-8	D-14-W-231117	92	98	100	95
410-151876-10	RB-1-R-231117	91	99	98	97
410-151876-11	MW-25-W-231116	98	99	101	98
410-151876-12	D-10-W-231116	99	98	101	98
410-151876-13	D-7-W-231116	100	98	101	99
410-151876-14	MW-22-W-231116	99	98	100	98
410-151876-15	D-06-W-231116	99	98	101	99
410-151876-16	MW-18-W-231116	100	99	101	99
410-151876-17	DUP-1-WD-231116	100	99	100	99
410-151876-18	DUP-2-WD-231117	92	97	97	96
410-151876-19	MW-13-W-231117	89	99	96	97
410-151876-20	D-01-W-231117	92	99	96	95
410-151876-21	TB-4-T-231117	93	96	100	99
410-151876-22	TB-3-T-231117	93	97	98	99
LCS 410-446440/4	Lab Control Sample	95	99	99	99
LCS 410-448049/4	Lab Control Sample	101	100	100	100
LCS 410-448445/4	Lab Control Sample	92	98	97	97
LCSD 410-446440/5	Lab Control Sample Dup	98	98	100	99
LCSD 410-448049/5	Lab Control Sample Dup	101	99	100	99
LCSD 410-448445/5	Lab Control Sample Dup	91	99	98	97
MB 410-446440/6	Method Blank	94	96	101	98
MB 410-448049/6	Method Blank	99	98	100	100
MB 410-448445/6	Method Blank	90	96	97	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TFT-F1 (50-150)			
410-151876-1	D-22-W-231116	103			
410-151876-2	MW-34-W-231116	99			
410-151876-2 MS	MW-34-W-231116	89			
410-151876-2 MSD	MW-34-W-231116	90			
410-151876-3	MW-21-W-231116	97			

Eurofins Lancaster Laboratories Environment Testing, LLC

Surrogate Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TFT-F1 (50-150)					
410-151876-4	MW-32-W-231116	101					
410-151876-5	D-03A-W-231116	101					
410-151876-6	MW-14-W-231116	98					
410-151876-7	MW-19-W-231117	97					
410-151876-8	D-14-W-231117	99					
410-151876-9	FB-1-O-231117	98					
410-151876-10	RB-1-R-231117	98					
410-151876-11	MW-25-W-231116	97					
410-151876-12	D-10-W-231116	103					
410-151876-13	D-7-W-231116	98					
410-151876-14	MW-22-W-231116	100					
410-151876-15	D-06-W-231116	96					
410-151876-16	MW-18-W-231116	96					
410-151876-17	DUP-1-WD-231116	102 cn					
410-151876-18	DUP-2-WD-231117	104 cn					
410-151876-19	MW-13-W-231117	102 cn					
410-151876-20	D-01-W-231117	104 cn					
410-151876-21	TB-4-T-231117	102					
410-151876-22	TB-3-T-231117	101					
LCS 410-445905/6	Lab Control Sample	92					
LCS 410-447337/6	Lab Control Sample	91					
LCS 410-448447/6	Lab Control Sample	93					
LCSD 410-445905/7	Lab Control Sample Dup	93					
LCSD 410-447337/7	Lab Control Sample Dup	91					
LCSD 410-448447/7	Lab Control Sample Dup	96					
MB 410-445905/5	Method Blank	102					
MB 410-447337/5	Method Blank	99					
MB 410-448447/5	Method Blank	102					
Surrogate Legend							
TFT-F = a,a,a-Trifluorotoluene (fid)							

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	OTP (50-150)	NDA (0-1)				
410-151876-1	D-22-W-231116	83					
410-151876-1	D-22-W-231116	73 cn					
410-151876-1 DU	D-22-W-231116	74					
410-151876-1 DU	D-22-W-231116	62 cn					
410-151876-2	MW-34-W-231116	63					
410-151876-2	MW-34-W-231116	56 cn					
410-151876-2 MS	MW-34-W-231116	64					
410-151876-2 MS	MW-34-W-231116	68 cn					
410-151876-2 MSD	MW-34-W-231116	68					
410-151876-2 MSD	MW-34-W-231116	65 cn					
410-151876-3	MW-21-W-231116	79					
410-151876-3	MW-21-W-231116	61 cn					
410-151876-4	MW-32-W-231116	76					

Eurofins Lancaster Laboratories Environment Testing, LLC

Surrogate Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		OTP (50-150)	NDA (0-1)
410-151876-4	MW-32-W-231116	68 cn	
410-151876-5	D-03A-W-231116	53	
410-151876-5	D-03A-W-231116	57 cn	
410-151876-6	MW-14-W-231116	74	
410-151876-6	MW-14-W-231116	62 cn	
410-151876-7	MW-19-W-231117	66	
410-151876-7	MW-19-W-231117	62	
410-151876-7 DU	MW-19-W-231117	55	
410-151876-7 DU	MW-19-W-231117	55	
410-151876-8	D-14-W-231117	72	
410-151876-8	D-14-W-231117	53	
410-151876-8 DU	D-14-W-231117	76	
410-151876-8 DU	D-14-W-231117	56	
410-151876-9	FB-1-O-231117	73	
410-151876-9	FB-1-O-231117	62	
410-151876-10	RB-1-R-231117	61	
410-151876-10	RB-1-R-231117	44 S1- cn	
410-151876-10	RB-1-R-231117	54	
410-151876-11	MW-25-W-231116	72	
410-151876-11	MW-25-W-231116	65 cn	
410-151876-12	D-10-W-231116	62	
410-151876-12	D-10-W-231116	62 cn	
410-151876-13	D-7-W-231116	73	
410-151876-13	D-7-W-231116	65 cn	
410-151876-14	MW-22-W-231116	56	
410-151876-14	MW-22-W-231116	63 cn	
410-151876-15	D-06-W-231116	75	
410-151876-15	D-06-W-231116	67 cn	
410-151876-15	D-06-W-231116	62	0.005
410-151876-16	MW-18-W-231116	75	
410-151876-16	MW-18-W-231116	66 cn	
410-151876-17	DUP-1-WD-231116	53	
410-151876-17	DUP-1-WD-231116	61 cn	
410-151876-18	DUP-2-WD-231117	74	
410-151876-18	DUP-2-WD-231117	49 S1- cn	
410-151876-18	DUP-2-WD-231117	51	
410-151876-19	MW-13-W-231117	61	
410-151876-19	MW-13-W-231117	47 S1- cn	
410-151876-19	MW-13-W-231117	41 S1-	
410-151876-20	D-01-W-231117	70	
410-151876-20	D-01-W-231117	35 S1- cn	
410-151876-20	D-01-W-231117	74	
LCS 410-448722/2-A	Lab Control Sample	70	
LCS 410-448723/2-B	Lab Control Sample	70 cn	
LCS 410-448924/2-B	Lab Control Sample	62	
LCS 410-448928/2-A	Lab Control Sample	72	
LCS 410-451387/2-B	Lab Control Sample	65	
LCS 410-451914/2-B	Lab Control Sample	61	0.5
LCSD 410-448924/3-B	Lab Control Sample Dup	60	
LCSD 410-448928/3-A	Lab Control Sample Dup	77	

Eurofins Lancaster Laboratories Environment Testing, LLC

Surrogate Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTP (50-150)	NDA (0-1)
LCSD 410-451387/3-B	Lab Control Sample Dup	55	
LCSD 410-451914/3-B	Lab Control Sample Dup	61	0.3
MB 410-448722/1-A	Method Blank	61	
MB 410-448723/1-B	Method Blank	64 cn	
MB 410-448924/1-B	Method Blank	56	
MB 410-448928/1-A	Method Blank	73	
MB 410-451387/1-B	Method Blank	53	
MB 410-451914/1-B	Method Blank	73	0.0005
Surrogate Legend			
OTP = o- terphenyl (Surr)			
NDA = n-Decanoic Acid (Surr)			

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-446440/6

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/22/23 14:24	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/22/23 14:24	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/22/23 14:24	1
Toluene	ND		1.0	0.30	ug/L			11/22/23 14:24	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/22/23 14:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		11/22/23 14:24	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/22/23 14:24	1
Dibromofluoromethane (Surr)	101		80 - 120		11/22/23 14:24	1
Toluene-d8 (Surr)	98		80 - 120		11/22/23 14:24	1

Lab Sample ID: LCS 410-446440/4

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	19.0		ug/L		95	80 - 120
Ethylbenzene	20.0	18.6		ug/L		93	80 - 120
Methyl tertiary butyl ether	20.0	19.9		ug/L		100	69 - 122
Toluene	20.0	18.9		ug/L		94	80 - 120
Xylenes, Total	60.0	57.5		ug/L		96	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 410-446440/5

Matrix: Water

Analysis Batch: 446440

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	20.0	18.6		ug/L		93	80 - 120	2	30
Ethylbenzene	20.0	18.0		ug/L		90	80 - 120	3	30
Methyl tertiary butyl ether	20.0	18.7		ug/L		93	69 - 122	7	30
Toluene	20.0	18.4		ug/L		92	80 - 120	2	30
Xylenes, Total	60.0	55.9		ug/L		93	80 - 120	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-448049/6

Matrix: Water

Analysis Batch: 448049

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/29/23 15:24	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/29/23 15:24	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/29/23 15:24	1
Toluene	ND		1.0	0.30	ug/L			11/29/23 15:24	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/29/23 15:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		11/29/23 15:24	1
4-Bromofluorobenzene (Surr)	98		80 - 120		11/29/23 15:24	1
Dibromofluoromethane (Surr)	100		80 - 120		11/29/23 15:24	1
Toluene-d8 (Surr)	100		80 - 120		11/29/23 15:24	1

Lab Sample ID: LCS 410-448049/4

Matrix: Water

Analysis Batch: 448049

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	20.7		ug/L		104	80 - 120
Ethylbenzene	20.0	21.2		ug/L		106	80 - 120
Methyl tertiary butyl ether	20.0	21.5		ug/L		107	69 - 122
Toluene	20.0	20.7		ug/L		104	80 - 120
Xylenes, Total	60.0	64.2		ug/L		107	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 410-448049/5

Matrix: Water

Analysis Batch: 448049

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	20.0	20.5		ug/L		103	80 - 120	1	30
Ethylbenzene	20.0	20.7		ug/L		104	80 - 120	2	30
Methyl tertiary butyl ether	20.0	21.6		ug/L		108	69 - 122	1	30
Toluene	20.0	20.1		ug/L		101	80 - 120	3	30
Xylenes, Total	60.0	63.7		ug/L		106	80 - 120	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 410-151876-2 MS

Client Sample ID: MW-34-W-231116

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 448049

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		20.0	22.5		ug/L		113	80 - 120
Ethylbenzene	ND		20.0	23.2		ug/L		116	80 - 120
Methyl tertiary butyl ether	ND		20.0	21.9		ug/L		110	69 - 122
Toluene	ND		20.0	22.5		ug/L		113	80 - 120
Xylenes, Total	ND		60.0	70.3		ug/L		117	80 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 410-151876-2 MSD

Client Sample ID: MW-34-W-231116

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 448049

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		20.0	22.7		ug/L		114	80 - 120	1	30
Ethylbenzene	ND		20.0	23.2		ug/L		116	80 - 120	0	30
Methyl tertiary butyl ether	ND		20.0	22.1		ug/L		110	69 - 122	1	30
Toluene	ND		20.0	22.6		ug/L		113	80 - 120	0	30
Xylenes, Total	ND		60.0	70.5		ug/L		118	80 - 120	0	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 410-448445/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 448445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			11/30/23 11:17	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 11:17	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			11/30/23 11:17	1
Toluene	ND		1.0	0.30	ug/L			11/30/23 11:17	1
Xylenes, Total	ND		6.0	0.40	ug/L			11/30/23 11:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		80 - 120		11/30/23 11:17	1
4-Bromofluorobenzene (Surr)	96		80 - 120		11/30/23 11:17	1
Dibromofluoromethane (Surr)	97		80 - 120		11/30/23 11:17	1
Toluene-d8 (Surr)	96		80 - 120		11/30/23 11:17	1

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-448445/4

Matrix: Water

Analysis Batch: 448445

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	19.0		ug/L		95	80 - 120
Ethylbenzene	20.0	18.3		ug/L		91	80 - 120
Methyl tertiary butyl ether	20.0	19.1		ug/L		95	69 - 122
Toluene	20.0	18.3		ug/L		92	80 - 120
Xylenes, Total	60.0	55.0		ug/L		92	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: LCSD 410-448445/5

Matrix: Water

Analysis Batch: 448445

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	20.0	18.7		ug/L		93	80 - 120	2	30
Ethylbenzene	20.0	17.9		ug/L		89	80 - 120	2	30
Methyl tertiary butyl ether	20.0	18.8		ug/L		94	69 - 122	1	30
Toluene	20.0	18.0		ug/L		90	80 - 120	2	30
Xylenes, Total	60.0	54.1		ug/L		90	80 - 120	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-445905/5

Matrix: Water

Analysis Batch: 445905

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/21/23 13:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150		11/21/23 13:08	1

Lab Sample ID: LCS 410-445905/6

Matrix: Water

Analysis Batch: 445905

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	1100	1080		ug/L		98	64 - 131

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QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-445905/6

Matrix: Water

Analysis Batch: 445905

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	92		50 - 150

Lab Sample ID: LCSD 410-445905/7

Matrix: Water

Analysis Batch: 445905

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	1110		ug/L		101	64 - 131	3	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	93		50 - 150

Lab Sample ID: MB 410-447337/5

Matrix: Water

Analysis Batch: 447337

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/28/23 11:25	1

	MB	MB					Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	99		50 - 150					11/28/23 11:25	1

Lab Sample ID: LCS 410-447337/6

Matrix: Water

Analysis Batch: 447337

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)	1100	909		ug/L		83	64 - 131		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

Lab Sample ID: LCSD 410-447337/7

Matrix: Water

Analysis Batch: 447337

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	930		ug/L		85	64 - 131	2	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	91		50 - 150

QC Sample Results

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 410-151876-2 MS

Matrix: Water

Analysis Batch: 447337

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	ND		1120	974		ug/L		87	80 - 120
Surrogate	MS %Recovery	MS Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	89		50 - 150						

Lab Sample ID: 410-151876-2 MSD

Matrix: Water

Analysis Batch: 447337

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	ND		1120	981		ug/L		88	80 - 120	1	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid) (1C)	90		50 - 150								

Lab Sample ID: MB 410-448447/5

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			11/30/23 12:27	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150					11/30/23 12:27	1

Lab Sample ID: LCS 410-448447/6

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C7-C12 (1C)	1100	1090		ug/L		99	64 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene (fid) (1C)	93		50 - 150				

Lab Sample ID: LCSD 410-448447/7

Matrix: Water

Analysis Batch: 448447

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	1100	1140		ug/L		104	64 - 131	4	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene (fid) (1C)	96		50 - 150						

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-448722/1-A

Matrix: Water

Analysis Batch: 449247

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		11/30/23 15:28	12/01/23 20:07	1
C24-C40	ND		250	100	ug/L		11/30/23 15:28	12/01/23 20:07	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	61		50 - 150				11/30/23 15:28	12/01/23 20:07	1

Lab Sample ID: LCS 410-448722/2-A

Matrix: Water

Analysis Batch: 449247

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24	600	239		ug/L		40	14 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr)	70		50 - 150				

Lab Sample ID: 410-151876-2 MS

Matrix: Water

Analysis Batch: 449247

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Prep Batch: 448722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24	ND		613	211		ug/L		34	30 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
o- terphenyl (Surr)	64		50 - 150						

Lab Sample ID: 410-151876-2 MSD

Matrix: Water

Analysis Batch: 449247

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Prep Batch: 448722

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24	ND		609	239		ug/L		39	30 - 115	12	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o- terphenyl (Surr)	68		50 - 150								

Lab Sample ID: 410-151876-1 DU

Matrix: Water

Analysis Batch: 449247

Client Sample ID: D-22-W-231116

Prep Type: Total/NA

Prep Batch: 448722

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24	500		424		ug/L		16	20
C24-C40	ND		ND		ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	74		50 - 150					

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-448723/1-B

Matrix: Water

Analysis Batch: 450931

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448723

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND	cn	100	45	ug/L		11/30/23 15:33	12/07/23 00:31	1
C24-C40 with Silica Gel clean up	ND	cn	250	100	ug/L		11/30/23 15:33	12/07/23 00:31	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	64	cn	50 - 150				11/30/23 15:33	12/07/23 00:31	1

Lab Sample ID: LCS 410-448723/2-B

Matrix: Water

Analysis Batch: 450931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448723

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	600	228	cn	ug/L		38	14 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr)	70	cn	50 - 150				

Lab Sample ID: 410-151876-2 MS

Matrix: Water

Analysis Batch: 450931

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Prep Batch: 448723

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	ND	cn	613	202	cn	ug/L		33	30 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
o- terphenyl (Surr)	68	cn	50 - 150						

Lab Sample ID: 410-151876-2 MSD

Matrix: Water

Analysis Batch: 450931

Client Sample ID: MW-34-W-231116

Prep Type: Total/NA

Prep Batch: 448723

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up	ND	cn	609	210	cn	ug/L		35	30 - 115	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o- terphenyl (Surr)	65	cn	50 - 150								

Lab Sample ID: 410-151876-1 DU

Matrix: Water

Analysis Batch: 450931

Client Sample ID: D-22-W-231116

Prep Type: Total/NA

Prep Batch: 448723

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24 with Silica Gel clean up	ND	cn	ND	cn	ug/L		NC	20
C24-C40 with Silica Gel clean up	ND	cn	ND	cn	ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	62	cn	50 - 150					

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-448924/1-B

Matrix: Water

Analysis Batch: 450932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		12/01/23 08:06	12/07/23 00:31	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		12/01/23 08:06	12/07/23 00:31	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	56		50 - 150				12/01/23 08:06	12/07/23 00:31	1

Lab Sample ID: LCS 410-448924/2-B

Matrix: Water

Analysis Batch: 450932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24 with Silica Gel clean up	600	214		ug/L		36	14 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr)	62		50 - 150				

Lab Sample ID: LCSD 410-448924/3-B

Matrix: Water

Analysis Batch: 450932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 448924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up	600	214		ug/L		36	14 - 115	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
o- terphenyl (Surr)	60		50 - 150						

Lab Sample ID: 410-151876-7 DU

Matrix: Water

Analysis Batch: 450932

Client Sample ID: MW-19-W-231117

Prep Type: Total/NA

Prep Batch: 448924

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24 with Silica Gel clean up	81	J	69.1	J	ug/L		15	20
C24-C40 with Silica Gel clean up	ND		ND		ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	55		50 - 150					

Lab Sample ID: 410-151876-8 DU

Matrix: Water

Analysis Batch: 450932

Client Sample ID: D-14-W-231117

Prep Type: Total/NA

Prep Batch: 448924

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24 with Silica Gel clean up	ND		ND		ug/L		NC	20
C24-C40 with Silica Gel clean up	ND		ND		ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	56		50 - 150					

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QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-448928/1-A

Matrix: Water

Analysis Batch: 449243

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		12/01/23 08:10	12/01/23 20:07	1
C24-C40	ND		250	100	ug/L		12/01/23 08:10	12/01/23 20:07	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	73		50 - 150				12/01/23 08:10	12/01/23 20:07	1

Lab Sample ID: LCS 410-448928/2-A

Matrix: Water

Analysis Batch: 449243

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C12-C24	600	251		ug/L		42	14 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr)	72		50 - 150				

Lab Sample ID: LCSD 410-448928/3-A

Matrix: Water

Analysis Batch: 449243

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 448928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24	600	276		ug/L		46	14 - 115	9	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
o- terphenyl (Surr)	77		50 - 150						

Lab Sample ID: 410-151876-7 DU

Matrix: Water

Analysis Batch: 449747

Client Sample ID: MW-19-W-231117

Prep Type: Total/NA

Prep Batch: 448928

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24	8600		8420		ug/L		2	20
C24-C40	1500		1560		ug/L		1	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	55		50 - 150					

Lab Sample ID: 410-151876-8 DU

Matrix: Water

Analysis Batch: 449243

Client Sample ID: D-14-W-231117

Prep Type: Total/NA

Prep Batch: 448928

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
C12-C24	ND		ND		ug/L		NC	20
C24-C40	ND		ND		ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
o- terphenyl (Surr)	76		50 - 150					

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-451387/1-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 451387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		12/07/23 15:43	12/08/23 23:12	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		12/07/23 15:43	12/08/23 23:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -terphenyl (Surr)	53		50 - 150				12/07/23 15:43	12/08/23 23:12	1

Lab Sample ID: LCS 410-451387/2-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 451387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24 with Silica Gel clean up	600	192		ug/L		32	14 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
<i>o</i> -terphenyl (Surr)	65		50 - 150						

Lab Sample ID: LCSD 410-451387/3-B

Matrix: Water

Analysis Batch: 451978

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 451387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24 with Silica Gel clean up	600	164		ug/L		27	14 - 115	16	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
<i>o</i> -terphenyl (Surr)	55		50 - 150						

Lab Sample ID: MB 410-451914/1-B

Matrix: Water

Analysis Batch: 452415

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 451914

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24 with Silica Gel clean up	ND		100	45	ug/L		12/08/23 15:16	12/11/23 12:24	1
C24-C40 with Silica Gel clean up	ND		250	100	ug/L		12/08/23 15:16	12/11/23 12:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -terphenyl (Surr)	73		50 - 150				12/08/23 15:16	12/11/23 12:24	1
<i>n</i> -Decanoic Acid (Surr)	0.0005		0 - 1				12/08/23 15:16	12/11/23 12:24	1

Lab Sample ID: LCS 410-451914/2-B

Matrix: Water

Analysis Batch: 452415

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 451914

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24 with Silica Gel clean up	600	150		ug/L		25	14 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
<i>o</i> -terphenyl (Surr)	61		50 - 150						

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 410-451914/2-B

Matrix: Water

Analysis Batch: 452415

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 451914

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
n-Decanoic Acid (Surr)	0.5		0 - 1

Lab Sample ID: LCSD 410-451914/3-B

Matrix: Water

Analysis Batch: 452415

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 451914

	Spike	LCSD	LCSD					%Rec	RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
C12-C24 with Silica Gel clean up	600	152		ug/L		25	14 - 115	2	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
o-terphenyl (Surr)	61		50 - 150
n-Decanoic Acid (Surr)	0.3		0 - 1

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC/MS VOA

Analysis Batch: 446440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-21	TB-4-T-231117	Total/NA	Water	8260D/UST	
410-151876-22	TB-3-T-231117	Total/NA	Water	8260D/UST	
MB 410-446440/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-446440/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-446440/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

Analysis Batch: 448049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	8260D/UST	
410-151876-2	MW-34-W-231116	Total/NA	Water	8260D/UST	
410-151876-3	MW-21-W-231116	Total/NA	Water	8260D/UST	
410-151876-4	MW-32-W-231116	Total/NA	Water	8260D/UST	
410-151876-5	D-03A-W-231116	Total/NA	Water	8260D/UST	
410-151876-6	MW-14-W-231116	Total/NA	Water	8260D/UST	
410-151876-7	MW-19-W-231117	Total/NA	Water	8260D/UST	
410-151876-11	MW-25-W-231116	Total/NA	Water	8260D/UST	
410-151876-12	D-10-W-231116	Total/NA	Water	8260D/UST	
410-151876-13	D-7-W-231116	Total/NA	Water	8260D/UST	
410-151876-14	MW-22-W-231116	Total/NA	Water	8260D/UST	
410-151876-15	D-06-W-231116	Total/NA	Water	8260D/UST	
410-151876-16	MW-18-W-231116	Total/NA	Water	8260D/UST	
410-151876-17	DUP-1-WD-231116	Total/NA	Water	8260D/UST	
MB 410-448049/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-448049/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-448049/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	8260D/UST	
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	8260D/UST	

Analysis Batch: 448445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-8	D-14-W-231117	Total/NA	Water	8260D/UST	
410-151876-10	RB-1-R-231117	Total/NA	Water	8260D/UST	
410-151876-18	DUP-2-WD-231117	Total/NA	Water	8260D/UST	
410-151876-19	MW-13-W-231117	Total/NA	Water	8260D/UST	
410-151876-20	D-01-W-231117	Total/NA	Water	8260D/UST	
MB 410-448445/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-448445/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-448445/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

GC VOA

Analysis Batch: 445905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-21	TB-4-T-231117	Total/NA	Water	NWTPH-Gx	
410-151876-22	TB-3-T-231117	Total/NA	Water	NWTPH-Gx	
MB 410-445905/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-445905/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-445905/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC VOA

Analysis Batch: 447337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-2	MW-34-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-3	MW-21-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-4	MW-32-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-5	D-03A-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-6	MW-14-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-7	MW-19-W-231117	Total/NA	Water	NWTPH-Gx	
410-151876-8	D-14-W-231117	Total/NA	Water	NWTPH-Gx	
410-151876-9	FB-1-O-231117	Total/NA	Water	NWTPH-Gx	
410-151876-10	RB-1-R-231117	Total/NA	Water	NWTPH-Gx	
410-151876-11	MW-25-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-12	D-10-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-13	D-7-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-14	MW-22-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-15	D-06-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-16	MW-18-W-231116	Total/NA	Water	NWTPH-Gx	
MB 410-447337/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-447337/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-447337/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	NWTPH-Gx	
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 448447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-17	DUP-1-WD-231116	Total/NA	Water	NWTPH-Gx	
410-151876-18	DUP-2-WD-231117	Total/NA	Water	NWTPH-Gx	
410-151876-19	MW-13-W-231117	Total/NA	Water	NWTPH-Gx	
410-151876-20	D-01-W-231117	Total/NA	Water	NWTPH-Gx	
MB 410-448447/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-448447/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-448447/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

GC Semi VOA

Prep Batch: 448722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	3510C	
410-151876-2	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-3	MW-21-W-231116	Total/NA	Water	3510C	
410-151876-4	MW-32-W-231116	Total/NA	Water	3510C	
410-151876-5	D-03A-W-231116	Total/NA	Water	3510C	
410-151876-6	MW-14-W-231116	Total/NA	Water	3510C	
410-151876-11	MW-25-W-231116	Total/NA	Water	3510C	
410-151876-12	D-10-W-231116	Total/NA	Water	3510C	
410-151876-13	D-7-W-231116	Total/NA	Water	3510C	
410-151876-14	MW-22-W-231116	Total/NA	Water	3510C	
410-151876-15	D-06-W-231116	Total/NA	Water	3510C	
410-151876-16	MW-18-W-231116	Total/NA	Water	3510C	
410-151876-17	DUP-1-WD-231116	Total/NA	Water	3510C	
MB 410-448722/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-448722/2-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA (Continued)

Prep Batch: 448722 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-1 DU	D-22-W-231116	Total/NA	Water	3510C	

Prep Batch: 448723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	3510C	
410-151876-2	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-3	MW-21-W-231116	Total/NA	Water	3510C	
410-151876-4	MW-32-W-231116	Total/NA	Water	3510C	
410-151876-5	D-03A-W-231116	Total/NA	Water	3510C	
410-151876-6	MW-14-W-231116	Total/NA	Water	3510C	
410-151876-11	MW-25-W-231116	Total/NA	Water	3510C	
410-151876-12	D-10-W-231116	Total/NA	Water	3510C	
410-151876-13	D-7-W-231116	Total/NA	Water	3510C	
410-151876-14	MW-22-W-231116	Total/NA	Water	3510C	
410-151876-15	D-06-W-231116	Total/NA	Water	3510C	
410-151876-16	MW-18-W-231116	Total/NA	Water	3510C	
410-151876-17	DUP-1-WD-231116	Total/NA	Water	3510C	
MB 410-448723/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-448723/2-B	Lab Control Sample	Total/NA	Water	3510C	
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	3510C	
410-151876-1 DU	D-22-W-231116	Total/NA	Water	3510C	

Prep Batch: 448924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-7	MW-19-W-231117	Total/NA	Water	3510C	
410-151876-8	D-14-W-231117	Total/NA	Water	3510C	
410-151876-9	FB-1-O-231117	Total/NA	Water	3510C	
410-151876-10	RB-1-R-231117	Total/NA	Water	3510C	
410-151876-18	DUP-2-WD-231117	Total/NA	Water	3510C	
410-151876-19	MW-13-W-231117	Total/NA	Water	3510C	
410-151876-20	D-01-W-231117	Total/NA	Water	3510C	
MB 410-448924/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-448924/2-B	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-448924/3-B	Lab Control Sample Dup	Total/NA	Water	3510C	
410-151876-7 DU	MW-19-W-231117	Total/NA	Water	3510C	
410-151876-8 DU	D-14-W-231117	Total/NA	Water	3510C	

Prep Batch: 448928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-7	MW-19-W-231117	Total/NA	Water	3510C	
410-151876-8	D-14-W-231117	Total/NA	Water	3510C	
410-151876-9	FB-1-O-231117	Total/NA	Water	3510C	
410-151876-10	RB-1-R-231117	Total/NA	Water	3510C	
410-151876-18	DUP-2-WD-231117	Total/NA	Water	3510C	
410-151876-19	MW-13-W-231117	Total/NA	Water	3510C	
410-151876-20	D-01-W-231117	Total/NA	Water	3510C	
MB 410-448928/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-448928/2-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA (Continued)

Prep Batch: 448928 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 410-448928/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
410-151876-7 DU	MW-19-W-231117	Total/NA	Water	3510C	
410-151876-8 DU	D-14-W-231117	Total/NA	Water	3510C	

Analysis Batch: 449243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-8	D-14-W-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-9	FB-1-O-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-10	RB-1-R-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-18	DUP-2-WD-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-19	MW-13-W-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-20	D-01-W-231117	Total/NA	Water	NWTPH-Dx	448928
MB 410-448928/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	448928
LCS 410-448928/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	448928
LCSD 410-448928/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	448928
410-151876-8 DU	D-14-W-231117	Total/NA	Water	NWTPH-Dx	448928

Analysis Batch: 449247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-2	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-3	MW-21-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-4	MW-32-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-5	D-03A-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-6	MW-14-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-11	MW-25-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-12	D-10-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-13	D-7-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-14	MW-22-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-15	D-06-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-16	MW-18-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-17	DUP-1-WD-231116	Total/NA	Water	NWTPH-Dx	448722
MB 410-448722/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	448722
LCS 410-448722/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	448722
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	448722
410-151876-1 DU	D-22-W-231116	Total/NA	Water	NWTPH-Dx	448722

Analysis Batch: 449747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-7	MW-19-W-231117	Total/NA	Water	NWTPH-Dx	448928
410-151876-7 DU	MW-19-W-231117	Total/NA	Water	NWTPH-Dx	448928

Cleanup Batch: 450001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	3630C	448723
410-151876-2	MW-34-W-231116	Total/NA	Water	3630C	448723
410-151876-3	MW-21-W-231116	Total/NA	Water	3630C	448723
410-151876-4	MW-32-W-231116	Total/NA	Water	3630C	448723
410-151876-5	D-03A-W-231116	Total/NA	Water	3630C	448723
410-151876-6	MW-14-W-231116	Total/NA	Water	3630C	448723

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA (Continued)

Cleanup Batch: 450001 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-11	MW-25-W-231116	Total/NA	Water	3630C	448723
410-151876-12	D-10-W-231116	Total/NA	Water	3630C	448723
410-151876-13	D-7-W-231116	Total/NA	Water	3630C	448723
410-151876-14	MW-22-W-231116	Total/NA	Water	3630C	448723
410-151876-15	D-06-W-231116	Total/NA	Water	3630C	448723
410-151876-16	MW-18-W-231116	Total/NA	Water	3630C	448723
410-151876-17	DUP-1-WD-231116	Total/NA	Water	3630C	448723
MB 410-448723/1-B	Method Blank	Total/NA	Water	3630C	448723
LCS 410-448723/2-B	Lab Control Sample	Total/NA	Water	3630C	448723
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	3630C	448723
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	3630C	448723
410-151876-1 DU	D-22-W-231116	Total/NA	Water	3630C	448723

Cleanup Batch: 450018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-7	MW-19-W-231117	Total/NA	Water	3630C	448924
410-151876-8	D-14-W-231117	Total/NA	Water	3630C	448924
410-151876-9	FB-1-O-231117	Total/NA	Water	3630C	448924
410-151876-10	RB-1-R-231117	Total/NA	Water	3630C	448924
410-151876-18	DUP-2-WD-231117	Total/NA	Water	3630C	448924
410-151876-19	MW-13-W-231117	Total/NA	Water	3630C	448924
410-151876-20	D-01-W-231117	Total/NA	Water	3630C	448924
MB 410-448924/1-B	Method Blank	Total/NA	Water	3630C	448924
LCS 410-448924/2-B	Lab Control Sample	Total/NA	Water	3630C	448924
LCS 410-448924/3-B	Lab Control Sample Dup	Total/NA	Water	3630C	448924
410-151876-7 DU	MW-19-W-231117	Total/NA	Water	3630C	448924
410-151876-8 DU	D-14-W-231117	Total/NA	Water	3630C	448924

Analysis Batch: 450931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-1	D-22-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-2	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-3	MW-21-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-4	MW-32-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-5	D-03A-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-6	MW-14-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-11	MW-25-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-12	D-10-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-13	D-7-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-14	MW-22-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-15	D-06-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-16	MW-18-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-17	DUP-1-WD-231116	Total/NA	Water	NWTPH-Dx	450001
MB 410-448723/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	450001
LCS 410-448723/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	450001
410-151876-2 MS	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-2 MSD	MW-34-W-231116	Total/NA	Water	NWTPH-Dx	450001
410-151876-1 DU	D-22-W-231116	Total/NA	Water	NWTPH-Dx	450001

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA

Analysis Batch: 450932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-7	MW-19-W-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-8	D-14-W-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-9	FB-1-O-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-10	RB-1-R-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-18	DUP-2-WD-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-19	MW-13-W-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-20	D-01-W-231117	Total/NA	Water	NWTPH-Dx	450018
MB 410-448924/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	450018
LCS 410-448924/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	450018
LCSD 410-448924/3-B	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	450018
410-151876-7 DU	MW-19-W-231117	Total/NA	Water	NWTPH-Dx	450018
410-151876-8 DU	D-14-W-231117	Total/NA	Water	NWTPH-Dx	450018

Prep Batch: 451387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-15	D-06-W-231116	Total/NA	Water	3510C	
MB 410-451387/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	3510C	

Cleanup Batch: 451524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-15	D-06-W-231116	Total/NA	Water	3630C	451387
MB 410-451387/1-B	Method Blank	Total/NA	Water	3630C	451387
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	3630C	451387
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	3630C	451387

Prep Batch: 451914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-10	RB-1-R-231117	Total/NA	Water	3510C	
410-151876-18	DUP-2-WD-231117	Total/NA	Water	3510C	
410-151876-19	MW-13-W-231117	Total/NA	Water	3510C	
410-151876-20	D-01-W-231117	Total/NA	Water	3510C	
MB 410-451914/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-451914/2-B	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-451914/3-B	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 451978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-15	D-06-W-231116	Total/NA	Water	NWTPH-Dx	451524
MB 410-451387/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	451524
LCS 410-451387/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	451524
LCSD 410-451387/3-B	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	451524

Cleanup Batch: 452225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-10	RB-1-R-231117	Total/NA	Water	3630C	451914
410-151876-18	DUP-2-WD-231117	Total/NA	Water	3630C	451914
410-151876-19	MW-13-W-231117	Total/NA	Water	3630C	451914
410-151876-20	D-01-W-231117	Total/NA	Water	3630C	451914
MB 410-451914/1-B	Method Blank	Total/NA	Water	3630C	451914

