AECOM

2025 Annual Compliance Monitoring Report

Terminal 91 Tank Farm Affected Area

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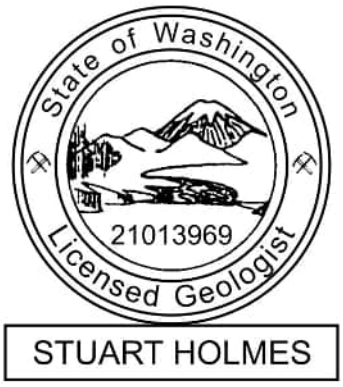

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Abbreviations

α	level of significance
AECOM	AECOM Technical Services, Inc.
AOC	Area of Concern
bgs	below ground surface
CF	Confidence Factor
CMP	Compliance Monitoring Plan
CPOC	Conditional Point of Compliance
DO	dissolved oxygen
Dx	Diesel extended
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ft	feet
ft/ft	feet per foot
Gx	Gasoline extended
IHS	Indicator Hazardous Substance
LNAPL	light non-aqueous phase liquid
m/s	meters per second
MNA	monitored natural attenuation
NWTPH	Northwest Total Petroleum Hydrocarbons
O&M	operations and maintenance
OMP	Operations and Maintenance Plan
ORP	oxidation-reduction potential
OWS	oil-water Separator
PES	PES Environmental, Inc.
PGG	Pacific Groundwater Group
S	Mann-Kendall statistic
T-91	Terminal 91
TFAA	Tank Farm Affected Area
TFLP	Tank Farm Lease Parcel
TPH	total petroleum hydrocarbons

1. Introduction

AECOM Technical Services, Inc. (AECOM) has prepared this 2025 Annual Compliance Monitoring Report to document the groundwater compliance monitoring at the Terminal 91 (T-91) Tank Farm Affected Area (TFAA). The TFAA is situated within the Port's T-91 Facility in Seattle, Washington (Figure 1).

This report has been prepared pursuant to Agreed Order No. DE-8938 between the Port of Seattle (Port) and Washington State Department of Ecology (Ecology) and in accordance with the Model Toxics Control Act under Chapter 70.105D of the Revised Code of Washington and Chapter 173-340 of the Washington Administrative Code.

The activities summarized in this annual report were conducted from January 2025 through December 2025 in accordance with the Compliance Monitoring Plan (CMP) (PES Environmental, Inc. [PES] et al. 2013a) and Ecology-approved revisions (Pacific Groundwater Group [PGG] 2019). The scope of work for monitoring activities documented in this report is described in the following documents:

- CMP, Terminal 91 Tank Farm Cleanup, Port of Seattle, Seattle, Washington (PES et al. 2013a), and
- Operations and Maintenance Plan (OMP), Terminal 91 Tank Farm Cleanup, Port of Seattle, Seattle, Washington (PES et al. 2013b).

Compliance monitoring currently includes annual confirmation groundwater monitoring and a snapshot of the groundwater level in August and quarterly light non-aqueous phase liquid (LNAPL) gauging (Table 1). PES conducted groundwater monitoring at the TFAA through the construction phase, and the first year of performance monitoring, ending in August 2016. PGG continued the monitoring program beginning in November 2016. Ecology approved a transition to annual confirmation monitoring in September 2019 (Ecology 2019). PGG was acquired by Mott MacDonald in 2021. Mott MacDonald continued the monitoring program as a subconsultant to AECOM from March 2023 through November 2024. AECOM continued the monitoring program from November 2024 to present with field sampling assistance provided by Blaine Tech Services, Inc. (Blaine Tech).

The CMP requirements for the annual report include:

- An overview of the current cleanup status identifying significant results and trends (Sections 1.1, 2.5, and 4);
- Water level contour map using data from shallow groundwater monitoring wells sampled during the 2025 event (Section 4.2; Figure 2);
- Tabulated current and historical monitoring and water table elevation data (Figures 3 through 5, Tables 2a through 5);
- A narrative discussion of data validation and a description of all data qualified or rejected (Section 4.4);
- A summary of the routine operations and maintenance (O&M) inspections (Section 4.5);
- A summary of CMP deviations during the monitoring period (Section 5); and
- A 5-year Indicator Hazardous Substance (IHS) Monitoring Review completed with recommendations for revised monitoring (Section 6).

1.1 Key Results

Key results from December 2024–November 2025 confirmation monitoring include the following:

- Groundwater flow directions are consistent with previous flow directions, suggesting a relatively stable groundwater flow setting along previously identified flow pathways.
- IHS concentrations at Conditional Point of Compliance (CPOC) wells remain below cleanup levels.
- Groundwater concentrations at non-CPOC wells are generally consistent with previous concentrations or appear to decrease in concentration. Some values still exceed applicable cleanup levels.

2. Project Background

Section 2 summarizes the general site history, subsurface conditions, and cleanup actions conducted between 2005 and 2014. The *Construction Completion Report* and its references provide additional detail on the background and history of the TFAA (PES et al. 2017).

2.1 Project Description and History

T-91 is located at 2001 West Garfield Street, Seattle, Washington, and includes approximately 216 acres (Figure 1). The TFAA occupies approximately 17 acres in the central portion of T-91. The TFAA includes the Tank Farm Lease Parcel (TFLP), identified as the “Tank Farm” within the TFAA, as well as Area of Concern (AOC) 11, which is the location of an old tank farm that was inactive after 1942 (Figure 2). The TFLP is a contiguous parcel covering approximately 4 acres located immediately north of the Magnolia Bridge (Figures 2). The TFAA is flat and paved or covered with buildings.

The TFLP is located at the north end of the TFAA. Historical activities within the TFLP associated with releases to the environment included a bulk petroleum tank farm present from the 1920s through 2005 and dangerous waste treatment and storage operations conducted from 1980 through 1995. The aboveground portion of the Tank Farm, including the tanks, containment walls, and other aboveground piping and equipment, was demolished and removed in 2005 as part of an interim remedial action (Roth Consulting 2005). The final cleanup was performed in 2013–2015 and included the construction of an engineered cutoff wall, asphalt cover, and three LNAPL recovery trenches. Remedial construction is described further in the *Construction Completion Report* (PES et al. 2017).

2.2 Subsurface Conditions

The geology, hydrogeology, and nature and extent of contamination are informed by investigations conducted at T-91 since 1988. The results of these investigations are detailed in the *Remedial Investigation Summary Report* (Roth Consulting 2007) and Final Cleanup Action Plan (Ecology 2010). The geology and hydrostratigraphy of the Site are briefly summarized below.

2.3 Geology

Four lithologic units have been identified beneath the TFLP and adjacent areas; in order of increasing depth, these units include the following:

- The Shallow Sand Unit consists of fill material placed over shallow marine and tidal marsh deposits of Smith Cove during the early 1900s. It consists primarily of moderately to poorly sorted, fine- to medium-grained unconsolidated sand with laminations of silty sand and gravel lenses occurring locally. The Shallow Sand Unit extends vertically from just below the paved ground surface to between 15 and 20 feet (ft) below ground surface (bgs).
- The Silty Sand Unit consists of gray or olive, moderately sorted, fine- to medium-grained silty sand with traces of coarse sand, shell debris, and wood debris. This unit is interpreted to be native marsh, intertidal, and shallow marine sediments that formed the pre-fill surface in the Smith Cove Waterway and the adjacent tidelands. Beneath the TFLP and adjacent upland areas, the Silty Sand Unit generally occurs at depths of 15 to 20 ft bgs and varies from 20 ft thick beneath the BNSF rail yard east of the TFLP to 5 ft thick or less in the southwest corner of the TFLP. A gravel layer was found within the Silty Sand Unit in some locations that consists of moderately to poorly sorted, silty sandy gravel.
- The Deep Sand Unit directly underlies the Silty Sand Unit and consists primarily of poorly to moderately sorted, medium- to coarse-grained sand and gravelly sand, with isolated occurrences of silt. However, beneath the northern portion of the TFLP, the Deep Sand Unit is composed of only 6 to 8 ft of sand, gravelly sand, and sandy gravel, with the remaining deeper portions of the unit characterized by interbedded silty sand and sand. The depth to the top of the Deep Sand Unit varies from approximately 25 ft bgs at the center of the TFLP to as much as 45 ft bgs at the north end of Pier 90.

- The Silty Clayey Sand Unit underlies the Deep Sand Unit and consists of soft to stiff fine-grained sediments, primarily silty clay and clayey silt, with lesser amounts of silt and silty clayey sand. The top of the Silty Clayey Sand Unit is shallowest beneath the eastern portion of the TFLP, where it occurs as shallow as 42 ft bgs.

2.4 Hydrostratigraphy

2.4.1 Shallow Aquifer

The Shallow Aquifer is generally present in the Shallow Sand Unit and is separated from the Deep Confined Aquifer by the Silty Sand Unit that acts as an upper confining unit. Water level data collected during routine well monitoring show that the dominant unconfined groundwater flow direction is generally toward the south beneath the TFLP, TFAA, and piers, with flow locally to the southwest beneath AOC 11, located in the western portion of the TFAA (Figure 2). Water levels in the monitoring wells typically range between 3 and 10 ft bgs and generally correlate with seasonal variations in precipitation rates, with the highest water levels observed during the wet season. The typical horizontal gradient beneath the TFLP is approximately 0.001 feet per foot (ft/ft).

Downward vertical gradients between the Shallow Aquifer and Deep Confined Aquifer are noted throughout the TFAA. Vertical gradients typically range from approximately 0.018 to 0.040 ft/ft, generally decreasing to the south. Despite the presence of downward vertical gradients, the low hydraulic conductivity of the upper confining unit (Silty Sand Unit), which ranges from 10^{-7} meters per second (m/s) to 10^{-4} m/s, likely prevents significant downward movement of Shallow Aquifer groundwater under most of the TFAA.

Tidal influence, as reflected in higher tidal efficiency and lower time lag, on Shallow Aquifer groundwater levels under the piers is generally greatest near the southern ends of the piers, lessening progressively inland toward the bulkheads that run east to west parallel to the shoreline. Tidal efficiencies are notably higher on Pier 91 than Pier 90 and in areas without bulkheads or significant silt locally within the Shallow Aquifer. Little tidal influence is evident in Shallow Aquifer wells at the south end of the TFLP.

2.4.2 Deep Confined Aquifer

The Deep Confined Aquifer is present in the Deep Sand Unit. The tidally averaged groundwater flow direction in the Deep Confined Aquifer beneath and shoreward (i.e., south) of the TFLP is toward the south. As in the Shallow Aquifer, water levels in the Deep Confined Aquifer respond to seasonal variations in precipitation rates, with the highest water levels observed during the wet season. The typical horizontal gradient of the Deep Confined Aquifer is approximately 0.003 ft/ft beneath the TFAA.

Tidal influence on Deep Confined Aquifer groundwater levels under the piers is similar to the Shallow Aquifer, with greater influence near the southern ends of the piers. Time lags are generally shorter in the Deep Confined Aquifer under the piers than in the Shallow Aquifer. Tidal influence is evident in Deep Confined Aquifer wells in most of the TFLP; the shortest time lags are along the southern boundary of the TFLP, and the longest time lags are in the north.

2.5 Cleanup Action Summary

The TFAA cleanup actions completed between 2005 and 2014 consisted of the cleanup action for the TFLP and the cleanup actions addressing secondary source areas, other potential future exposures, and the start of compliance monitoring (PES et al. 2017). These actions are briefly summarized in the subsection below.

2.5.1 Cleanup Action for the Tank Farm Lease Parcel

The primary objectives for the TFLP cleanup action are to prevent migration of LNAPL from the TFLP source area and to prevent future surface product seeps from occurring (PES et al. 2013c). Specific actions that have been implemented since 2017 include:

- Removing existing above-ground structures and asphalt paving; removing the remaining subsurface utilities, structures, and tank bases that appear to be the source of the historical surface seeps; and removing highly contaminated soil encountered during the tank base removal process;
- Constructing a subsurface cutoff wall around the perimeter of the former tank farm;

- Installing an enhanced passive LNAPL recovery system and conducting regular inspections and O&M according to the OMP; and
- Backfilling and grading the area, constructing a new asphalt cover over the area, and constructing new stormwater drainage improvements.

Actions for Secondary Source Areas.

- Excavating secondary source areas at Solid Waste Management Unit 30; and
- Cleaning and decommissioning underground fuel pipelines remaining in the TFAA.

Actions for Potential Future Exposures.