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

GC Semi VOA (Continued)

Cleanup Batch: 452225 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-451914/2-B	Lab Control Sample	Total/NA	Water	3630C	451914
LCSD 410-451914/3-B	Lab Control Sample Dup	Total/NA	Water	3630C	451914

Analysis Batch: 452415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-151876-10	RB-1-R-231117	Total/NA	Water	NWTPH-Dx	452225
410-151876-18	DUP-2-WD-231117	Total/NA	Water	NWTPH-Dx	452225
410-151876-19	MW-13-W-231117	Total/NA	Water	NWTPH-Dx	452225
410-151876-20	D-01-W-231117	Total/NA	Water	NWTPH-Dx	452225
MB 410-451914/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	452225
LCS 410-451914/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	452225
LCSD 410-451914/3-B	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	452225

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: D-22-W-231116

Lab Sample ID: 410-151876-1

Date Collected: 11/16/23 09:35

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 18:15
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 15:00
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 01:40
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/01/23 21:16

Client Sample ID: MW-34-W-231116

Lab Sample ID: 410-151876-2

Date Collected: 11/16/23 10:36

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 18:39
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 15:26
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 02:26
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/01/23 22:02

Client Sample ID: MW-21-W-231116

Lab Sample ID: 410-151876-3

Date Collected: 11/16/23 12:05

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 19:50
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 16:42
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 03:35
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/01/23 23:11

Client Sample ID: MW-32-W-231116

Lab Sample ID: 410-151876-4

Date Collected: 11/16/23 14:09

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 20:14
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 17:08
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 03:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: MW-32-W-231116

Lab Sample ID: 410-151876-4

Date Collected: 11/16/23 14:09

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/01/23 23:34

Client Sample ID: D-03A-W-231116

Lab Sample ID: 410-151876-5

Date Collected: 11/16/23 13:07

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 20:38
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 17:33
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 04:44
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/01/23 23:57

Client Sample ID: MW-14-W-231116

Lab Sample ID: 410-151876-6

Date Collected: 11/16/23 15:15

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 21:01
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 17:59
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 05:07
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 00:20

Client Sample ID: MW-19-W-231117

Lab Sample ID: 410-151876-7

Date Collected: 11/17/23 09:10

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 21:25
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 18:24
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		2	449747	KP5X	ELLE	12/05/23 00:55
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 05:07

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: D-14-W-231117

Lab Sample ID: 410-151876-8

Date Collected: 11/17/23 10:15

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448445	UKAD	ELLE	11/30/23 13:17
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 18:50
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 00:20
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 05:54

Client Sample ID: FB-1-O-231117

Lab Sample ID: 410-151876-9

Date Collected: 11/17/23 11:24

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 20:06
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 01:29
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 06:40

Client Sample ID: RB-1-R-231117

Lab Sample ID: 410-151876-10

Date Collected: 11/17/23 11:34

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448445	UKAD	ELLE	11/30/23 11:41
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 20:31
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 01:52
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 07:03
Total/NA	Prep	3510C			451914	QJZ6	ELLE	12/08/23 15:16
Total/NA	Cleanup	3630C			452225	USL7	ELLE	12/11/23 04:40
Total/NA	Analysis	NWTPH-Dx		1	452415	IUSB	ELLE	12/11/23 13:32

Client Sample ID: MW-25-W-231116

Lab Sample ID: 410-151876-11

Date Collected: 11/16/23 09:25

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 21:49
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 20:57

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: MW-25-W-231116

Lab Sample ID: 410-151876-11

Date Collected: 11/16/23 09:25

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 05:30
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 01:06

Client Sample ID: D-10-W-231116

Lab Sample ID: 410-151876-12

Date Collected: 11/16/23 10:25

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 22:12
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 21:22
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 05:54
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 01:29

Client Sample ID: D-7-W-231116

Lab Sample ID: 410-151876-13

Date Collected: 11/16/23 11:40

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 22:36
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 21:48
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 06:17
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 01:52

Client Sample ID: MW-22-W-231116

Lab Sample ID: 410-151876-14

Date Collected: 11/16/23 12:40

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 23:00
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 22:13
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 06:40
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 03:01

Lab Chronicle

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: D-06-W-231116

Lab Sample ID: 410-151876-15

Date Collected: 11/16/23 14:25

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 23:23
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 22:39
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 07:03
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 02:15
Total/NA	Prep	3510C			451387	QJZ6	ELLE	12/07/23 15:43
Total/NA	Cleanup	3630C			451524	USL7	ELLE	12/08/23 00:38
Total/NA	Analysis	NWTPH-Dx		1	451978	IUSB	ELLE	12/09/23 03:47

Client Sample ID: MW-18-W-231116

Lab Sample ID: 410-151876-16

Date Collected: 11/16/23 15:28

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/29/23 23:47
Total/NA	Analysis	NWTPH-Gx		1	447337	SE8S	ELLE	11/28/23 23:04
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 07:26
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 02:38

Client Sample ID: DUP-1-WD-231116

Lab Sample ID: 410-151876-17

Date Collected: 11/16/23 12:10

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448049	UKAD	ELLE	11/30/23 00:11
Total/NA	Analysis	NWTPH-Gx		10	448447	SE8S	ELLE	11/30/23 15:00
Total/NA	Prep	3510C			448723	T9CY	ELLE	11/30/23 15:33
Total/NA	Cleanup	3630C			450001	K2IL	ELLE	12/04/23 19:30
Total/NA	Analysis	NWTPH-Dx		1	450931	KP5X	ELLE	12/07/23 07:49
Total/NA	Prep	3510C			448722	T9CY	ELLE	11/30/23 15:28
Total/NA	Analysis	NWTPH-Dx		1	449247	UHEW	ELLE	12/02/23 03:24

Client Sample ID: DUP-2-WD-231117

Lab Sample ID: 410-151876-18

Date Collected: 11/17/23 09:30

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448445	UKAD	ELLE	11/30/23 13:41
Total/NA	Analysis	NWTPH-Gx		10	448447	SE8S	ELLE	11/30/23 15:26

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Client Sample ID: DUP-2-WD-231117

Lab Sample ID: 410-151876-18

Date Collected: 11/17/23 09:30

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 02:15
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 07:26
Total/NA	Prep	3510C			451914	QJZ6	ELLE	12/08/23 15:16
Total/NA	Cleanup	3630C			452225	USL7	ELLE	12/11/23 04:40
Total/NA	Analysis	NWTPH-Dx		1	452415	IUSB	ELLE	12/11/23 13:55

Client Sample ID: MW-13-W-231117

Lab Sample ID: 410-151876-19

Date Collected: 11/17/23 09:15

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448445	UKAD	ELLE	11/30/23 14:05
Total/NA	Analysis	NWTPH-Gx		5	448447	SE8S	ELLE	11/30/23 15:51
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 02:38
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 07:49
Total/NA	Prep	3510C			451914	QJZ6	ELLE	12/08/23 15:16
Total/NA	Cleanup	3630C			452225	USL7	ELLE	12/11/23 04:40
Total/NA	Analysis	NWTPH-Dx		1	452415	IUSB	ELLE	12/11/23 14:18

Client Sample ID: D-01-W-231117

Lab Sample ID: 410-151876-20

Date Collected: 11/17/23 10:10

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	448445	UKAD	ELLE	11/30/23 14:29
Total/NA	Analysis	NWTPH-Gx		10	448447	SE8S	ELLE	11/30/23 16:17
Total/NA	Prep	3510C			448928	QKX3	ELLE	12/01/23 08:10
Total/NA	Analysis	NWTPH-Dx		1	449243	UHEW	ELLE	12/02/23 03:01
Total/NA	Prep	3510C			448924	QKX3	ELLE	12/01/23 08:06
Total/NA	Cleanup	3630C			450018	USL7	ELLE	12/05/23 01:00
Total/NA	Analysis	NWTPH-Dx		1	450932	KP5X	ELLE	12/07/23 08:12
Total/NA	Prep	3510C			451914	QJZ6	ELLE	12/08/23 15:16
Total/NA	Cleanup	3630C			452225	USL7	ELLE	12/11/23 04:40
Total/NA	Analysis	NWTPH-Dx		1	452415	IUSB	ELLE	12/11/23 14:41

Lab Chronicle

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Client Sample ID: TB-4-T-231117

Lab Sample ID: 410-151876-21

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 16:47
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 14:52

Client Sample ID: TB-3-T-231117

Lab Sample ID: 410-151876-22

Date Collected: 10/26/23 00:00

Matrix: Water

Date Received: 11/18/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	446440	UKAD	ELLE	11/22/23 17:10
Total/NA	Analysis	NWTPH-Gx		1	445905	SE8S	ELLE	11/21/23 15:17

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: AECOM
Project/Site: CEMREC Legacy Sites – Tacoma

Job ID: 410-151876-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C457	04-11-24

Method Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Method	Method Description	Protocol	Laboratory
8260D/UST	Volatile Organic Compounds by GC/MS	SW846	ELLE
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ELLE
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
3630C	Silica Gel Cleanup	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: AECOM

Job ID: 410-151876-1

Project/Site: CEMREC Legacy Sites – Tacoma

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-151876-1	D-22-W-231116	Water	11/16/23 09:35	11/18/23 10:00
410-151876-2	MW-34-W-231116	Water	11/16/23 10:36	11/18/23 10:00
410-151876-3	MW-21-W-231116	Water	11/16/23 12:05	11/18/23 10:00
410-151876-4	MW-32-W-231116	Water	11/16/23 14:09	11/18/23 10:00
410-151876-5	D-03A-W-231116	Water	11/16/23 13:07	11/18/23 10:00
410-151876-6	MW-14-W-231116	Water	11/16/23 15:15	11/18/23 10:00
410-151876-7	MW-19-W-231117	Water	11/17/23 09:10	11/18/23 10:00
410-151876-8	D-14-W-231117	Water	11/17/23 10:15	11/18/23 10:00
410-151876-9	FB-1-O-231117	Water	11/17/23 11:24	11/18/23 10:00
410-151876-10	RB-1-R-231117	Water	11/17/23 11:34	11/18/23 10:00
410-151876-11	MW-25-W-231116	Water	11/16/23 09:25	11/18/23 10:00
410-151876-12	D-10-W-231116	Water	11/16/23 10:25	11/18/23 10:00
410-151876-13	D-7-W-231116	Water	11/16/23 11:40	11/18/23 10:00
410-151876-14	MW-22-W-231116	Water	11/16/23 12:40	11/18/23 10:00
410-151876-15	D-06-W-231116	Water	11/16/23 14:25	11/18/23 10:00
410-151876-16	MW-18-W-231116	Water	11/16/23 15:28	11/18/23 10:00
410-151876-17	DUP-1-WD-231116	Water	11/16/23 12:10	11/18/23 10:00
410-151876-18	DUP-2-WD-231117	Water	11/17/23 09:30	11/18/23 10:00
410-151876-19	MW-13-W-231117	Water	11/17/23 09:15	11/18/23 10:00
410-151876-20	D-01-W-231117	Water	11/17/23 10:10	11/18/23 10:00
410-151876-21	TB-4-T-231117	Water	10/26/23 00:00	11/18/23 10:00
410-151876-22	TB-3-T-231117	Water	10/26/23 00:00	11/18/23 10:00

Eurofins

2425 New Hol
Lancaster, P
Phone 717-61



Chain of Custody Record

eurofins

Environment Testing

Client Info: Client Contact: Mr. Bradley Wynne Company: AECOM Address: 13355 Noel Road Suite 400 City: Dallas State, Zip: TX, 75240 Phone: 972-735-7068(Tel) Email: bradley.wynne@aecom.com Project Name: CEMREC Legacy Sites - Tacoma Site:		410-151876 Chain of Custody		Lab PM: Carter, Amek E-Mail: Loran.Carter@et.eurofinsus.com	Carrier Tracking No(s):	COC No: 410-101297-22634.3 Page: 8 of 10 of 3
Due Date Requested:		TAT Requested (days):		Analysis Requested		
Compliance Project: ☐ Yes ☐ No		PO #: 152363		Preservation Codes:		
WO #: 60701804		Project #: 41014252		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)		
SSOW#:		Field Filtered Sample (Yes or No)		Total Number of containers		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=biological, A=air)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
					NWTPH_Dx - NWTPH-Gx NWTPH_Gx - NWTPH-Gx BTEX/MTBE NWTPH_Dx - NWTPH-Dx	
AW-29-W-231115	11/15/23	1138	G	W	Y	
D-22-W-231116	11/16/23	935	G	W		
MW-34-W-231116		1030	G	W	Y	
MW-21-W-231116		1305	G	W		
MW-32-W-231116		1409	G	W		
D-03A-W-231116		1307	G	W		
MW-14-W-231116		1515	G	W		
MW-19-W-231117	11/17/23	910	G	W		
D-14-W-231117		1015	G	W		
FB-1-F-231117		1124				5 Field Blank
RB-1-R-231117		1134				8 Rinsak Blank
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:
Relinquished by: <i>[Signature]</i>		Date/Time: 11/17/23 1210		Company: AECOM		Received by: <i>[Signature]</i>
Relinquished by:		Date/Time:		Company:		Received by:
Relinquished by:		Date/Time:		Company:		Received by: <i>[Signature]</i>
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.9/1.9 0.3/0.3		

Environment Testing

IN

 Eurofins | Environmental Testing
America

12/12/2023

Login Sample Receipt Checklist

Client: AECOM

Job Number: 410-151876-1

Login Number: 151876

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	False	Headspace greater than 6mm in diameter in some but not all containers

Appendix D

Data Quality Reviews



AECOM
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Suite 1600
Seattle, WA 98101
www.aecom.com

206 438 2700 tel
866 495 5288 fax

Memorandum

To	Brad Wynn, Project Manager	Info	FINAL
Subject	Summary Data Quality Review Chevron Environmental Management Company (CEMC) Legacy Sites – Tacoma Terminal 2024 4 th Quarter Groundwater Sampling		
From	Christina Wheeler, Chemist Jennifer B. Garner, Chemist		
Date	December 10, 2024		

The summary data quality review of 51 groundwater samples, 4 trip blanks, and 1 rinsate blank collected between November 4 and November 7, 2024, has been completed. The samples were analyzed at the Eurofins laboratory located in Tacoma, Washington, for selected volatile organic compounds (VOCs; benzene, ethylbenzene, toluene, methyl tertiary butyl ether [MTBE], and total xylenes) by EPA Method 8260D and/or total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology Methods NWTPH-Gx (gasoline-range TPH) and/or NWTPH-Dx (diesel-range and oil-range TPHs). The laboratory provided summary reports containing sample results and associated quality assurance (QA) and quality control (QC) data for all samples. For this report, the sample identifications (IDs) do not include the sample matrix and date suffixes (e.g., W-241104) unless required for clarity. The following samples are associated with Eurofins Seattle laboratory groups 580-145633-1 and 580-145663-1:

Sample ID	Laboratory Group	Laboratory ID	Analyses
D-17-W-241104	580-145633	580-145633-1	VOCs, TPHs
MW-10-W-241104		580-145633-2	VOCs, TPHs
D-10-W-241105		580-145633-3	VOCs, TPHs
MW-25-W-241105		580-145633-4	VOCs, TPHs
D-23-W-241105		580-145633-5	VOCs, TPHs
MW-27-W-241105		580-145633-6	VOCs, TPHs
D-11-W-241105		580-145633-7	VOCs, TPHs
MW-29-W-241105		580-145633-8	VOCs, TPHs
D-15-W-241105		580-145633-9	VOCs, TPHs
D-28-W-241105		580-145633-10	VOCs, TPHs
MW-40-W-241105		580-145633-11	VOCs, TPHs
D-12-W-241105		580-145633-12	VOCs, TPHs
RMW-1-W-241105		580-145633-13	VOCs, TPHs
MW-33-W-241105		580-145633-14	VOCs, TPHs
MW-24-W-241104		580-145633-15	VOCs, Gasoline-range TPH
D-8-W-241105		580-145633-16	VOCs, TPHs
MW-23-W-241105		580-145633-17	VOCs, TPHs
TB-1-T-241105 (trip blank)		580-145633-18	VOCs, Gasoline-range TPH
D-26-W-241105		580-145633-19	VOCs, TPHs
MW-39-W-241105		580-145633-20	VOCs, TPHs
D-27-W-241105		580-145633-21	VOCs, TPHs
MW-37-W-241105		580-145633-22	VOCs, TPHs
MW-36-W-241105		580-145633-23	VOCs, TPHs



Summary Data Quality Review
CEMC Legacy Sites – Tacoma
2024 4th Quarter Groundwater Sampling
Eurofins Laboratory Groups: 580-145633-1 and 580-145663-1

Sample ID	Laboratory Group	Laboratory ID	Analyses
MW-38-W-241105	580-145633	580-145633-24	VOCs, TPHs
D-25-W-241105		580-145633-25	VOCs, TPHs
D-24-W-241105		580-145633-26	VOCs, TPHs
TB-2-T-241106 (trip blank)		580-145633-27	VOCs, Gasoline-range TPH
MW-13-W-241106	580-145663	580-145663-1	VOCs, TPHs
D-01-241106		580-145663-2	VOCs, TPHs
DUP-2-WD-241106 (field duplicate of D-01-W-241106)		580-145663-3	VOCs, TPHs
MW-14-W-241106		580-145663-4	VOCs, TPHs
D-14-W-241106		580-145663-5	VOCs, TPHs
MW-34-W-241107		580-145663-6	VOCs, TPHs
D-22-W-241107		580-145663-7	VOCs, TPHs
D-03A-W-241107		580-145663-8	VOCs, TPHs
MW-21-W-241107		580-145663-9	VOCs, TPHs
DUP-1-WD-241107 (field duplicate of MW-22-W-241107)		580-145663-10	VOCs, TPHs
MW-22-W-241107		580-145663-11	VOCs, TPHs
D-19-W-241107		580-145663-12	VOCs, TPHs
MW-18-W-241106		580-145663-13	VOCs, TPHs
D-06-W-241106		580-145663-14	VOCs, TPHs
MW-12-W-241106		580-145663-15	VOCs, TPHs
D-18-W-241106		580-145663-16	VOCs, TPHs
D-2A-W-241106		580-145663-17	VOCs, TPHs
MW-30-W-241106		580-145663-18	VOCs, TPHs
TB-3-T-241107 (trip blank)		580-145663-19	VOCs, Gasoline-range TPH
MW-31-W-241107		580-145663-20	VOCs, Gasoline-range TPH
D-07-W-241107		580-145663-21	VOCs, TPHs
MW-26-W-241107		580-145663-22	VOCs, TPHs
MW-19-W-241106		580-145663-23	VOCs, TPHs
D-09-W-241106		580-145663-24	VOCs, TPHs
MW-32-W-241106		580-145663-25	VOCs, TPHs
D-16-W-241107		580-145663-26	VOCs, TPHs
MW-28-W-241107		580-145663-27	VOCs, TPHs
EB-1-241107 (rinsate blank)		580-145663-28	TPHs
TB-4-T-241107 (trip blank)		580-145663-29	VOCs, Gasoline-range TPH

Data were evaluated based on validation criteria established in the *National Functional Guidelines for Organic 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, 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.



**Summary Data Quality Review
CEMC Legacy Sites – Tacoma
2024 4th Quarter Groundwater Sampling
Eurofins Laboratory Groups: 580-145633-1 and 580-145663-1**

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

- U - The analyte was analyzed but 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.

All QC parameters above were reviewed for all samples, where applicable, and data validation qualifiers were assigned when required.

Sample Receipt

The cooler temperatures were recorded upon receipt by the laboratory, and the sample container information was compared to the associated chain-of-custody (COC). The coolers were received at temperatures within the EPA-recommended limits of greater than 0°C and less than 6°C, except for one cooler received at 7.8°C. Data were not qualified based on the elevated cooler temperature. Discrepancies during sample log in were noted for MW-34 (container labels for the associated MS/MSDs were labeled as MW-25), and sample MW-24 had TPH-Dx misrepresented on the COC. Label and/or COC discrepancies were corrected by the laboratory as directed by AECOM. Insufficient volume was collected at sample locations MW-24 and MW-31 to perform TPH-Dx analysis due to low water levels in the wells.

Organic Analyses

Samples were analyzed for VOCs and/or TPHs using the methods identified in the introduction of this report.

1. Holding Times – Acceptable
2. Blanks – Acceptable except as noted below:

NWPTH-Dx – Diesel-range TPH (94.5 J ug/L) was detected in the method blank associated with preparation batch 580-477876 at a concentration between the method detection limit (MDL) and the

Summary Data Quality Review
CEMC Legacy Sites – Tacoma
2024 4th Quarter Groundwater Sampling
Eurofins Laboratory Groups: 580-145633-1 and 580-145663-1

laboratory reporting limit. Associated sample results (EB-1) were reported as not detected; therefore, data were not qualified based on this method blank detection.

3. Surrogates – Acceptable except as noted below:

VOCs by Method 8260D – The percent recoveries for one or more surrogates were outside the control limits in the following samples:

Sample	Surrogate	%Recovery	Control Limits
MW-29	Toluene-d8	128%	80-120%
	4-Bromofluorobenzene	124%	80-120%
D-15	Toluene-d8	153%	80-120%
RMW-1	1,2-Dichloroethane-d4	136%	80-120%
	Dibromofluoromethane	138%	80-120%
TB-1	Toluene-d8	145%	80-120%

The result for benzene (0.34 J ug/L) in MW-29 was qualified as estimated and flagged 'J' based on the elevated surrogate recoveries. VOCs were not detected in the other samples listed above; therefore, data were not qualified based on the elevated surrogate recoveries.

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable
5. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

General – MS/MSDs were performed using MW-34 and D-26 for all organic analyses. The results were acceptable.

6. Field Duplicates – Acceptable

General – Field duplicates were submitted for MW-22 and D-01 and identified as DUP-01 and DUP-02, respectively. A relative percent difference (RPD) control limit of 30% was used to evaluate results reported at concentrations greater than five times the reporting limits. Results were comparable.

7. Reporting Limits – Acceptable

General – One or more results in multiple samples were flagged 'J' by the laboratory to indicate the reported concentrations were above the MDLs but below the laboratory reporting limits. Laboratory 'J'-flagged results are considered estimated. As the results are between the MDLs and the reporting limits, there are greater levels of uncertainty associated with the numerical results.

8. Other Items of Note:

TPH-Dx – The percent difference (%D) for diesel-range TPH in the continuing calibration verification (CCV) associated with analytical batch 580-477869 was above the upper method limit,



Summary Data Quality Review
CEMC Legacy Sites – Tacoma
2024 4th Quarter Groundwater Sampling
Eurofins Laboratory Groups: 580-145633-1 and 580-145663-1

biased high. Diesel-range TPH was not detected in the associated samples; therefore, data were not qualified based on the elevated CCV %D.

The laboratory noted the following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes in samples MW-25, D-23, MW-27, D-12, MW-21, DUP-1, MW-22, D-19, and MW-28.

Overall Assessment of Data

The data reported in these laboratory groups, as qualified, are usable for meeting project objectives. The completeness for Eurofins laboratory 580-145633-1 and 580-145663-1 is 100%.

Summary Data Quality Review
CEMC Legacy Sites - Tacoma
2024 4th Quarter Groundwater Sampling
Eurofins Seattle Laboratory Groups: 580-145633-1 and 580-145663-1

Table 1 - Summary of Qualified Data

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
MW-29-W-241105	580-145633-8	8260D	Benzene	0.34 J	ug/L	0.34 J	SU1

Notes:
ug/L - microgram per liter
J - estimated value
SU1 - surrogate recovery above acceptance limit.

Appendix E

Previous Groundwater Data 1992-2022

**Previous Groundwater
Data - 1992-2022**

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-10																
09/23/92		99.71	6.35	--	93.36	--	--	--	--	--	--	--	--	--	--	--
01/11/93		99.71	4.15	--	95.56	--	--	--	--	--	--	--	--	--	--	--
06/04/93		99.71	4.18	--	95.53	ND	--	--	--	--	ND	ND	ND	ND	--	--
12/15/93		99.71	4.55	--	95.16	ND	1,100	--	--	--	ND	ND	ND	ND	--	0.058
06/03/94		99.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11/01/94		99.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/09/95		99.71	2.89	--	96.82	69	6,400	--	590	--	ND	ND	ND	ND	--	ND
05/02/95		99.71	3.93	--	95.78	ND	2,700	--	940	--	ND	ND	ND	ND	--	ND
08/02/95		99.71	5.27	--	94.44	190	32,000	--	4,700	--	ND	ND	ND	ND	--	ND
12/05/95		99.71	2.84	--	96.87	72	14,000	--	2,800	--	ND	ND	ND	ND	--	ND
03/18/96		99.71	3.65	--	96.06	ND	1,900	--	ND	--	ND	ND	ND	ND	--	ND
06/26/96		99.71	4.82	--	94.89	--	1,540	--	ND	--	--	--	--	--	--	--
09/09/96		99.71	5.55	--	94.16	--	2,260	--	840	--	--	--	--	--	--	--
12/30/96		99.71	1.90	--	97.81	--	885	--	ND	--	--	--	--	--	--	--
03/07/97		99.71	2.55	--	97.16	--	3,360	--	ND	--	--	--	--	--	--	ND
06/09/97		99.71	2.85	--	96.86	--	ND	--	ND	--	--	--	--	--	--	ND
09/04/97		99.71	3.57	--	96.14	--	281	--	ND	--	--	--	--	--	--	ND
12/17/97		99.71	3.22	--	96.49	--	933	--	ND	--	--	--	--	--	--	--
06/01/98		99.71	4.71	--	95.00	--	1,250	--	ND	--	--	--	--	--	--	--
11/01/98		99.71	6.83	0.00	92.88	--	1,120	--	790	--	--	--	--	--	--	--
05/30/99		99.71	4.19	0.00	95.52	--	1,370	--	ND	--	--	--	--	--	--	--
06/11-12/00		99.71	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--
09/25/00		99.71	6.89	0.00	92.82	--	6,080	--	ND	--	--	--	--	--	--	--
04/04/02	NP	99.71	4.41	0.00	95.30	--	4,100	--	1,500	--	--	--	--	--	--	--
04/28/03	NP	99.71	4.06	0.00	95.65	--	4,400	--	2,300	--	--	--	--	--	--	--
04/15/04	NP	99.71	4.95	0.00	94.76	--	40,000	--	23,000	--	--	--	--	--	--	--
04/29/05	NP	99.71	4.47	0.00	95.24	--	3,500	--	2,200	--	--	--	--	--	--	--
04/27/06	NP	99.71	4.81	0.00	94.90	--	5,800	--	1,500	--	--	--	--	--	--	--
12/09/08	LFP	99.45	4.85	0.00	94.60	ND	710	--	250	--	ND	ND	ND	ND	ND	--
08/31/10		99.45	6.27	0.00	93.18	<50	--	--	--	--	<0.5	<0.5	<0.5	<0.5	ND	--
10/07/11		99.45	6.30	0.00	93.15	INSUFFICIENT WATER FOR SAMPLE		--	--	--	--	--	--	--	--	--
01/10/12		99.45	4.35	0.00	95.10	<50	<30	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
04/11/12		99.45	3.90	0.00	95.55	<50	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		99.45	4.84	0.00	94.61	55	200	--	970	--	<0.5	<0.5	<0.5	<1.5	--	--
10/08/12		99.45	7.66	0.00	91.79	INSUFFICIENT WATER FOR SAMPLE		--	--	--	--	--	--	--	--	--
01/08/13		99.45	3.82	0.00	95.63	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		99.45	4.21	0.00	95.24	<50	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		99.45	5.43	0.00	94.02	<50	--	2,700	--	1,100	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		99.45	5.08	0.00	94.37	74	--	2,400	--	450	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		99.45	5.08	0.00	94.37	110	--	4,400	--	1,100	<0.5	<0.5	<0.5	<1.5	--	--

Table 1
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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
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Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-10 cont.																
04/07/08/14		99.45	3.80	0.00	95.65	<50	<29	2,800	<67	1,200	<0.5	<0.5	<0.5	<1.5	--	--
07/07/09/14		99.45	6.32	0.00	93.13	12,000	300	410	110	130	16	280	150	1,600	--	--
10/07/08/14		99.45	6.02	0.00	93.43	<50	<29	<29	<67	<67	<0.5	<0.5	<0.5	<1.5	--	--
01/06/07/15		99.45	3.56	0.00	95.89	<50	<28	1,000	<66	790	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06/08/15		99.45	4.33	0.00	95.12	60	<29	2,400	<67	700	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		99.45	UNABLE TO ACCESS				--	--	--	--	--	--	--	--	--	--
10/19/20/15		99.45	UNABLE TO ACCESS				--	--	--	--	--	--	--	--	--	--
01/12/13/16		99.45	UNABLE TO ACCESS				--	--	--	--	--	--	--	--	--	--
04/23/16		99.45	UNABLE TO ACCESS				--	--	--	--	--	--	--	--	--	--
06/10/12/20		99.45	5.03	0.00	94.42	30	--	2,700	--	1,000	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		99.45	7.07	0.00	92.38	--	--	--	--	--	--	--	--	--	--	--
12/09/20		99.45	4.65	0.00	94.80	<19	<45	300	<100	340	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		99.45	--	0.00	99.45	78	--	2,500	--	1,300	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		99.45	3.13	0.00	96.32	19	--	93	--	120	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		99.45	3.85	0.00	95.60	39	--	1,600	--	770	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		99.45	4.09	0.00	95.36	39	--	1,100	--	460	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		99.45	6.71	0.00	92.74	<43	INSUFFICIENT WATER FOR SAMPLE				<0.3	<0.3	<0.4	<1.4	--	--
MW-11																
06/04/93		101.33	4.68	--	96.65	ND	11,000	--	--	--	ND	ND	ND	ND	--	--
12/15/93		101.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/04/94		101.33	5.34	--	95.99	230	--	--	--	--	ND	ND	ND	0.7	--	3.6
11/01/94		101.33	5.85	--	95.48	--	--	--	--	--	--	--	--	--	--	--
02/09/95		101.33	3.97	--	97.36	58	2,800	--	420	--	ND	ND	ND	0.6	--	ND
05/02/95		101.33	4.59	--	96.74	ND	8,600	--	1,600	--	ND	ND	ND	ND	--	ND
08/02/95		101.33	5.44	--	95.89	--	--	--	--	--	--	--	--	--	--	--
12/05/95		101.33	3.80	--	97.53	ND	290	--	930	--	ND	ND	ND	ND	--	ND
03/18/96		101.33	4.50	--	96.83	61	2,000	--	ND	--	1.0	ND	ND	1.9	--	ND
06/26/96		101.33	4.90	--	96.43	--	4,320	--	1,360	--	--	--	--	--	--	--
09/09/96		101.33	5.65	--	95.68	--	--	--	--	--	--	--	--	--	--	--
12/30/96		101.33	2.60	--	98.73	--	370	--	ND	--	--	--	--	--	--	--
03/07/97		101.33	3.92	--	97.41	--	1,100	--	ND	--	--	--	--	--	--	ND
06/09/97		101.33	3.80	--	97.53	--	3,090	--	1,090	--	--	--	--	--	--	ND
09/04/97		101.33	5.84	--	95.49	--	--	--	--	--	--	--	--	--	--	--
12/17/97		101.33	4.51	--	96.82	--	1,830	--	ND	--	--	--	--	--	--	--
06/01/98		101.33	5.44	--	95.89	--	1,360	--	ND	--	--	--	--	--	--	--
11/01/98		101.33	5.87	0.00	95.46	--	1,060	--	1,870	--	--	--	--	--	--	--
05/30/99		101.33	5.31	0.00	96.02	--	21,700	--	ND	--	--	--	--	--	--	--
06/11-12/00		101.33	INACCESSIBLE				--	--	--	--	--	--	--	--	--	--
09/25/00		101.33	5.85	0.00	95.48	--	5,350	--	4,410	--	--	--	--	--	--	--
01/26/01		101.33	5.38	0.00	95.95	--	ND	--	ND	--	--	--	--	--	--	--
01/09/02		101.33	4.24	0.00	97.09	--	<250	--	<500	--	--	--	--	--	--	--
04/04/02	NP	101.33	4.94	0.00	96.39	--	9,900	--	2,300	--	--	--	--	--	--	--
04/28/03	NP	101.33	4.89	0.00	96.44	--	12,000	--	1,900	--	--	--	--	--	--	--
04/15/04	NP	101.33	5.39	0.00	95.94	--	2,700	--	710	--	--	--	--	--	--	--
04/29/05	NP	101.33	5.18	0.00	96.15	--	2,600	--	1,900	--	--	--	--	--	--	--
04/27/06	NP	101.33	5.33	0.00	96.00	--	2,000	--	<510	--	--	--	--	--	--	--
12/10/08	NP	101.00	5.60	0.00	95.40	ND	--	--	--	--	ND	ND	ND	ND	ND	--

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Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-11 cont.																
08/31/10		101.00	5.75	0.00	95.25	<50	--	--	--	--	<0.5	<0.5	<0.5	<0.5	ND	--
10/07/11		101.00	7.20	0.00	93.80	Drv	--	--	--	--	--	--	--	--	--	--
01/09/12		101.00	5.18	0.00	95.82	<50	<34	--	<79	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/12		101.00	6.80	0.00	94.20	Drv	--	--	--	--	--	--	--	--	--	--
07/09/12		101.00	5.66	0.00	95.34	<50	<30	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
10/08/12		101.00	6.88	0.00	94.12	INSUFFICIENT WATER FOR SAMPLE										
01/07/13		101.00	3.38	0.00	97.62	510	53	--	<67	--	1.4	<2.0	0.9	4.5	--	--
04/08/13		101.00	6.76	0.00	94.24	INSUFFICIENT WATER FOR SAMPLE										
9/25-26/13		101.00	6.83	0.00	94.17	INSUFFICIENT WATER FOR SAMPLE										
11/05-06/13		101.00	6.51	0.00	94.49	INSUFFICIENT WATER FOR SAMPLE										
01/07-09/14		101.00	6.78	0.00	94.22	INSUFFICIENT WATER FOR SAMPLE										
04/07-08/14		101.00	4.57	0.00	96.43	<50	<28	400	<66	360	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		101.00	6.48	0.00	94.52	INSUFFICIENT WATER FOR SAMPLE										
10/07-08/14		101.00	5.97	0.00	95.03	<50	<29	<68	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		101.00	4.38	0.00	96.62	<50	<28	3,400	<66	700	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		101.00	5.06	0.00	95.94	<50	<28	3,000	<66	580	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		101.00	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
10/19-20/15		101.00	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
01/12-13/16		101.00	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
04/23/16		101.00	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
06/10-12/20		101.00	5.71	0.00	95.29	37	--	3,100	--	1,300	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		101.00	6.75	0.00	94.25											
12/08/20		101.00	6.15	0.00	94.85	INSUFFICIENT WATER FOR SAMPLE										
07/07/21		101.00	--	0.00	101.00	<19	--	240	--	590	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		101.00	4.30	0.00	96.70	23	--	340	--	190	<0.3	<0.2	<0.4	<0.4	<0.2	--
MW-12																
09/23/92		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
01/11/93		101.13	4.88	--	96.25	--	--	--	--	--	--	--	--	--	--	--
06/04/93		101.13	4.40	--	96.73	360	9,200	--	--	--	120	1.2	0.6	2.1	--	0.12 - 0.54
12/15/93		101.13	5.21	--	95.92	670	6,400	--	--	--	400	2.9	0.9	5.8	--	0.067 - 14
06/04/94		101.13	5.21	--	95.92	840	8,100	--	1,500	--	240	3.3	ND	2.8	--	13
11/01/94		101.13	5.31	--	95.82	810	5,700	--	1,400	--	160	1.7	0.7	4.5	--	0.12 - 28
02/09/95		101.13	3.68	--	97.45	87	3,700	--	680	--	7.1	ND	ND	ND	--	ND
05/02/95		101.13	4.17	--	96.96	490	16,000	--	1,800	--	16	0.58	ND	1.9	--	ND
08/02/95		101.13	5.28	--	95.85	270	12,000	--	2,300	--	10	0.83	ND	ND	--	ND
12/05/95		101.13	2.91	--	98.22	ND	420	--	1,100	--	ND	ND	ND	ND	--	ND
03/18/96		101.13	4.00	--	97.13	430	5,400	--	ND	--	1.5	1.2	0.95	4.7	--	ND
06/26/96		101.13	4.62	--	96.51	--	12,600	--	2,920	--	--	--	--	--	--	--
09/09/96		101.13	5.95	--	95.18	--	9,680	--	1,470	--	--	--	--	--	--	--
12/30/96		101.13	1.90	--	99.23	--	429	--	ND	--	--	--	--	--	--	--
03/07/97		101.13	3.03	--	98.10	105	18,900	--	1,330	--	1.85	ND	ND	ND	--	ND
06/09/97		101.13	4.23	--	96.90	--	9,070	--	1,250	--	--	--	--	--	--	ND
09/04/97		101.13	5.78	--	95.35	--	14,000	--	1,500	--	--	--	--	--	--	ND - 2.06
12/17/97		101.13	3.84	--	97.29	--	4,500	--	ND	--	--	--	--	--	--	--