- Maintaining ongoing institutional controls, such as health and safety requirements for site workers, and addressing potential exposures when future land use changes are made, including a restrictive environmental covenant filed in 2017; and
- Add monitored natural attenuation (MNA) to the groundwater sampling program to confirm that natural attenuation processes continue to degrade chemicals. MNA parameters were removed from the program after the 2020 sampling event and indicate persistent conditions favorable to anaerobic degradation of petroleum along the groundwater flow paths.

3. Compliance Groundwater Monitoring Activities

This section describes the field methods and activities undertaken to perform compliance monitoring from December 2024 through November 2025, including four quarterly LNAPL gauging events and one annual groundwater monitoring event. The results are summarized in Section 4. Field data forms are included in Appendix A.

The compliance monitoring program is designed to assess how the cleanup action is affecting groundwater quality and to evaluate if cleanup levels continue to be achieved at the CPOC wells. The CPOC wells are located at the downgradient end of the Pier 90, Pier 91, and AOC 11 flow paths (Figure 2).

Shallow Aquifer CPOC wells include:

- CP-GP08, located at the downgradient end of the Pier 90 flow path;
- CP-GP09R and CP-GP10, located at the downgradient end of the Pier 91 flow path; and
- CP-GP14, located at the downgradient end of the AOC 11 flow path.

Deep Confined Aquifer CPOC wells include:

- PNO-MW-06B, located on the Pier 91 flow path; and
- CP-GP01B, located on the Pier 90 flow path.

The groundwater compliance monitoring program follows the schedule specified in the CMP. Consistent with the CMP, groundwater sampling shifted to a semi-annual schedule in 2018, and an annual schedule in 2019, with quarterly LNAPL gauging (PGG 2019; Ecology 2019). The monitoring well network and analyte list was updated for the current monitoring period based on the recommendations in the *2020 Annual Compliance Monitoring Report* and as approved by Ecology (PGG 2020; Ecology 2021). Table 1 summarizes the current LNAPL and groundwater compliance monitoring program.

3.1 Quarterly LNAPL Monitoring

Under the direction of AECOM, Blaine Tech personnel collected LNAPL measurements at the east and west end of three LNAPL recovery trenches and at three monitoring wells (CP-107, CP-110, and PNO-MW104) on February 10,

2025; May 16, 2025; August 21, 2025; and November 10, 2025 (Table 2a). The presence of LNAPL and the depth to water were measured from the surveyed top of casing to the nearest 0.01 ft using an electronic oil-water interface probe. LNAPL recovery was not performed at any of the wells during this annual monitoring period due to observation of LNAPL thicknesses equal to or less than the 0.25 ft threshold, as specified in the CMP and OMP (PES et al. 2013a, b). LNAPL thickness ranged from sheen or not measurable (< 0.01 ft) to 0.24 ft in 2025. Historic LNAPL thickness from 2015-2025 are summarized Table 2b.

3.2 Annual Groundwater Gauging

AECOM and Blaine Tech personnel jointly conducted annual groundwater gauging in 42 of the 46 active CMP monitoring wells on August 20, 2025 (Tables 3a and 3b; Figure 2). Wells CP-GP05, CP-GP06, and CP-GP14 were not gauged due to safety hazards presented by potential shedding of concrete from the bridge above. Well CP-GP03BR was repaired in 2024 but was not gauged during this event due to miscommunication with the field team. Future gauging events will include this well.

3.3 Annual Groundwater Sampling and Analysis

Annual groundwater sampling was conducted on August 20 and 21, 2025 (Table 3). Groundwater was monitored during purging for field parameters including temperature, pH, specific conductance, dissolved oxygen (DO), and oxidation-reduction potential (ORP) at each well sampled. Well CP-GP14 was not sampled due to the safety hazards described above.

The groundwater samples were collected using low-flow sampling methods. A peristaltic pump and dedicated tubing were used for purging and sample collection. Groundwater was purged until field parameters stabilized prior to sample collection. Samples were collected directly into laboratory-provided containers. Sample containers were stored in coolers with ice, and chain of custody was maintained through delivery to the analytical laboratory.

Samples were submitted to Friedman & Bruya, Inc., an Ecology-accredited laboratory located in Seattle, Washington, for analysis on August 21, 2025. Samples were analyzed for the full analyte list including:

- Gasoline-range hydrocarbons using Northwest Total Petroleum Hydrocarbons (NWTPH)-Gasoline extended (Gx), and
- Diesel- and heavy oil-range hydrocarbons using NWTPH-Diesel extended (Dx).
  - NWTPH-Dx analysis was conducted with silica gel cleanup, consistent with the CMP.

4. Compliance Monitoring Results

This section summarizes the results of the annual groundwater monitoring event, four quarterly LNAPL monitoring events, and the O&M of the oil-water separators. Monitoring data are presented in Tables 2a through 5, and groundwater elevation and analytical concentration data are shown on Figures 2 and 3, respectively.

4.1 LNAPL Monitoring Results

Table 2a summarizes LNAPL measurements during the reporting period. LNAPL recovery was not performed during the reporting period because LNAPL thickness was not greater than 0.25 ft at any of the wells monitored, consistent with the CMP and OMP (PES et al. 2013a, b). The LNAPL monitoring field data forms are included in Appendix A.

Key LNAPL observations during this monitoring period are as follows:

- LNAPL was not detected in well CP-110, which is located between AOC 11 and the TFLP.
- LNAPL was intermittently detected in well CP-107, Trench 2E, Trench 5E, and Trench 2W, with thicknesses from 0 to 0.23 ft.
- LNAPL was consistently detected in well PNO-MW104, Trench 3E, Trench 3W, and Trench 5W, with the greatest thickness measurements recorded in well PNO-MW104 and Trench 5W (0.24 ft).

LNAPL thickness appears to vary seasonally based on rising and falling water levels. LNAPL thickness measurements are typically the greatest in summer through fall events when water levels are the lowest (Figure 5). This is consistent with the expected LNAPL behavior in unconfined aquifers (Newell 1995).

4.2 Groundwater Elevations and Flow Direction

Depth to water measurements are summarized in Table 3a, and field forms are included in Appendix A. Table 3a also includes the calculated groundwater elevations, referenced to mean lower low water (MLLW) vertical datum. The top of casing elevations in Table 3a include updated survey values from supplemental survey measurements in 2015 and 2016 at selected wells. Groundwater elevations of wells that contain LNAPL (CP-107 and PNO-MW104) are corrected to account for the density of the LNAPL.

Table 3b provides a summary of the 2016 to 2025 water level elevations for active T-91 monitoring wells.

Shallow aquifer groundwater elevations were used to generate groundwater contours and evaluate the shallow flow direction during August 2025 (Figure 2). The inferred Shallow Aquifer flow direction is to the south and is consistent with previously inferred groundwater flow directions. As a result, no adjustments to the CMP are necessary based on groundwater flow direction.

4.3 Groundwater Monitoring Results

4.3.1 Field Parameters

The groundwater quality was monitored for field parameters temperature, pH, specific conductance, DO, and ORP. The August 2025 groundwater field parameter results are presented in Table 4.

4.3.2 Analytical Results

The analytical results for total petroleum hydrocarbons (TPH) are summarized in Table 4. Groundwater concentration time series plots for petroleum hydrocarbons are shown in Figures 4a and 4b.

The CPOC wells include the Shallow Aquifer wells CP-GP01B, CP-GP08, CP-GP09R, CP-GP10, and CP-GP14 and Deep Confined Aquifer well PNO-MW06B. As indicated in previous sections, CP-GP14 was not sampled during this event due to safety concerns. In August 2025, groundwater concentrations were below cleanup levels at all COPC wells sampled for gasoline-, diesel-, and heavy oil-range hydrocarbons.

Key CPOC well results included the following:

- No sampled wells had cleanup level exceedances for gasoline-, diesel-, or heavy oil-range hydrocarbons during the monitoring period.
- Petroleum hydrocarbons were not detected at any of the sampled wells.

TPH results exceeded cleanup levels at three non-CPOC wells in the TFAA. These results were generally consistent with expected site conditions. Wells with exceedances included:

- CP-106A, for gasoline- and diesel-range hydrocarbons; and
- PNO-MW06A and PNO-MW103, for diesel-range hydrocarbons only.

Figure 3 summarizes the groundwater monitoring analytical results from 2021–2025 at each of the sampled wells. The data generally indicate continued compliance with site cleanup objectives. Petroleum hydrocarbon concentrations were generally consistent with previous monitoring events, with compliance at all CPOC wells.

General trends in the data show low concentration or no detections at all sampled CPOC wells. The time series data plotted in Figures 4a and 4b indicate concentrations are generally decreasing with time. Mann-Kendall trend analysis of groundwater monitoring data is presented and discussed in Section 6.

4.4 Data Validation and Management

Samples were submitted to Friedman & Bruya, Inc. for the August 2025 event, and the laboratory data report is provided in Appendix B.

Data were reviewed using Stage 2 data validation consistent with United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review (EPA 2016a, b). Data completeness, holding times, laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, laboratory control samples, quantitation limits, method blanks, field quality control samples, and trip blanks were reviewed. No additional data qualifiers were added to data presented in this report. Data quality assurance review key points include the following:

- NWTPH-Dx analysis was conducted with silica gel cleanup during the sample extraction and preparation phase. Silica gel cleanup is specified in the CMP.
- Samples were analyzed within applicable holding times.
- Laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, and laboratory control samples were within the applicable quality assurance ranges.
- Laboratory control samples were within acceptable ranges.

The reviewed data are considered generally acceptable for the intended use.

4.5 Stormwater O&M Inspections

Inspections of the stormwater treatment system were conducted routinely by Port Marine Maintenance staff. The oil/water separator (OWS) was inspected for defects or problems, and oil absorbent pads were replaced as needed. No defects or other problems were observed at any of the OWS during the O&M visits on March 20 and June 9, 2025. On June 9, 2025, oil absorbent pads were replaced at all locations, per the bi-annual requirement.

Inspection Forms are included as Appendix C of this document.

5. Compliance Monitoring Plan Deviations

There were few deviations from the CMP in the 2025 monitoring year.

Water levels were not measured at well CP-GP03BR due to miscommunication between management and field staff. This well has historically not been gauged due to a seized monument lid. Repairs were completed in 2024. Wells CP-GP05, CP-GP06, and CP-GP14 were not gauged due to overhead hazards posed by failing concrete from the Magnolia Bridge.

6. IHS Monitoring Review

The most recent IHS Monitoring Review conducted at T-91 was summarized in the 2020 Terminal 91 Annual Compliance Monitoring Report and conducted in accordance with the CMP (PGG 2020). The CMP includes a process to review monitoring data and consider revisions to the groundwater monitoring plan every 5 years. An evaluation report is required after 5 years of groundwater monitoring, and 2025 marks another 5 years of LNAPL and groundwater monitoring.

This section reviews data to assess if the IHS components can be removed from the program or if the number of wells included in sampling can be revised, while still achieving the goals of the monitoring program. The analysis may support revision to the monitoring program based on the findings that:

- Cleanup levels continue to be met at the CPOC wells,
- Plume concentrations are stable, and
- LNAPL monitoring shows stable to decreasing LNAPL levels.

A new evaluation has been conducted using recent data and is organized below in the order of criteria listed in the CMP. The 2025 groundwater monitoring data are compiled in Table 4, analytical results from 2015 to 2025 are summarized by constituent in Table 5, and Mann-Kendall trend test results are summarized in Table 6.

6.1 Concentrations at CPOC Wells

Historic IHS concentrations at CPOC wells are summarized in Table 5. Cleanup levels have not been exceeded in any of the CPOC wells since 2017. CPOC wells sampled in 2021 were analyzed by NWTPH-Dx without silica gel cleanup, so concentrations of both diesel- and heavy oil-range hydrocarbons were flagged to be biased high and are not considered to represent exceedances of the relevant cleanup levels.

6.2 Mann-Kendall Analysis for Trend

The Mann-Kendall trend test was performed on all constituents for which there was sufficient data. The test was performed on data from 2017 to 2025 to remove trend influences due to systematic differences in data collected before 2017 (PGG 2019). All ten of the sampled non-CPOC wells and one CPOC well (PNO-MW06B) were evaluated. CPOC wells with detections of contaminants at rates of 25% or lower were excluded from this trend analysis. Analytical results for diesel- and heavy oil-range hydrocarbons from the 2021 groundwater monitoring event are biased high because they did not include silica gel preparation, which is required in the CMP. Due to this, and the fact that diesel- and heavy oil-range results have since returned to levels typical for each well, these data are also excluded from the trend analysis. The laboratory reporting limit was used as the concentration value in this trend test when a given constituent was not detected. Figures 4a and 4b present time series plots of the constituents.

The Mann-Kendall non-parametric trend test was applied to all wells individually to evaluate whether groundwater concentrations have a trend (e.g., increasing, decreasing, or no trend). The Mann-Kendall statistic (S) was computed in Excel by examining all possible pairs of measurements in the data set and scoring each pair as follows. An earlier measurement lower in magnitude than a later one is assigned a value of +1. If an earlier value is greater in magnitude than a later sample, it is scored as –1; two identical measurement values are assigned a value of 0. After scoring each pair in this way and adding up the total to get S, a positive value of S implies that a majority of the differences between earlier and later measurements are positive, suggesting an increasing trend over time. On the other hand, a negative S value suggests a decreasing trend over time. The Confidence Factor (CF) modifies the S calculation to indicate the degree of confidence in the trend result. The CF is the measure of confidence for rejecting the null hypothesis of “no trend” vs. time. The p-value is the probability of obtaining a value of S equal to or greater than the calculated value for n events when no trend is present. CF is defined as the percentage of 1 minus the p-value, (1 - p-value)%.

For this analysis, the null hypothesis that no increasing trend exists was applied with a 0.05 level of significance (α) on each of the comparisons. The hypothesis was rejected when the p-value was less than 0.05, indicating that a statistically significant trend is present in the data.

A statistically significant decreasing trend was determined at all of the sampled wells for heavy oil-range hydrocarbons (Table 6). The CPOC well included in this test (PNO-MW06B) suggested a decreasing trend for all constituents and CP-GP11 and CP-106A showed a decreasing trend for diesel-range hydrocarbons (Table 6). Although the rest of the wells and their respective constituents have a negative S value and time series charts generally indicating decreasing concentrations from 2017-2025, the p-values were not less than 0.05; therefore, they are not considered statistically significant. Based on these results, the groundwater plume appears to be stable to decreasing.

6.3 LNAPL Trends

LNAPL thicknesses are summarized in Table 1b and Figure 5. LNAPL thickness has not exceeded the 0.25-ft recovery threshold since installation of the LNAPL enhanced recovery trenches, with the exception of a single

measurement at Trench 5W in 2015. Trench 5E historically had a maximum LNAPL thickness of 0.08 ft until an outlier measurement was recorded during the August 2025 event (0.23 ft). The LNAPL thickness decreased to typical levels as measured in November 2025.

LNAPL thicknesses are overall variable and are generally greatest during the August and/or November event. The typical peak in LNAPL thickness is concurrent with the seasonal low water level. This inverse correlation between water level and LNAPL thickness is consistent with typical LNAPL behavior in an unconfined aquifer. LNAPL thicknesses do not qualitatively show significant trends over the period of record (2015 through 2025).

6.4 Recommendations for Revised Monitoring

Starting in 2020, only TPH as gasoline-, diesel-, and heavy oil-range hydrocarbons were analyzed in groundwater samples from the Site. Gasoline- and diesel-range hydrocarbon concentrations exceeded the respective cleanup levels in one or more samples, with the bulk of detections and exceedances occurring in the diesel-range (Table 5). There were no heavy oil-range exceedances and minimal gasoline-range exceedances observed in the last 5 years. The prevalence of detections and presence of exceedances in the last 5 years indicates these constituents should continue to be included in the monitoring program.

Results from the aggregate data set from the last 5 years (2021–2025) are summarized by the number of analyses, number of detections, prevalence of exceedances of cleanup levels, and Mann-Kendall trend test results (Table 7). The purpose of this review is to provide the basis of recommendations regarding future monitoring by identifying wells with no recent cleanup level exceedances, and stable or decreasing concentrations. Based on this evaluation, it is recommended that the following wells be removed from the groundwater sampling program: CP-203B, CP-GP02, CP-GP11, and PNO-MW02. In the past 5 years, these wells have not had any diesel-, heavy oil-, or gasoline-range exceedances, and the Mann-Kendall trend test confirmed that concentrations are stable or decreasing. These wells are also located near other wells that will continue to be sampled annually. It is recommended that the wells continue to be gauged during future sampling events.

With the exception of well CP_203B, all of the wells that are recommended to conclude groundwater sampling are part of the Shallow Aquifer network. Well CP_203B is immediately adjacent to a Shallow Aquifer well, CP-103A, which can be used to evaluate the possibility of vertical migration of contaminants. Table 5 shows that even when there were diesel-range exceedances observed at well CP_103A, the levels of diesel-range TPH have remained below cleanup levels at well CP_203B since November 2016. The analytical data observed in the vicinity of wells CP_203B and CP_103A indicate that the petroleum hydrocarbon concentrations attenuate rapidly with depth and provide evidence of limited hydraulic communication between the shallow and deep aquifers.

6.5 Conclusions

This evaluation shows that cleanup levels continue to be met at CPOC wells, the plume appears stable (or decreasing), and the LNAPL levels appear to be stable. AECOM recommends the removal of wells CP-203B, CP-GP02, CP-GP11, and PNO-MW02 from the groundwater sampling program as indicated above. No changes in the LNAPL monitoring or groundwater gauging are recommended but another 5-year evaluation of the monitoring program should be conducted in 2030.

7. Limitations

The conclusions presented in this report are professional opinions based solely upon the data described in this report. They are intended exclusively for the purpose outlined herein and the Site location and project indicated. This report was prepared for the sole use and benefit of the Port. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or reuse of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Given that the scope of services for this investigation was limited to the groundwater monitoring locations indicated, and that conditions may vary between the points explored, it is possible that currently unrecognized subsurface conditions may be present at the Site. Opinions relating to environmental and geologic conditions are based on

limited data, and actual conditions may vary from those conditions encountered at the times when, and locations where, data were obtained. No express or implied representation or warranty is included or intended in this report except that the work was performed within the limits prescribed by the Port with the customary thoroughness and competence of professionals working in the same area on similar projects.

8. References

Ecology (Washington State Department of Ecology). 2010. Final Cleanup Action Plan, Port of Seattle Terminal 91 Site, Seattle, Washington. December 15.

Ecology. 2019. Approval: Transition to Annual Confirmation Monitoring in the Tank Farm Affected Area. September 18.

Ecology. 2021. Letter from Tom Mackie, Department of Ecology Re: Approval (with comments) of Annual Compliance Monitoring Report (November 2019 through August 2020) Terminal 91 Tank Farm Affected Area Seattle, Washington. January 8.

EPA (U.S. Environmental Protection Agency). 2016a. National Functional Guidelines for Data Review for Inorganic Super-fund Methods Data Review. OLEM 9355.0-133. EPA-540-R-2016-001. September 2016.

EPA. 2016b. National Functional Guidelines for Data Review for Superfund Organic Methods Data Review. OLEM 9355.0-134. EPA-540-R-2016-002. September 2016.

Newell, C., S. Acree, R. Ross, S. and Huling. 1995. EPA Ground Water Issue, Light Nonaqueous Phase Liquids. EPA/540/S-95/500. https://www.epa.gov/sites/default/files/2015-06/documents/lnapl.pdf

PES et al. (PES Environmental, Inc. and Vista Consultants). 2013a. Engineering Design Report. Terminal 91 Tank Farm Cleanup, Port of Seattle, Seattle, Washington. Prepared for Port of Seattle. July 11.

PES et al. 2013a. Compliance Monitoring Plan, Terminal 91 Tank Farm Cleanup, Port of Seattle, Seattle, Washington. Prepared for Port of Seattle. July 11.

PES et al. 2013b. Operation and Maintenance Plan, Terminal 91 Tank Farm Cleanup, Port of Seattle, Seattle, Washington. Prepared for Port of Seattle. July 11.

PES et al. 2017. Construction Report, Terminal 91 Tank Farm Affected Area Cleanup Action, Seattle, Washington. October 2017.

PGG (Pacific Groundwater Group). 2019. TFAA Compliance Monitoring Recommendation and Statistical Analysis, Port of Seattle – Terminal 91 Site, Agreed Order No. DE 8938. Prepared for Port of Seattle. August 20.

PGG. 2020. Annual Compliance Monitoring Report (November 2019 through August 2020) Terminal 91 Tank Farm Affected Area. Prepared for Port of Seattle. October 30.

Roth Consulting.2005. Independent Interim Remedial Action Report Terminal 91 Tank Farm Demolition 2005. October 18.

Roth Consulting. 2007. Remedial Investigation Summary Report for the Terminal 91 Tank Farm Site in Seattle, Washington. Prepared for Port of Seattle. August 2007.

Tables

Table 1. Current Compliance Monitoring Program

Port of Seattle Terminal 91

Well or Riser	Quarterly LNAPL Monitoring	Annual Groundwater Gauging	Annual Groundwater Sampling
CPOC Wells			
CP-GP01B		X	X
CP-GP08		X	X
CP-GP09R		X	X
CP-GP10		X	X
CP-GP14		X	X
PNO-MW06B		X	X
Monitoring Wells			
B1-93		X	
CP-103A		X	X
CP-104A		X	X
CP-104B		X	
CP-106A		X	X
CP-106B		X	
CP-107	X	X	
CP-108A		X	X
CP-108B		X	
CP-110	X	X	
CP-111		X	
CP-112		X	
CP-113		X	
CP-114		X	
CP-115A		X	
CP-115B		X	
CP-121		X	
CP-122B		X	
CP-203B		X	X
CP-205A		X	
CP-205B		X	
CP-GP01A		X	
CP-GP02		X	X
CP-GP03AR		X	
CP-GP03BR		X	
CP-GP04R		X	
CP-GP05		X	
CP-GP06		X	
CP-GP07R		X	
CP-GP11		X	X
CP-GP12		X	
CP-GP13		X	
CP-PR-13		X	
CP-W210		X	
PNO-MW02		X	X
PNO-MW06A		X	X
PNO-MW101		X	
PNO-MW103		X	X
PNO-MW104	X	X	
UT-MW39-1		X	
LNAPL Recovery Trench Risers			
Trench 2E	X		
Trench 2W	X		
Trench 3E	X		
Trench 3W	X		
Trench 5E	X		
Trench 5W	X		

Notes:

Annual groundwater sampling includes alaysis of total petroleum hydrocarbons (gasoline-, diesel-, and heavy oil-range).

This current compliance monitoring program was modified from the 2013 Compliance Monitoring Plan following recommendations from the 2020 Compliance Monitoring Report

LNAPL: light non-aqueous phase liquid

Table 2a. Feburary 2025 through November 2025 LNAPL Monitoring Summary

Port of Seattle Terminal 91

Well or Riser	Date	Easting	Northing	Depth to LNAPL (ft BTOC)	Depth to Water (ft BTOC)	LNAPL Thickness (ft)
CP-107	2/10/2025	1258549.03	235217.38	ND	5.52	0.00
CP-107	5/16/2025	1258549.03	235217.38	ND	5.76	0.00
CP-107	8/21/2025	1258549.03	235217.38	6.45	6.47	0.02
CP-107	11/10/2025	1258549.03	235217.38	5.70	5.74	0.04
CP-110	2/10/2025	1258545.20	235064.79	ND	6.39	0.00
CP-110	5/16/2025	1258545.20	235064.79	ND	6.62	0.00
CP-110	8/21/2025	1258545.20	235064.79	ND	7.14	0.00
CP-110	11/10/2025	1258545.20	235064.79	ND	6.44	0.00
PNO-MW104	2/10/2025	1258507.67	234985.46	6.65	6.81	0.16
PNO-MW104	5/16/2025	1258507.67	234985.46	6.87	7.11	0.24
PNO-MW104	8/21/2025	1258507.67	234985.46	7.30	7.53	0.23
PNO-MW104	11/10/2025	1258507.67	234985.46	6.62	6.85	0.23
Trench 2E	2/10/2025	1258689.24	235172.27	10.21	10.24	0.03
Trench 2E	5/16/2025	1258689.24	235172.27	ND	10.25	0.00
Trench 2E	8/21/2025	1258689.24	235172.27	ND	10.93	0.00
Trench 2E	11/10/2025	1258689.24	235172.27	ND	10.80	0.00
Trench 2W	2/10/2025	1258614.92	235174.81	ND	7.15	0.00
Trench 2W	5/16/2025	1258614.92	235174.81	ND	7.19	0.00
Trench 2W	8/21/2025	1258614.92	235174.81	ND	7.84	0.00
Trench 2W	11/10/2025	1258614.92	235174.81	7.71	7.81	0.10
Trench 3E	2/10/2025	1258683.13	235311.86	8.09	8.24	0.15
Trench 3E	5/16/2025	1258683.13	235311.86	8.05	8.17	0.12
Trench 3E	8/21/2025	1258683.13	235311.86	8.72	8.80	0.08
Trench 3E	11/10/2025	1258683.13	235311.86	8.62	8.74	0.12
Trench 3W	2/10/2025	1258607.59	235312.57	6.86	6.91	0.05
Trench 3W	5/16/2025	1258607.59	235312.57	6.88	6.93	0.05
Trench 3W	8/21/2025	1258607.59	235312.57	7.51	7.58	0.07
Trench 3W	11/10/2025	1258607.59	235312.57	7.42	7.52	0.10
Trench 5E	2/10/2025	1258571.45	235310.84	ND	4.54	0.00
Trench 5E	5/16/2025	1258571.45	235310.84	ND	4.82	0.00
Trench 5E	8/21/2025	1258571.45	235310.84	5.89	6.12	0.23
Trench 5E	11/10/2025	1258571.45	235310.84	ND	4.82	0.00
Trench 5W	2/10/2025	1258516.23	235312.10	4.53	4.71	0.18
Trench 5W	5/16/2025	1258516.23	235312.10	4.78	4.94	0.16
Trench 5W	8/21/2025	1258516.23	235312.10	5.51	5.75	0.24
Trench 5W	11/10/2025	1258516.23	235312.10	4.81	4.89	0.08

Notes:

ND: non-detect; LNAPL not detected at measurable thickness.