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1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-12 cont.																
06/01/98		101.13	5.00	--	96.13	--	7,050	--	ND	--	--	--	--	--	--	--
11/01/98		101.13	5.44	0.00	95.69	--	6,300	--	ND	--	--	--	--	--	--	--
05/30/99		101.13	4.97	0.00	96.16	--	22,200	--	ND	--	--	--	--	--	--	--
06/11-12/00		101.13	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--	--
09/25/00		101.13	6.57	0.00	94.56	--	12,000	--	ND	--	--	--	--	--	--	--
01/26/01		101.13	5.05	0.00	96.08	--	ND	--	ND	--	--	--	--	--	--	--
01/09/02		101.13	3.46	0.00	97.67	--	310	--	<500	--	--	--	--	--	--	--
04/04/02	NP	101.13	4.48	0.00	96.65	--	12,000	--	1,700	--	--	--	--	--	--	--
04/28/03	NP	101.13	4.41	0.00	96.72	--	22,000	--	3,200	--	--	--	--	--	--	--
04/15/04	NP	101.13	5.00	0.00	96.13	--	19,000	--	3,100	--	--	--	--	--	--	--
04/29/05	NP	101.13	4.39	0.00	96.74	--	17,000	--	3,200	--	--	--	--	--	--	--
04/27/06	NP	101.13	4.88	0.00	96.25	--	4,900	--	1,300	--	--	--	--	--	--	--
12/09/08	LFP	101.04	5.19	0.00	95.85	150	2,200	--	250	--	ND	ND	ND	ND	ND	--
08/31/10		101.04	5.86	0.00	95.18	530	2,600	--	<360	--	<0.5	<0.5	<0.5	<0.5	ND	--
10/07/11		101.04	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
01/09/12		101.04	4.55	0.00	96.49	300	49	--	71	--	<2.0	<2.0	<0.5	1.5	--	--
04/11/12		101.04	4.05	0.00	96.99	130	<29	--	<69	--	<0.5	<0.5	<0.5	<5.0	--	--
07/09/12		101.04	5.36	0.00	95.68	490	670	--	1,000	--	1.4	<2.0	1.11	<6.0	--	--
10/09/12		101.04	6.54	0.00	94.50	670	32	--	<69	--	1.3	1.1	1.2	3.5	--	--
01/07/13		101.04	3.88	0.00	97.16	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		101.04	4.09	0.00	96.95	260	<28	--	<66	--	<0.5	<0.5	<0.5	<5.0	--	--
09/25-26/13		101.04	5.58	0.00	95.46	420	--	6,800	--	870	0.6	<2.0	0.6	1.7	--	--
11/05-06/13		101.04	5.27	0.00	95.77	220	--	4,300	--	380	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		101.04	5.62	0.00	95.42	260	--	8,900	--	1,900	<0.5	<0.5	<0.5	1.9	--	--
04/07-08/14		101.04	3.77	0.00	97.27	<50	<28	3,000	<66	1,100	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		101.04	4.88	0.00	96.16	37,000	810	1,200	140	200	55	910	420	3,800	--	--
10/07-08/14		101.04	6.02	0.00	95.02	<50	<29	110	<67	<67	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		101.04	3.63	0.00	97.41	140	<28	6,900	<66	1,600	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		101.04	4.57	0.00	96.47	220	32	11,000	<66	1,100	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		101.04	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
10/19-20/15		101.04	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
01/12-13/16		101.04	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
04/23/16		101.04	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
06/10-12/20		101.04	5.37	0.00	95.67	280	--	14,000	--	3,700	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		101.04	6.44	0.00	94.60											
12/08/20		101.04	5.10	0.00	95.94	56	<47	2,100	<100	1,000	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		101.04		0.00	101.04	220	--	13,000	--	3,900	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		101.04	3.51	0.00	97.53	23	--	4,000	--	1,700	<0.3	<0.2	<0.4	<0.4	<0.2	--
MW-13																
09/23/92		102.54	5.23	--	97.31	870	8,200	--	--	--	87	4.0	4.0	6.0	--	--
01/11/93		102.54	6.26	--	96.28	--	--	--	--	--	--	--	--	--	--	--
06/04/93		102.54	5.95	--	96.59	ND	330	--	--	--	ND	ND	ND	ND	--	0.087
12/15/93		102.54	7.04	--	95.50	1,000	27,000	--	--	--	35	2.4	5.9	8.7	--	0.58 - 2.7
06/03/94		102.54	6.74	--	95.80	680	27,000	--	ND	--	8.5	1.1	2.0	1.6	--	1.5

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-13 cont.																
11/01/94		102.54	7.69	--	94.85	1,500	20,000	--	ND	--	38	3.2	8.7	9.2	--	0.15 - 7.8
02/09/95		102.54	4.83	--	97.71	130	4,400	--	1,400	--	2.0	ND	0.7	ND	--	ND
05/02/95		102.54	5.82	--	96.72	410	14,000	--	2,200	--	3.0	ND	2.1	ND	--	ND
08/02/95		102.54	7.25	--	95.29	750	31,000	--	2,400	--	18	2.5	13	3.0	--	ND
12/05/95		102.54	4.14	--	98.40	ND	6,700	--	4,800	--	ND	ND	ND	ND	--	ND
03/18/96		102.54	5.16	--	97.38	140	10,000	--	2,500	--	ND	ND	ND	ND	2.6	ND
06/26/96		102.54	6.48	--	96.06	--	8,110	--	2,640	--	--	--	--	--	--	--
09/09/96		102.54	7.70	--	94.84	--	35,800	--	2,810	--	--	--	--	--	--	--
12/30/96		102.54	3.12	--	99.42	--	--	--	--	--	--	--	--	--	--	--
03/07/97		102.54	4.16	--	98.38	--	960	--	ND	--	--	--	--	--	--	ND
06/09/97		102.54	5.70	--	96.84	--	1,620	--	1,050	--	--	--	--	--	--	ND
09/04/97		102.54	7.59	--	94.95	--	15,800	--	1,550	--	--	--	--	--	--	ND
12/17/97		102.54	5.43	--	97.11	--	11,100	--	1,630	--	--	--	--	--	--	--
06/01/98		102.54	6.48	--	96.06	--	1,490	--	ND	--	--	--	--	--	--	--
11/01/98		102.54	7.77	0.00	94.77	--	9,580	--	933	--	--	--	--	--	--	--
05/30/99		102.54	6.34	0.00	96.20	--	12,800	--	ND	--	--	--	--	--	--	--
06/11-12/00		102.54	6.88	0.00	95.66	--	--	--	--	--	--	--	--	--	--	--
04/04/02	NP	102.54	5.52	0.00	97.02	--	980	--	<750	--	--	--	--	--	--	--
04/28/03	NP	102.54	5.45	0.00	97.09	--	3,200	--	440	--	--	--	--	--	--	--
04/15/04	NP	102.54	6.15	0.00	96.39	--	2,100	--	460	--	--	--	--	--	--	--
04/29/05	NP	102.54	5.55	0.00	96.99	--	4,400	--	1,500	--	--	--	--	--	--	--
04/27/06	NP	102.54	5.99	0.00	96.55	--	1,800	--	280	--	--	--	--	--	--	--
12/09/08	LFP	102.57	6.23	0.00	96.34	200	4,000	--	520	--	ND	ND	ND	ND	ND	--
08/31/10		102.57	7.44	0.00	95.13	<50	2,500	--	<360	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		102.57	8.00	0.00	94.57	190	42	--	<69	--	<0.5	<0.5	<0.5	1.8	--	--
01/10/12		102.57	5.95	0.00	96.62	<50	66	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
04/10/12		102.57	5.45	0.00	97.12	<50	89	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		102.57	6.87	0.00	95.70	280	2,100	--	150	--	0.6	<0.5	<0.5	2.0	--	--
10/10/12		102.57	8.10	0.00	94.47	360	280	--	<66	--	1.1	0.7	<0.5	1.7	--	--
01/09/13		102.57	4.57	0.00	98.00	<50	510	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		102.57	5.54	0.00	97.03	<50	83	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		102.57	7.57	0.00	95.00	370	--	4,000	--	460	0.9	<2.0	0.7	1.5	--	--
11/05-06/13		102.57	6.84	0.00	95.73	120	--	3,100	--	620	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		102.57	6.94	0.00	95.63	400	--	4,000	--	630	0.5	<0.5	<0.5	1.8	--	--
04/07-08/14		102.57	5.39	0.00	97.18	<50	83	600	<68	430	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		102.57	7.51	0.00	95.06	140	400	2,500	<67	420	<0.5	<0.5	<0.5	<1.5	--	--
10/07-08/14		102.57	8.03	0.00	94.54	<50	35	54	<69	<69	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		102.57	5.00	0.00	97.57	300	1,300	2,700	<66	820	<0.5	<0.5	0.7	<1.5	<2.5	--
04/06-08/15		102.57	5.99	0.00	96.58	<50	55	420	<66	80	<0.5	<0.5	0.7	<1.5	--	--
07/23/15		102.57	7.80	0.00	94.77	400	1,100	3,100	<100	650	<0.5	<0.5	0.6	1.7	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-13 cont.																
10/19/2015		102.57	7.73	0.00	94.84	230	150	5,800	<100	720	<0.2	<0.2	0.4	0.8	--	--
01/12/13/16		102.57	5.07	0.00	97.50	100	740	2,200	<100	650	<0.2	<0.2	<0.2	<0.2	--	--
04/23/16		102.57	6.11	0.00	96.46	<50	62	530	<100	140	<0.2	<0.2	<0.2	<0.2	--	--
06/10-12/20		102.57	6.98	0.00	95.59	460	--	3,600	--	690	<1.0	0.30	<1.0	<3.0	--	--
09/19/20		102.57	8.05	0.00	94.52	--	--	--	--	--	--	--	--	--	--	--
12/10/20		102.57	6.50	0.00	96.07	390	2,300	5,200	<100	340	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		102.57	--	0.00	102.57	510	--	6,500	--	570	<0.3	<0.4	<0.2	<0.4	--	--
11/29/21		102.57	4.67	0.00	97.90	110	--	4,800	--	360	<0.3	<0.4	<0.2	<0.4	<0.2	--
04/05/22		102.57	5.70	0.00	96.87	28	--	460	--	120	<0.3	<0.4	<0.2	<0.4	<0.2	--
06/22/22		102.57	6.13	0.00	96.44	170	--	220	--	<100	<0.3	<0.4	<0.2	<0.4	--	--
10/06/22		102.57	7.96	0.00	94.61	400	--	15,000	--	570	<0.3	<0.3	<0.4	<1.4	--	--
MW-14																
09/23/92		102.25	5.26	--	96.99	1,100	9,800	--	--	--	200	11	3.0	7.0	--	--
01/11/93		102.25	5.25	--	97.00	--	--	--	--	--	--	--	--	--	--	--
06/04/93		102.25	4.90	--	97.35	ND	9,700	--	--	--	2.2	ND	ND	ND	--	--
12/15/93		102.25	6.18	--	96.07	470	9,500	--	--	--	72	0.6	1.9	4.2	--	0.48 - 1.0
06/03/94		102.25	5.71	--	96.54	830	4,300	--	980	--	29	1.0	1.3	0.7	--	ND
11/01/94		102.25	6.76	--	95.49	ND	5,400	--	1,700	--	3.8	ND	ND	0.5	--	0.11
02/09/95		102.25	3.85	--	98.40	ND	1,700	--	1,100	--	ND	ND	ND	ND	--	ND
05/02/95		102.25	4.74	--	97.51	ND	4,200	--	2,200	--	0.65	0.58	ND	ND	--	ND
08/02/95		102.25	6.64	--	95.61	140	21,000	--	4,800	--	17	1.8	1.6	ND	--	ND
12/05/95		102.25	3.16	--	99.09	ND	9,300	--	3,900	--	3.0	ND	ND	ND	--	ND
03/18/96		102.25	4.20	--	98.05	230	11,000	--	2,900	--	8.9	ND	ND	6.9	--	ND
06/26/96		102.25	5.75	--	96.50	--	39,300	--	4,600	--	--	--	--	--	--	--
09/09/96		102.25	7.00	--	95.25	--	58,200	--	4,450	--	--	--	--	--	--	--
12/30/96		102.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/07/97		102.25	2.96	--	99.29	98	9,230	--	1,310	--	0.545	ND	ND	ND	--	ND
06/09/97		102.25	4.75	--	97.50	--	10,000	--	2,240	--	--	--	--	--	--	ND
09/04/97		102.25	6.74	--	95.51	--	42,700	--	ND	--	--	--	--	--	--	ND - 1.90
12/17/97		102.25	3.90	--	98.35	--	4,860	--	1,710	--	--	--	--	--	--	--
06/01/98		102.25	5.58	--	96.67	--	2,270	--	ND	--	--	--	--	--	--	--
11/01/98		102.25	7.30	0.00	94.95	--	8,620	--	2,030	--	--	--	--	--	--	--
05/30/99		102.25	5.37	0.00	96.88	--	15,700	--	1,590	--	--	--	--	--	--	--
06/11-12/00		102.25	5.81	0.00	96.44	--	--	--	--	--	--	--	--	--	--	--
04/04/02	NP	102.25	4.69	0.00	97.56	--	1,100	--	<750	--	--	--	--	--	--	--
04/28/03	NP	102.25	4.52	0.00	97.73	--	820	--	470	--	--	--	--	--	--	--
04/15/04	NP	102.25	5.29	0.00	96.96	--	4,400	--	2,800	--	--	--	--	--	--	--
04/29/05	NP	102.25	4.50	0.00	97.75	--	740	--	580	--	--	--	--	--	--	--
04/27/06	NP	102.25	4.99	0.00	97.26	--	400	--	140	--	--	--	--	--	--	--
12/10/08	LFP	102.30	5.26	0.00	97.04	ND	520	--	210	--	ND	ND	ND	ND	ND	--
08/31/10		102.30	7.69	0.00	94.61	<50	1,200	--	940	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		102.30	8.30	0.00	94.00	<50	2,000	--	1,100	--	<0.5	<0.5	<0.5	<1.5	--	--
01/10/12		102.30	5.65	0.00	96.65	<50	680	--	320	--	<0.5	<0.5	<0.5	<1.5	--	--
04/10/12		102.30	5.70	0.00	96.60	<50	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		102.30	6.93	0.00	95.37	<50	2,900	--	1,400	--	<0.5	<0.5	<0.5	<1.5	--	--
10/09/12		102.30	8.45	0.00	93.85	<50	290	--	250	--	<0.5	<0.5	<0.5	<1.5	--	--
01/08/13		102.30	4.99	0.00	97.31	<50	30	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--

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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-14 cont.																
04/09/13		102.30	5.50	0.00	96.80	<50	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		102.30	7.08	0.00	95.22	<51	--	720	--	550	<0.5	<0.5	<0.5	<1.6	--	--
11/05-06/13		102.30	6.77	0.00	95.53	<50	--	480	--	310	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		102.30	6.76	0.00	95.54	<50	--	530	--	440	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		102.30	5.56	0.00	96.74	<50	62	440	<67	440	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		102.30	7.37	0.00	94.93	<50	<28	340	<66	220	<0.5	<0.5	<0.5	<1.5	--	--
10/07-08/14		102.30	8.39	0.00	93.91	<50	<29	<29	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		102.30	5.30	0.00	97.00	<50	510	1,300	400	1,400	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		102.30	6.04	0.00	96.26	<50	<28	200	<66	220	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		102.30	8.07	0.00	94.23	<50	110	920	<100	500	<0.5	<0.5	<0.5	<1.5	--	--
10/19-20/15		102.30	9.77	0.00	92.53	<50	<46	2,600	<100	960	<0.2	<0.2	<0.2	<0.2	--	--
01/12-13/16		102.30	5.41	0.00	96.89	<50	140	860	<100	740	<0.2	<0.2	<0.2	<0.2	--	--
04/23/16		102.30	6.26	0.00	96.04	<50	<46	150	<100	<100	<0.2	<0.2	<0.2	<0.2	--	--
06/10-12/20		102.30	6.86	0.00	95.44	<260	--	3,600	--	7,600	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		102.30	8.39	0.00	93.91											
12/08/20		102.30	5.80	0.00	96.50	<19	850	1,600	580	1,200	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		102.30		0.00	102.30	<19	--	410	--	230	<0.2	<0.4	<0.2	<0.4	--	--
11/29/21		102.30	5.22	0.00	97.08	<19	--	1,200	--	670	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		102.30	6.19	0.00	96.11	<22	--	79	--	<250	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		102.30	6.19	0.00	96.11	<43	--	490	--	150	<0.3	<0.3	<0.4	<1.4	--	--
MW-18																
08/31/10		104.12	9.27	0.00	94.85	320	2,700	--	<370	--	5	<0.5	<0.5	<0.5	--	--
10/07/11		104.12	8.10	0.00	96.02	100	<30	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
01/10/12		104.12	8.00	0.00	96.12	540	120	--	<67	--	<2.0	0.8	0.9	2.9	--	--
04/11/12		104.12	7.55	0.00	96.57	340	<30	--	<69	--	<2.0	<0.5	0.5	3.3	--	--
07/10/12		104.12	8.83	0.00	95.29	760	520	--	160	--	1.6	0.9	1.2	<6.0	--	--
10/10/12		104.12	9.85	0.00	94.27	410	51	--	<66	--	1.2	0.6	0.7	2.5	--	--
01/09/13		104.12	7.20	0.00	96.92	610	160	--	<68	--	1.6	<2.0	1.0	5.4	--	--
04/09/13		104.12	7.77	0.00	96.35	310	68	--	<66	--	<0.5	0.6	0.8	2.6	--	--
09/25-26/13		104.12	9.24	0.00	94.88	600	--	4,300	--	760	1.6	<2.0	1.2	3.7	--	--
11/05-06/13		104.12	5.88	0.00	98.24	1,000	--	3,700	--	650	1.9	1.3	1.6	<8.0	--	--
01/07-09/14		104.12	8.60	0.00	95.52	940	--	6,300	--	1,100	2.2	1.2	1.4	6.8	--	--
04/07-08/14		104.12	7.50	0.00	96.62	620	110	2,400	<67	510	<2.0	0.7	0.9	<5.0	--	--
07/07-09/14		104.12	8.93	0.00	95.19	4,500	72	98	<68	<68	2.2	52	40	460	--	--
10/07-08/14		104.12	8.08	0.00	96.04	<50	<29	<29	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		104.12	7.17	0.00	96.95	620	43	3,300	<66	630	<2.0	<2.0	1.4	<6.0	<2.5	--
04/06-08/15		104.12	8.08	0.00	96.04	540	150	3,500	<66	810	<0.9	<0.6	1.0	<5.0	--	--
07/23/15		104.12	9.69	0.00	94.43	INSUFFICIENT WATER FOR SAMPLE										
10/19-20/15		104.12	DRY	--	--	INSUFFICIENT WATER FOR SAMPLE										
01/12-13/16		104.12	7.15	0.00	96.97	510	85	4,800	<100	650	<0.2	0.3	<0.5	1.1	--	--
04/23/16		104.12	9.39	0.00	94.73	INSUFFICIENT WATER FOR SAMPLE										
06/10-12/20		104.12	9.23	0.00	94.89	INSUFFICIENT WATER FOR SAMPLE										
09/19/20		104.12	DRY	--	--	INSUFFICIENT WATER FOR SAMPLE										
12/08/20		104.12	9.17	0.00	94.95	INSUFFICIENT WATER FOR SAMPLE										
07/06/21		104.12		0.00	104.12						<0.3				--	--
11/29/21		104.12	6.73	0.00	97.39	26	--	510	--	230	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		104.12	7.79	0.00	96.33	1,000	--	5,500	--	530	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		104.12	8.18	0.00	95.94	950	--	790	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
10/06/22		104.12	DRY	--	--	INSUFFICIENT WATER FOR SAMPLE										
MW-19																
08/31/10		101.41	6.07	0.00	95.34	2,900	8,800	--	<1,700	--	1	3	11	9	--	--
10/07/11		101.41	6.65	0.00	94.76	2,300	440	--	<69	--	9.8	4.2	6.5	12	--	--
01/10/12		101.41	4.70	0.00	96.71	3,100	470	--	<67	--	9.1	3.5	9.1	12	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-19 cont.																
04/11/12		101.41	4.15	0.00	97.26	1,200	540	--	<68	--	1.3	1.4	3.6	5.9	--	--
07/10/12		101.41	5.53	0.00	95.88	2,900	2,900	--	350	--	3.1	4.3	9.7	18	--	--
10/10/12		101.41	6.74	0.00	94.67	1,600	150	--	<66	--	<6.0	3.3	5.7	8.5	--	--
01/09/13		101.41	3.36	0.00	98.05	110	89	--	<67	--	<0.5	<2.0	<0.5	1.6	--	--
04/09/13		101.41	4.33	0.00	97.08	1,500	400	--	<66	--	2.1	2.1	3.9	<7.0	--	--
09/25-26/13		101.41	5.98	0.00	95.43	2,000	--	21,000	--	1,700	2.5	2.5	5.2	<11	--	--
11/05-06/13		101.41	5.47	0.00	95.94	2,400	--	12,000	--	1,300	3.2	2.8	8.1	<14	--	--
01/07-09/14		101.41	5.57	0.00	95.84	2,400	--	11,000	--	<670	3.8	3.2	6.6	14	--	--
04/07-08/14		101.41	4.08	0.00	97.33	1,000	290	22,000	<67	1,900	0.8	0.6	1.7	<5.0	--	--
07/07-09/14		101.41	5.63	0.00	95.78	1,900	39	42	<68	<68	0.5	13	13	170	--	--
10/07-08/14		101.41	7.96	0.00	93.45	<50	<29	<29	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		101.41	3.76	0.00	97.65	1,500	7,400	10,000	<1,700	<3,300	<4.0	1.9	3.6	<9.0	<9.0	--
04/06-08/15		101.41	4.18	0.00	97.23	990	500	16,000	<66	3,100	1.5	1.3	2.4	5.6	--	--
07/23/15		101.41	6.38	0.00	95.03	2,400	370	12,000	<100	<1,000	3.5	3.3	3.5	9.5	--	--
10/19-20/15		101.41	6.32	0.00	95.09	3,000	250	27,000	<100	2,000	3.5	2.7	3.5	7.0	--	--
01/12-13/16		101.41	3.76	0.00	97.65	870	1,900	14,000	270	2,700	0.7	0.6	1.0	2.4	--	--
04/23/16		101.41	4.77	0.00	96.64	1,700	5,000	51,000	650	<5,200	1.7	0.9	1.6	#####	--	--
06/10-12/20		101.41	5.65	0.00	95.76	1,100	--	29,000	--	13,000	0.2	#####	#####	#####	--	--
09/19/20		101.41	6.68	0.00	94.73	--	--	--	--	--	--	--	--	--	--	--
12/08/20		101.41	5.60	0.00	95.81	1,900	1,900	45,000	420	1,200	0.4	#####	1.0	#####	--	--
07/07/21		101.41	--	0.00	101.41	500	--	5,300	--	1,800	<0.3	<0.	<0.4	<0.	--	--
11/29/21		101.41	2.49	0.00	98.92	80	--	18,000	--	1,900	<0.3	<0.	<0.4	<0.	<0.	--
MW-20																
08/31/10		100.99	5.31	0.00	95.68	1,700	7,600	--	2,300	--	59	6	11	6	--	--
10/07/11		100.99	5.95	0.00	95.04	2,700	1,500	--	430	--	14	4.2	5.2	4.2	--	--
01/10/12		100.99	3.70	0.00	97.29	3,700	980	--	<67	--	130	7.2	19	16	--	--
04/11/12		100.99	3.30	0.00	97.69	2,400	990	--	<67	--	88	6.5	15	23	--	--
07/10/12		100.99	4.66	0.15	96.45	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
10/08/12		100.99	6.43	0.41	94.89	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
01/08/13		100.99	3.90	0.02	97.11	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
04/08/13		100.99	3.42	0.02	97.59	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
09/25-26/13		100.99	5.07	0.03	95.94	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
11/05-06/13		100.99	6.81	0.29	94.41	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
01/07-09/14		100.99	UNABLE TO GAUGE DEPTH DUE TO PRODUCT				--	--	--	--	--	--	--	--	--	--
04/07-08/14		100.99	3.55	0.03	97.46	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
07/07-09/14		100.99	5.96	0.08	95.09	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
10/07-08/14		100.99	6.16	0.05	94.87	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
01/06-07/15		100.99	3.61	0.02	97.40	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
04/06-08/15		100.99	UNABLE TO GAUGE DEPTH DUE TO PRODUCT				--	--	--	--	--	--	--	--	--	--
07/23/15		100.99	5.80	0.07	95.25	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
10/19-20/15		100.99	5.61	0.03	95.40	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
01/12-13/16		100.09	3.14	0.04	96.98	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
04/23/16		100.09	7.19	0.28	93.12	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
06/10-12/20		100.09	4.75	0.02	95.36	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
09/19/20		100.09	6.05	0.00	94.04					--	--	--	--	--	--	--
12/08/20		100.09	5.60	0.03	94.51	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
07/06/21		100.09	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
11/29/21		100.09	2.83	0.05	97.30	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-21																
08/31/10		100.60	4.93	0.00	95.67	230	1,400	--	960	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		100.60	5.30	0.00	95.30	820	1,200	--	290	--	<0.5	<0.5	1.2	5.9	--	--
01/10/12		100.60	2.90	0.00	97.70	250	<29	--	<67	--	<0.5	<0.5	<0.5	1.9	--	--
04/10/12		100.60	2.85	0.00	97.75	130	58	--	<68	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		100.60	4.07	0.00	96.53	330	610	--	190	--	0.8	<0.5	0.6	<6.0	--	--
10/10/12		100.60	5.53	0.00	95.07	450	1,900	--	1,200	--	0.9	0.7	1	4.1	--	--
01/08/13		100.60	2.54	0.00	98.06	260	63	--	<66	--	0.6	0.5	<0.5	4.1	--	--
04/09/13		100.60	2.78	0.00	97.82	230	43	--	<66	--	<0.5	<0.5	<0.5	2.8	--	--
09/25-26/13		100.60	4.24	0.00	96.36	520	--	2,400	--	870	<2.5	0.6	0.70	4.6	--	--
11/05-06/13		100.60	3.89	0.00	96.71	370	--	2,500	--	1,400	<0.5	<0.5	<0.5	<4.0	--	--
01/07-09/14		100.60	3.77	0.00	96.83	370	--	2,100	--	600	<2.0	<0.5	0.6	4.0	--	--
04/07-08/14		100.60	2.78	0.00	97.82	93	32	1,300	<67	1,400	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		100.60	4.72	0.00	95.88	350	540	2,000	<68	890	<2.0	<0.5	0.6	<5.0	--	--
10/07-08/14		100.60	5.66	0.00	94.94	<50	110	140	<67	<67	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		100.60	3.48	0.00	97.12	180	48	1,300	<66	820	<0.5	<0.5	<0.5	<3.0	<2.5	--
04/06-08/15		100.60	3.19	0.00	97.41	130	49	1,300	<67	730	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		100.60	5.24	0.00	95.36	700	150	1,600	<100	1,300	<0.5	<0.8	1.1	3.4	--	--
10/19-20/15		100.60	4.83	0.00	95.77	630	150	2,400	<100	990	<0.2	<0.2	0.9	2.3	--	--
01/12-13/16		100.60	2.21	0.00	98.39	290	<45	1,800	<100	1,800	<0.2	<0.2	<0.4	1.3	--	--
04/23/16		100.60	3.44	0.00	97.16	400	72	1,400	<100	1,600	<0.2	0.3	0.5	1.2	--	--
06/10-12/20		100.60	3.97	0.00	96.63	27	--	760	--	1,200	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		100.60	5.62	0.00	94.98											
12/08/20		100.60	3.03	0.00	97.57	19	<46	360	<100	630	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		100.60	3.03	0.00	97.57	160	--	840	--	770	<0.3	<0.4	<0.2	<0.4	--	--
11/29/21		100.60	2.64	0.00	97.96	<19	--	430	--	770	<0.3	<0.2	<0.4	<0.4	<0.2	--
MW-22																
08/31/10		100.62	6.21	0.00	94.41	81	2,300	--	1,100	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		100.62	6.55	0.00	94.07	300	950	--	440	--	0.7	<0.5	<0.5	2.8	--	--
01/09/12		100.62	5.42	0.00	95.20	590	14,000	--	6,500	--	<2.0	<0.5	<0.5	1.9	--	--
04/10/12		100.62	4.90	0.00	95.72	56	65	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		100.62	5.74	0.00	94.88	520	6,700	--	2,400	--	0.6	<0.5	0.6	3.5	--	--
10/09/12		100.62	6.63	0.00	93.99	280	4,900	--	2,600	--	0.5	0.6	0.6	2.7	--	--
01/08/13		100.62	4.90	0.00	95.72	70	220	--	150	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		100.62	5.13	0.00	95.49	52	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		100.62	6.12	0.00	94.50	350	--	3,300	--	1,200	0.7	0.7	0.70	3.3	--	--
11/05-06/13		100.62	5.73	0.00	94.89	360	--	3,500	--	1,800	0.7	<1.0	0.6	2.9	--	--
01/07-09/14		100.62	5.87	0.00	94.75	390	--	3,200	--	930	<2.0	0.6	0.7	3.9	--	--
04/07-08/14		100.62	4.88	0.00	95.74	150	52	2,800	<66	2,100	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		100.62	5.90	0.00	94.72	370	790	3,800	260	1,800	<2.0	0.6	0.6	3.5	--	--
10/07-08/14		100.62	6.73	0.00	93.89	<50	34	47	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		100.62	4.75	0.00	95.87	120	36	2,800	<68	1,100	<0.5	<0.5	<0.5	<1.7	<2.5	--
04/06-08/15		100.62	5.24	0.00	95.38	130	73	3,000	<66	840	<0.6	<0.5	<0.5	<1.5	--	--
07/23/15		100.62	6.38	0.00	94.24	420	3,800	5,800	1,600	2,700	0.5	<0.5	0.6	3.2	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-22 cont.																
10/19/2015		100.62	6.41	0.00	94.21	550	9,300	22,000	4,200	12,000	<0.2	0.9	0.8	3.7	--	--
01/12-13/16		100.62	4.75	0.00	95.87	450	210	3,000	<100	2,300	<0.4	0.2	<0.6	1.8	--	--
04/23/16		100.62	5.26	0.00	95.36	490	1,200	1,100	410	390	<2.0	0.6	0.6	2.8	--	--
06/10-12/20		100.62	5.85	0.00	94.77	330	--	15,000	--	8,500	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		100.62	7.25	0.00	93.37	--	--	--	--	--	--	--	--	--	--	--
12/08/20		100.62	5.61	0.00	95.01	310	1,500	3,600	760	2,200	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		100.62	--	0.00	100.62	950	--	2,800	--	1,500	<0.30	0.28	<0.4	0.78	--	--
11/30/21		100.62	4.65	0.00	95.97	320	--	1,800	--	1,400	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		100.62	5.03	0.00	95.59	380	--	2,600	--	1,700	<0.3	0.25	<0.4	<0.4	<0.2	--
06/22/22		100.62	5.28	0.00	95.34	360	--	2,300	--	910	<0.3	0.28	<0.4	0.75	--	--
10/05/22		100.62	6.55	0.00	94.07	500	--	10,000	--	5,300	<0.3	<0.3	<0.4	<1.4	--	--
MW-23																
02/21/19		--	--	--	--	--	--	65	--	<110	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	6.67	0.00	--	<250	--	<100	--	<260	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.36	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	6.67	0.00	--	<19	72	64	160	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		--	--	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	5.28	0.00	--	<19	--	<48	--	<110	<0.3	<0.2	<0.4	<0.4	--	--
04/06/22		--	6.03	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
06/20/22		--	5.93	0.00	--	<22	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	7.27	0.00	--	<43	--	<46	--	<100	<0.3	<0.3	<0.4	<1.4	--	--
MW-24																
02/21/19		--	5.65	0.00	--	<250	--	1,600	--	350	<0.2	<0.2	<0.4	<1	<1	ND
06/10-12/20		--	6.34	0.00	--	<250	--	1,000	--	900	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	6.89	0.00	--	<19	<46	210	<100	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		--	6.89	0.00	--	<19	--	270	--	200	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	5.09	0.00	--	38	--	3,500	--	930	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	5.12	0.00	--	34	--	1,100	--	350	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	5.43	0.00	--	29	--	1,300	--	300	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		--	UNABLE TO ACCESS													
MW-25																
02/21/19		--	--	--	--	--	--	73	--	<110	0.4	<0.2	<0.4	<1	--	--
12/08/20		--	4.51	0.00	--	1,200	270	490	1,600	2,900	1.1	0.33	0.87	<1.4	--	--
07/08/21		--	--	0.00	--	1,700	--	180	--	190	2.9	0.86	2.5	<0.4	--	--
12/01/21		--	3.33	0.00	--	400	--	98	--	<100	0.56	<0.2	0.52	<0.4	<0.2	--
04/06/22		--	3.66	0.00	--	940	--	190	--	<110	1.7	0.47	1.2	<0.4	<0.2	--
06/21/22		--	4.04	0.00	--	1,500	--	350	--	140	1.7	0.67	2.2	<0.4	--	--
10/05/22		--	5.66	0.00	--	1,400	--	320	--	110	1.3	0.54	1.9	<1.4	--	--
MW-26																
02/21/19		--	3.40	0.00	--	<250	--	430	--	160	<0.2	<0.2	<0.4	<1	<1	ND
06/10-12/20		--	4.33	0.00	--	44	--	3,600	--	1,400	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	5.25	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/09/20		--	4.08	0.00	--	20	<46	510	<100	310	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		--	--	0.00	--	93	--	4,000	--	1,800	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	2.79	0.00	--	29	--	610	--	340	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	3.35	0.00	--	26	--	1,500	--	360	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	3.58	0.00	--	32	--	1,800	--	450	<0.3	<0.2	<0.4	<0.4	<0.2	--
10/05/22		--	5.38	0.00	--	<43	--	1,200	--	520	<0.3	<0.3	<0.4	<1.4	--	--
MW-29																
02/21/19		--	5.15	0.00	--	--	--	7,200	--	590	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	6.52	0.00	--	810	--	22,000	--	2,100	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.15	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	6.18	0.00	--	200	52	870	<100	180	<0.4	<0.4	<0.8	<2.8	--	--
07/08/21		--	--	0.00	--	1,500	--	8,800	--	1,100	<0.6	0.51	<0.8	<0.8	--	--
12/01/21		--	5.00	0.00	--	33	--	140	--	<100	<0.6	<0.4	<0.8	<0.8	<0.4	--
04/06/22		--	5.78	0.00	--	390	--	8,100	--	620	<6	<4	<8	<8	<4	--
06/22/22		--	5.98	0.00	--	640	--	<47	--	<110	<0.6	<0.4	<0.8	<0.8	--	--
10/06/22		--	7.09	0.00	--	1,000	--	6,900	--	710	<0.3	<0.3	<0.4	<1.4	--	--
MW-30																
02/21/19		--	4.57	0.00	--	--	--	8,500	--	2,400	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	5.45	0.00	--	200	--	6,800	--	2,000	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	6.00	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	5.41	0.00	--	180	1,300	7,900	1,900	4,600	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		--	--	0.00	--	200	--	7,000	--	2,100	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	4.11	0.00	--	31	--	2,300	--	1,300	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	4.59	0.00	--	65	--	8,400	--	2,500	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	4.65	0.00	--	30	--	5,600	--	2,100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	6.06	0.00	--	120	--	5,100	--	2,300	<0.3	<0.3	<0.4	<1.4	--	--

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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-31																
02/21/19		--	5.99	0.00	--	260	--	22,000	--	170	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	6.48	0.00	--	34	--	640	--	510	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.00	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	6.72	0.00	--	24	<47	510	<100	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		--	--	0.00	--	<19	--	140	--	130	<0.3	0.39	<0.4	<0.4	--	--
12/01/21		--	5.64	0.00	--	<19	--	190	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	6.24	0.00	--	<19	--	190	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	5.95	0.00	--	<22	--	230	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	7.12	0.00	--	<43	--	140	--	480	<0.3	<0.3	<0.4	<1.4	--	--
MW-32																
06/10-12/20		--	3.15	0.00	--	2,400	--	6,000	--	790	0.93	0.35	0.20	<3.0	--	--
09/19/20		--	4.50	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	2.94	0.00	--	2,000	1,800	3,500	<100	240	0.94	0.41	<0.4	<1.4	--	--
07/06/21		--	--	0.00	--	1,300	--	860	--	280	<0.3	<0.4	<0.2	<0.4	--	--
11/29/21		--	1.99	0.00	--	450	--	700	--	170	<0.3	<0.2	<0.4	<0.4	--	--
04/05/22		--	1.77	0.00	--	160	--	97	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	2.32	0.00	--	400	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		--	4.43	0.00	--	780	--	1,600	--	180	<0.3	<0.3	<0.4	<1.4	--	--
MW-34																
03/04/21		--	--	0.00	--	<19	--	<46	--	<100	--	--	--	--	--	--
07/09/21		--	--	0.00	--	<19	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	6.96	0.00	--	<19	--	<45	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/07/22		--	7.73	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	7.65	0.00	--	<22	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	8.80	0.00	--	<43	--	<46	--	<100	<0.3	<0.3	<0.4	<1.4	--	--
MW-36																
01/10/21		--	--	0.00	--	<19	--	67	--	<100	<0.2	<0.2	<0.4	<1.4	<0.2	--
07/08/21		--	--	0.00	--	<19	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	5.64	0.00	--	<19	--	100	--	<110	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	6.24	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	5.98	0.00	--	<22	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	DRY	--	--	INSUFFICIENT WATER FOR SAMPLE				--	--	--	--	--	--	--
MW-37																
01/10/21		--	--	0.00	--	28	--	320	--	720	<0.2	<0.2	<0.4	<1.4	<0.2	--
07/08/21		--	--	0.00	--	<19	--	67	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	6.55	0.00	--	28	--	190	--	390	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	7.29	0.00	--	<19	--	1,400	--	4,900	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	6.95	0.00	--	<22	--	100	--	110	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	8.21	0.00	--	<43	--	560	--	2,300	<0.3	<0.3	<0.4	<1.4	--	--
MW-38																
01/10/21		--	--	0.00	--	<19	--	200	--	580	<0.2	<0.2	<0.4	<1.4	<0.2	--
07/08/21		--	--	0.00	--	<19	--	56	--	<110	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	7.09	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	7.74	0.00	--	<19	--	260	--	650	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	7.55	0.00	--	<22	--	--	--	--	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	8.95	0.00	--	<43	--	57	--	<110	<0.3	<0.3	<0.4	<1.4	--	--
MW-39																
03/04/21		--	--	0.00	--	140	--	2,200	--	2,600	--	--	--	--	--	--
07/08/21		--	--	0.00	--	170	--	4,400	--	1,200	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	4.80	0.00	--	97	--	2,700	--	310	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/07/22		--	5.34	0.00	--	65	--	370	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		--	5.62	0.00	--	58	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	6.80	0.00	--	200	--	10,000	--	2,400	<0.3	<0.3	<0.4	<1.4	--	--
D-1																
09/23/92		101.96	8.74	--	93.22	180	2,100	--	--	--	ND	ND	ND	ND	--	--
01/11/93		101.96	9.50	--	92.46	--	--	--	--	--	--	--	--	--	--	--
06/04/93		101.96	9.75	--	92.21	100	22,000	--	--	--	0.6	ND	ND	ND	--	--
12/15/93		101.96	9.28	--	92.68	150	2,400	--	--	--	ND	ND	ND	ND	1.0	0.14
06/03/94		101.96	10.53	--	91.43	290	2,600	--	ND	--	ND	ND	ND	ND	--	0.14
11/01/94		101.96	10.15	--	91.81	170	2,800	--	ND	--	ND	ND	ND	ND	0.9	0.1 - 0.2
02/09/95		101.96	8.82	--	93.14	170	2,800	--	420	--	ND	ND	ND	ND	--	ND - 5.0
05/02/95		101.96	9.87	--	92.09	110	6,000	--	ND	--	ND	ND	ND	ND	--	ND
08/02/95		101.96	10.43	--	91.53	ND	4,800	--	900	--	ND	ND	ND	ND	--	ND
12/05/95		101.96	8.30	--	93.66	58	4,200	--	950	--	ND	ND	ND	ND	--	ND
03/18/96		101.96	10.30	--	91.66	91	3,600	--	ND	--	ND	ND	ND	2.1	--	ND
06/26/96		101.96	10.95	--	91.01	--	4,430	--	896	--	--	--	--	--	--	--
09/09/96		101.96	11.27	--	90.69	--	3,910	--	ND	--	--	--	--	--	--	--

Table 1
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1656 East J Street
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Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-1 cont.																
12/30/96		101.96	7.25	--	94.71	--	3,400	--	ND	--	--	--	--	--	--	--
03/07/97		101.96	9.26	--	92.70	--	5,010	--	ND	--	--	--	--	--	--	ND
06/09/97		101.96	9.50	--	92.46	--	4,530	--	ND	--	--	--	--	--	--	ND
09/04/97		101.96	10.20	--	91.76	--	3,730	--	ND	--	--	--	--	--	--	ND - 0.114
12/17/97		101.96	8.14	--	93.82	--	3,190	--	ND	--	--	--	--	--	--	--
06/01/98		101.96	9.76	--	92.20	--	3,120	--	ND	--	--	--	--	--	--	--
11/01/98		101.96	11.06	0.00	90.90	--	1,770	--	ND	--	--	--	--	--	--	--
05/30/99		101.96	10.43	0.00	91.53	--	4,480	--	ND	--	--	--	--	--	--	--
06/11-12/00		101.96	9.97	0.00	91.99	--	--	--	--	--	--	--	--	--	--	--
04/04/02	NP	101.96	9.62	0.00	92.34	--	6,200	--	<1,100	--	--	--	--	--	--	--
04/28/03	NP	101.96	9.62	0.00	92.34	--	6,700	--	520	--	--	--	--	--	--	--
04/15/04	NP	101.96	9.78	0.00	92.18	--	6,500	--	400	--	--	--	--	--	--	--
04/29/05	NP	101.96	9.41	0.00	92.55	--	6,200	--	1,200	--	--	--	--	--	--	--
04/27/06	NP	101.96	10.42	0.00	91.54	--	5,000	--	<1,000	--	--	--	--	--	--	--
12/09/08	LFP	101.99	9.50	0.00	92.49	460	3,400	--	<690	--	ND	ND	ND	ND	ND	--
08/31/10		103.22	12.03	0.00	91.19	200	3,200	--	<360	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		103.22	11.85	0.00	91.37	680	250	--	<68	--	<5.0	0.9	1.3	4	--	--
01/10/12		103.22	10.85	0.00	92.37	160	240	--	<73	--	<0.5	<0.5	<0.5	<0.5	--	--
04/10/12		103.22	9.90	0.00	93.32	110	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		103.22	10.93	0.00	92.29	160	<31	--	<73	--	<0.5	<0.5	<0.5	1.6	--	--
10/10/12		103.22	12.43	0.00	90.79	140	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
01/09/13		103.22	9.92	0.00	93.30	50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		103.22	10.80	0.00	92.42	99	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		103.22	10.48	0.00	92.74	99	--	5,200	--	590	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		103.22	10.94	0.00	92.28	120	--	3,600	--	300	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		103.22	11.15	0.00	92.07	110	--	6,100	--	710	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		103.22	10.58	0.00	92.64	110	<29	5,200	<67	820	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		103.22	11.82	0.00	91.39	150	<28	5,900	<66	730	<0.5	<0.5	<0.5	1.6	--	--
10/07-08/14		103.22	11.99	0.00	91.23	<50	<29	<29	<69	<69	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		103.22	9.95	0.00	93.27	170	540	1,500	<66	620	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		103.22	10.44	0.00	92.78	95	<28	5,400	<66	340	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		103.22	11.64	0.00	91.58	220	61	7,000	<100	570	<0.5	<0.5	<0.5	<1.5	--	--
10/19-20/15		103.22	10.88	0.00	92.34	290	<46	6,100	<100	660	0.4	<0.2	<0.2	0.4	--	--
01/12-13/16		103.22	9.84	0.00	93.38	320	<46	6,300	<100	810	<0.2	<0.2	<0.4	1.4	--	--
04/23/16		103.22	10.69	0.00	92.53	290	<46	8,000	<100	1,500	<0.2	<0.2	0.3	1.6	--	--
06/10-12/20		103.22	10.78	0.00	92.44	240	--	4,500	--	930	<0.2	<0.2	<0.2	<0.8	--	--
09/19-21/20		103.22	11.29	0.00	91.93											
12/10/20		103.22	11.35	0.00	91.87	270	48	4,100	<100	580	<0.4	<0.4	<0.8	<2.8	--	--
07/06/21		103.22		0.00	103.22	230	--	4,900	--	710	<1.5	<2.0	<1.0	<2.0	--	--
11/29/21		103.22	9.61	0.00	93.61	270	--	3,200	--	530	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		103.22	11.26	0.00	91.96	250	--	5,600	--	750	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		103.22	10.91	0.00	92.31	240	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		103.22	12.09	0.00	91.13	260	--	4,300	--	700	<0.3	<0.3	<0.4	<1.4	--	--
D-2A																
09/23/92		100.80	--	--	--	25	690	--	--	--	11	ND	ND	ND	--	--
01/11/93		100.80	8.20	--	92.60	--	--	--	--	--	--	--	--	--	--	--
06/04/93		100.80	8.55	--	92.25	ND	ND	--	--	--	ND	ND	ND	ND	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-2A cont.																
12/15/93		100.80	7.89	--	92.91	ND	660	--	--	--	ND	ND	ND	ND	--	ND
06/04/94		100.80	9.33	--	91.47	ND	760	--	ND	--	ND	ND	ND	ND	--	ND
11/01/94		100.80	8.67	--	92.13	ND	860	--	ND	--	ND	ND	ND	ND	0.8	ND
02/09/95		100.80	7.63	--	93.17	60	590	--	ND	--	ND	ND	ND	ND	--	ND
05/02/95		100.80	8.58	--	92.22	ND	1,700	--	ND	--	ND	ND	ND	ND	--	ND
08/02/95		100.80	9.27	--	91.53	ND	1,600	--	ND	--	ND	ND	ND	ND	--	ND
12/05/95		100.80	7.20	--	93.60	ND	2,300	--	1,100	--	ND	ND	ND	ND	--	ND
03/18/96		100.80	8.96	--	91.84	ND	820	--	ND	--	ND	ND	ND	ND	--	ND
06/26/96		100.80	9.55	--	91.25	--	2,230	--	ND	--	--	--	--	--	--	--
09/09/96		100.80	9.80	--	91.00	--	1,900	--	ND	--	--	--	--	--	--	--
12/30/96		100.80	6.00	--	94.80	--	2,390	--	ND	--	--	--	--	--	--	--
03/07/97		100.80	7.85	--	92.95	--	2,280	--	ND	--	--	--	--	--	--	ND
06/09/97		100.80	8.25	--	92.55	--	2,200	--	ND	--	--	--	--	--	--	ND
09/04/97		100.80	9.17	--	91.63	--	1,930	--	ND	--	--	--	--	--	--	ND
12/17/97		100.80	6.99	--	93.81	--	1,100	--	ND	--	--	--	--	--	--	--
06/01/98		100.80	8.52	--	92.28	--	1,200	--	ND	--	--	--	--	--	--	--
11/01/98		100.80	9.64	0.00	91.16	--	592	--	ND	--	--	--	--	--	--	--
05/30/99		100.80	9.10	0.00	91.70	--	1,380	--	ND	--	--	--	--	--	--	--
06/11-12/00		100.80	9.08	0.00	91.72	--	--	--	--	--	--	--	--	--	--	--
04/04/02	NP	100.80	8.24	0.00	92.56	--	2,200	--	<750	--	--	--	--	--	--	--
04/28/03	NP	100.80	8.16	0.00	92.64	--	2,700	--	610	--	--	--	--	--	--	--
04/15/04	NP	100.80	8.60	0.00	92.20	--	2,400	--	350	--	--	--	--	--	--	--
04/29/05	NP	100.80	8.00	0.00	92.80	--	2,400	--	870	--	--	--	--	--	--	--
04/27/06	NP	100.80	8.89	0.00	91.91	--	1,700	--	<500	--	--	--	--	--	--	--
12/09/08	LFP	100.78	8.75	0.00	92.03	ND	1,000	--	190	--	ND	ND	ND	ND	ND	--
08/31/10		100.78	9.37	0.00	91.41	<50	2,100	--	810	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		100.78	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
01/09/12		100.78	8.10	0.00	92.68	<50	45	--	150	--	<0.5	<0.5	<0.5	<1.5	--	--
04/11/12		100.78	7.35	0.00	93.43	<50	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
07/09/12		100.78	9.30	0.00	91.48	<50	<31	--	<73	--	<0.5	<0.5	<0.5	<1.5	--	--
10/09/12		100.78	9.59	0.00	91.19	<50	63	--	320	--	<0.5	<0.5	<0.5	<1.5	--	--
01/07/13		100.78	7.80	0.00	92.98	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		100.78	8.40	0.00	92.38	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		100.78	8.84	0.00	91.94	<50	--	3,700	--	1,000	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		100.78	8.50	0.00	92.28	<50	--	2,800	--	740	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		100.78	8.70	0.00	92.08	<50	--	3,100	--	620	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		100.78	7.89	0.00	92.89	<50	<29	3,000	<67	1,300	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		100.78	8.99	0.00	91.79	39,000	3,500	5,200	500	640	140	1,400	490	4,200	--	--
10/07-08/14		100.78	8.13	0.00	92.65	<50	<29	240	<67	<67	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		100.78	7.43	0.00	93.35	<50	<28	2,800	<66	870	<0.5	<0.5	<0.5	<1.5	<2.5	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-2A cont.																
04/06/08/15		100.78	7.97	0.00	92.81	<50	<28	2,800	<66	560	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		100.78	UNABLE TO ATTEMPT			--	--	--	102	--	--	--	--	--	--	--
10/19/20/15		100.78	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
01/12/13/16		100.78	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
04/23/16		100.78	UNABLE TO ATTEMPT			--	--	--	--	--	--	--	--	--	--	--
06/10-12/20		100.78	8.10	0.00	92.68	55	--	1,700	--	880	<1.0	<1.0	<1.0	<3.0	--	--
09/19-21/20		100.78	8.60	0.00	92.18											
12/08/20		100.78	8.76	0.00	92.02	50	<45	1,400	<100	680	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		100.78		0.00	100.78	82	--	2,100	--	1,000	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		100.78	7.42	0.00	93.36	50	--	1,300	--	650	<0.3	<0.2	<0.4	<0.4	<0.2	--
D-3																
09/23/92		101.04	8.00	--	93.04	75	1,200	--	--	--	ND	ND	ND	ND	--	--
01/11/93		101.04	8.40	--	92.64	--	--	--	--	--	--	--	--	--	--	--
06/04/93		101.04	8.58	--	92.46	ND	780	--	--	--	ND	ND	ND	ND	--	--
12/15/93		101.04	8.19	--	92.85	ND	1,900	--	--	--	ND	ND	ND	ND	--	ND
06/03/94		101.04	9.41	--	91.63	ND	1,700	--	ND	--	ND	ND	ND	ND	--	ND
11/01/94		101.04	8.86	--	92.18	ND	1,400	--	ND	--	ND	ND	ND	ND	--	ND
02/09/95		101.04	7.77	--	93.27	100	1,600	--	270	--	ND	ND	ND	ND	--	ND
05/02/95		101.04	8.57	--	92.47	57	5,100	--	940	--	ND	ND	ND	ND	--	ND
08/02/95		101.04	9.44	--	91.60	ND	4,100	--	810	--	ND	ND	ND	ND	--	ND
12/05/95		101.04	7.20	--	93.84	ND	4,400	--	930	--	ND	ND	ND	ND	--	ND
03/18/96		101.04	9.14	--	91.90	85	1,500	--	ND	--	ND	0.79	ND	2.2	--	ND
06/26/96		101.04	9.75	--	91.29	--	4,120	--	ND	--	--	--	--	--	--	--
09/09/96		101.04	10.00	--	91.04	--	3,850	--	ND	--	--	--	--	--	--	--
12/30/96		101.04	6.35	--	94.69	--	3,120	--	ND	--	--	--	--	--	--	--
03/07/97		101.04	8.10	--	92.94	--	2,760	--	ND	--	--	--	--	--	--	ND
06/09/97		101.04	8.10	--	92.94	--	2,680	--	ND	--	--	--	--	--	--	ND
09/04/97		101.04	9.08	--	91.96	--	4,080	--	ND	--	--	--	--	--	--	ND - 0.178
12/17/97		101.04	7.29	--	93.75	--	3,300	--	ND	--	--	--	--	--	--	--
06/01/98		101.04	8.68	--	92.36	--	3,160	--	1,530	--	--	--	--	--	--	--
11/01/98		101.04	9.88	0.00	91.16	--	1,630	--	ND	--	--	--	--	--	--	--
05/30/99		101.04	9.29	0.00	91.75	--	3,870	--	ND	--	--	--	--	--	--	--
06/11-12/00		101.04	8.97	0.00	92.07	--	--	--	--	--	--	--	--	--	--	--
04/04/02	NP	101.04	8.45	0.00	92.59	--	3,500	--	<750	--	--	--	--	--	--	--
04/28/03	NP	101.04	8.28	0.00	92.76	--	2,800	--	530	--	--	--	--	--	--	--
04/15/04	NP	101.04	8.76	0.00	92.28	--	3,200	--	420	--	--	--	--	--	--	--
04/29/05	NP	101.04	8.25	0.00	92.79	--	2,800	--	860	--	--	--	--	--	--	--
04/27/06	NP	101.04	9.11	0.00	91.93	--	2,900	--	<510	--	--	--	--	--	--	--
12/10/08	LFP	101.04	8.91	0.00	92.13	--	2,900	--	<510	--	--	--	--	--	--	--
08/31/10		102.22	10.88	0.00	91.34	140	2,600	--	<360	--	<0.5	<0.5	<0.5	<0.5	--	--
08/31/10 (D)		102.22	10.88	0.00	91.34	130	2,500	--	<360	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		102.22	10.55	0.00	91.67	75	<30	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
01/10/12		102.22	9.70	0.00	92.52	84	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
04/10/12		102.22	8.80	0.00	93.42	82	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--

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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
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Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-3 cont.																
07/10/12		102.22	9.97	0.00	92.25	120	<30	--	<71	--	<0.5	<0.5	<0.5	<1.5	--	--
10/09/12		102.22	10.86	0.00	91.36	67	<29	--	<67	--	<0.5	<0.5	<0.5	<2.0	--	--
01/08/13		102.22	8.90	0.00	93.32	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		102.22	5.34	0.00	96.88	77	<28	--	<66	--	<0.5	<0.5	<0.5	<5.0	--	--
09/25-26/13		102.22	10.48	0.00	91.74	<50	--	3,000	--	350	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		102.22	9.96	0.00	92.26	52	--	3,400	--	430	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		102.22	10.17	0.00	92.05	<50	--	4,400	--	860	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		102.22	9.26	0.00	92.96	100	<29	4,900	<67	990	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		102.22	10.22	0.00	92.00	110	<28	4,000	<66	930	<0.5	<0.5	<0.5	<1.5	--	--
10/07-08/14		102.22	10.13	0.00	92.09	<50	<29	<29	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		102.22	8.88	0.00	93.34	<50	<28	4,000	<66	890	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		102.22	9.37	0.00	92.85	110	<29	3,500	<67	450	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		102.22	10.48	0.00	91.74	91	<46	6,000	<100	620	<0.5	<0.5	<0.5	<1.5	--	--
10/19-20/15		102.22	10.02	0.00	92.20	200	<45	3,700	<100	1,100	<0.2	0.2	<0.2	0.5	--	--
01/12-13/16		102.22	8.76	0.00	93.46	280	<46	4,300	<100	1,000	<0.2	<0.2	<0.2	1.1	--	--
04/23/16		102.22	9.40	0.00	92.82	190	<46	4,300	<100	880	<0.2	<0.2	<0.2	0.7	--	--
D-3A																
07/06/21				0.00	0.00	140	--	3,400	--	680	<0.3	<0.2	<0.4	<0.4	--	--
11/29/21			6.61	0.00	--	190	--	4,900	--	770	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22			7.70	0.00	--	93	--	3,500	--	720	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22			7.33	0.00	--	73	--	<110	--	<270	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22			8.55	0.00	--	170	--	3,400	--	910	<0.3	<0.3	<0.4	<1.4	--	--
D-6																
08/31/10		104.20	12.71	0.00	91.49	110	2,000	--	<360	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		104.20	12.17	0.00	92.03	140	1,100	--	82	--	<0.5	<0.5	<0.5	<1.5	--	--
01/10/12		104.20	11.25	0.00	92.95	160	32	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
04/11/12		104.20	10.50	0.00	93.70	81	32	--	<72	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		104.20	12.06	0.00	92.14	130	<31	--	<71	--	<0.5	<0.5	<0.5	1.9	--	--
10/10/12		104.20	13.05	0.00	91.15	140	34	--	<66	--	0.9	<0.5	0.6	<1.5	--	--
01/09/13		104.20	13.45	0.00	90.75	100	<29	--	<67	--	<0.5	<0.5	<0.5	1.7	--	--
04/09/13		104.20	14.21	0.00	89.99	140	<29	--	<67	--	0.7	<0.5	<0.5	1.6	--	--
09/25-26/13		104.20	12.20	0.00	92.00	170	--	5,000	--	450	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		104.20	11.74	0.00	92.46	250	--	4,000	--	350	<0.5	<0.5	0.7	<5.0	--	--
01/07-09/14		104.20	15.45	0.00	88.75	180	--	6,900	--	1,100	<2.0	<0.5	<0.5	1.8	--	--
04/07-08/14		104.20	12.52	0.00	91.68	150	<29	5,300	<69	1,100	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		104.20	16.88	0.00	87.32	8,900	160	150	<66	<66	7.6	160	100	940	--	--
10/07-08/14		104.20	12.93	0.00	91.27	<50	53	84	<68	<68	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		104.20	10.98	0.00	93.22	200	39	3,500	<67	870	<0.7	<0.5	0.6	<2.8	<2.5	--
04/06-08/15		104.20	10.39	0.00	93.81	160	<28	3,400	500	<66	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		104.20	14.81	0.00	89.39	300	47	4,800	<100	670	0.6	0.6	0.6	<3.0	--	--
10/19-20/15		104.20	11.80	0.00	92.40	270	<46	3,700	<100	930	<0.2	0.5	0.5	1.2	--	--
01/12-13/16		104.20	10.36	0.00	93.84	290	<46	3,600	750	<100	<0.2	<0.2	<0.4	<1.5	--	--
04/23/16		104.20	11.51	0.00	92.69	350	100	5,700	<100	410	<0.3	0.2	<0.2	1.6	--	--
06/10-12/20		104.20	12.16	0.00	92.04	380	--	8,200	--	1,200	<1.0	0.22	<1.0	<3.0	--	--
09/19-21/20		104.20	12.05	0.00	92.15											

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-6 cont.																
12/10/20		104.20	12.30	0.00	91.90	320	<46	5,200	<100	580	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		104.20		0.00	104.20	420	--	5,700	--	780	<0.3	0.20	<0.4	<0.4	--	--
11/29/21		104.20	10.29	0.00	93.91	350	--	4,000	--	590	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		104.20	12.09	0.00	92.11	350	--	4,500	--	380	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		104.20	11.70	0.00	92.50	310	--	49	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		104.20	12.86	0.00	91.34	410	--	4,100	--	500	<0.3	<0.3	<0.4	<1.4	--	--
D-7																
08/31/10		100.38	8.86	0.00	91.52	<50	1,600	--	<690	--	<0.5	<0.5	<0.5	<0.5	--	--
10/07/11		100.38	8.50	0.00	91.88	<50	<30	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
01/09/12		100.38	7.80	0.00	92.58	<50	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
04/10/12		100.38	7.00	0.00	93.38	<50	38	--	<69	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		100.38	7.94	0.00	92.44	<50	<30	--	<70	--	<0.5	<0.5	<0.5	<1.5	--	--
10/09/12		100.38	8.58	0.00	91.80	<50	<29	--	<68	--	<0.5	<0.5	<0.5	<1.5	--	--
01/08/13		100.38	7.28	0.00	93.10	<50	<28	--	<66	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		100.38	7.67	0.00	92.71	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		100.38	8.22	0.00	92.16	<50	--	990	--	420	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		100.38	8.29	0.00	92.09	<50	--	790	--	210	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		100.38	8.34	0.00	92.04	<50	--	1,500	--	740	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		100.38	7.36	0.00	93.02	<50	<29	990	<67	640	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		100.38	7.97	0.00	92.41	<50	<28	640	<66	210	<0.5	<0.5	<0.5	<1.5	--	--
10/07-08/14		100.38	8.22	0.00	92.16	<50	<29	<29	<67	<67	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		100.38	7.05	0.00	93.33	<50	<29	1,100	<67	630	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		100.38	7.69	0.00	92.69	<50	<28	580	210	<66	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		100.38	8.46	0.00	91.92	<50	<46	660	<100	460	<0.5	<0.5	<0.5	<1.5	--	--
10/19-20/15		100.38	8.24	0.00	92.14	<50	<47	970	<100	610	<0.2	<0.2	<0.2	0.2	--	--
01/12-13/16		100.38	7.02	0.00	93.36	120	<45	1,500	<100	640	<0.2	<0.2	<0.2	0.4	--	--
04/23/16		100.38	7.60	0.00	92.78	57	<46	980	<100	360	<0.2	<0.2	<0.2	0.3	--	--
06/10-12/20		100.38	7.21	0.00	93.17	20	--	300	--	360	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		100.38	8.25	0.00	92.13											
12/08/20		100.38	8.28	0.00	92.10	20	<46	420	<100	290	<0.4	<0.4	<0.8	<2.8	--	--
07/06/21		100.38		0.00	100.38	19	--	500	--	330	<0.6	3.0	<0.8	<0.8	--	--
11/30/21		100.38	6.81	0.00	93.57	42	--	360	--	320	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		100.38	7.55	0.00	92.83	<19	--	550	--	220	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		100.38	7.57	0.00	92.81	<22	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		100.38	8.55	0.00	91.83	160	--	2,000	--	1,200	<0.3	<0.3	<0.4	<1.4	--	--
D-8																
02/21/19		--	--	--	--	--	--	3,800	--	400	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	7.13	0.00	--	86	--	4,300	--	850	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.42	0.00	--											
12/08/20		--	8.13	0.00	--	81	<46	2,500	<100	340	<0.2	<0.2	<0.4	<1.4	--	--
07/08/21		--		0.00	--	100	--	2,900	--	730	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	6.50	0.00	--	110	--	4,500	--	600	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	7.35	0.00	--	120	--	3,100	--	410	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	7.65	0.00	--	47	--	2,700	--	530	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	7.39	0.00	--	86	--	2,300	--	330	<0.3	0.36	<0.4	<1.4	--	--
D-9																
02/21/19		--	5.75	0.00	--	<250	--	2,700	--	880	<0.2	<0.2	<0.4	<1	<1	ND
06/10-12/20		--	6.23	0.00	--	53	--	1,500	--	780	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	6.75	0.00	--											
12/08/20		--	6.68	0.00	--	<19	<46	1,600	<100	860	<0.4	<0.4	<0.8	<2.8	--	--
07/07/21		--		0.00	--	51	--	3,600	--	2,100	<0.6	0.54	<0.8	<0.8	--	--
12/01/21		--	5.52	0.00	--	<19	--	1,600	--	1,100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	5.98	0.00	--	26	--	1,800	--	830	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	5.83	0.00	--	25	--	2,700	--	990	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		--	UNABLE TO ACCESS													

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-10																
02/21/19		--	--	--	--	--	--	1,600	--	240	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	7.40	0.00	--	130	--	2,700	--	640	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	7.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	8.30	0.00	--	<19	<46	99	<100	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		--	UNABLE TO ACCESS													
11/30/21		--	7.36	0.00	--	<19	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	7.94	0.00	--	23	--	260	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22		--	7.73	0.00	--	<22	--	<48	--	<110	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	8.94	0.00	--	<43	--	74	--	<100	<0.3	<0.3	<0.4	<1.4	--	PAHs
D-12																
02/21/19		--	7.57	0.00	--	--	--	520	--	330	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	8.21	0.00	--	<250	--	540	--	530	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	8.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	8.97	0.00	--	<19	<46	360	<100	210	<0.2	<0.2	<0.4	<1.4	--	--
07/08/21		--	--	0.00	--	<19	--	330	--	440	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	UNABLE TO ACCESS													
04/07/22		--	8.06	0.00	--	<19	--	420	--	260	<6.0	<4.0	<8.0	<8.0	<4.0	--
06/22/22		--	8.40	0.00	--	<22	--	<47	--	<100	<0.6	<0.4	<0.8	<0.8	--	--
10/06/22		--	8.40	0.00	--	<43	--	380	--	140	<0.3	<0.3	<0.4	<1.4	--	--
D-13																
11/29/21		--	5.75	0.00	--	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--	--	--
D-14																
12/10/20		--	11.25	--	--	<19	<46	130	<100	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/06/21		--	--	--	--	31	--	350	--	170	<0.3	<0.4	<0.2	<0.4	--	--
11/29/21		--	8.28	--	--	29	--	240	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	7.78	--	--	22	--	230	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		--	8.73	--	--	<22	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		--	9.89	--	--	<43	--	210	--	<110	<0.3	<0.3	<0.4	<1.4	--	--
D-15																
02/21/19		--	--	--	--	--	--	4,500	--	380	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20		--	8.19	0.00	--	66	--	1,900	--	800	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	8.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/08/20		--	8.89	0.00	--	69	<46	1,700	<100	510	<0.2	<0.2	<0.4	<1.4	--	--
07/08/21		--	--	0.00	--	51	--	1,100	--	640	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21		--	7.16	0.00	--	37	--	1,400	--	460	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22		--	8.79	0.00	--	81	--	1,800	--	380	<6	<4	<8	<8	<4	--
06/22/22		--	8.54	0.00	--	31	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/06/22		--	9.50	0.00	--	57	--	1,400	--	340	<0.3	<0.3	<0.4	<1.4	--	--
D-17																
02/21/19		--	5.41	0.00	--	<250	--	180	--	130	<0.2	<0.2	<0.4	<1	<1	ND
06/10-12/20		--	6.00	0.00	--	<250	--	470	--	560	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20		--	6.68	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/09/20		--	6.29	0.00	--	<19	<100	230	<100	150	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21		--	--	0.00	--	<19	--	140	--	120	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21		--	5.00	0.00	--	21	--	320	--	200	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22		--	5.75	0.00	--	<19	--	320	--	120	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22		--	5.53	0.00	--	<22	--	250	--	100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22		--	6.91	0.00	--	<43	--	330	--	150	<0.3	<0.3	<0.4	<1.4	--	--