LNAPL: light non-aqueous phase liquid

LNAPL top and bottom measured as distance below top of riser pipe in feet.

LNAPL thickness in feet was measured twice in the field; reported values are the final measurement.

Table 2b. LNAPL Thickness Summary (2015-2025)

Port of Seattle Terminal 91

Date	LNAPL Thickness (ft)								
	CP-107	CP-110	PNO-MW104	Trench 2E	Trench 2W	Trench 3E	Trench 3W	Trench 5E	Trench 5W
8/6/2015	0.00	0.00	0.23	0.00	0.00	0.00	0.03	0.00	0.07
9/15/2015	0.01	0.01	0.18	0.02	0.00	0.04	0.05	0.00	0.19
10/14/2015	0.00	0.00	0.21	0.04	0.17	0.07	0.07	0.01	0.11
11/12/2015	0.00	0.00	0.19	0.10	0.19	0.06	0.06	0.00	**0.70**
11/16/2015	0.00	0.00	0.15	0.03	0.02	0.04	0.02	NA	0.03
2/8/2016	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.02
5/2/2016	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.09
8/15/2016	0.00	0.00	0.20	0.05	0.06	0.04	0.02	0.03	0.10
11/14/2016	0.00	0.00	0.04	0.01	0.01	0.01	0.02	0.02	0.04
2/13/2017	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.18
5/10/2017	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.06
8/15/2017	NA	NA	NA	0.07	0.00	0.00	0.00	0.06	0.11
11/30/2017	0.00	0.00	0.11	0.04	0.07	0.12	0.05	0.08	0.06
2/15/2018	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.07
5/9/2018	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.06
8/15/2018	0.00	0.00	0.13	0.01	0.00	0.00	0.01	0.03	0.02
11/25/2018	0.00	0.00	0.06	0.02	0.03	0.03	0.04	0.02	0.03
2/21/2019	0.00	0.00	0.11	0.00	0.01	0.01	0.01	0.00	0.02
5/30/2019	0.00	0.00	0.08	0.00	NA	0.01	0.00	0.00	0.04
8/22/2019	0.09	0.00	0.19	0.00	0.00	0.02	0.02	0.00	0.01
11/19/2019	0.00	0.00	0.10	0.01	0.02	0.05	0.05	0.02	0.02
2/26/2020	0.00	0.00	0.08	0.00	0.00	0.01	0.00	0.00	0.03
5/27/2020	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.03
8/7/2020	0.02	0.01	0.11	0.01	0.00	0.04	0.02	0.01	0.03
11/18/2020	0.00	0.00	0.11	0.00	0.02	0.02	0.05	0.00	0.02
2/9/2021	0.00	0.01	0.13	0.00	0.00	0.00	0.01	0.00	0.01
5/27/2021	0.00	0.01	0.14	0.00	0.01	0.01	0.00	0.00	0.06
8/26/2021	0.01	0.00	0.24	0.00	0.01	0.01	0.02	0.00	0.00
11/17/2021	0.00	0.00	0.16	0.00	0.02	0.04	0.05	0.01	0.04
2/25/2022	0.00	0.01	0.11	0.00	0.00	NA	0.01	0.01	0.02
5/10/2022	0.00	0.01	0.13	0.01	0.01	NA	0.01	0.02	0.06
8/25/2022	0.00	0.00	0.09	0.00	0.00	NA	0.00	0.00	0.00
11/9/2022	0.00	0.01	0.17	0.00	0.00	0.03	0.01	0.02	0.01
2/27/2023	0.01	0.01	0.18	NA	0.01	0.01	0.01	0.02	0.03
5/1/2023	0.00	0.01	0.19	0.01	0.00	0.00	0.01	0.01	0.07
8/11/2023	0.00	0.00	0.25	0.00	0.00	0.05	NA	0.00	0.10
11/14/2023	0.00	0.00	0.18	0.00	0.00	0.07	NA	0.00	0.06
2/28/2024	0.00	0.00	0.19	0.00	0.00	NA	NA	0.01	0.04
5/7/2024	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.10
8/7/2024	0.00	0.00	0.24	0.00	0.00	0.01	0.00	0.00	0.05
11/1/2024	0.00	0.00	0.23	0.00	0.00	0.06	0.04	0.00	0.07
2/10/2025	0.00	0.00	0.16	0.03	0.00	0.15	0.05	0.00	0.18
5/16/2025	0.00	0.00	0.24	0.00	0.00	0.12	0.05	0.00	0.16
8/21/2025	0.02	0.00	0.23	0.00	0.00	0.08	0.07	0.23	0.24
11/10/2025	0.04	0.00	0.23	0.00	0.10	0.12	0.10	0.00	0.08

Notes:

Bold indicates thickness greater than the recovery threshold (0.25 feet).

NA: well not accessible at time of gauging event

Table 3a. 2025 Water Level Snapshot (August 20, 2025)

Port of Seattle Terminal 91

Location	Aquifer	Northing	Easting	Top of Casing Elevation (ft, MLLW)	LNAPL Thickness (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft, MLLW)
B1-93	Shallow	235056.488	1259053.02	17.24	NM	6.91	10.33
CP-103A	Shallow	234972.532	1258577.49	17.21	NM	6.83	10.38
CP-104A	Shallow	235419.92	1258578.53	17.49	NM	5.94	11.55
CP-104B	Deep	235426.99	1258578.29	17.39	NM	6.19	11.20
CP-106A	Shallow	235301.93	1258919.04	18.11	NM	7.03	11.08
CP-106B	Deep	235311.62	1258908.04	18.06	NM	7.33	10.73
CP-107	Shallow	235217.377	1258549.03	17.70	0.02	6.43	11.29
CP-108A	Shallow	234962.68	1258931.98	17.19	NM	6.67	10.52
CP-108B	Deep	234962.46	1258927.28	17.22	NM	10.32	6.90
CP-110	Shallow	235064.79	1258545.2	17.46	0.00	7.15	10.31
CP-111	Shallow	234994.011	1258361.25	17.74	NM	7.46	10.28
CP-112	Shallow	235347.293	1258424.51	17.40	NM	6.03	11.37
CP-113	Shallow	235538.49	1258574.6	17.36	NM	5.91	11.45
CP-114	Shallow	235478.726	1258827.05	17.17	NM	6.47	10.70
CP-115A	Shallow	235411.433	1258723.96	17.74	NM	6.25	11.49
CP-115B	Deep	235417.48	1258737.17	17.87	NM	6.71	11.16
CP-121	Shallow	235478.449	1258668.95	17.91	NM	6.19	11.72
CP-122B	Deep	235241.133	1258967.84	17.07	NM	6.42	10.65
CP-203B	Deep	234972.13	1258599.96	17.56	NM	8.95	8.61
CP-205A	Shallow	235677.44	1258726.8	17.69	NM	6.16	11.53
CP-205B	Deep	235682.021	1258725.15	17.72	NM	6.60	11.12
CP-GP01A	Shallow	234783.171	1259137.77	17.79	NM	8.58	9.21
CP-GP01B	Deep	234780.155	1259127.74	17.58	NM	12.14	5.44
CP-GP02	Shallow	234870.331	1259056.83	17.52	NM	7.83	9.69
CP-GP03AR	Shallow	234510.996	1258309.84	18.00	NM	9.21	8.79
CP-GP03BR	Deep	234481.72	1258309.70	17.91	NM	NA	NA
CP-GP04R	Shallow	234734.039	1258317.31	18.14	NM	8.67	9.47
CP-GP05	Shallow	234925.882	1258075.23	17.75	NM	NA	NA
CP-GP06	Shallow	234926.509	1257941.21	17.85	NM	NA	NA
CP-GP07R	Shallow	234873.769	1258267.68	18.07	NM	8.21	9.86
CP-GP08	Shallow	234457.14	1259008.14	17.27	NM	8.99	8.28
CP-GP09R	Shallow	234287.947	1258417.29	17.67	NM	9.17	8.50
CP-GP10	Shallow	234293.606	1258302.87	17.68	NM	9.74	7.94
CP-GP11	Shallow	235153.122	1258319.95	16.98	NM	6.50	10.48
CP-GP12	Shallow	235283.731	1258226.95	17.31	NM	6.84	10.47
CP-GP13	Shallow	235085.865	1258020.07	16.45	NM	6.18	10.27
CP-GP14	Shallow	234927.563	1257862.3	17.60	NM	NA	NA
CP-PR-13	Shallow	235133.41	1258256.72	17.34	NM	6.97	10.37
CP-W210	Shallow	234966.79	1258734.14	17.40	NM	7.47	9.93
PNO-MW02	Shallow	234813.143	1258463.27	17.87	NM	8.53	9.34
PNO-MW06A	Shallow	234773.718	1258421.89	18.21	NM	13.47	4.74
PNO-MW06B	Deep	234764.073	1258421.79	18.17	NM	8.78	9.39
PNO-MW101	Shallow	234996.104	1258273.01	17.72	NM	7.60	10.12
PNO-MW103	Shallow	234472.89	1258453.46	17.53	NM	8.95	8.58
PNO-MW104	Shallow	234985.46	1258507.67	17.70	0.23	7.62	10.26
UT-MW39-1	Shallow	235313.48	1258481.61	16.89	NM	5.66	11.23

Notes:

BTOC: below top of casting

MLLW: mean lower low water;

NA: well not accessible at time of snap shot.

NM: not measured

* Depth to water is inconsistent with the historical data.

Groundwater elevation is corrected for the density of LNAPL in CP-107, CP-110, and PNO-MW104. Formula assumes 80% of the LNAPL thickness is added to the groundwater elevation.

Groundwater Elevation = Top of Casing Elevation - Depth to Water + (LNAPL thickness * 0.8)

Table 3b. Groundwater Elevations Summary (2016-2025)

Port of Seattle Terminal 91

Date	Groundwater Elevation (ft, MLLW)															
	B1-93	CP-103A	CP-104A	CP-104B	CP-106A	CP-106B	CP-107	CP-108A	CP-108B	CP-110	CP-111	CP-112	CP-113	CP-114	CP-115A	CP-115B
11/14/2016	11.85	11.71	13.80	12.77	13.16	12.52	12.85	11.97	11.03	11.63	11.12	12.68	13.55	13.09	13.70	12.91
2/13/2017	--	12.18	14.34	13.35	13.60	13.31	13.36	12.52	9.94	12.09	11.36	13.12	14.41	13.72	14.54	14.68
5/9/2017	12.05	11.73	13.70	12.97	12.91	12.88	13.13	11.97	7.29	11.69	10.96	12.83	13.71	13.01	13.82	12.85
8/15/2017	10.49	10.58	11.97	11.67	11.38	11.38	11.55	10.70	8.93	10.52	10.35	11.67	11.87	11.15	11.91	11.62
11/30/2017	11.60	11.56	13.34	12.54	12.82	12.47	12.61	11.72	10.82	11.49	11.34	12.54	13.30	12.69	13.42	12.72
5/9/2018	11.34	11.16	12.99	12.34	12.36	12.27	12.31	11.38	8.97	11.12	10.64	12.38	12.97	12.51	13.08	11.69
11/25/2018	10.37	10.58	11.80	11.45	11.63	11.16	11.45	10.74	9.27	10.50	10.60	11.58	11.69	11.02	11.24	11.90
5/29/2019	--	10.70	12.20	11.78	11.60	11.58	11.72	10.89	8.27	10.63	10.50	--	--	11.39	12.17	11.78
5/27/2020	10.67	10.85	12.46	11.91	11.79	11.55	11.93	10.94	7.70	10.78	10.49	12.00	12.38	11.69	12.48	11.95
8/26/2021	--	10.36	11.65	11.33	11.14	10.93	11.29	10.40	7.53	10.28	10.32	11.44	11.55	10.82	11.62	11.31
8/25/2022	10.53	10.57	11.96	11.59	11.35	11.36	11.58	10.69	6.62	10.50	10.43	11.70	11.90	11.17	11.92	11.54
8/9/2023	-7.14*	10.50	11.74	11.49	11.54	11.08	11.36	10.58	7.54	10.38	10.44	11.54	11.63	10.90	11.69	11.49
8/7/2024	-10.67*	10.43	11.70	11.39	11.19	11.06	11.35	10.51	7.61	10.35	10.26	11.46	11.61	10.86	11.67	11.13
8/20/2025	10.33	10.38	11.55	11.20	11.08	10.73	11.29	10.52	6.90	10.31	10.28	11.37	11.45	10.70	11.49	11.16

Date	Groundwater Elevation (ft, MLLW)															
	CP-121	CP-122B	CP-203B	CP-205A	CP-205B	CP-GP01A	CP-GP01B	CP-GP02	CP-GP03AR	CP-GP03BR	CP-GP04R	CP-GP05	CP-GP06	CP-GP07R	CP-GP08	CP-GP09R
11/14/2016	13.90	12.44	10.48	13.79	13.30	10.65	10.18	11.16	10.33	7.33	10.37	11.35	10.71	10.60	9.98	9.86
2/13/2017	14.76	13.10	10.82	14.75	14.53	10.82	9.68	11.56	10.22	9.47	10.59	10.87	10.93	10.79	10.34	9.74
5/9/2017	14.03	12.84	9.62	13.95	13.84	10.00	6.41	10.98	8.75	3.57	9.80	9.73	10.10	10.32	9.66	8.31
8/15/2017	12.14	11.28	9.29	11.99	11.87	9.72	8.65	9.93	9.42	7.86	9.70	9.95	10.03	9.97	8.72	8.98
11/30/2017	13.67	12.23	10.54	13.57	13.47	10.48	10.28	10.81	10.12	12.97	10.43	10.64	10.87	10.36	9.90	9.32
5/9/2018	13.28	12.18	9.65	13.17	12.79	9.80	8.43	10.47	8.99	8.37	9.70	9.61	9.92	10.10	9.20	8.54
11/25/2018	11.98	10.92	9.60	11.81	11.58	10.03	--	9.99	9.89	8.69	10.06	10.31	10.33	10.14	9.02	9.52
5/29/2019	12.40	11.39	9.05	12.25	12.03	9.31	6.98	10.05	8.63	6.50	9.51	9.50	9.65	9.94	8.90	8.27
5/27/2020	12.70	--	8.98	12.57	12.17	9.63	7.54	10.14	9.03	4.27	9.63	9.62	9.83	9.98	9.08	8.72
8/26/2021	11.84	10.82	9.33	11.65	11.44	9.17	6.80	9.72	8.72	--	9.42	9.46	9.76	9.88	8.78	8.77
8/25/2022	12.16	11.22	9.34	11.99	11.72	9.34	5.97	9.95	8.65	--	9.49	9.55	9.75	9.87	8.85	8.35
8/9/2023	11.90	11.16	9.23	11.74	11.74	9.38	6.65	9.87	8.88	--	9.60	9.63	9.96	9.92	8.95	8.67
8/7/2024	11.87	10.93	8.83	11.71	11.53	9.14	6.69	9.67	8.97	--	9.52	9.59	9.83	9.85	8.84	8.44
8/20/2025	11.72	10.65	8.61	11.53	11.12	9.21	5.44	9.69	8.79	--	9.47	--	--	9.86	8.28	8.50

Date	Groundwater Elevation (ft, MLLW)													
	CP-GP10	CP-GP11	CP-GP12	CP-GP13	CP-GP14	CP-PR-13	CP-W210	PNO-MW02	PNO-MW06A	PNO-MW06B	PNO-MW101	PNO-MW103	PNO-MW104	UT-MW39-1
11/14/2016	9.75	11.41	11.47	10.19	10.91	11.07	11.36	10.54	10.40	8.79	11.07	9.76	11.50	12.69
2/13/2017	9.45	11.56	11.54	7.44	10.67	11.25	13.71	10.63	10.73	9.94	11.11	9.84	11.80	13.16
5/9/2017	--	11.23	11.23	9.86	9.75	10.93	11.27	10.03	9.89	6.39	10.67	8.49	13.50	12.90
8/15/2017	8.68	10.60	10.52	9.55	9.88	10.43	10.11	9.47	9.59	8.33	10.18	8.90	10.40	11.65
11/30/2017	8.98	11.32	11.52	10.20	10.60	11.29	11.04	10.31	10.41	11.79	10.95	9.51	11.30	12.48
5/9/2018	8.04	10.92	10.90	9.56	9.61	9.64	10.66	9.67	9.73	9.03	10.40	8.64	10.89	12.36
11/25/2018	9.16	10.67	10.61	9.69	10.28	10.55	10.11	9.69	9.89	9.28	10.32	9.34	10.51	10.52
5/29/2019	7.72	10.68	10.67	9.38	9.41	10.48	10.24	9.54	9.53	7.93	10.22	8.46	10.54	11.83
5/27/2020	8.29	10.73	11.91	9.44	9.70	10.55	10.34	9.61	9.64	6.28	10.25	8.74	10.60	12.01
8/26/2021	8.22	9.56	10.40	9.45	9.56	10.37	9.89	9.45	9.42	7.56	10.04	8.77	10.29	11.40
8/25/2022	7.78	10.55	10.61	9.55	9.40	10.49	10.15	9.33	9.33	6.08	10.12	8.39	10.43	11.69
8/9/2023	8.16	10.65	10.61	9.57	9.64	10.49	9.99	9.45	9.53	8.15	9.27	8.64	10.18	11.56
8/7/2024	7.90	10.48	10.46	9.40	9.54	10.35	9.93	9.42	9.54	8.38	10.07	8.71	10.17	11.40
8/20/2025	7.94	10.48	10.47	10.27	--	10.37	9.93	9.34	4.74*	9.39	10.12	8.58	10.08	11.23

Notes:

* Apparent groundwater elevation is inconsistent with the historical data.

All groundwater elevations in feet referenced to mean lower low water vertical datum (MLLW).

(--) Groundwater elevation not measured

Table 4. August 2025 Groundwater Field Parameter and Analytical Results

Port of Seattle Terminal 91

Well	CPOC Well?	Date	Field Parameters					Total Petroleum Hydrocarbons (TPH)		
			Temperature (deg C)	Specific Conductance (umhos/cm)	pH	Oxidation-Reduction Potential (mV)	Oxygen, Dissolved (mg/L)	TPH-diesel* (mg/L)	TPH-heavy oil* (mg/L)	TPH-gasoline (ug/L)
						MTCA Method A Cleanup Levels		0.50	0.50	800
CP-103A		8/20/2025	16.73	502	6.79	-111.2	0.16	0.28	0.20 U	160
CP-104A		8/20/2025	20	397	6.96	-28.7	1.05	0.36	0.20 U	240
CP-106A		8/20/2025	23.07	431	6.93	-36.9	1.14	**0.52**	0.20 U	**810**
CP-108A		8/20/2025	18.16	273	6.60	44.9	1.14	0.21	0.20 U	120
CP-203B		8/20/2025	17.8	532	6.99	-83.0	0.11	0.19	0.20 U	100
CP-GP01B	CPOC	8/20/2025	19.76	3256	7.66	-62.3	1.02	0.050 U	0.20 U	100 U
CP-GP02		8/20/2025	20.39	645	6.75	-43.9	1.03	0.35	0.20 U	230
CP-GP08	CPOC	8/20/2025	19.82	415	6.91	80.1	1.10	0.050 U	0.20 U	100 U
CP-GP09R	CPOC	8/20/2025	22.26	9753	7.98	36.9	0.38	0.050 U	0.20 U	100 U
CP-GP10	CPOC	8/20/2025	20.61	18220	8.75	39.4	1.20	0.050 U	0.20 U	100 U
CP-GP11		8/20/2025	23.55	3605	6.72	-125.3	0.21	0.050 U	0.20 U	100 U
CP-GP14	CPOC	8/20/2025	NA	NA	NA	NA	NA	NA	NA	NA
PNO-MW02		8/20/2025	21.61	589	6.62	1.8	0.09	0.10	0.20 U	100 U
PNO-MW06A		8/20/2025	23.51	1640	6.36	-65.9	0.08	**2.10**	0.36[1]	100 U
PNO-MW06B	CPOC	8/20/2025	20.93	1214	7.00	36.3	0.32	0.050 U	0.20 U	100 U
PNO-MW103		8/20/2025	19.82	1130	8.59	-87.8	0.40	**0.83**	0.20 U	240

Notes:

* NWTPH-Dx analysis conducted with silica gel cleanup as detailed in CMP.

Groundwater Cleanup Levels from PES 2009.

Bold values indicate exceedance of MTCA Method A cleanup levels

deg C: degrees Celcius

umhos/cm: micromhos per centimeter, equivalient to microsiemens per centimeter (uS/cm)

pH: logarithmic units, $-\log[H^+]$

mV: millivolts

ug/L: micrograms per liter

mg/L: milligrams per liter

U: Constituent not detected at reporting limit shown; values are gray

CPOC: conditional point of compliance

Groundwater samples were collected on August 20 and 21, 2025.

[1] The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 5: Historic Analytical Data Summary (2015-2025)