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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
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Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-18																
02/21/19	--	--	5.98	0.00	--	--	--	910	--	350	<0.2	<0.2	<0.4	<1	--	--
06/10-12/20	--	--	6.58	0.00	--	42	--	1,300	--	810	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20	--	--	7.22	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/09/20	--	--	7.00	0.00	--	<19	<45	1,500	<100	690	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21	--	--	--	0.00	--	47	--	2,200	--	1,600	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	5.85	0.00	--	22	--	1,300	--	790	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22	--	--	6.33	0.00	--	39	--	1,900	--	700	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22	--	--	6.13	0.00	--	22	--	2,500	--	770	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22	--	--	7.53	0.00	--	<43	--	520	--	290	<0.3	<0.3	<0.4	<1.4	--	--
D-19																
02/21/19	--	--	6.08	0.00	--	<250	--	570	--	190	<0.2	<0.2	<0.4	<1	<1	ND
06/10-12/20	--	--	6.58	0.00	--	<250	--	530	--	450	<1.0	<1.0	<1.0	<3.0	--	--
09/19/20	--	--	7.10	0.00	--	--	--	--	--	--	--	--	--	--	--	--
12/09/20	--	--	7.10	0.00	--	<19	<45	110	<100	<100	<0.2	<0.2	<0.4	<1.4	--	--
07/07/21	--	--	--	0.00	--	<19	--	52	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	5.96	0.00	--	<19	--	140	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/05/22	--	--	6.36	0.00	--	<19	--	79	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/20/22	--	--	6.28	0.00	--	<22	--	120	--	<100	<0.3	0.22	<0.4	<0.4	<0.2	--
10/05/22	--	--	7.55	0.00	--	<43	--	110	--	<100	<0.3	<0.3	<0.4	<1.4	--	--
D-22																
03/04/21	--	--	--	0.00	--	33	--	100	--	<100	--	--	--	--	--	--
07/06/21	--	--	--	UNABLE TO ACCESS												
11/30/21	--	--	--	UNABLE TO ACCESS												
04/06/22	--	--	8.80	0.00	--	44	--	91	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22	--	--	9.94	0.00	--	<22	--	700	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
10/05/22	--	--	8.73	0.00	--	<43	--	220	--	<100	<0.3	<0.3	<0.4	<1.4	--	--
D-24																
01/10/21	--	--	--	0.00	--	<19	--	200	--	<100	<0.2	0.25	<0.4	<1.4	<0.2	--
07/08/21	--	--	--	0.00	--	20	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	6.38	0.00	--	<19	--	73	--	<110	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22	--	--	6.96	0.00	--	<19	--	<45	--	<100	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22	--	--	6.85	0.00	--	<22	--	<47	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22	--	--	7.86	0.00	--	<43	--	<47	--	<100	<0.3	<0.3	<0.4	<1.4	--	--
D-25																
01/10/21	--	--	--	0.00	--	<19	--	65	--	<100	<0.2	<0.2	<0.4	<1.4	<0.2	--
07/08/21	--	--	--	0.00	--	37	--	1,700	--	880	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	7.34	0.00	--	21	--	520	--	170	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22	--	--	8.98	0.00	--	<19	--	990	--	260	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22	--	--	7.82	0.00	--	<22	--	890	--	250	<0.3	<0.3	<0.4	<1.4	--	--
10/05/22	--	--	8.89	0.00	--	<43	--	2,200	--	690	<0.3	<0.3	<0.4	<1.4	--	--
D-26																
01/10/21	--	--	--	0.00	--	21	--	580	--	590	<0.2	0.24	<0.4	<1.4	<0.2	--
07/08/21	--	--	--	0.00	--	<19	--	300	--	300	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	7.80	0.00	--	26	--	480	--	250	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/06/22	--	--	8.37	0.00	--	21	--	630	--	210	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/21/22	--	--	8.22	0.00	--	<22	--	440	--	200	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22	--	--	9.32	0.00	--	<43	--	270	--	160	<0.3	<0.3	<0.4	<1.4	--	--
D-27																
03/04/21	--	--	--	0.00	--	110	--	790	--	400	--	--	--	--	--	--
07/08/21	--	--	--	0.00	--	32	--	900	--	740	<0.3	<0.2	<0.4	<0.4	--	--
12/01/21	--	--	7.50	0.00	--	53	--	1,300	--	430	<0.3	<0.2	<0.4	<0.4	<0.2	--
04/07/22	--	--	8.20	0.00	--	71	--	1,390	--	340	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22	--	--	8.18	0.00	--	27	--	<46	--	<110	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22	--	--	9.25	0.00	--	43	--	1,400	--	440	<0.3	<0.3	<0.4	<1.4	--	--
RMW-1																
07/10/14	LFP	--	5.70	--	--	730	74	--	<69	--	1	1	<0.5	1	--	--
12/08/20	--	--	5.20	--	--	200	<45	2,400	<100	450	<0.2	<0.2	<0.4	<1.4	--	--
07/08/21	--	--	--	--	--	690	--	6,400	--	1,000	<0.3	<0.2	<0.4	<0.4	--	--
11/30/21	--	--	--	UNABLE TO ACCESS												
04/07/22	--	--	4.39	--	--	98	--	1,700	--	760	<6.0	<4.0	<8.0	<8.0	<4.0	--
06/22/22	--	--	4.72	--	--	180	--	<46	--	<100	<0.3	<0.2	<0.4	<0.4	--	--
10/05/22	--	--	6.30	--	--	470	--	3,400	--	450	<0.3	<0.3	<0.4	<1.4	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
No Longer Monitored/Sampled																
MW-6																
06/04/93		101.41	5.73	--	95.68	500	9,900	--	--	--	8.5	ND	0.7	0.9	--	--
12/15/93		101.41	6.11	--	95.30	ND	400	--	--	--	ND	ND	ND	ND	--	ND
06/03/94		101.41	6.39	--	95.02	ND	--	--	--	--	ND	ND	ND	ND	--	--
11/01/94		101.41	6.93	--	94.48	1,200	--	--	--	--	ND	ND	ND	1.2	--	--
02/09/95		101.41	4.82	--	96.59	ND	1,200	--	270	--	ND	ND	ND	ND	--	ND
05/02/95		101.41	5.67	--	95.74	ND	3,000	--	1,500	--	ND	ND	ND	ND	--	ND
08/02/95		101.41	6.70	--	94.71	--	--	--	--	--	--	--	--	--	--	--
12/05/95		101.41	4.53	--	96.88	58	4,300	--	2,000	--	0.72	ND	ND	ND	--	ND
03/18/96		101.41	5.20	--	96.21	ND	360	--	ND	--	ND	ND	ND	ND	--	--
MW-6 cont.																
06/26/96		101.41	6.23	--	95.18	--	5,090	--	1,230	--	--	--	--	--	--	--
09/09/96		101.41	6.71	--	94.70	--	--	--	--	--	--	--	--	--	--	--
12/30/96		101.41	3.35	--	98.06	--	9,470	--	999	--	--	--	--	--	--	--
03/07/97		101.41	4.65	--	96.76	ND	2,430	--	ND	--	ND	ND	ND	ND	--	ND
06/09/97		101.41	5.47	--	95.94	--	301	--	ND	--	--	--	--	--	--	ND
09/04/97		101.41	6.94	--	94.47	--	--	--	--	--	--	--	--	--	--	--
12/17/97		101.41	4.92	--	96.49	--	ND	--	ND	--	--	--	--	--	--	--
06/01/98		101.41	6.09	--	95.32	--	1,510	--	ND	--	--	--	--	--	--	--
11/01/98		101.41	7.12	0.00	94.29	--	551	--	ND	--	--	--	--	--	--	--
05/30/99		101.41	6.08	0.00	95.33	--	1,060	--	ND	--	--	--	--	--	--	--
06/11-12/00		101.41	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
09/25/00		101.41	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
01/26/01		101.41	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
01/09/02		101.41	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
04/10-11/12		101.41	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED																
MW-8																
09/23/92		101.32	6.14	--	95.18	500	7,100	--	--	--	1,700	7.0	4.0	12	--	--
01/11/93		101.32	5.26	--	96.06	--	--	--	--	--	--	--	--	--	--	--
06/04/93		101.32	4.88	--	96.44	3,400	810,000	--	--	--	21	ND	ND	7.6	--	13 - 600
12/15/93		101.32	4.82	--	96.50	400	--	--	--	--	ND	ND	ND	0.6	--	--
06/04/94		101.32	5.18	--	96.14	1,300	--	--	--	--	13	1.3	1.0	2.5	--	--
11/01/94		101.32	6.19	--	95.13	5,800	--	--	--	--	46	4.6	35	300	--	--
02/09/95		101.32	3.92	0.02	97.42	--	--	--	--	--	--	--	--	--	--	--
05/02/95		101.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/95		101.32	6.50	--	94.82	--	--	--	--	--	--	--	--	--	--	--
12/05/95		101.32	3.30	--	98.02	19,000	290,000	--	19,000	--	ND	ND	ND	ND	--	7.2 - 210
03/18/96		101.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/26/96		101.32	5.15	Sheen	96.17	--	--	--	--	--	--	--	--	--	--	--
09/09/96		101.32	6.25	--	95.07	--	--	--	--	--	--	--	--	--	--	--
12/30/96		101.32	2.15	--	99.17	138	2,160	--	1,800	--	ND	ND	ND	ND	--	--
03/07/97		101.32	2.90	--	98.42	ND	1,020	--	1,800	--	ND	ND	ND	ND	--	0.119 - 0.738
09/04/97		101.32	5.96	--	95.36	INSUFFICIENT WATER TO SAMPLE					--	--	--	--	--	--
DESTROYED																

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-9																
09/23/92		99.62	6.15	--	93.47	93	960	--	--	--	ND	ND	ND	0.5	--	--
09/23/92 (D)		99.62	--	--	--	99	790	--	--	--	ND	ND	ND	0.5	--	--
01/11/93		99.62	4.90	--	94.72	--	--	--	--	--	--	--	--	--	--	--
06/04/93		99.62	5.10	--	94.52	360	11,000	--	--	--	ND	ND	ND	0.6	--	0.17 - 0.95
12/15/93		99.62	5.20	--	94.42	ND	760	--	--	--	ND	ND	ND	ND	--	0.22 - 0.64
06/04/94		99.62	5.68	--	93.94	730	16,000	--	ND	--	ND	ND	ND	2.2	--	1.7
11/01/94		99.62	5.66	--	93.96	ND	1,000	--	ND	--	ND	ND	ND	ND	--	0.057 - 0.67
02/09/95		99.62	4.35	--	95.27	250	11,000	--	1,800	--	ND	ND	ND	ND	--	ND
05/02/95		99.62	4.90	--	94.72	270	24,000	--	2,800	--	ND	ND	ND	1.0	--	ND
08/02/95		99.62	5.35	--	94.27	400	36,000	--	6,800	--	ND	0.67	ND	1.6	--	ND
12/05/95		99.62	4.00	--	95.62	ND	2,700	--	2,800	--	ND	0.73	0.7	4.0	--	ND
03/18/96		99.62	4.80	--	94.82	ND	3,300	--	1,400	--	ND	ND	ND	ND	--	ND
06/26/96		99.62	4.89	--	94.73	--	19,700	--	3,940	--	--	--	--	--	--	--
MW-9 cont.																
09/09/96		99.62	5.60	--	94.02	--	9,110	--	1,650	--	--	--	--	--	--	--
12/30/96		99.62	3.17	--	96.45	--	2,690	--	1,310	--	--	--	--	--	--	--
03/07/97		99.62	4.30	--	95.32	62	9,440	--	2,030	--	ND	ND	ND	ND	--	0.126
06/09/97		99.62	4.56	--	95.06	--	16,300	--	3,160	--	--	--	--	--	--	ND
09/04/97		99.62	5.50	--	94.12	--	21,700	--	ND	--	--	--	--	--	--	ND - 1.47
06/01/98		99.62	5.20	--	94.42	--	19,500	--	ND	--	--	--	--	--	--	--
11/01/98		99.62	5.84	0.00	93.78	--	2,280	--	ND	--	--	--	--	--	--	--
05/30/99		99.62	5.13	0.00	94.49	--	27,800	--	ND	--	--	--	--	--	--	--
06/11-12/00		99.62	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--	--
09/25/00		99.62	5.91	0.01	93.71	--	2,650	--	3,060	--	--	--	--	--	--	--
01/26/01		99.62	4.98	0.00	94.64	--	ND	--	ND	--	--	--	--	--	--	--
01/09/02		99.62	3.34	0.00	96.28	--	346	--	<500	--	--	--	--	--	--	--
04/04/02	NP	99.62	4.69	0.00	94.93	--	5,700	--	1,600	--	--	--	--	--	--	--
04/28/03	NP	99.62	4.59	0.00	95.03	--	11,000	--	2,100	--	--	--	--	--	--	--
04/15/04		99.62	INACCESSIBLE - WELL FILLED WITH BENTONITE				--	--	--	--	--	--	--	--	--	--
04/29/05		99.62	INACCESSIBLE - WELL FILLED WITH BENTONITE				--	--	--	--	--	--	--	--	--	--
04/27/06		99.62	INACCESSIBLE - WELL FILLED WITH BENTONITE				--	--	--	--	--	--	--	--	--	--

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Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
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Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
MW-15																
09/23/92		99.24	4.14	--	95.10	3,700	8,300	--	--	--	36	7.0	14	23	--	--
09/23/92 (D)		99.24	--	--	--	3,400	12,000	--	--	--	23	7.0	12	23	--	--
01/11/93		99.24	2.17	--	97.07	--	--	--	--	--	--	--	--	--	--	--
06/04/93		99.24	1.86	--	97.38	1,300	17,000	--	--	--	3.0	1.2	1.5	5.1	--	--
12/15/93		99.24	2.75	--	96.49	1,900	19,000	--	--	--	10	2.5	2.9	17	--	0.55 - 3.8
06/03/94		99.24	2.63	--	96.61	1,800	11,000	--	ND	--	2.1	3.4	4.7	9.2	--	ND
11/01/94		99.24	3.25	--	95.99	1,900	15,000	--	ND	--	15	2.8	4.2	12	--	0.67 - 4.3
02/09/95		99.24	0.95	--	98.29	210	7,000	--	1,400	--	ND	ND	ND	0.8	--	ND
05/02/95		99.24	1.60	--	97.64	160	13,000	--	2,400	--	ND	ND	ND	ND	--	ND
08/02/95		99.24	3.43	--	95.81	1,100	17,000	--	4,000	--	7.7	1.3	4.2	1.5	--	ND
12/05/95		99.24	0.20	--	99.04	ND	1,500	--	1,500	--	ND	ND	ND	ND	--	0
03/18/96		99.24	1.12	--	98.12	170	4,700	--	1,700	--	1.1	0.88	ND	2.3	--	ND
06/26/96		99.24	2.51	--	96.73	--	5,880	--	3,150	--	--	--	--	--	--	--
09/09/96		99.24	3.70	--	95.54	--	7,290	--	4,700	--	--	--	--	--	--	--
12/30/96		99.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/07/97		99.24	0.00	--	99.24	ND	6,000	--	2,030	--	ND	ND	ND	ND	--	ND
06/09/97		99.24	1.60	--	97.64	--	3,280	--	1,690	--	--	--	--	--	--	ND
09/04/97		99.24	3.28	--	95.96	--	6,980	--	3,260	--	--	--	--	--	--	ND
12/17/97		99.24	0.25	--	98.99	--	6,230	--	2,080	--	--	--	--	--	--	--
06/01/98		99.24	2.28	--	96.96	--	7,260	--	976	--	--	--	--	--	--	--
11/01/98		99.24	4.14	0.00	95.10	--	9,540	--	ND	--	--	--	--	--	--	--
05/30/99		99.24	2.20	0.00	97.04	--	6,610	--	3,930	--	--	--	--	--	--	--
DESTROYED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17																
09/23/92		99.64	4.58	--	95.06	5,100	5,300	--	--	--	36	7.0	32	300	--	--
01/11/93		99.64	2.80	--	96.84	--	--	--	--	--	--	--	--	--	--	--
06/04/93		99.64	2.36	--	97.28	2,300	24,000	--	--	--	9.0	1.4	16	61	--	0.18 - 33
12/15/93		99.64	3.31	--	96.33	20,000	45,000	--	--	--	19	6.2	17	110	--	0.73 - 34
06/04/94		99.64	3.18	--	96.46	990	31,000	--	ND	--	9.0	1.1	1.9	8.7	--	0.33 - 28
11/01/94		99.64	3.76	--	95.88	2,100	42,000	--	4,600	--	16	1.6	2.6	14	--	0.83 - 23
02/09/95		99.64	1.43	--	98.21	610	18,000	--	1,700	--	ND	1.0	1.3	3.6	--	ND
05/02/95		99.64	1.97	--	97.67	890	38,000	--	6,000	--	1.8	ND	0.95	3.3	--	ND
08/02/95		99.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/05/95		99.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/18/96		99.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/26/96		99.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ABANDONED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
D-4																
09/23/92		98.76	7.33	--	91.43	ND	420	--	--	--	ND	ND	ND	ND	--	--
01/11/93		98.76	6.00	--	92.76	--	--	--	--	--	--	--	--	--	--	--
06/04/93		98.76	5.71	--	93.05	ND	ND	--	--	--	ND	ND	ND	ND	--	--
12/15/93		98.76	5.75	--	93.01	ND	330	--	--	--	ND	0.5	ND	ND	--	ND
06/04/94		98.76	6.93	--	91.83	ND	ND	--	ND	--	ND	ND	ND	ND	--	ND
11/01/94		98.76	6.29	--	92.47	ND	360	--	ND	--	ND	ND	ND	ND	--	ND
02/09/95		98.76	5.43	--	93.33	ND	200	--	300	--	ND	ND	ND	ND	--	ND
05/02/95		98.76	6.13	--	92.63	ND	390	--	1,000	--	ND	ND	ND	ND	--	ND
08/02/95		98.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/05/95		98.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D-4 cont.																
03/18/96		98.76	6.46	--	92.30	ND	ND	--	ND	--	ND	ND	ND	ND	--	ND
06/26/96		98.76	7.10	--	91.66	--	592	--	ND	--	--	--	--	--	--	--
09/09/96		98.76	7.35	--	91.41	--	939	--	943	--	--	--	--	--	--	--
12/30/96		98.76	7.40	--	91.36	--	311	--	ND	--	--	--	--	--	--	--
03/07/97		98.76	5.55	--	93.21	--	264	--	ND	--	--	--	--	--	--	ND
06/09/97		98.76	5.65	--	93.11	--	ND	--	ND	--	--	--	--	--	--	ND
09/04/97		98.76	6.67	--	92.09	--	550	--	ND	--	--	--	--	--	--	ND
12/17/97		98.76	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--	--
06/01/98		98.76	6.34	--	92.42	--	371	--	ND	--	--	--	--	--	--	--
11/01/98		98.76	7.31	0.00	91.45	--	276	--	ND	--	--	--	--	--	--	--
05/30/99		98.76	6.54	0.00	92.22	--	429	--	ND	--	--	--	--	--	--	--
06/11-12/00		98.76	INACCESSIBLE - PAVED OVER			--	--	--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D-5A																
09/23/92		--	--	--	--	100	860	--	--	--	0.7	ND	0.3	0.9	--	--
01/11/93		100.53	7.92	--	92.61	--	--	--	--	--	--	--	--	--	--	--
06/04/93		100.53	8.00	--	92.53	ND	270	--	--	--	ND	ND	ND	ND	--	--
12/15/93		100.53	7.61	--	92.92	ND	590	--	--	--	ND	ND	ND	ND	--	ND
06/04/94		100.53	8.91	--	91.62	ND	960	--	ND	--	ND	ND	ND	ND	--	ND
11/01/94		100.53	8.33	--	92.20	ND	1,100	--	ND	--	ND	ND	ND	0.6	--	ND
02/09/95		100.53	7.30	--	93.23	ND	610	--	210	--	ND	ND	ND	ND	--	ND
05/02/95		100.53	8.08	--	92.45	ND	2,500	--	ND	--	ND	ND	ND	ND	--	ND
08/02/95		100.53	8.95	--	91.58	ND	2,800	--	1,000	--	ND	ND	ND	ND	--	ND
12/05/95		100.53	6.72	--	93.81	ND	6,700	--	2,300	--	ND	ND	ND	ND	--	ND
03/18/96		100.53	8.62	--	91.91	--	--	--	--	--	--	--	--	--	--	--
ABANDONED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
1656 East J Street
Tacoma, Washington

Well ID/ Date	Purge Method	TOC ¹ (ft)	DTW (ft)	SPHT (ft)	GWE ² (ft)	TPH-GRO (µg/L)	TPH-DRO w/Silica Gel (µg/L)	TPH-DRO w/out Silica (µg/L)	TPH-HRO w/Silica Gel (µg/L)	TPH-HRO w/out Silica (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	PAHs (µg/L)
TRIP BLANK																
06/01/98		--	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--
11/01/98		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/30/99		--	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--
06/11-12/00		--	--	--	--	ND	--	--	--	--	ND	ND	ND	ND	--	--
09/25/00		--	--	--	--	ND	--	--	--	--	ND	ND	ND	ND	--	--
01/26/01		--	--	--	--	ND	--	--	--	--	ND	ND	ND	ND	ND	--
01/09/02		--	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.00	--	--
04/04/02		--	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	--	--
04/28/03		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
04/15/04		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
04/29/05		--	--	--	--	<50	--	--	--	--	--	--	--	--	--	--
04/27/06		--	--	--	--	<48	--	--	--	--	<0.5	<0.5	<0.5	1.5	--	--
12/09/08		--	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	<0.50	--
12/10/08		--	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	<0.50	--
12/07/11		--	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	--	--
01/09/12		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
04/10-11/12		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
07/10/12		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
10/09/12		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
01/08/13		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
04/09/13		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
09/25-26/13		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
11/05-06/13		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
01/07-09/14		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
04/07-08/14		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
07/07-09/14		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
10/06-07/14		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
01/06-07/15		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	<2.5	--
04/06-08/15		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
07/23/15		--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--
10/19-20/15		--	--	--	--	<50	--	--	--	--	<0.2	<0.2	<0.2	<0.2	--	--
01/12-13/16		--	--	--	--	<50	--	--	--	--	<0.2	<0.2	<0.2	<0.2	--	--
04/23/16		--	--	--	--	<50	--	--	--	--	<0.2	<0.2	<0.2	<0.2	--	--
06/10-12/20		--	--	--	--	<250	--	--	--	--	<1.0	<1.0	<1.0	<3.0	--	--
12/08/20		--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1.4	--	--
01/09/21		--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1.4	--	--
07/09/21		--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1.4	--	--
12/29/21		--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<0.4	--	--
04/06/22		--	--	--	--	<19	--	--	--	--	<0.3	<0.2	<0.4	<0.4	<0.2	--
06/22/22		--	--	--	--	29	--	--	--	--	<0.3	<0.2	<0.4	<0.4	<0.2	--
10/06/22		--	--	--	--	29	--	--	--	--	<0.3	<0.2	<0.4	<0.4	<0.2	--
Standard Laboratory Reporting Limits:						50	250	500	500	500	0.5	0.5	0.5	1.5	--	0.10 - 5.0
MTCA Method A Cleanup Levels:						800/1,000	500				5.0	1,000	700	1,000	20	1.0
Current Method ³						NWTPH-Gx	NWTPH-Dx + Extended				USEPA 8021					USEPA 8310

Explanations:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes
(D) = Duplicate
DTW = Depth to Water
(ft) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge
MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act
ND = Not Detected
NP = No Purge
SPHT = Separate-Phase Hydrocarbon Thickness
TOC = Top of Casing
PAHs = Polynuclear Aromatic Hydrocarbons
TPH = Total Petroleum Hydrocarbons

TPH-DRO = TPH as Diesel-Range Organics
TPH-GRO = TPH as Gasoline-Range Organics
TPH-HRO = TPH as Heavy Oil-Range Organics
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
-- = Not Measured/Not Analyzed

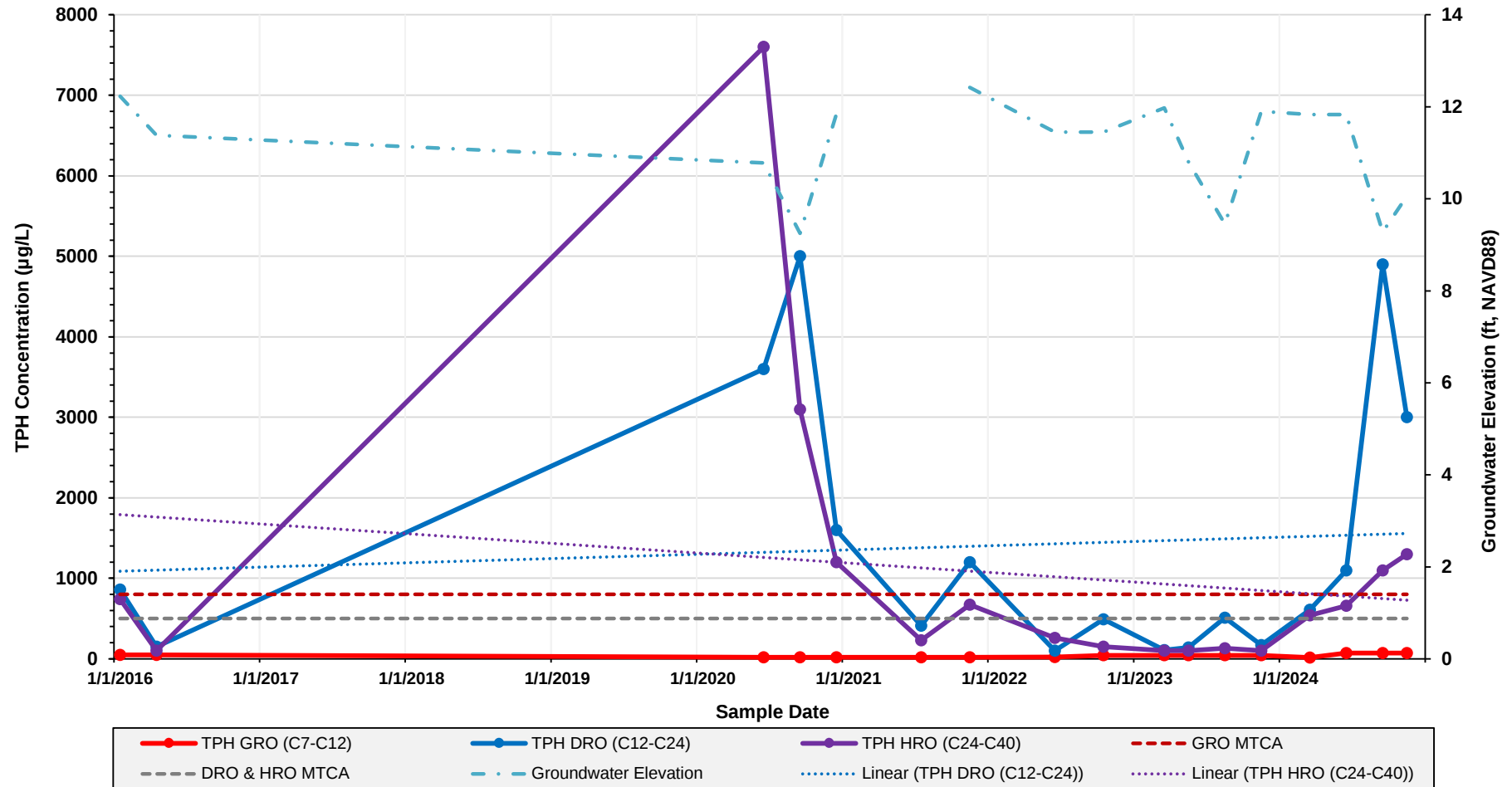
Notes:

- TOC elevations referenced in feet relative to an arbitrary datum.
 - When SPH is present, GWE has been corrected using the following formula: GWE = [(TOC - DTW) * (SPHT x 0.80)].
 - Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
- Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
Consult original laboratory analysis reports for analytical methods prior to 2009.
Silica-gel analysis suspended June 2013- February 2014.

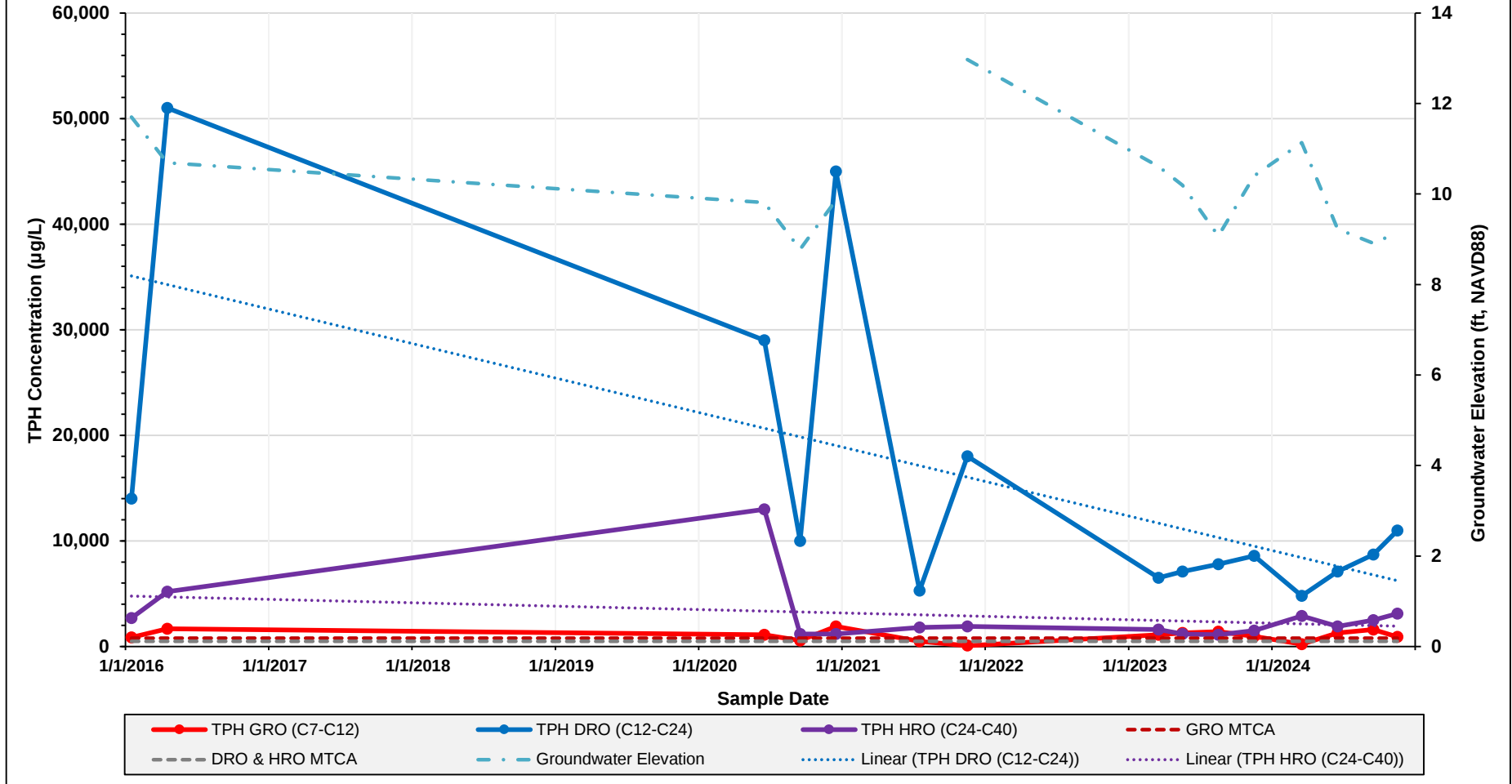
Appendix F

Trend Graphs

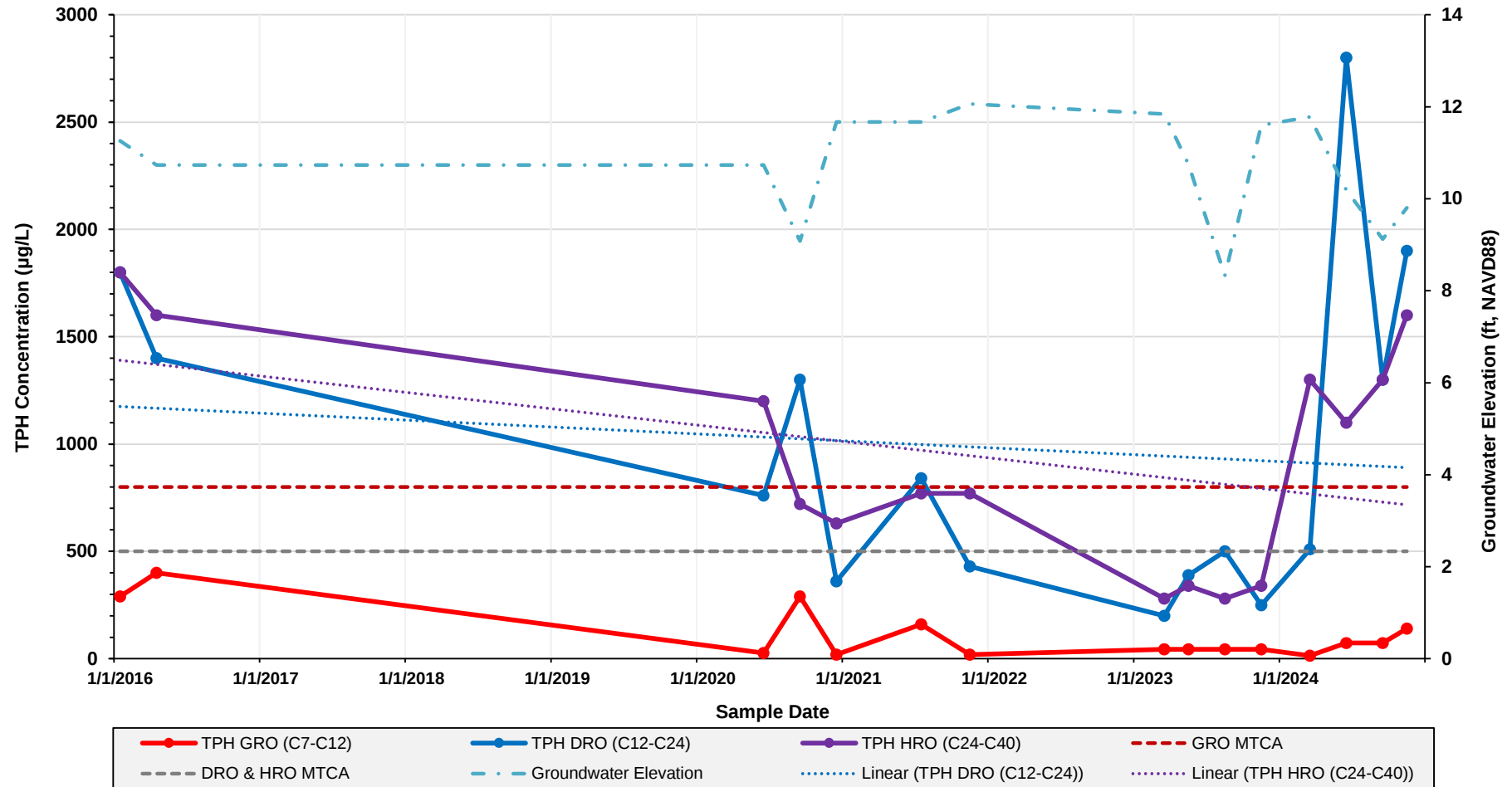
MW-14: TPH Concentrations in Groundwater