Port of Seattle Terminal 91

			CPOC Wells						Monitoring Wells															
Constituent	**Units**	**Event Date**	**CP-GP08**	**CP-GP01B**	**CP-GP09R**	**CP-GP10**	**CP-GP14**	**PNO-MW06B**	**CP-103A**	**CP-104A**	**CP-106A**	**CP-108A**	**CP-108B**	**CP-114**	**CP-203B**	**CP-205B**	**CP-GP01A**	**CP-GP02**	**CP-GP03AR**	**CP-GP05**	**CP-GP11**	**PNO-MW02**	**PNO-MW06A**	**PNO-MW101**	**PNO-MW103**
TPH-D-No Silica Gel	mg/L	8/10/2015	0.05 U	**0.641 Z**	0.05 U	0.05U	0.05 U	0.05 U	**2.14 Z**	0.408 Z	**4.62 Z**	0.05 U	0.27 Z	0.05 U	**1.45 Z**	0.05 U	0.05 U	3.88 Z	0.05 U	0.05U	0.05 U	**3.42 Z**	**3.73 Z**	0.05 U	**11.2 Z**
TPH-D-SG	mg/L	11/9/2015	0.05 U	**0.526**	0.074	0.05 U	0.113	**2.98**	**1.9**	**0.63**	**2.83**	**6.98**	**1.12**	0.05 U	**2.35**	0.05 U	0.05 U	6.75	0.152	0.1	0.05 U	**4.92**	**5.62**	0.185	**5.01**
TPH-D-SG	mg/L	2/8/2016	0.05 U	**1.04**	0.05 U	0.05 U	0.05 U	**2.26**	**3.08**	**0.555**	**1.84**	**6.54**	0.61	0.05 U	**1.68**	0.05 U	0.18	3.24	0.43	0.05U	0.05 U	**0.892**	**1.82**	0.05 U	**5.10**
TPH-D-SG	mg/L	5/3/2016	0.05 U	0.448	0.05 U	0.05 U	0.05 U	**1.98**	**0.999**	**0.806**	**6.96**	**5.33**	0.405	0.05 U	**1.52**	0.05 U	0.109	0.05 U	0.05 U	0.05U	0.05 U	0.271	**0.997**	0.078	**6.08**
TPH-D-SG	mg/L	8/15/2016	0.05 U	0.414	0.157	0.05 U	0.05 U	**2.12**	**1.83**	0.404	**2.37**	**3.96**	0.166	0.05 U	**1.94**	0.05 U	0.05 U	7.72	0.137	0.091	0.05 U	**3.78**	**3.74**	0.05 U	**1.50**
TPH-D-No Silica Gel	mg/L	11/14/2016	0.26 U	0.26 U	0.26 U	0.25 U	0.26 U	**2.8 Z**	**2.2 Z**	**0.56 Z**	**0.78 Z**	**6.2 Z**	--	0.26 U	0.25 U	0.26 U	0.26 U	0.55 Z	**0.65 Z**	0.26U	0.25 U	**3.6 Z**	**9.5 Z**	0.26 U	**5.5 Z**
TPH-D-SG	mg/L	2/13/2017	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	**0.58 X**	0.38 X	**0.7 X**	0.26 X	0.26 U	0.26 UX	0.26 UX	0.31 UX	0.26 UX	0.26 UX	0.25 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	**0.6 X**
TPH-D-SG	mg/L	5/10/2017	0.26 UX	0.26 UX	0.25 UX	0.26 UX	0.26 UX	0.26 UX	**0.53 X**	0.41 X	**0.66 X**	0.42 X	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.25 UX	0.26 UX	0.26 UX	0.26 UX	0.26 UX	0.25 UX	**0.73 X**
TPH-D-SG	mg/L	8/15/2017	0.26 UX1	0.25 UX1	0.26 UX1	0.25 UX1	0.26 UX1	0.25 UX1	**0.64 X1**	0.52 X1	**0.83 X1**	**0.53 X1**	0.27 UX1	0.25 UX1	0.36 X1	0.26 UX1	0.26 UX1	0.48 X1	0.46X1	0.25 UX1	0.26 UX1	0.45 X1	0.26 UX1	0.26 UX1	**0.73 X1**
TPH-D-SG	mg/L	11/30/2017	0.26 UX1	0.26 UX1	0.25 UX1	0.25 UX1	0.25 UX1	0.26 UX1	0.47 X1,J	0.39 X1,M	**0.65 X1,M**	0.47 X1	0.26 UX1	0.26 UX1	0.26 X1,M	0.26 UX1	0.26 UX1	0.63 X1,M	0.25 UX1	0.25 UX1	0.25 UX1	0.26 UX1	0.35 X1	0.26 UX1	**0.98 X1**
TPH-D-SG	mg/L	5/16/2018	0.26 UX1	0.26 UX1	0.26 UX1	0.25 UX1	0.25 UX1	0.26 UX1	**0.76 X1,M**	0.64 X1,M	**0.79 X1,M**	0.4 X1,M	0.31 UX1	0.26 UX1	0.3 X1,M	0.3 UX1	0.25 UX1	0.26 UX1	0.25 UX1	0.26 UX1	0.26 UX1	0.26 UX1	**0.62 X1**	0.26 UX1	**0.9 X1,M**
TPH-D-SG	mg/L	11/15/2018	0.25 UX1	0.26 UX1	0.25 UX1	--	0.26 UX1	0.25 UX1	**0.68 X1**	0.43 X1	**0.67 X1**	0.33 X1	0.26 UX1	0.25 UX1	0.37 X1	0.26 UX1	0.26 UX1	0.43 X1	0.25 UX1	0.25 UX1	0.26 UX1	0.47 X1	0.41 X1	0.25 UX1	**0.72 X1**
TPH-D-SG	mg/L	5/29/2019	0.25 UX1	0.25 UX1	0.26 UX1	0.25 UX1	0.25 UX1	0.25 UX1	**0.69 X1**	0.63 X1	**0.67 X1,M**	0.32 X1	0.26 UX1	0.25 UX1	0.44 X1	0.25 UX1	0.25 UX1	0.4 X1	0.25 UX1	0.25 UX1	0.25 UX1	0.35 X1,M	0.5 X1,M	0.25 UX1	**0.89 X1**
TPH-D-SG	mg/L	5/27/2020	0.21 UX1	0.21 UX1	0.2 UX1	0.2 UX1	0.21 UX1	0.24 X1	**0.78 X1**	0.5 X1	**0.86 X1**	**0.59 X1**	0.22 UX1	0.21 UX1	0.3 X1	0.22 UX1	0.2 UX1	0.97 X1	0.2 UX1	0.2 UX1	0.2 UX1	0.4 X1	0.34 X1	0.2 UX1	**0.86 X1**
TPH-D-No Silica Gel	mg/L	8/25/2021	0.48 Z	**1.5 Z**	0.45 Z	0.2 U	0.2 U	**2.6 Z**	**1.5 Z**	**1.0 Z**	**4.0 Z**	**2.7 Z**	--	--	**1.4 Z**	--	--	**6.2 Z**	--	--	0.22 Z	**3.7 Z**	**4.5 Z**	--	**6.2 Z**
TPH-D-SG	mg/L	8/25/2022	0.15 UX1	0.15 UX1	0.15 UX1	0.15 UX1	0.15 UX1	0.22 X1	**0.54 X1**	**0.57 X1**	**0.6 X1**	**0.72 X1**	--	--	0.36 X1	--	--	0.34 X1	--	--	0.15 UX1	0.24 X1	**0.62 X1**	--	**0.88 X1**
TPH-D-SG	mg/L	8/9/2023	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.15	0.31	0.34	0.45	0.34	--	--	0.21	--	--	0.22	--	--	0.05 U	0.055 U	0.140	--	**0.68**
TPH-D-SG	mg/L	8/7/2024	0.05	0.05 U	0.05 U	0.05 U	0.05 U	0.17	0.39	0.35	**0.59**	0.30	--	--	0.22	--	--	0.19	--	--	0.05 U	0.071	0.220	--	**0.69**
TPH-D-SG	mg/L	8/20/2025	0.050 U	0.050 U	0.050 U	0.050 U	--	0.050 U	0.28	0.36	**0.52**	0.21	--	--	0.19	--	--	0.35	--	--	0.050 U	0.100	**2.10**	--	**0.83**
TPH-O-No Silica Gel	mg/L	8/10/2015	0.13 Z	**0.65 Z**	**0.858 Z**	0.1 U	0.1 U	**0.659 Z**	0.1 U	0.1 U	6.29 Z	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.151 Z	**5.58 Z**	**0.57 Z**	0.1 U	0.1U	**2.44 Z**	2.17 Z	0.196 Z	0.1 U
TPH-O	mg/L	11/9/2015	0.1 U	0.253	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.76	3.83	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.104	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TPH-O	mg/L	2/8/2016	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.16	2.28	0.104 U	0.1 U	0.146	0.1 U	0.114	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TPH-O	mg/L	5/3/2016	0.1 U	0.446	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	6.3	0.1 U	**0.524**	0.338	0.103 U	0.1 U	0.1 U	**4.21**	0.331	0.1 U	0.1 U	**1.72**	**2.32**	0.1 U	0.1 U
TPH-O	mg/L	8/15/2016	0.1 U	**0.707**	0.314	0.1 U	0.1 U	0.1 U	0.1 U	0.24	4.04	0.1 U	**0.593**	0.118	0.1 U	0.1 U	0.15	0.1 U	0.19	0.1 U	0.1 U	0.1 U	0.1 U	0.144	**1.47**
TPH-O-No Silica Gel	mg/L	11/14/2016	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	**0.93 Z**	**0.52 Z**	0.46 Z	**2.3 Z**	**2.8 Z**	--	0.45 Z	0.41 U	0.42 U	0.41 U	**2.9 Z**	0.5 Z	0.41 U	0.4 U	**1.5 Z**	**1.9 Z**	0.41 U	**1.3 Z**
TPH-O	mg/L	2/13/2017	0.41 UX	0.42 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.4 U	0.41 UX	0.41 UX	0.49 UX	0.41 UX	0.41 UX	0.4 UX	0.41 UX	0.41 UX	0.41 UX	0.42 UX	0.41 UX	0.41 UX
TPH-O	mg/L	5/10/2017	0.42 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.42 UX	0.41 UX	0.41 UX	0.42 UX	0.41 UX	0.41 UX	0.4 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX	0.41 UX
TPH-O	mg/L	8/15/2017	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.42 UX1	0.41 UX1	0.41 UX1	0.42 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1
TPH-O	mg/L	11/30/2017	0.41 UX1	0.41 UX1	0.4 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.42 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.4 UX1	0.41 UX1	0.41 UX1	Error	0.41 UX1	0.47 X1,N
TPH-O	mg/L	5/16/2018	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.49 UX1	0.41 UX1	0.41 UX1	0.49 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1
TPH-O	mg/L	11/15/2018	0.4 UX1	0.41 UX1	0.4 UX1	--	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.4 UX1
TPH-O	mg/L	5/29/2019	0.41 UX1	0.41 UX1	0.41 UX1	0.4UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1	0.4 UX1	0.4 UX1	0.4 UX1	0.4 UX1	0.41 UX1	0.41 UX1	0.41 UX1
TPH-O	mg/L	5/27/2020	0.21 UX1	0.21UX1	0.2 UX1	0.2 UX1	0.21 UX1	0.2 UX1	0.21 UX1	0.21 UX2	0.2 UX1	0.21 UX1	0.22 UX1	0.21 UX1	0.21 UX1	0.22 UX1	0.2 UX1	0.21 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1
TPH-O-No Silica Gel	mg/L	8/25/2021	**0.66 Z**	**1.1 Z**	0.48 NZ	0.35 Z	0.26 Z	**1.3 NZ**	0.43 NZ	0.43 Z	**2.3 NZ**	**1.8 NZ**	--	--	**0.55 NZ**	--	--	**3.1 NZ**	--	--	0.27 Z	**1.1 NZ**	**2.3 NZ**	--	**1.7 NZ**
TPH-O	mg/L	8/25/2022	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	0.2 UX1	--	--	0.2 UX1	--	--	0.2 UX1	--	--	0.2 UX1	0.2 UX1	0.27 X1,N1	--	0.2 UX1
TPH-O	mg/L	8/9/2023	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	0.25 U	--	--	0.25 U	--	--	0.25 U	0.25 U	0.25 U	--	0.25 U
TPH-O	mg/L	8/7/2024	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	0.25 U	--	--	0.25 U	--	--	0.25 U	0.25 U	0.25 U	--	0.25 U
TPH-O	mg/L	8/20/2025	0.20 U	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U	--	--	0.20 U	--	--	0.20 U	0.20 U	0.36 [1]	--	0.20 U
TPH-G	ug/L	8/10/2015	50 U	50 U	50 U	50 U	50 U	50 U	235	554	703	336	50 U	50 U	171	50 U	50 U	248	50 U	50 U	255	50 U	50 U	84.1	50 U
TPH-G	ug/L	11/9/2015	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50U	50 U	50 U	51.8	50 U
TPH-G	ug/L	2/8/2016	50 U	50 U	50 U	50 U	50 U	50 U	334	50 U	50U	79.2	50 U	616	290	50 U	50 U	50 U	50 U	50 U	50U	50 U	50 U	50 U	50 U
TPH-G	ug/L	5/3/2016	50 U	50 U	50 U	50 U	50 U	164	290	712	1730	543	50 U	50 U	296	50 U	50 U	50 U	50 U	50 U	**1440**	50 U	50 U	58.7	50 U
TPH-G	ug/L	8/15/2016	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	93.4	50 U	50 U	50 U	50U	50 U	50 U	148	50 U
TPH-G	ug/L	11/14/2016	100 U	100 U	100 U	100 U	100 U	400 U	380	300	400 U	400 U	--	100 U	100 U	400 U	100 U	400 U	400U	100U	400U	160	400 U	100 U	400 U
TPH-G	ug/L	2/13/2017	100 U	100 U	100 U	100 U	100 U	200	430	390	860	270	100 U	100 U	320	100 U	100 U	100 U	100U	100U	230	100U	100 U	100 U	450
TPH-G	ug/L	5/10/2017	100 U	100 U	100 U	100 U	100 U	130	500 U	470 O	1200 O	500 U	100 U	100 U	500 U	100 U	100 U	140	100U	100U	360	100U	100 U	100 U	400 U
TPH-G	ug/L	8/15/2017	100 U	100 U	100 U	100 U	100 U	500 U	100 U	500 U	1200 O	500 U	100 U	100 U	500 U	100 U	100 U	500 U	100U	100U	500U	500U	100 U	100 U	500 U
TPH-G	ug/L	11/30/2017	100 U	100 U	100 U	100 U	100 U	380 O	540 O	450 O	990 O	490 O	400 U	100 U	380 O	400 U	100 U	690 O	100U	100U	350	380 O	100 UX	100 U	600 O
TPH-G	ug/L	5/16/2018	100 U	100 U	100 U	400 U	100 U	230	630	370	1100	430	400 U	100 U	380	400 U	100 U	250	400U	100U	730	150	220	100 U	710
TPH-G	ug/L	11/15/2018	100 U	100 U	100 U	--	400 U	400 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	400 U	100 U	100 U	400U	400U	400U	400U	400 U	400 U	400 U
TPH-G	ug/L	5/29/2019	100 U	100 U	100 U	100 U	100 U	170 O	500 U	500 U	790 O	500 U	500 U	100 U	500 U	500 U	100 U	500 U	100U	100U	330	250O	160 O	100 U	500 U
TPH-G	ug/L	5/27/2020	100 U	100 U	100 U	100 U	100 U	200 O	520 O	400 O	900 O	480 O	100 U	100 U	370 O	100 U	100 U	440 O	100U	100U	280	190O	160 O	100 U	640 O
TPH-G	ug/L	8/25/2021	100 U	100 U	100 U	100 U	100 U	400 U	400 U	400 U	510 O	400 U	--	--	400 U	--	--	400 U	--	--	400U	400U	100 U	--	400 U
TPH-G	ug/L	8/25/2022	100 U	100 U	100 U	100 U	100 U	170	560	540	**950**	540	--	--	430	--	--	360	--	--	230	100U	140	--	660
TPH-G	ug/L	8/9/2023	100 U	100	100 U	100 U	100 U	140	380	450	**940**	450	--	--	300	--	--	360	--	--	130	100U	100 U	--	410
TPH-G	ug/L	8/7/2024	100 U	100U	100 U	100 U	100 U	110	270	420	**850**	360	--	--	220	--	--	250	--	--	140	100U	100 U	--	330
TPH-G	ug/L	8/20/2025	100 U	100 U	100 U	100 U	--	100 U	160	240	**810**	120	--	--	100	--	--	230	--	--	100 U	100 U	100 U	--	240

Notes:

mg/L: milligrams per liter

ug/L: micrograms per liter

TPH: total petroleum hydrocarbon, with distillate range indicated (diesel (D)-, gasoline (G)-, and heavy oil (O)-range)

SG: Analysis performed using silica gel.

U: non-detect at reporting limit shown.

J: Estimated value, result may be between reporting and method detection limits.

O: Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

CPOC: Conditional Point of Compliance

Z: sample did not include silical gel preparation and the detected result is biased high relative to the CMP-defined analytical method.

X1: Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

N1: Hydrocarbons in diesel range are impacting lube oil range results.

Table 6: Summary of Mann-Kendall Trend Test Results

Port of Seattle Terminal 91

Well	Contituent (TPH)	n	S	p	CF (%)	Trend
CP-103A	Diesel	12	-16	0.1518	84.8	No Trend
CP-103A	Gasoline	13	-12	0.2503	75.0	No Trend
CP-103A	Oil	12	-35	0.0042	99.6	**Decreasing**
CP-104A	Diesel	12	-8	0.3156	68.4	No Trend
CP-104A	Gasoline	13	-5	0.4031	59.7	No Trend
CP-104A	Oil	12	-35	0.0042	99.6	**Decreasing**
CP-106A	Diesel	12	-29	0.0271	97.3	**Decreasing**
CP-106A	Gasoline	13	-25	0.0712	92.9	No Trend
CP-106A	Oil	12	-33	0.0062	99.4	**Decreasing**
CP-108A	Diesel	12	-12	0.2253	77.5	No Trend
CP-108A	Gasoline	13	-17	0.1628	83.7	No Trend
CP-108A	Oil	12	-35	0.0042	99.6	**Decreasing**
CP-203B	Diesel	12	-11	0.2435	75.6	No Trend
CP-203B	Gasoline	13	-27	0.0544	94.6	No Trend
CP-203B	Oil	12	-41	0.0015	99.8	**Decreasing**
CP-GP02	Diesel	12	-9	0.2900	71.0	No Trend
CP-GP02	Gasoline	13	-6	0.3793	62.1	No Trend
CP-GP02	Oil	12	-35	0.0042	99.6	**Decreasing**
PNO-MW06B	Diesel	12	-51	0.0002	100.0	**Decreasing**
PNO-MW06B	Gasoline	13	-33	0.0248	97.5	**Decreasing**
PNO-MW06B	Oil	12	-37	0.0036	99.6	**Decreasing**
CP-GP11	Diesel	12	-48	0.0003	100.0	**Decreasing**
CP-GP11	Gasoline	13	-26	0.0629	93.7	No Trend
CP-GP11	Oil	12	-39	0.0023	99.8	**Decreasing**
PNO-MW02	Diesel	12	-22	0.0707	92.9	No Trend
PNO-MW02	Gasoline	13	-18	0.1359	86.4	No Trend
PNO-MW02	Oil	12	-39	0.0023	99.8	**Decreasing**
PNO-MW06A	Diesel	12	12	0.2243	77.6	No Trend
PNO-MW06A	Gasoline	13	-5	0.3893	61.1	No Trend
PNO-MW06A	Oil	12	-30	0.0084	99.2	**Decreasing**
PNO-MW103	Diesel	12	-3	0.4453	55.5	No Trend
PNO-MW103	Gasoline	13	-16	0.1780	82.2	No Trend
PNO-MW103	Oil	12	-36	0.0057	99.4	**Decreasing**

Notes:

n: number of observations; data restricted to 2017 and later. Data from 2021 for diesel- and heavy oil-range were removed due to "Z-flags" meaning the data biased high. See text for details.

S: Mann-Kendall Statistic; positive indicates an increasing trend, negative indicates a decreasing trend.

CF: Confidence Factor; degree of confidence in the trend result.

p: significance level; p=(100-CF)/100, applied at 0.05; p<0.05 indicates a trend.

Trend: qualitative evaluation of p value with p<0.05 indicating a trend

TPH: total petroleum hyrocarbons

CPOC wells that had <25% constituent detections from 2017 to 2025 were not included in this trend analysis.

Table 7. Summary of Recommended Changes to the Compliance Monitoring Program

Port of Seattle Terminal 91

Well	TPH-D				TPH-O				TPH-G				Recommendations
	Number of Samples	Number of Detections	Exceedances in previous 4 samples	M-K Trend	Number of Samples	Number of Detections	Exceedances in previous 4 samples	M-K Trend	Number of Samples	Number of Detections	Exceedances in previous 4 samples	M-K Trend	
CP-103A	4	4	Yes	No trend	4	0	No	Decreasing	5	4	No	No trend	Continue Sampling
CP-104A	4	4	Yes	No trend	4	0	No	Decreasing	5	4	No	No trend	Continue Sampling
CP-106A	4	4	Yes	Decreasing	4	0	No	Decreasing	5	5	Yes	No trend	Continue Sampling
CP-108A	4	4	Yes	No trend	4	0	No	Decreasing	5	4	No	No trend	Continue Sampling
CP-203B	4	4	No	No trend	4	0	No	Decreasing	5	4	No	No trend	Remove well from sampling program
CP-GP02	4	4	No	No trend	4	0	No	Decreasing	5	4	No	No trend	Remove well from sampling program
CP-GP11	4	0	No	Decreasing	4	0	No	Decreasing	5	3	No	No trend	Remove well from sampling program
PNO-MW02	4	3	No	No trend	4	0	No	Decreasing	5	0	No	No trend	Remove well from sampling program
PNO-MW06A	4	4	Yes	No trend	4	2	No	Decreasing	5	1	No	No trend	Continue Sampling
PNO-MW103	4	4	Yes	No trend	4	0	No	Decreasing	5	4	No	No trend	Continue Sampling
CPOC Wells													
CP-GP01B	4	0	No	N/A	4	0	No	N/A	5	0	No	N/A	Continue Sampling
CP-GP08	4	0	No	N/A	4	0	No	N/A	5	0	No	N/A	Continue Sampling
CP-GP09R	4	0	No	N/A	4	0	No	N/A	5	0	No	N/A	Continue Sampling
CP-GP10	4	0	No	N/A	4	0	No	N/A	5	0	No	N/A	Continue Sampling
CP-GP14	3	0	No	N/A	3	0	No	N/A	4	0	No	N/A	Continue Sampling
PNO-MW06B	4	3	No	Decreasing	4	0	No	Decreasing	5	3	No	Decreasing	Continue Sampling

Notes:

(1) Data evaluated includes the most recent five-year period (2021-2025). See Teable 5 for data summary.

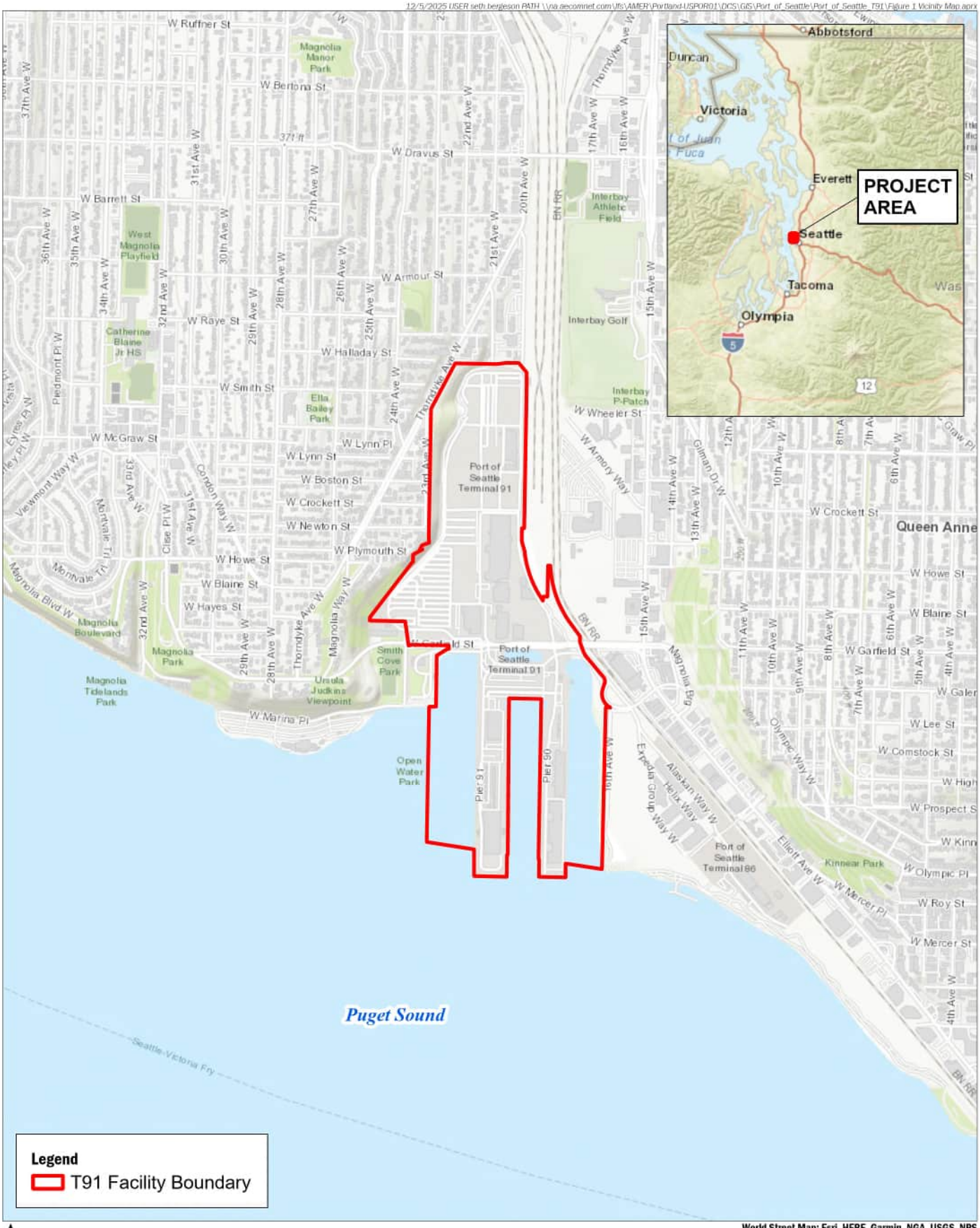
(2) Samples analyzed for TPH-D and -O from 2021 are not considered in this evaluation because silica gel cleanup was not used, thus data biased high.