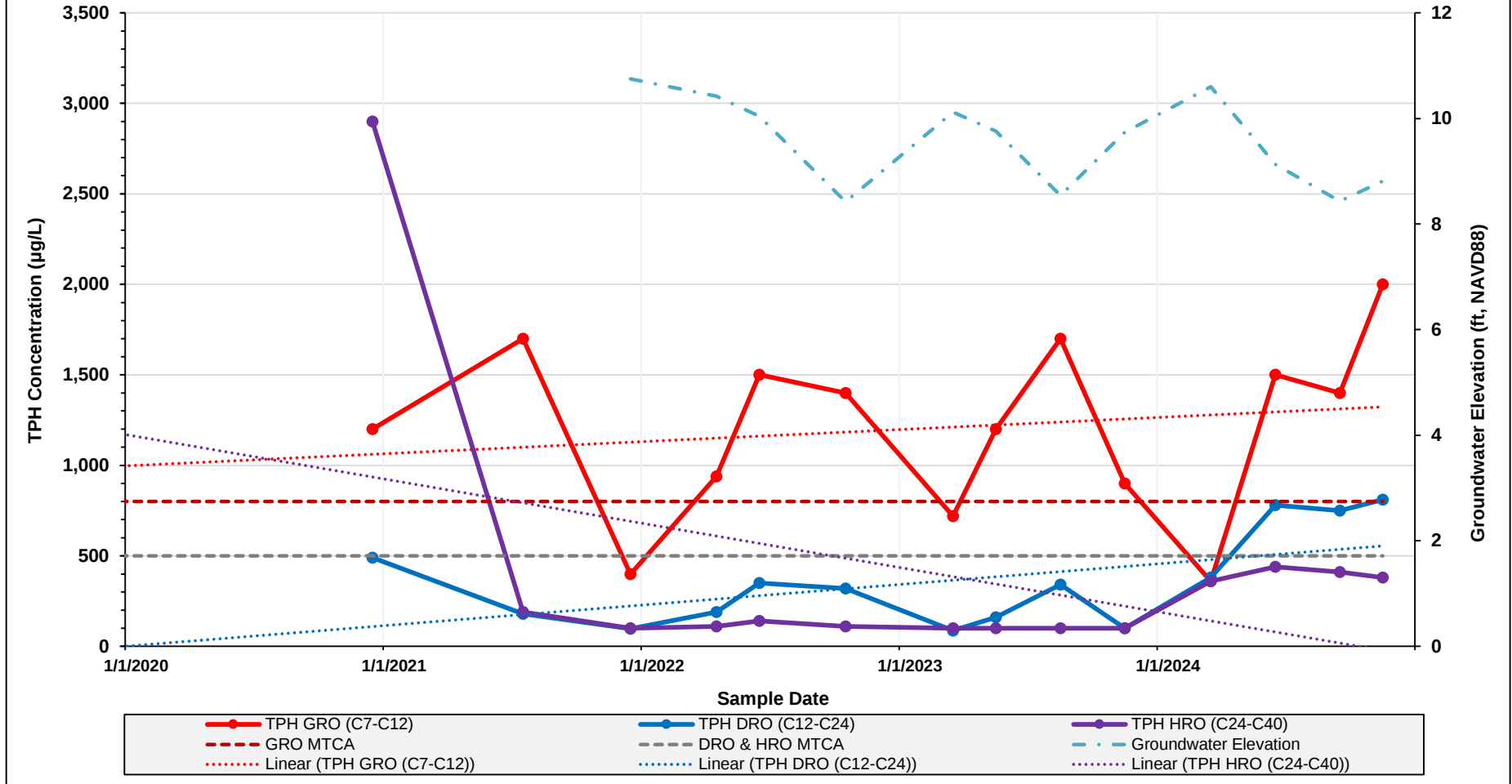
MW-19: TPH Concentrations in Groundwater



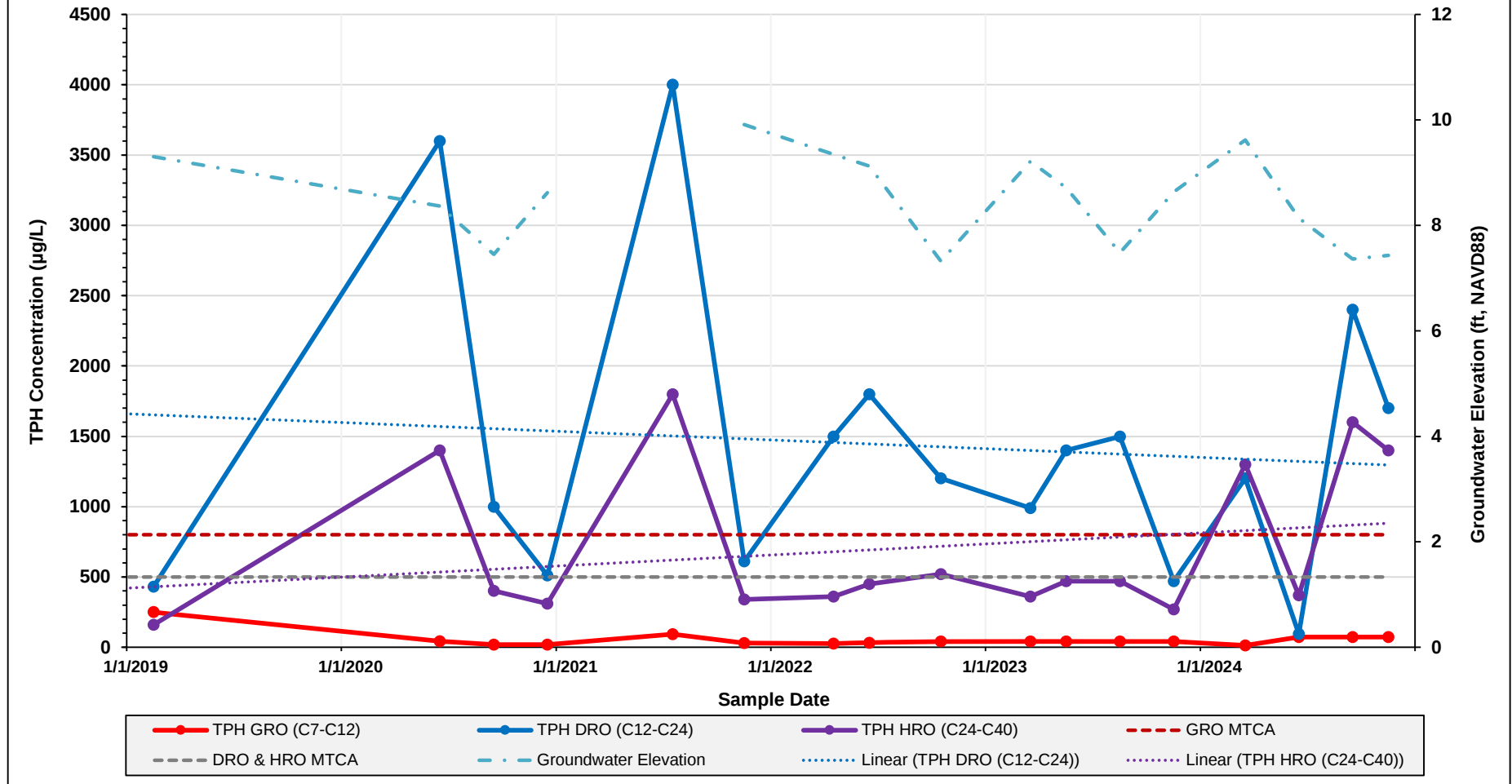
MW-21: TPH Concentrations in Groundwater



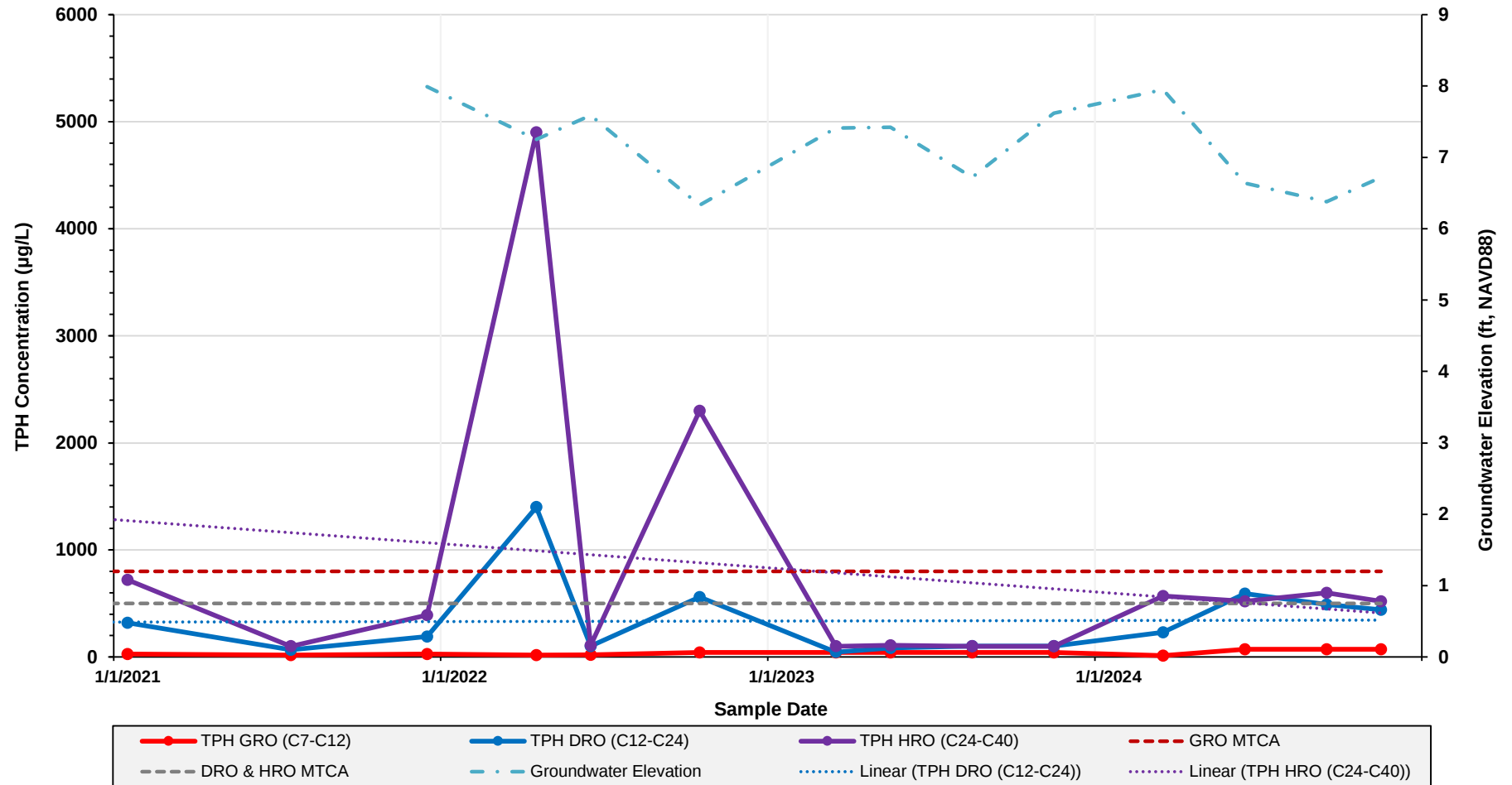
MW-25: TPH Concentrations in Groundwater



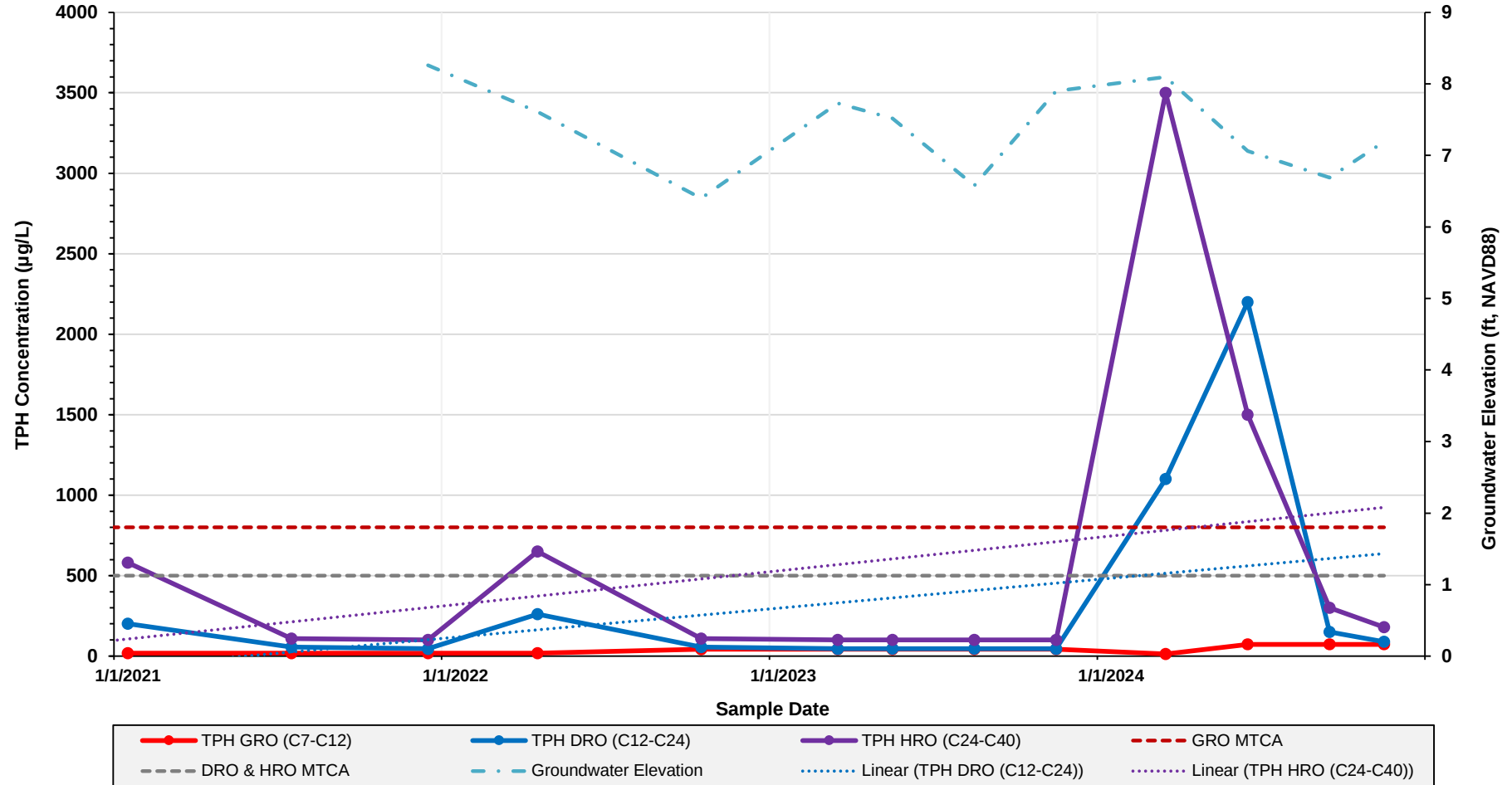
MW-26: TPH Concentrations in Groundwater



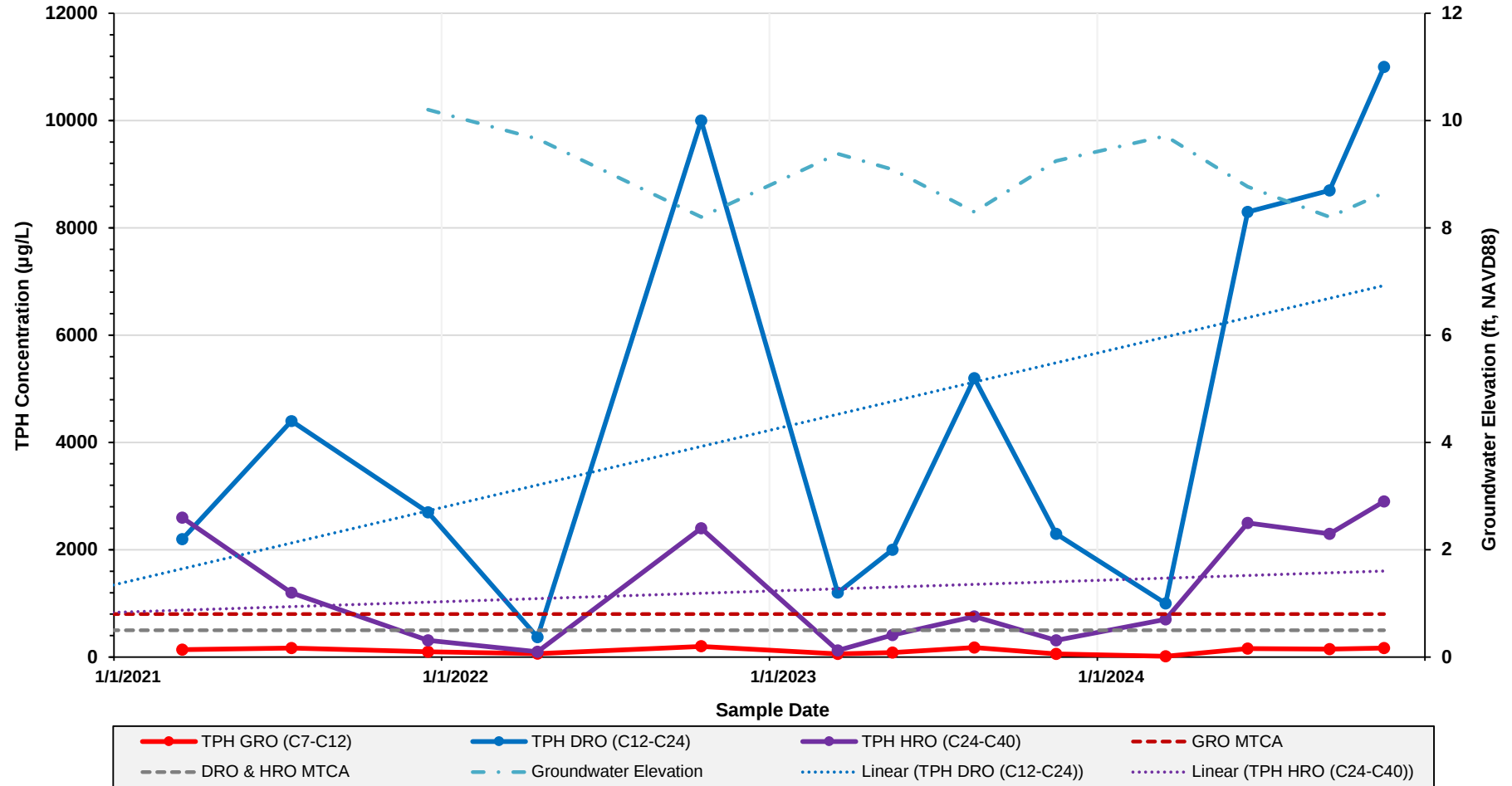
MW-37: TPH Concentrations in Groundwater



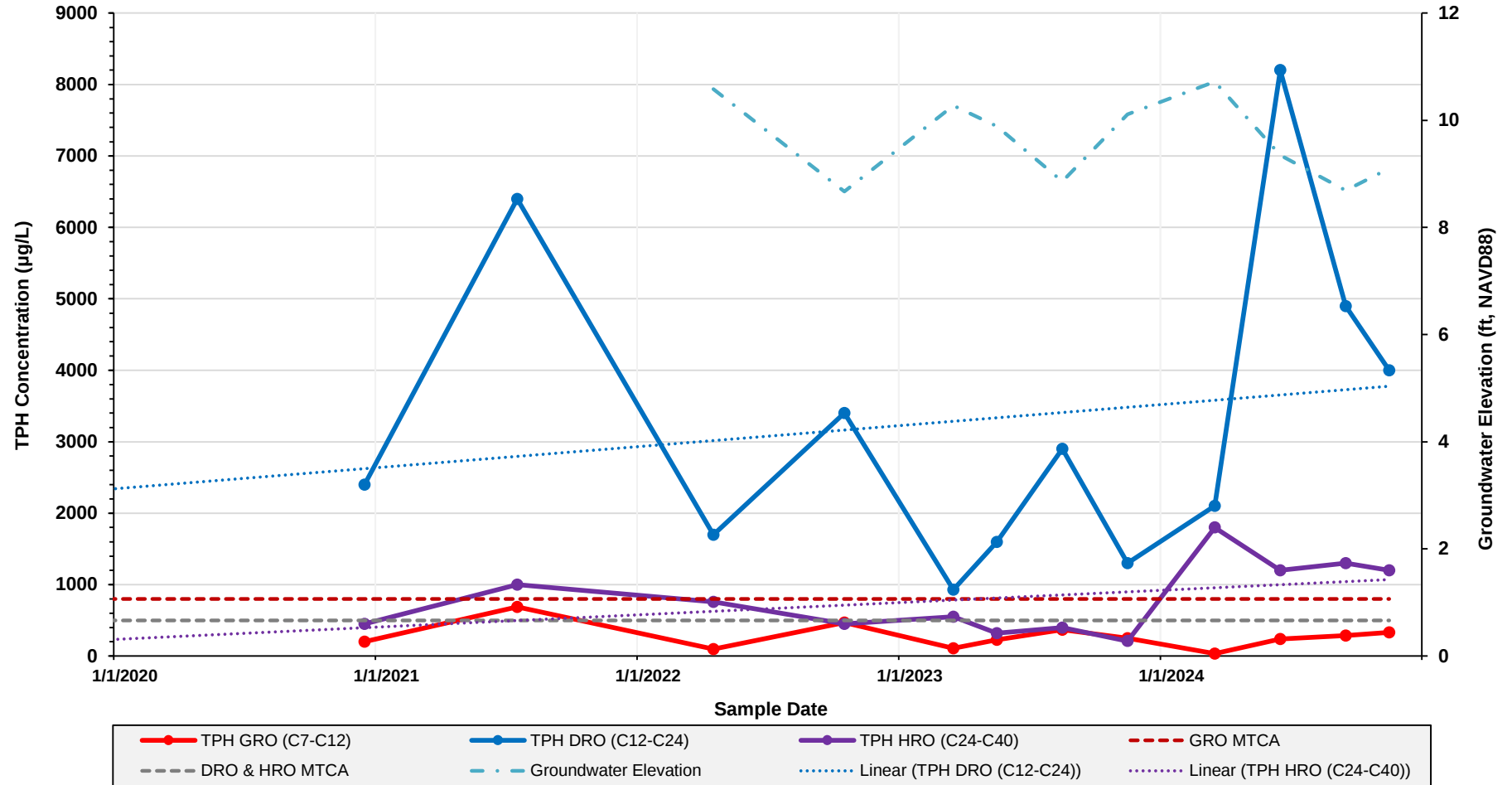
MW-38: TPH Concentrations in Groundwater



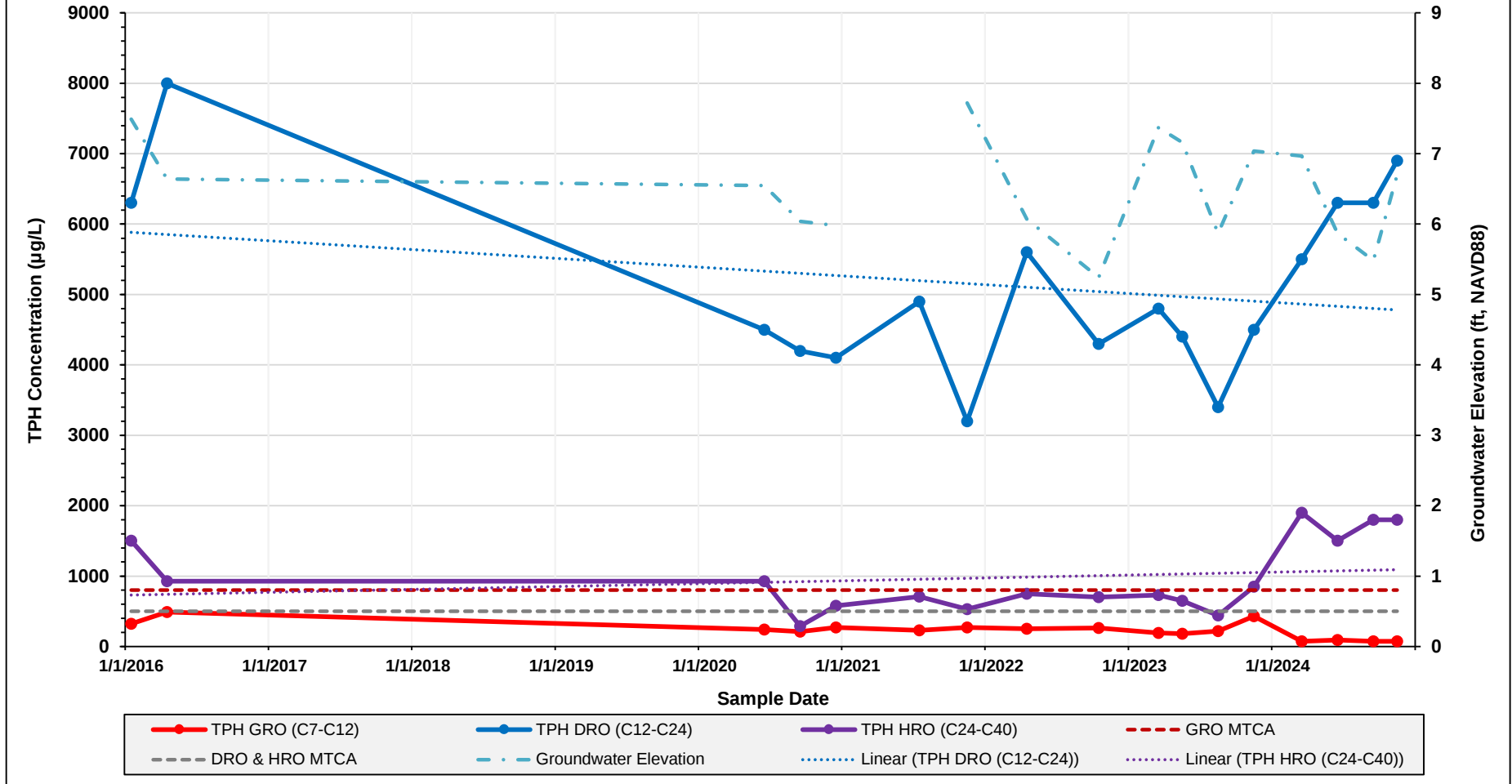
MW-39: TPH Concentrations in Groundwater



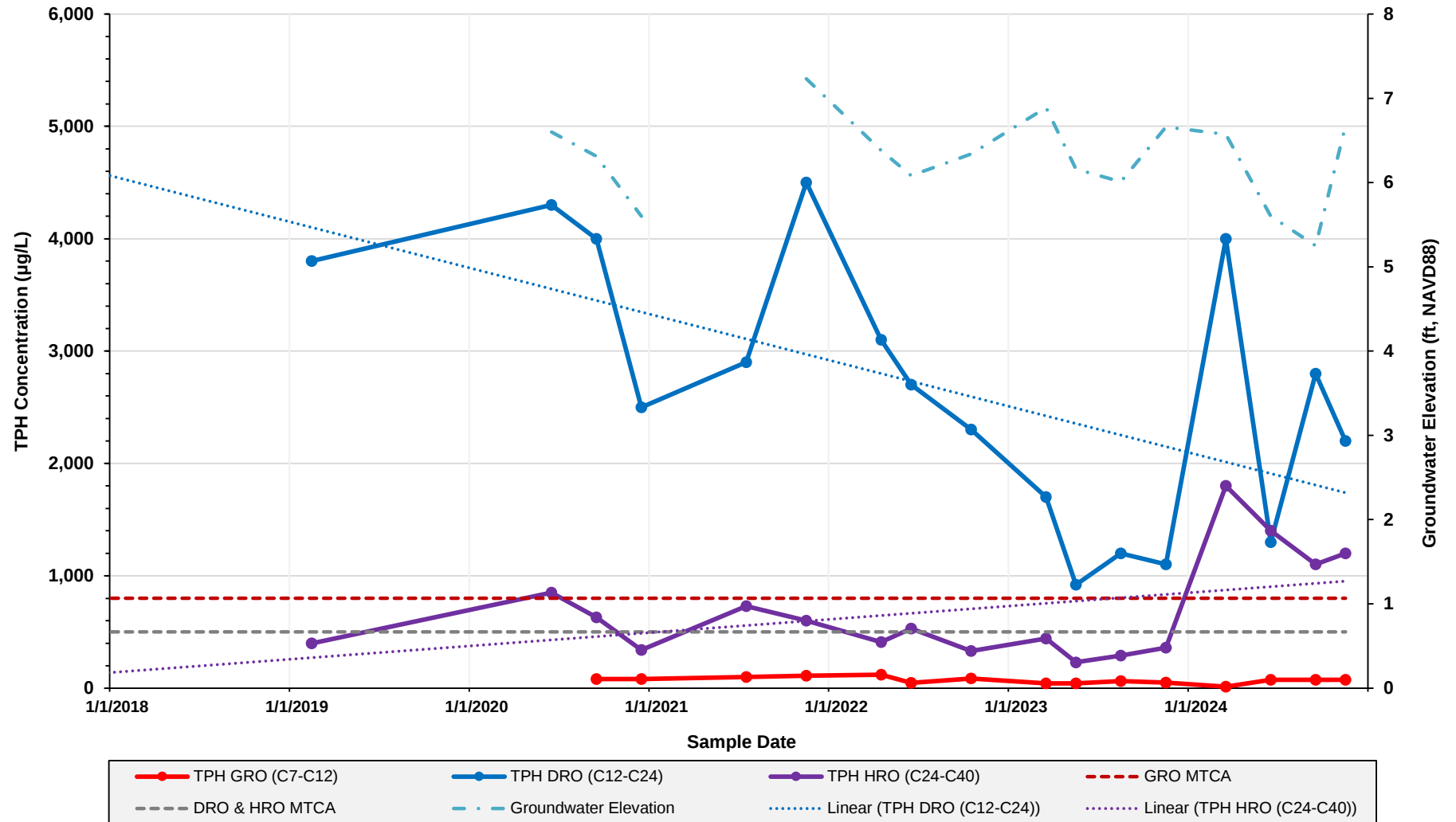
RMW-01: TPH Concentrations in Groundwater



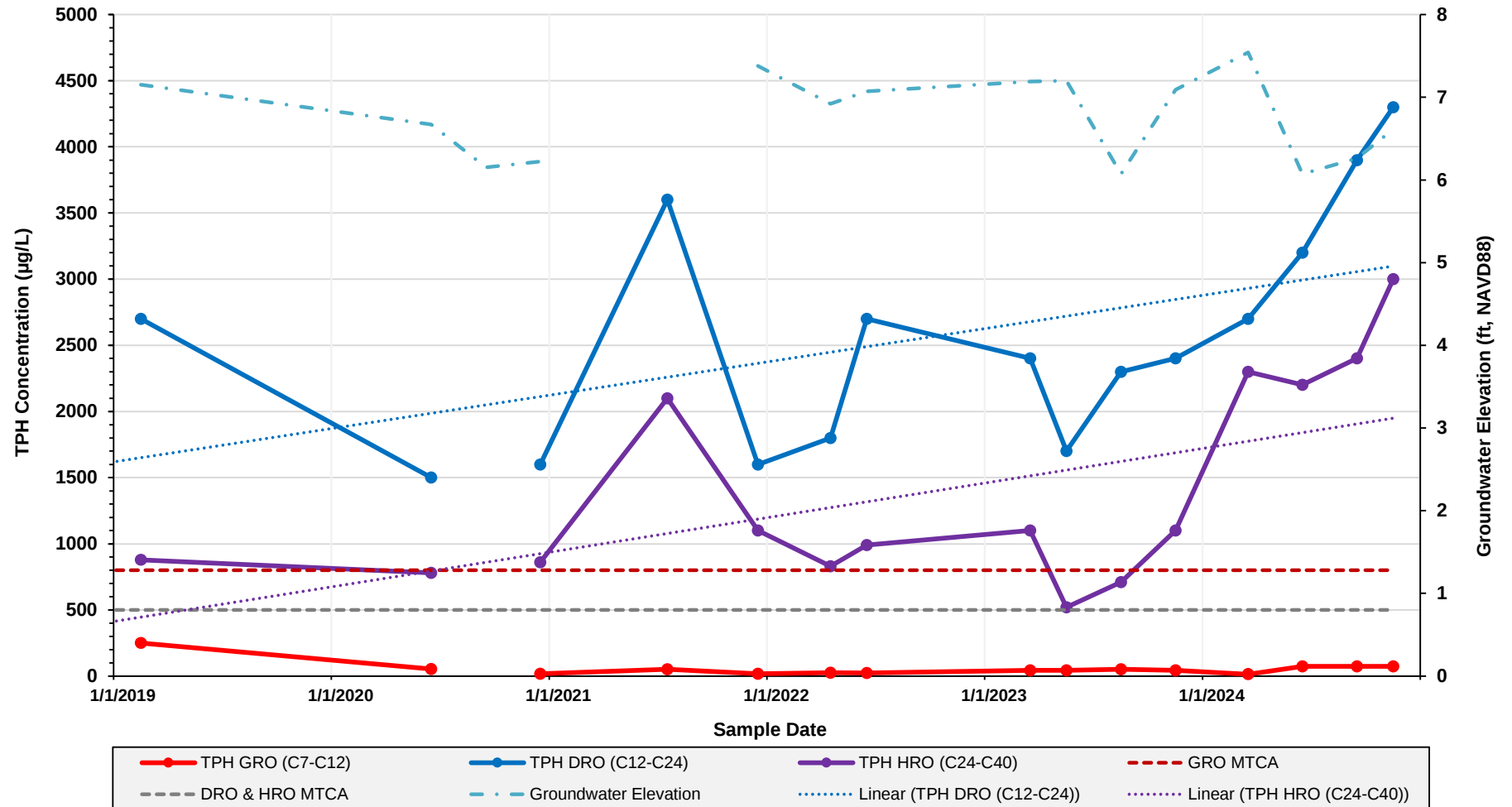
D-01: TPH Concentrations in Groundwater



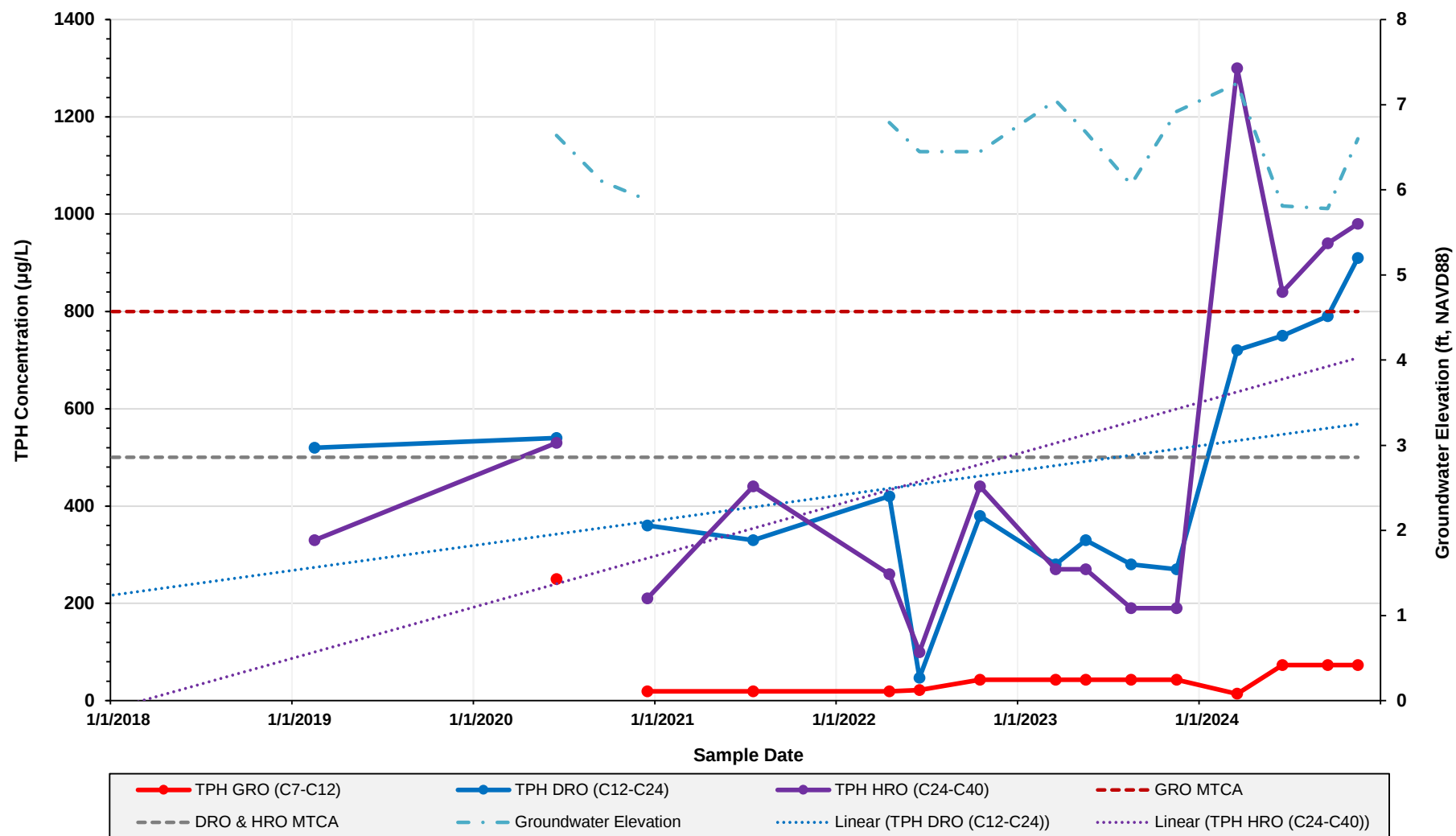
D-08: TPH Concentrations in Groundwater



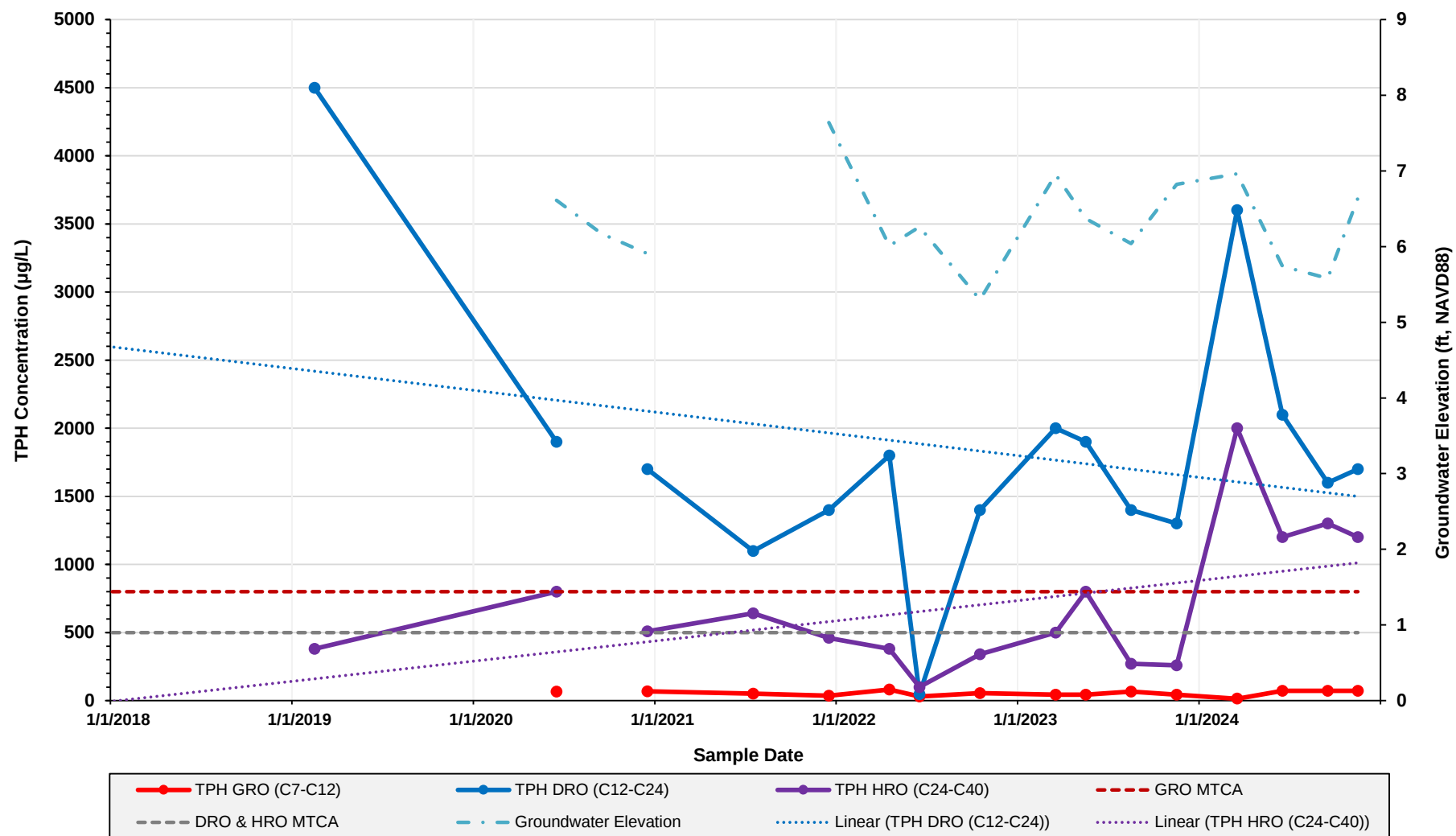
D-09: TPH Concentrations in Groundwater



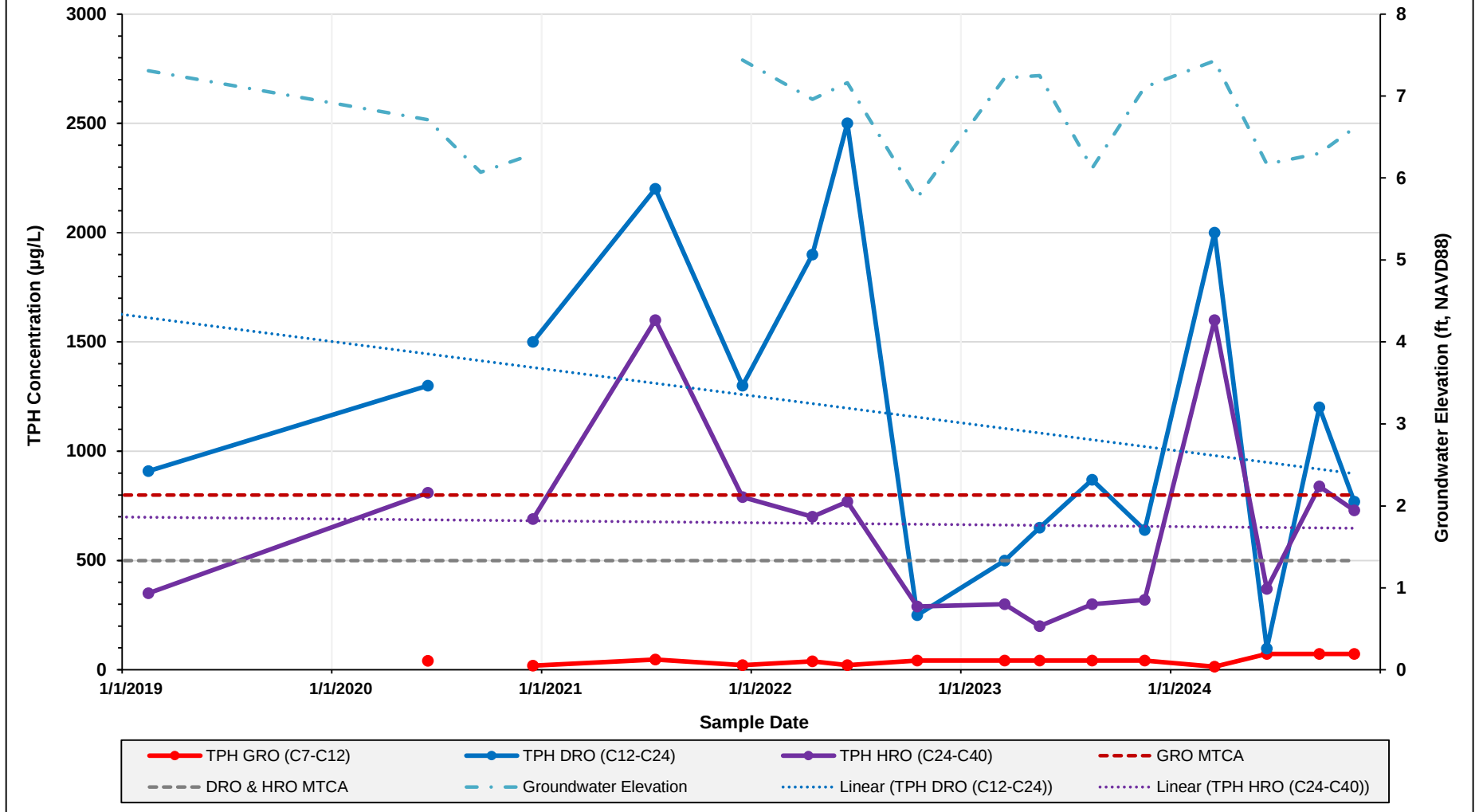
D-12: TPH Concentrations in Groundwater



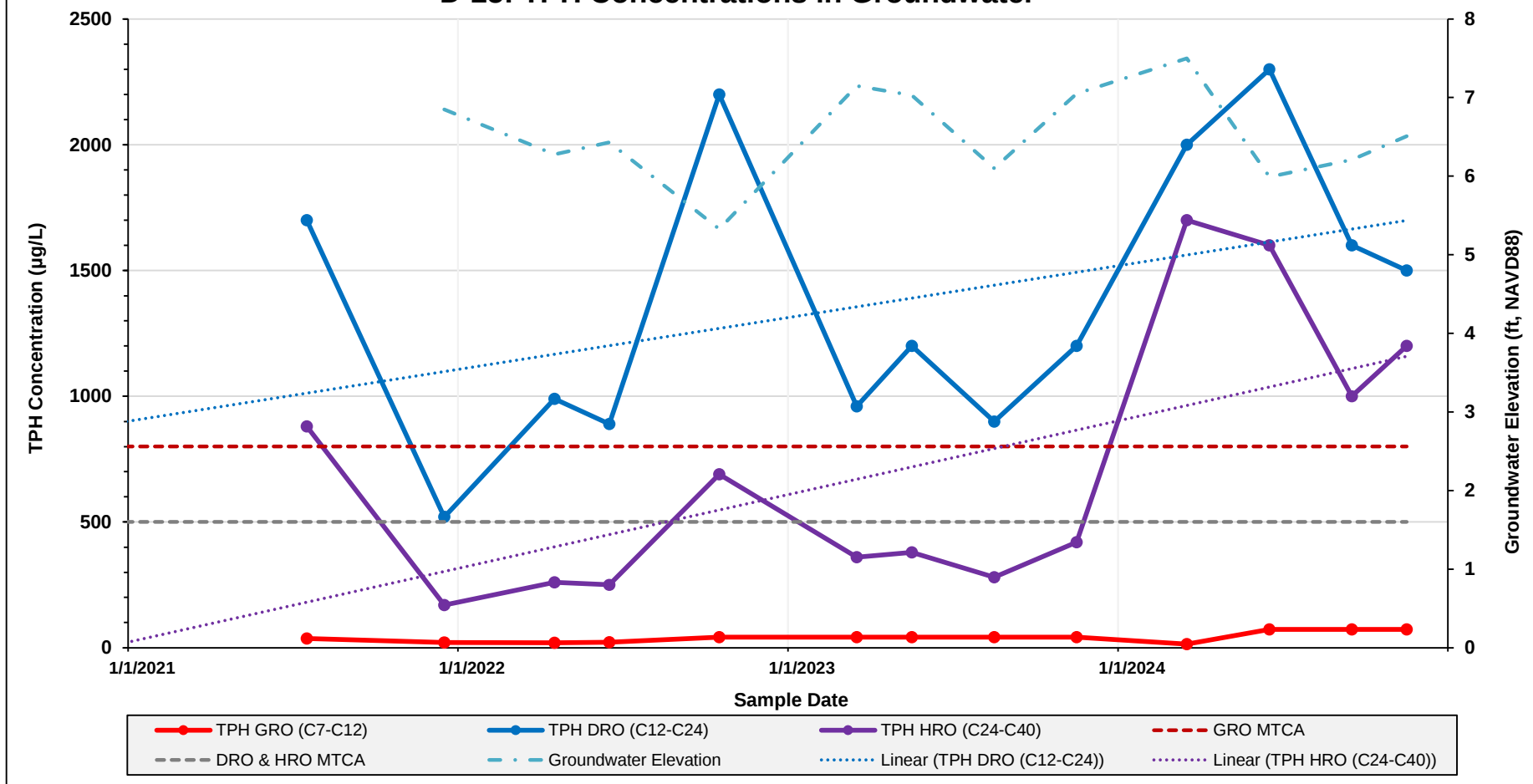
D-15: TPH Concentrations in Groundwater



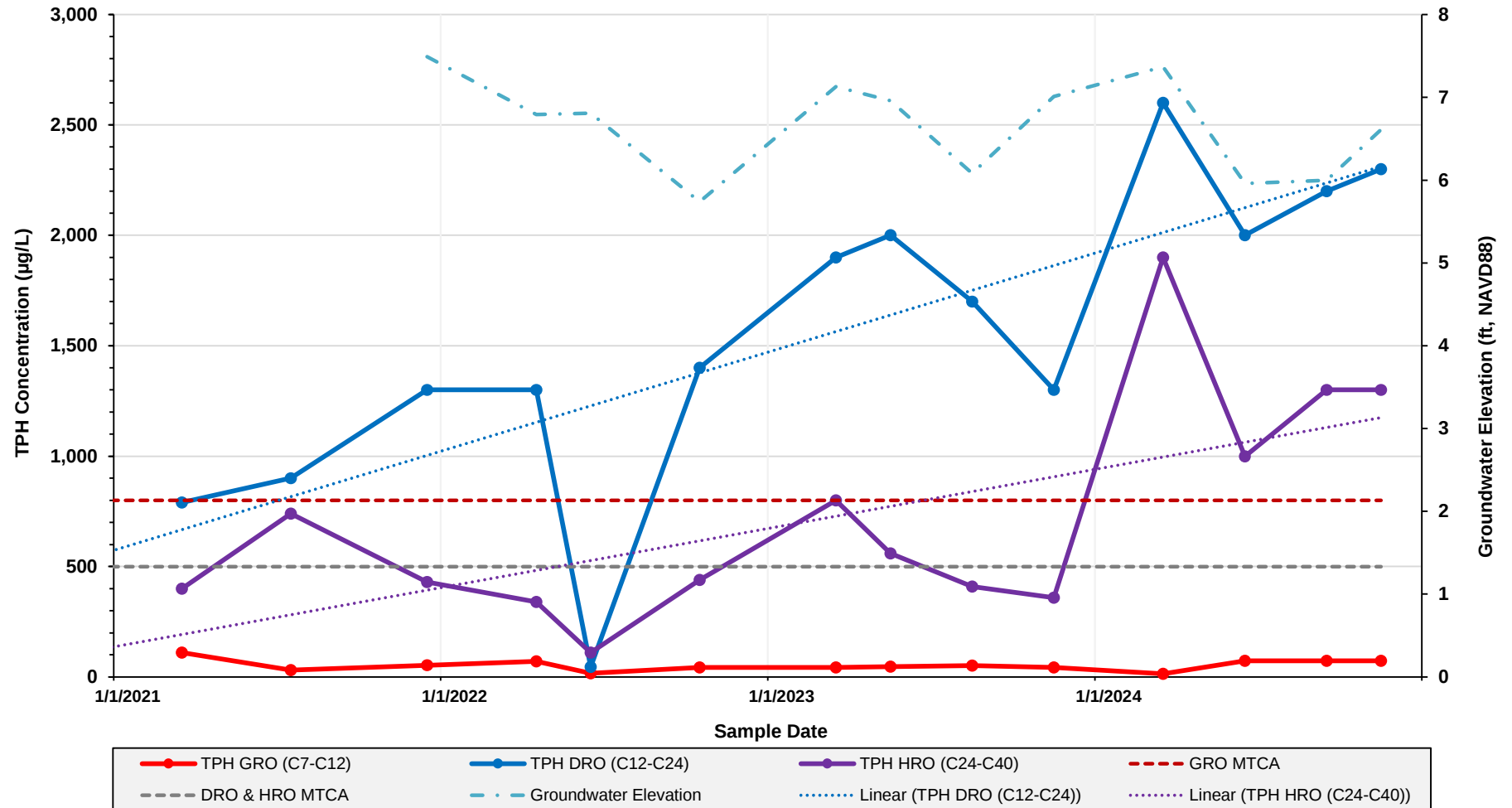
D-18: TPH Concentrations in Groundwater



D-25: TPH Concentrations in Groundwater



D-27: TPH Concentrations in Groundwater



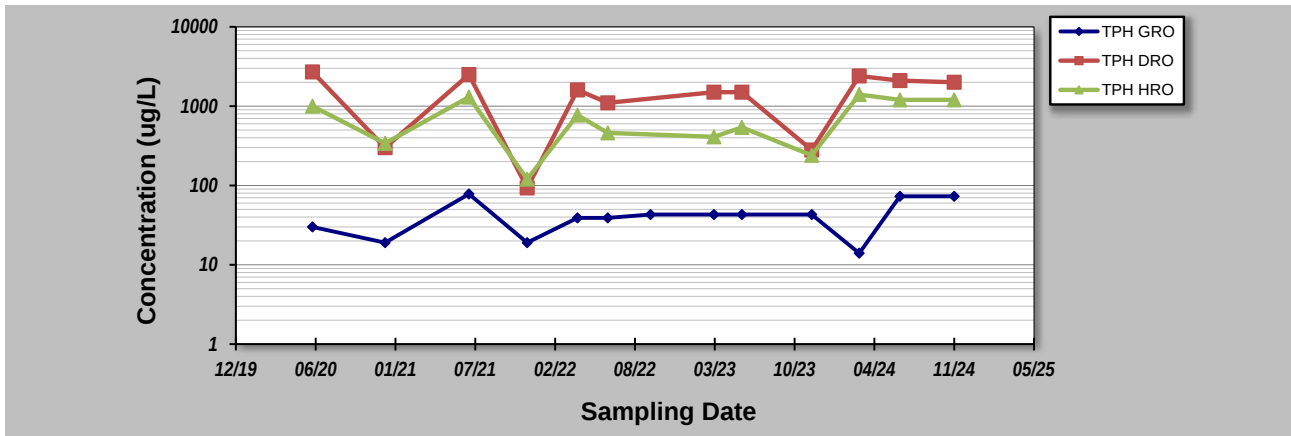
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-10 (post-2020)**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	6/10/20	30	2700	1000				
2	12/9/20	19	300	340				
3	7/7/21	78	2500	1300				
4	11/30/21	19	93	120				
5	4/5/22	39	1600	770				
6	6/20/22	39	1100	460				
7	10/5/22	43						
8	3/13/23	43	1500	410				
9	5/22/23	43	1500	540				
10	11/13/23	43	280	240				
11	3/11/24	14	2400	1400				
12	6/21/24	73	2100	1200				
13	11/4/24	73	2000	1200				
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.49	0.60	0.61				
Mann-Kendall Statistic (S):		27	1	11				
Confidence Factor:		94.3%	50.0%	74.9%				
Concentration Trend:		Prob. Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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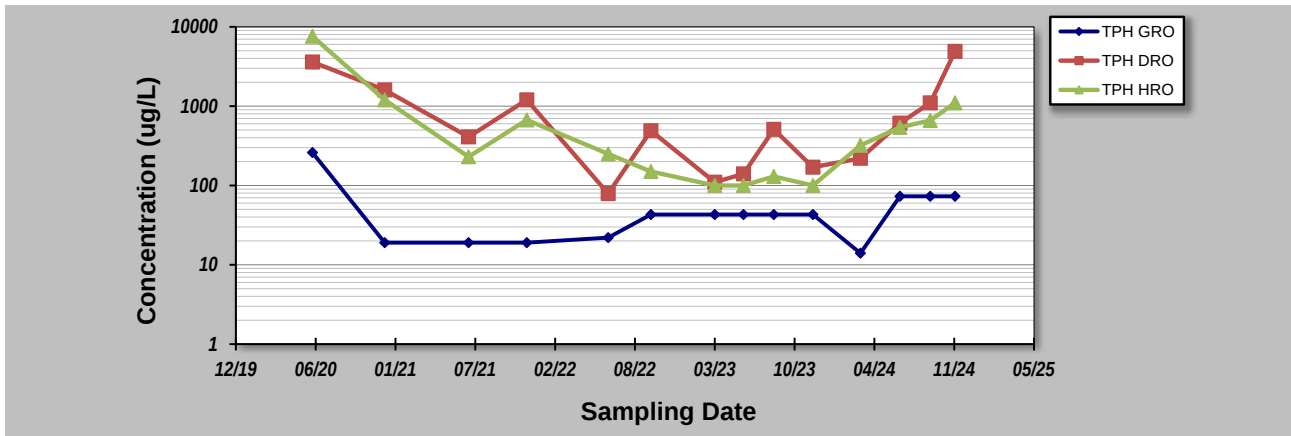
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-14**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	6/10/20	260	3600	7600				
2	12/8/20	19	1600	1200				
3	7/6/21	19	410	230				
4	11/29/21	19	1200	670				
5	6/21/22	22	79	250				
6	10/6/22	43	490	150				
7	3/15/23	43	110	100				
8	5/26/23	43	140	100				
9	8/10/23	43	510	130				
10	11/16/23	43	170	100				
11	3/14/24	14	220	320				
12	6/21/24	73	610	540				
13	9/5/24	73	1100	660				
14	11/6/24	73	4900	1100				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.11	1.33	2.08				
Mann-Kendall Statistic (S):		31	5	-10				
Confidence Factor:		95.0%	58.5%	68.6%				
Concentration Trend:		Prob. Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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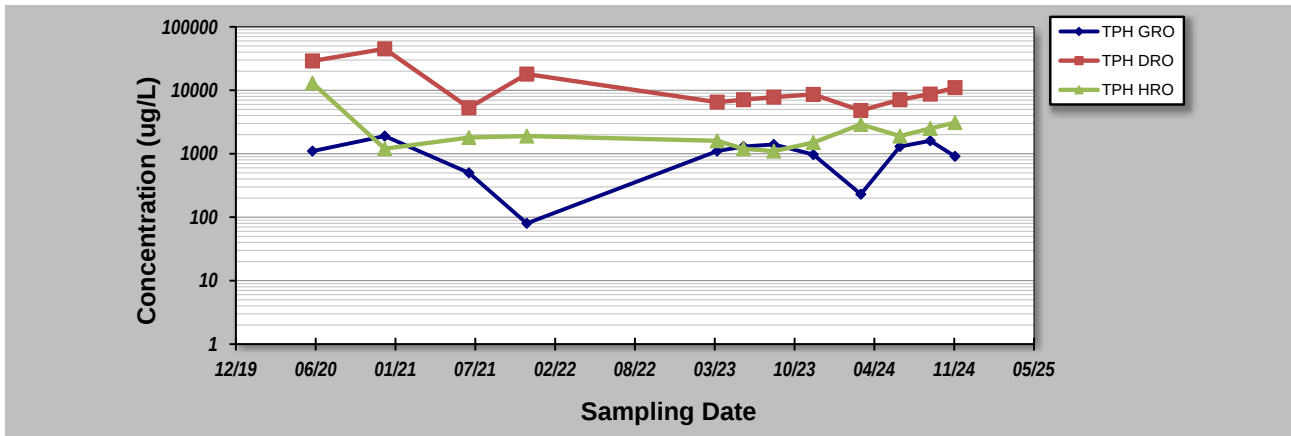
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-19**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	6/10/20	1100	29000	13000				
2	12/8/20	1900	45000	1200				
3	7/7/21	500	5300	1800				
4	11/29/21	80	18000	1900				
5	3/21/23	1100	6500	1600				
6	5/26/23	1300	7100	1200				
7	8/10/23	1400	7800	1100				
8	11/17/23	970	8600	1500				
9	3/15/24	230	4800	2900				
10	6/21/24	1300	7100	1900				
11	9/5/24	1600	8700	2500				
12	11/6/24	910	11000	3100				
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.52	0.91	1.17				
Mann-Kendall Statistic (S):		2	-5	12				
Confidence Factor:		52.7%	60.6%	77.0%				
Concentration Trend:		No Trend	Stable	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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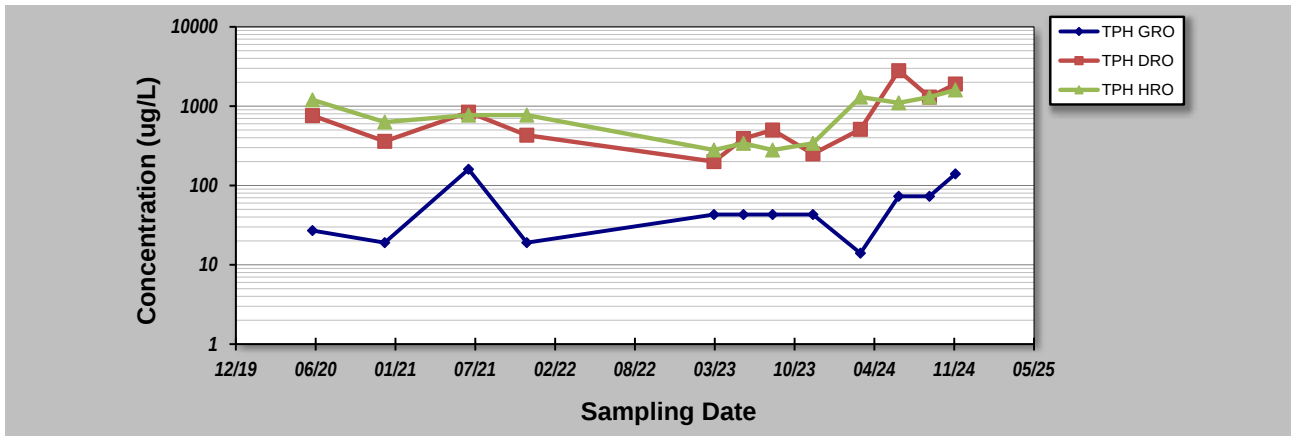
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-21 (post-2020)**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	6/10/20	27	760	1200				
2	12/8/20	19	360	630				
3	7/6/21	160	840	770				
4	11/29/21	19	430	770				
5	3/13/23	43	200	280				
6	5/26/23	43	390	340				
7	8/7/23	43	500	280				
8	11/16/23	43	250	340				
9	3/14/24	14	510	1300				
10	6/18/24	73	2800	1100				
11	9/3/24	73	1300	1300				
12	11/7/24	140	1900	1600				
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.81	0.92	0.56				
Mann-Kendall Statistic (S):		22	22	18				
Confidence Factor:		92.4%	92.4%	87.5%				
Concentration Trend:		Prob. Increasing	Prob. Increasing	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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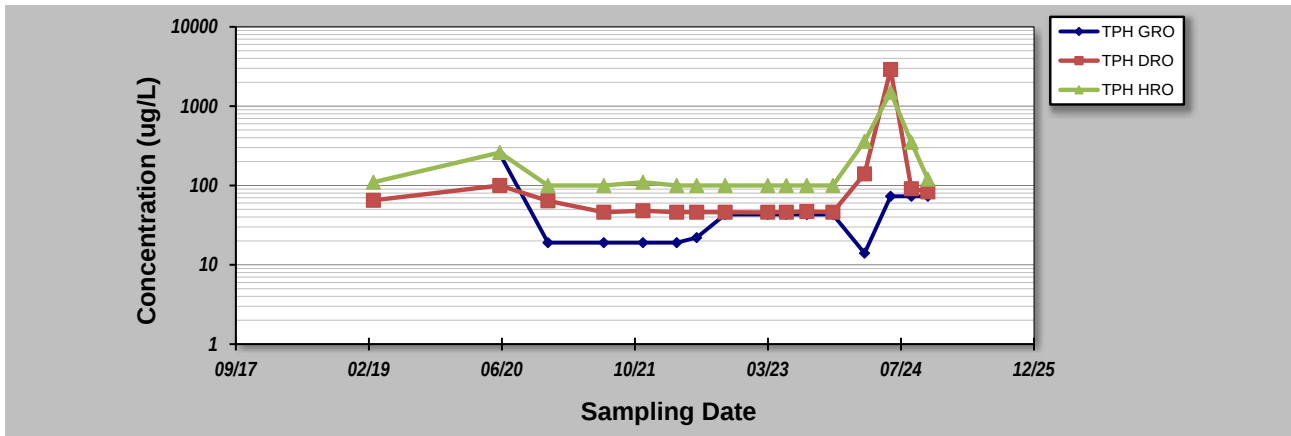
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-23**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		65	110				
2	6/10/20	250	100	260				
3	12/8/20	19	64	100				
4	7/6/21	19	46	100				
5	11/30/21	19	48	110				
6	4/6/22	19	46	100				
7	6/20/22	22	46	100				
8	10/5/22	43	46	100				
9	3/14/23	43	46	100				
10	5/23/23	43	46	100				
11	8/8/23	43	47	100				
12	11/14/23	43	46	100				
13	3/12/24	14	140	360				
14	6/18/24	73	2900	1500				
15	9/4/24	73	91	350				
16	11/5/24	73	83	120				
17								
18								
19								
20								
Coefficient of Variation:		1.10	2.94	1.51				
Mann-Kendall Statistic (S):		38	11	19				
Confidence Factor:		96.7%	67.1%	78.8%				
Concentration Trend:		Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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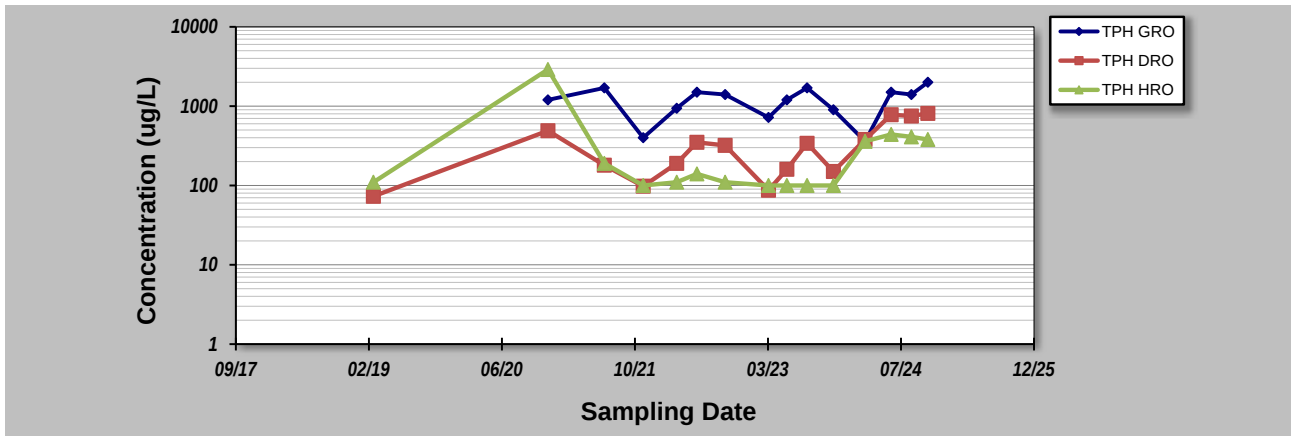
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-25**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		73	110				
2	12/8/20	1200	490	2900				
3	7/8/21	1700	180	190				
4	12/1/21	400	98	100				
5	4/6/22	940	190	110				
6	6/21/22	1500	350	140				
7	10/5/22	1400	320	110				
8	3/17/23	720	87	100				
9	5/25/23	1200	160	100				
10	8/9/23	1700	340	100				
11	11/16/23	900	150	100				
12	3/14/24	360	380	360				
13	6/20/24	1500	780	440				
14	9/4/24	1400	750	410				
15	11/5/24	2000	810	380				
16								
17								
18								
19								
20								
Coefficient of Variation:		0.41	0.74	1.89				
Mann-Kendall Statistic (S):		11	47	8				
Confidence Factor:		70.5%	99.0%	63.3%				
Concentration Trend:		No Trend	Increasing	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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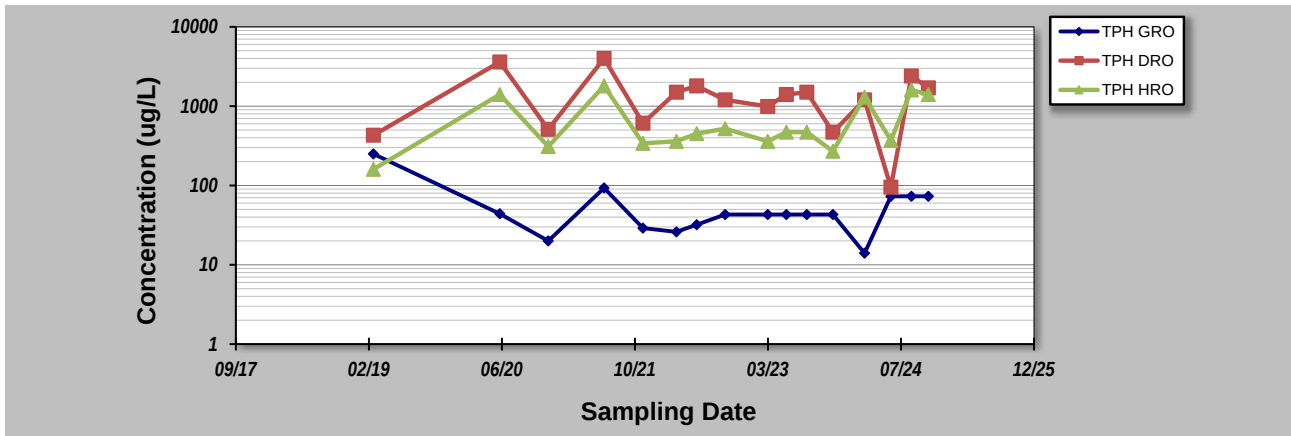
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-26**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19	250	430	160				
2	6/10/20	44	3600	1400				
3	12/9/20	20	510	310				
4	7/7/21	93	4000	1800				
5	11/30/21	29	610	340				
6	4/5/22	26	1500	360				
7	6/20/22	32	1800	450				
8	10/5/22	43	1200	520				
9	3/14/23	43	990	360				
10	5/23/23	43	1400	470				
11	8/8/23	43	1500	470				
12	11/14/23	43	470	270				
13	3/12/24	14	1200	1300				
14	6/19/24	73	95	370				
15	9/4/24	73	2400	1600				
16	11/7/24	73	1700	1400				
17								
18								
19								
20								
Coefficient of Variation:		0.94	0.75	0.77				
Mann-Kendall Statistic (S):		13	2	35				
Confidence Factor:		70.3%	51.8%	93.6%				
Concentration Trend:		No Trend	No Trend	Prob. Increasing				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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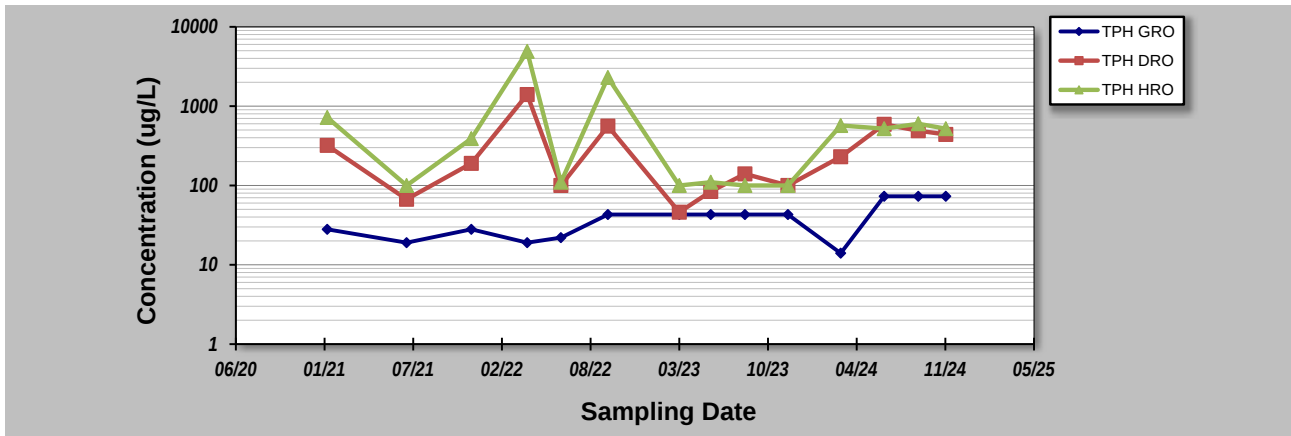
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-37**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	1/10/21	28	320	720				
2	7/8/21	19	67	100				
3	12/1/21	28	190	390				
4	4/6/22	19	1400	4900				
5	6/21/22	22	100	110				
6	10/5/22	43	560	2300				
7	3/15/23	43	46	100				
8	5/25/23	43	84	110				
9	8/10/23	43	140	100				
10	11/15/23	43	100	100				
11	3/13/24	14	230	570				
12	6/19/24	73	590	520				
13	9/4/24	73	490	600				
14	11/5/24	73	440	520				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.51	1.06	1.65				
Mann-Kendall Statistic (S):		46	16	-1				
Confidence Factor:		99.4%	79.1%	50.0%				
Concentration Trend:		Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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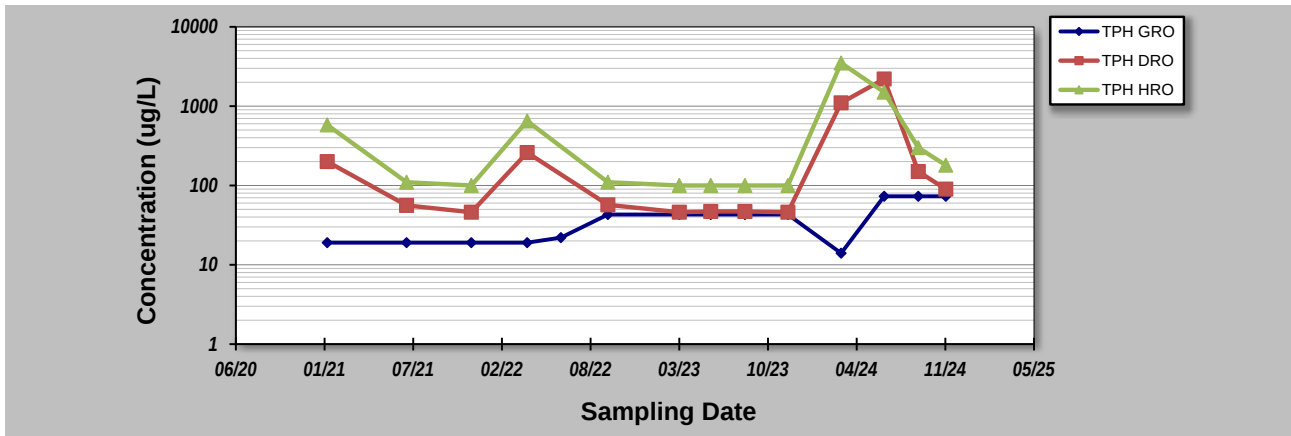
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-38**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	1/10/21	19	200	580				
2	7/8/21	19	56	110				
3	12/1/21	19	46	100				
4	4/6/22	19	260	650				
5	6/21/22	22						
6	10/5/22	43	57	110				
7	3/15/23	43	46	100				
8	5/25/23	43	47	100				
9	8/10/23	43	47	100				
10	11/15/23	43	46	100				
11	3/14/24	14	1100	3500				
12	6/19/24	73	2200	1500				
13	9/4/24	73	150	300				
14	11/5/24	73	90	180				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.55	1.88	1.69				
Mann-Kendall Statistic (S):		52	10	5				
Confidence Factor:		99.8%	70.5%	59.4%				
Concentration Trend:		Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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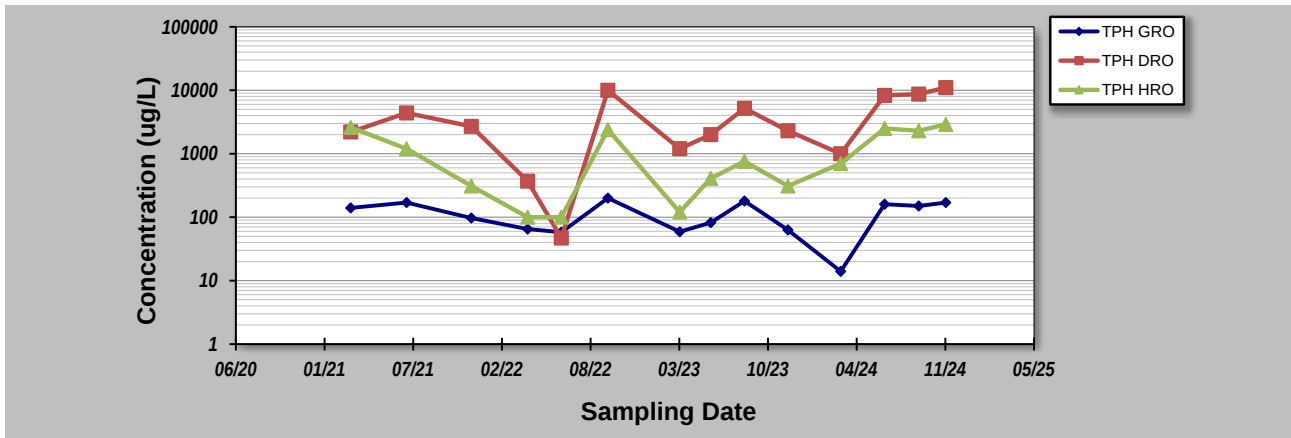
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **MW-39**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	3/4/21	140	2200	2600				
2	7/8/21	170	4400	1200				
3	12/1/21	97	2700	310				
4	4/7/22	65	370	100				
5	6/22/22	58	47	100				
6	10/5/22	200	10000	2400				
7	3/16/23	59	1200	120				
8	5/25/23	82	2000	410				
9	8/9/23	180	5200	760				
10	11/15/23	63	2300	310				
11	3/13/24	14	1000	700				
12	6/20/24	160	8300	2500				
13	9/5/24	150	8700	2300				
14	11/5/24	170	11000	2900				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.51	0.89	0.91				
Mann-Kendall Statistic (S):		0	29	23				
Confidence Factor:		47.8%	93.7%	88.3%				
Concentration Trend:		Stable	Prob. Increasing	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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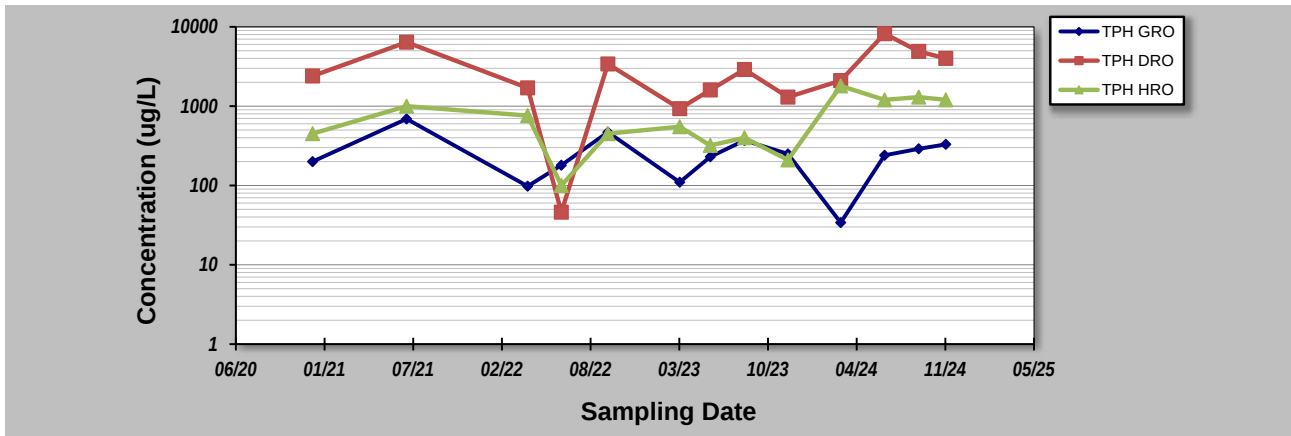
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **RMW-01**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	12/8/20	200	2400	450				
2	7/8/21	690	6400	1000				
3	4/7/22	98	1700	760				
4	6/22/22	180	46	100				
5	10/5/22	470	3400	450				
6	3/16/23	110	930	550				
7	5/24/23	230	1600	320				
8	8/9/23	370	2900	400				
9	11/15/23	250	1300	210				
10	3/13/24	34	2100	1800				
11	6/20/24	240	8200	1200				
12	9/5/24	290	4900	1300				
13	11/5/24	330	4000	1200				
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.64	0.75	0.68				
Mann-Kendall Statistic (S):		8	16	18				
Confidence Factor:		66.2%	81.6%	84.7%				
Concentration Trend:		No Trend	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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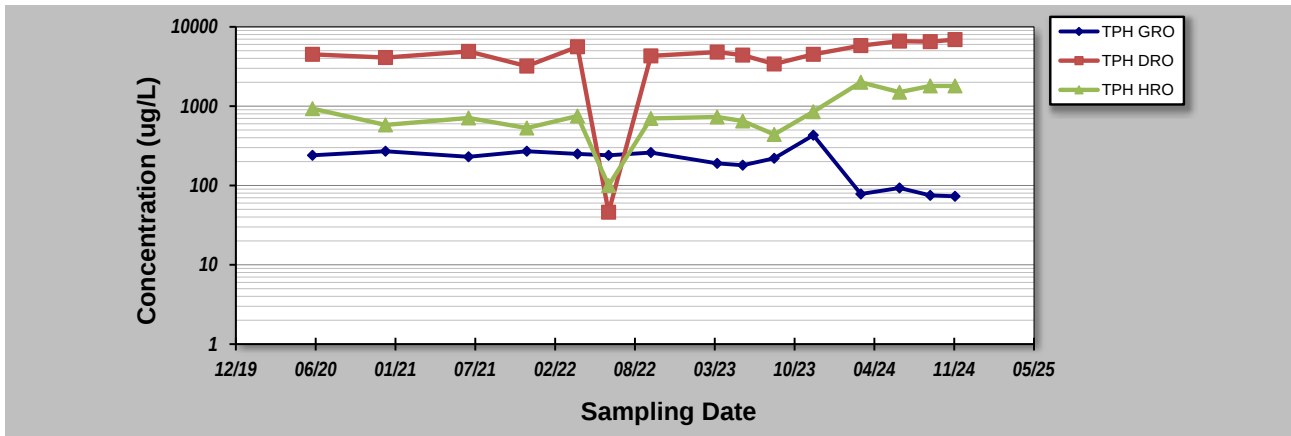
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-01**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	6/10/20	240	4500	930				
2	12/10/20	270	4100	580				
3	7/6/21	230	4900	710				
4	11/29/21	270	3200	530				
5	4/5/22	250	5600	750				
6	6/22/22	240	46	100				
7	10/6/22	260	4300	700				
8	3/21/23	190	4800	730				
9	5/24/23	180	4400	650				
10	8/11/23	220	3400	440				
11	11/17/23	430	4500	850				
12	3/15/24	78	5800	2000				
13	6/20/24	93	6600	1500				
14	9/5/24	75	6500	1800				
15	11/6/24	73	6900	1800				
16								
17								
18								
19								
20								
Coefficient of Variation:		0.47	0.36	0.60				
Mann-Kendall Statistic (S):		-57	46	38				
Confidence Factor:		99.8%	98.8%	96.7%				
Concentration Trend:		Decreasing	Increasing	Increasing				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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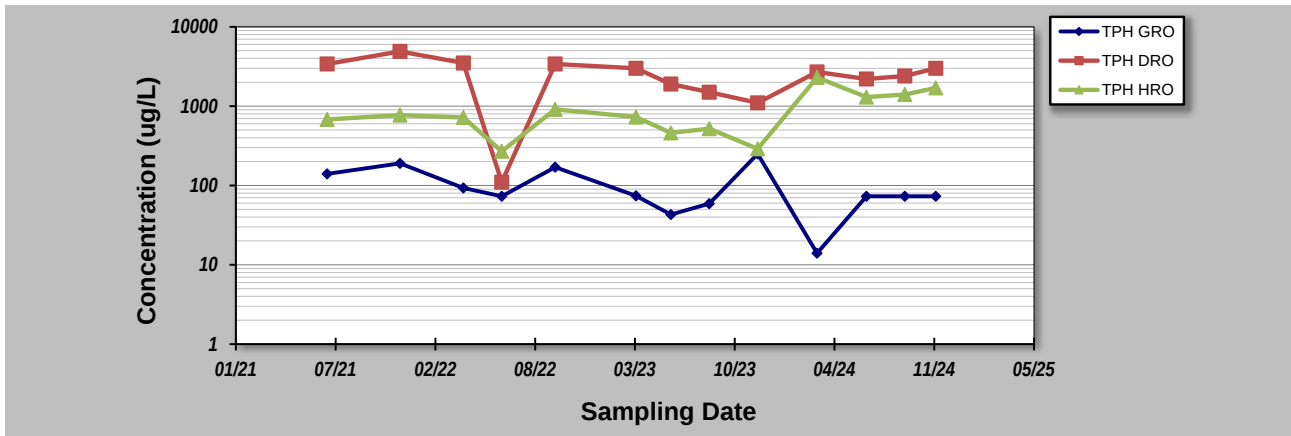
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-3A**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	7/6/21	140	3400	680				
2	11/29/21	190	4900	770				
3	4/5/22	93	3500	720				
4	6/21/22	73	110	270				
5	10/6/22	170	3400	910				
6	3/17/23	74	3000	730				
7	5/26/23	43	1900	460				
8	8/11/23	59	1500	520				
9	11/16/23	250	1100	290				
10	3/14/24	14	2700	2300				
11	6/21/24	73	2200	1300				
12	9/6/24	73	2400	1400				
13	11/7/24	73	3000	1700				
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.65	0.48	0.64				
Mann-Kendall Statistic (S):		-26	-22	26				
Confidence Factor:		93.6%	89.8%	93.6%				
Concentration Trend:		Prob. Decreasing	Stable	Prob. Increasing				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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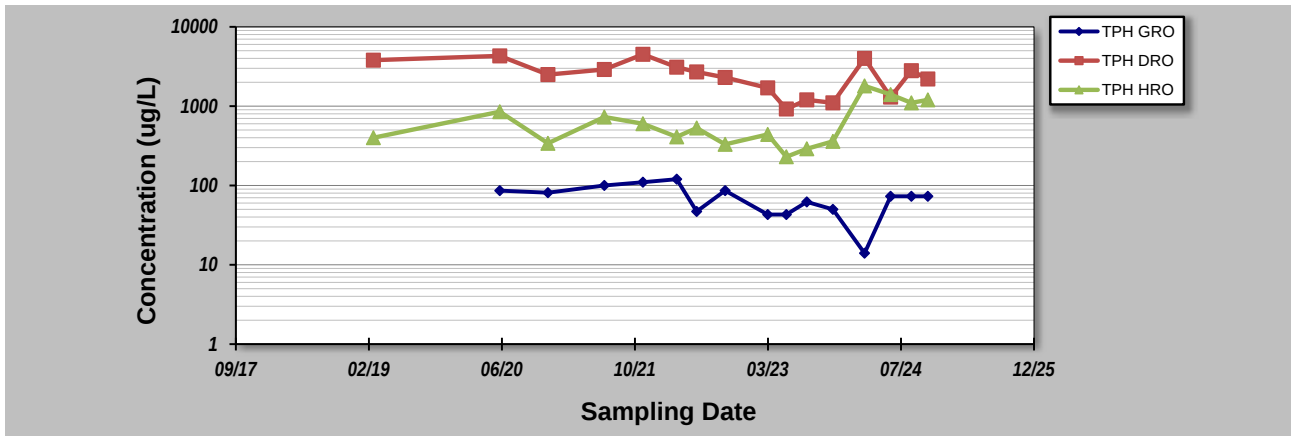
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-08**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		3800	400				
2	6/10/20	86	4300	850				
3	12/8/20	81	2500	340				
4	7/8/21	100	2900	730				
5	11/30/21	110	4500	600				
6	4/6/22	120	3100	410				
7	6/20/22	47	2700	530				
8	10/5/22	86	2300	330				
9	3/14/23	43	1700	440				
10	5/23/23	43	920	230				
11	8/8/23	62	1200	290				
12	11/14/23	50	1100	360				
13	3/12/24	14	4000	1800				
14	6/18/24	73	1300	1400				
15	9/4/24	73	2800	1100				
16	11/5/24	73	2200	1200				
17								
18								
19								
20								
Coefficient of Variation:		0.40	0.45	0.67				
Mann-Kendall Statistic (S):		-30	-46	16				
Confidence Factor:		92.3%	97.9%	74.7%				
Concentration Trend:		Prob. Decreasing	Decreasing	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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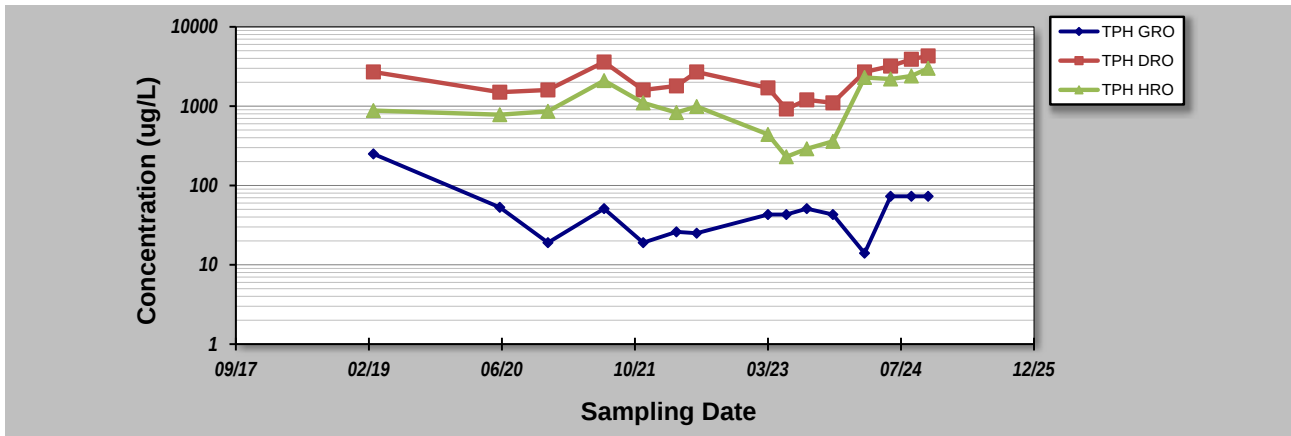
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-09**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19	250	2700	880				
2	6/10/20	53	1500	780				
3	12/8/20	19	1600	860				
4	7/7/21	51	3600	2100				
5	12/1/21	19	1600	1100				
6	4/5/22	26	1800	830				
7	6/20/22	25	2700	990				
8	3/15/23	43	1700	440				
9	5/23/23	43	920	230				
10	8/8/23	51	1200	290				
11	11/14/23	43	1100	360				
12	3/12/24	14	2700	2300				
13	6/18/24	73	3200	2200				
14	9/4/24	73	3900	2400				
15	11/6/24	73	4300	3000				
16								
17								
18								
19								
20								
Coefficient of Variation:		1.00	0.47	0.72				
Mann-Kendall Statistic (S):		15	25	23				
Confidence Factor:		75.2%	88.0%	85.9%				
Concentration Trend:		No Trend	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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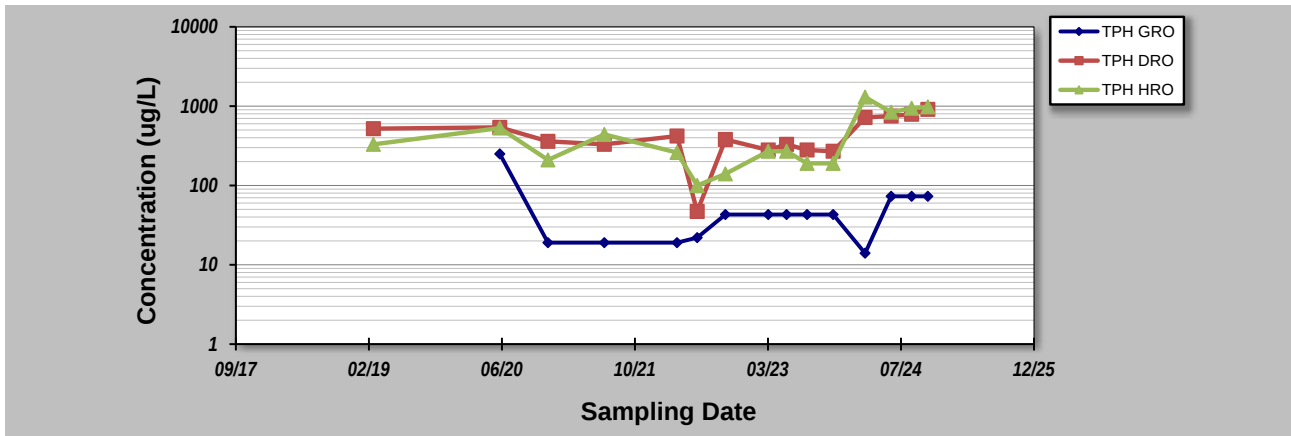
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-12**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		520	330				
2	6/10/20	250	540	530				
3	12/8/20	19	360	210				
4	7/8/21	19	330	440				
5	4/7/22	19	420	260				
6	6/22/22	22	47	100				
7	10/6/22	43	380	140				
8	3/16/23	43	280	270				
9	5/24/23	43	330	270				
10	8/9/23	43	280	190				
11	11/15/23	43	270	190				
12	3/14/24	14	720	1300				
13	6/20/24	73	750	840				
14	9/5/24	73	790	940				
15	11/5/24	73	910	980				
16								
17								
18								
19								
20								
Coefficient of Variation:		1.08	0.52	0.80				
Mann-Kendall Statistic (S):		31	19	25				
Confidence Factor:		95.0%	81.0%	88.0%				
Concentration Trend:		Prob. Increasing	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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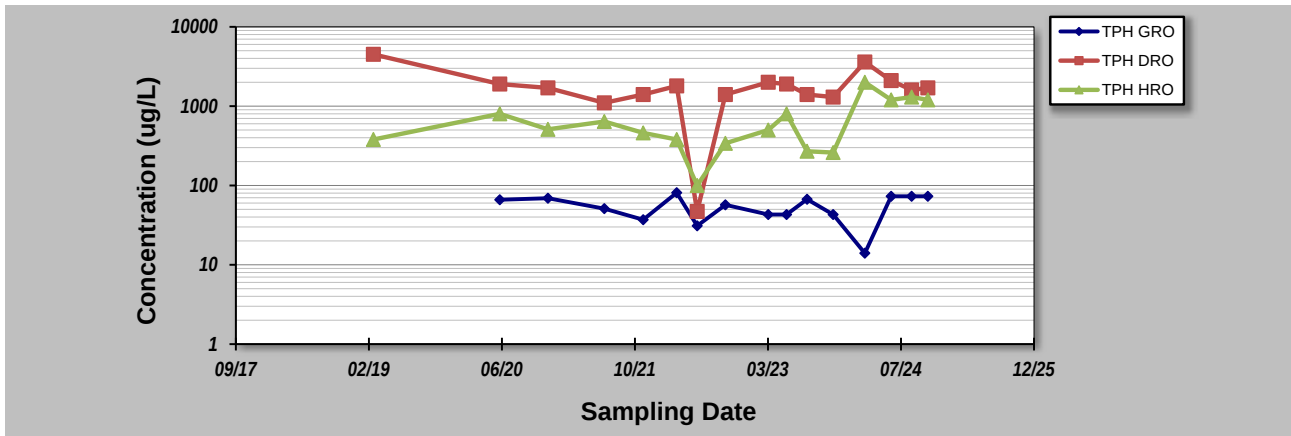
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-15**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		4500	380				
2	6/10/20	66	1900	800				
3	12/8/20	69	1700	510				
4	7/8/21	51	1100	640				
5	12/1/21	37	1400	460				
6	4/6/22	81	1800	380				
7	6/22/22	31	47	100				
8	10/6/22	57	1400	340				
9	3/16/23	43	2000	500				
10	5/24/23	43	1900	800				
11	8/9/23	67	1400	270				
12	11/15/23	43	1300	260				
13	3/13/24	14	3600	2000				
14	6/20/24	73	2100	1200				
15	9/5/24	73	1600	1300				
16	11/5/24	73	1700	1200				
17								
18								
19								
20								
Coefficient of Variation:		0.35	0.54	0.72				
Mann-Kendall Statistic (S):		9	1	23				
Confidence Factor:		65.1%	50.0%	83.6%				
Concentration Trend:		No Trend	No Trend	No Trend				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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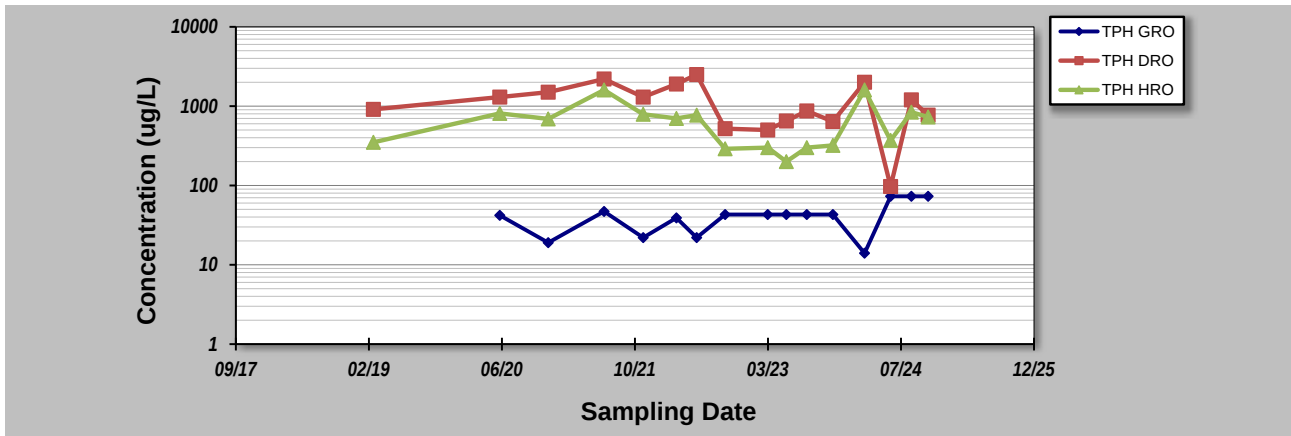
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-18**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	2/21/19		910	350				
2	6/10/20	42	1300	810				
3	12/9/20	19	1500	690				
4	7/7/21	47	2200	1600				
5	12/1/21	22	1300	790				
6	4/5/22	39	1900	700				
7	6/20/22	22	2500	770				
8	10/5/22	43	520	290				
9	3/14/23	43	500	300				
10	5/23/23	43	650	200				
11	8/8/23	43	870	300				
12	11/14/23	43	640	320				
13	3/12/24	14	2000	1600				
14	6/18/24	73	97	370				
15	9/4/24	73	1200	840				
16	11/6/24	73	770	730				
17								
18								
19								
20								
Coefficient of Variation:		0.44	0.58	0.64				
Mann-Kendall Statistic (S):		43	-27	-4				
Confidence Factor:		98.2%	87.7%	55.3%				
Concentration Trend:		Increasing	Stable	Stable				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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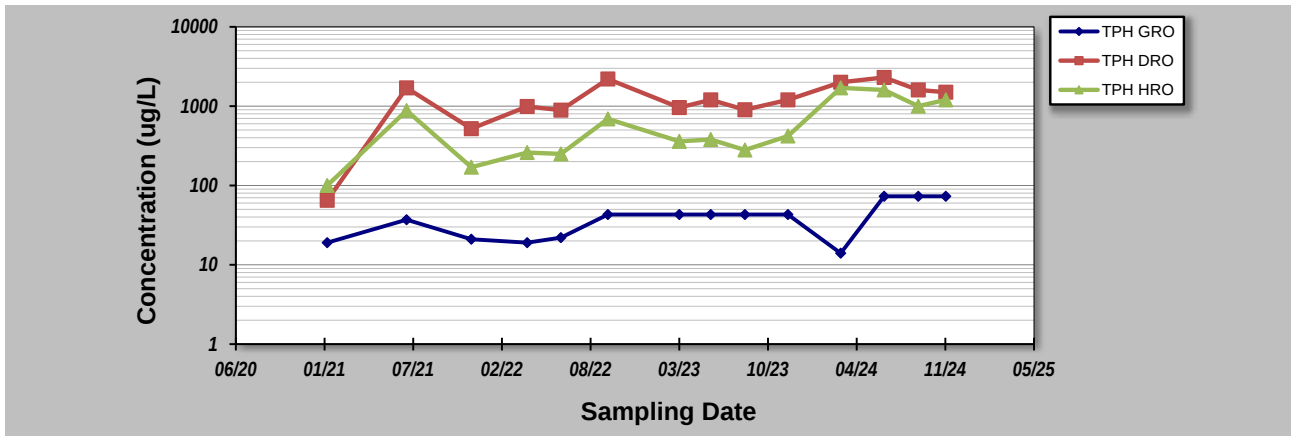
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-25**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	1/10/21	19	65	100				
2	7/8/21	37	1700	880				
3	12/1/21	21	520	170				
4	4/6/22	19	990	260				
5	6/21/22	22	890	250				
6	10/5/22	43	2200	690				
7	3/15/23	43	960	360				
8	5/25/23	43	1200	380				
9	8/10/23	43	900	280				
10	11/15/23	43	1200	420				
11	3/13/24	14	2000	1700				
12	6/19/24	73	2300	1600				
13	9/4/24	73	1600	1000				
14	11/5/24	73	1500	1200				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.51	0.50	0.80				
Mann-Kendall Statistic (S):		49	38	51				
Confidence Factor:		99.7%	97.9%	99.8%				
Concentration Trend:		Increasing	Increasing	Increasing				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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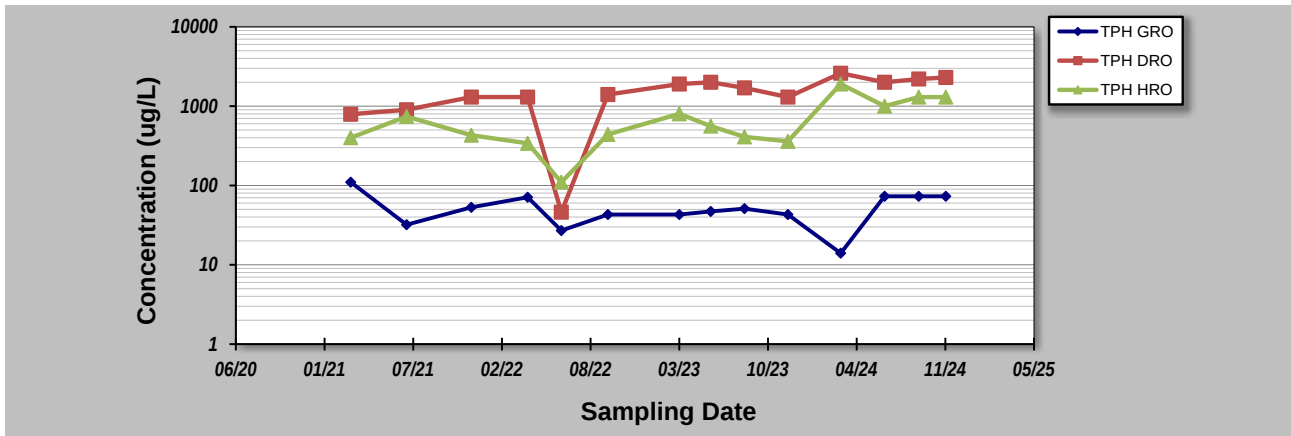
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: **8-Dec-24**
 Facility Name: **Chevron Tacoma Former Bulk Terminal**
 Conducted By: **B. CLAND**

Job ID: **D-27**
 Constituent: **Total Petroleum Hydrocarbons (TPH)**
 Concentration Units: **ug/L**

Sampling Point ID:		TPH GRO	TPH DRO	TPH HRO				
Sampling Event	Sampling Date	TOTAL PETROLEUM HYDROCARBONS (TPH) CONCENTRATION (ug/L)						
1	3/4/21	110	790	400				
2	7/8/21	32	900	740				
3	12/1/21	53	1300	430				
4	4/7/22	71	1300	340				
5	6/22/22	27	46	110				
6	10/5/22	43	1400	440				
7	3/15/23	43	1900	800				
8	5/25/23	47	2000	560				
9	8/9/23	51	1700	410				
10	11/15/23	43	1300	360				
11	3/13/24	14	2600	1900				
12	6/20/24	73	2000	1000				
13	9/5/24	73	2200	1300				
14	11/5/24	73	2300	1300				
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.45	0.44	0.69				
Mann-Kendall Statistic (S):		11	61	38				
Confidence Factor:		70.5%	>99.9%	97.9%				
Concentration Trend:		No Trend	Increasing	Increasing				



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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Appendix G

Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

DI 2406058165

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NONEREQUIRED		Manifest Document No. NH58165	2. Page 1 of 1
3. Generator's Name and Mailing Address Chevron EMC-Chevron 1001348 1648 E J St Tacoma WA 98421				Site Address : SAME	
4. Generator's Phone (925) 842-3872					
5. Transporter 1 Company Name Clean Harbors Environmental Services, Inc.		6. US EPA ID Number MAD039322250		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone (761) 792-5000	
9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029		10. US EPA ID Number UTD991301748		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (435) 884-8900	
11. WASTE DESCRIPTION				Containers No. Type	13. Total Quantity
a. NON DOT REGULATED MATERIAL, (PURGE, GROUNDWATER CONTAMINATED WITH VOC'S, NON-HAZARDOUS)				09 DM	3100 P
b. NON DOT REGULATED MATERIAL, (SOIL CONTAMINATED WITH VOC'S (NON HAZARDOUS))				06 DM	3950 P
c.					
d.					
G. Additional Descriptions for Materials Listed Above 11a.CH1331019-SC 9X55 11b.CH1331020 6X55				H. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information				EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Chevron EMC-Chevron 1001348	
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Stephen T. Schott				Signature <i>[Signature]</i>	
17. Transporter 1 Acknowledgment of Receipt of Materials				Date Month Day Year 11 16 24	
Printed/Typed Name Stephen T. Schott				Signature <i>[Signature]</i>	
18. Transporter 2 Acknowledgment of Receipt of Materials				Date Month Day Year 11 16 24	
Printed/Typed Name				Signature	
19. Discrepancy Indication Space				Date Month Day Year	
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.				Signature	
Printed/Typed Name				Date Month Day Year	



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