TPH: total petroleum hydrocarbons, with distillate range indicated (diesel (D)-, gasoline (G)-, and heavy oil (O)-range)

M-K: Mann-Kendall trend test (Summarized in Table 6)

N/A: not applicable (trend test not conducted on well to to lack of detections in data)

Figures



World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS
World Topographic Map: City of Seattle, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

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FIGURE 1
Project Area Vicinity Map

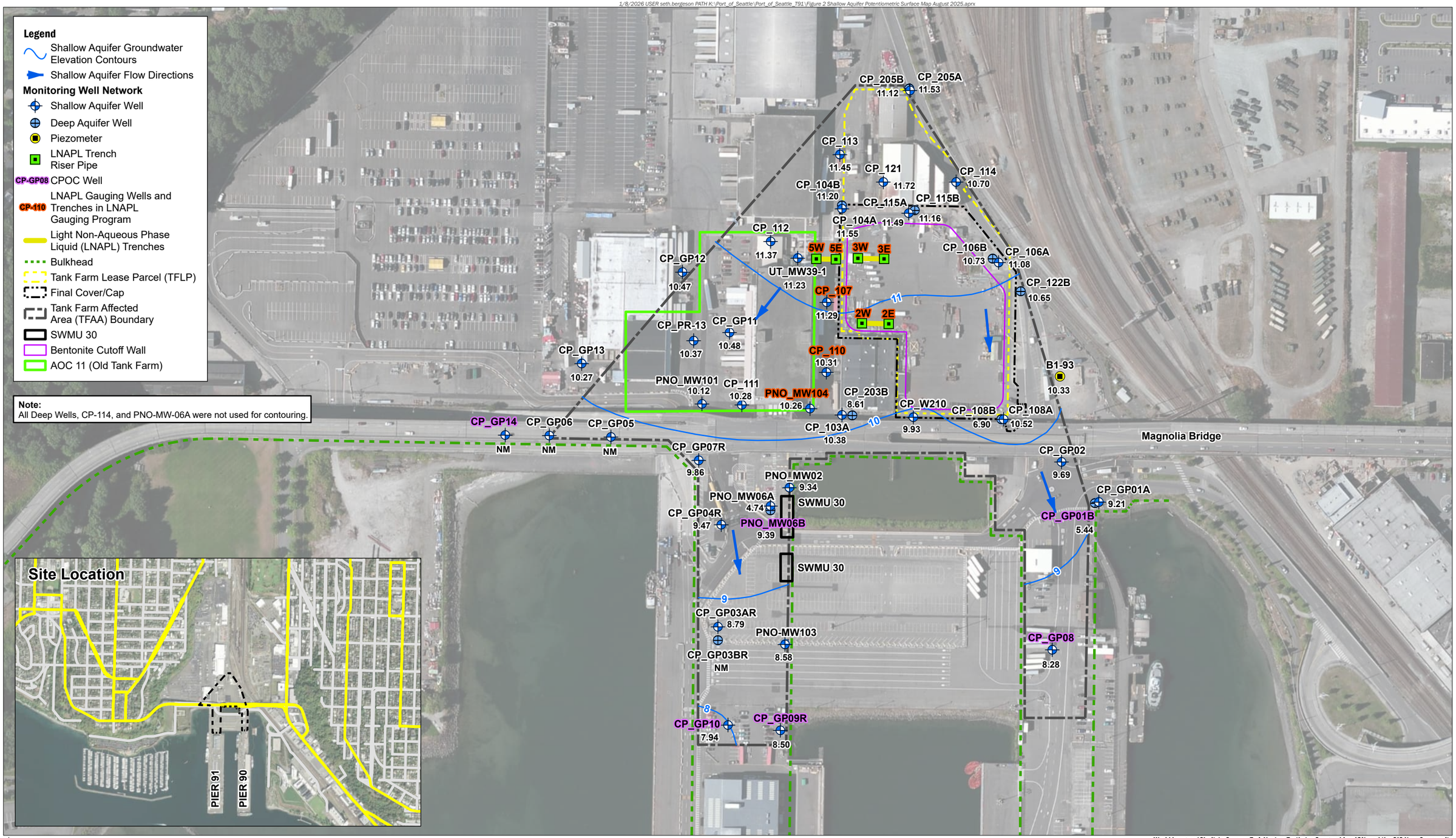

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FIGURE 2

Shallow Aquifer Potentiometric Surface Map
August 2025

Legend

Monitoring Well Network

- Shallow Aquifer Well
- Deep Aquifer Well
- Piezometer
- LNAPL Trench Riser Pipe
- CP-GP08 CPOC Well
- CP-110 LNAPL Gauging Wells and Trenches in LNAPL Gauging Program
- Light Non-Aqueous Phase Liquid (LNAPL) Trenches
- Bulkhead
- Tank Farm Lease Parcel (TFLP)
- Final Cover/Cap
- Tank Farm Affected Area (TFAA) Boundary
- SWMU 30
- Bentonite Cutoff Wall
- AOC 11 (Old Tank Farm)

CP-104A			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**1.0 Z**	400 U	0.43 Z
8/25/2022	**0.57 X1**	540	0.2 UX1
8/9/2023	0.34	450	0.25 U
8/7/2024	0.35	420	0.25 U
8/20/2025	0.36	240	0.20 U

CP-GP11			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	0.22 Z	400 U	0.27 Z
8/25/2022	0.15 UX1	230	0.2 UX1
8/9/2023	0.05 U	130	0.25 U
8/7/2024	0.05 U	140	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

CP-103A			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**1.5 Z**	400 U	0.43 NZ
8/25/2022	**0.54 X1**	560	0.2 UX1
8/9/2023	0.31	380	0.25 U
8/7/2024	0.39	270	0.25 U
8/20/2025	0.28	160	0.20 U

CP-106A			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**4.0 Z**	510 O	**2.3 NZ**
8/25/2022	**0.6 X1**	**950**	0.2 UX1
8/9/2023	0.45	**940**	0.25 U
8/7/2024	**0.59**	**850**	0.25 U
8/20/2025	**0.52**	**810**	0.20 U

CP-203B			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**1.4Z**	400U	**0.55NZ**
8/25/2022	0.36X1	430	0.2UX1
8/9/2023	0.21	300	0.25U
8/7/2024	0.22	220	0.25U
8/20/2025	0.19	100	0.20 U

CP-108A			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**2.7Z**	400U	**1.8NZ**
8/25/2022	**0.72X1**	540	0.2UX1
8/9/2023	0.34	450	0.25U
8/7/2024	0.3	360	0.25U
8/20/2025	0.21	120	0.20 U

CP-GP14			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	0.2 U	100 U	0.26 Z
8/25/2022	0.15 UX1	100 U	0.2 UX1
8/9/2023	0.05 U	100 U	0.25 U
8/7/2024	0.05 U	100 U	0.25 U
8/20/2025	--	--	--

PNO-MW02			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**3.7 Z**	400 U	**1.1 NZ**
8/25/2022	0.24 X1	100 U	0.2 UX1
8/9/2023	0.055 U	100 U	0.25 U
8/7/2024	0.071	100 U	0.25 U
8/20/2025	0.10	100 U	0.20 U

PNO-MW06A			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**4.5 Z**	100 U	**2.3 NZ**
8/25/2022	**0.62 X1**	140	0.27 X1,N1
8/9/2023	0.14	100 U	0.25 U
8/7/2024	0.22	100 U	0.25 U
8/20/2025	**2.1**	100 U	0.36 [1]

CP-GP02			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**6.2 Z**	400 U	**3.1 NZ**
8/25/2022	0.34 X1	360	0.2 UX1
8/9/2023	0.22	360	0.25 U
8/7/2024	0.19	250	0.25 U
8/20/2025	0.35	230	0.20 U

PNO-MW06B			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**2.6 Z**	400 U	**1.3 NZ**
8/25/2022	0.22 X1	170	0.2 UX1
8/9/2023	0.15	140	0.25 U
8/7/2024	0.17	110	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

PNO-MW103			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**6.2 Z**	400 U	**1.7 NZ**
8/25/2022	**0.88 X1**	660	0.2 UX1
8/9/2023	**0.68**	410	0.25 U
8/7/2024	**0.69**	330	0.25 U
8/20/2025	**0.83**	240	0.20 U

CP-GP01B			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	**1.5 Z**	100 U	**1.1 Z**
8/25/2022	0.15 UX1	100 U	0.2 UX1
8/9/2023	0.05 U	100	0.25 U
8/7/2024	0.05 U	100 U	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

CP-GP10			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	0.2 U	100 U	0.35 Z
8/25/2022	0.15 UX1	100 U	0.2 UX1
8/9/2023	0.05 U	100 U	0.25 U
8/7/2024	0.05 U	100 U	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

CP-GP09R			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	0.45 Z	100 U	0.48 NZ
8/25/2022	0.15 UX1	100 U	0.2 UX1
8/9/2023	0.05 U	100 U	0.25 U
8/7/2024	0.05 U	100 U	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

CP-GP08			
Sample Date	TPH -D (mg/L)	TPH-G (ug/L)	TPH-O (mg/L)
8/25/2021	0.48 Z	100 U	**0.66 Z**
8/25/2022	0.15 UX1	100 U	0.2 UX1
8/9/2023	0.05 U	100 U	0.25 U
8/7/2024	0.05	100 U	0.25 U
8/20/2025	0.050 U	100 U	0.20 U

Notes:
Bold values are detections over the CUL (0.5 mg/L for diesel- and oil-range, 800 µg/L for gasoline-range.
mg/L: milligrams per liter
µg/L: micrograms per liter
TPH: total petroleum hydrocarbons; with gasoline (G)-, diesel (D)-, and heavy oil (O)-range distillates
U: analyte not detected above the laboratory reporting limit shown.
O: Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
Z: sample did not include silica gel preparation and the detected result is biased high relative to the CMP-defined analytical method.
X1: Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
N1: Hydrocarbons in diesel range are impacting lube oil range results.
[1] The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

N

0 200

Feet

World Imagery (Clarity): Source: Esri, Vantor, Earthstar Geographics, IGN, and the GIS User Community
World_Imagery: Vantor

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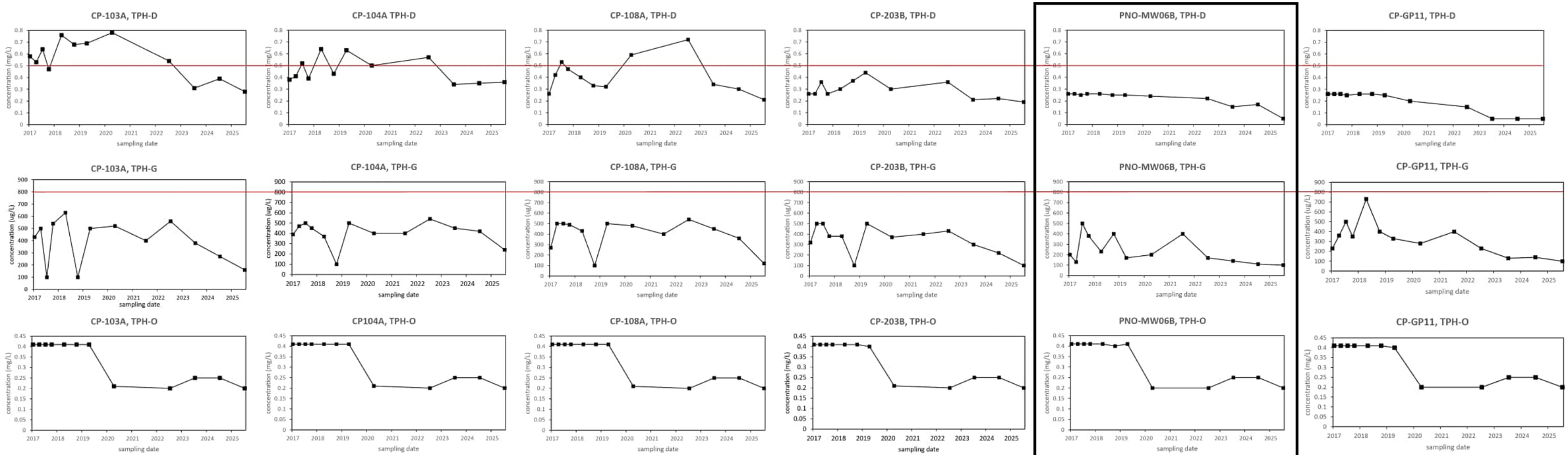
FIGURE 3

Groundwater Monitoring Results
August 2021 - 2025

CPOC Well



TPH: total petroleum hydrocarbon; diesel (D)-, heavy oil (O)-, and gasoline (G)-range
Only wells used for the Mann-Kendall trend analysis shown.
See Table 4 for data qualifiers shown in blue text and additional qualifiers not shown.
Red lines are the cleanup levels for TPH-G (800 µg/L) and TPH-D/O (0.5 mg/L); line not shown where cleanup levels are off-scale.
Z-flagged data from 2021 and shown in Table 4 was not included in these time series plots as the data was not included in trend analysis.

Figure 4a. TPH Time Series Plots (1 of 2)

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Terminal 91

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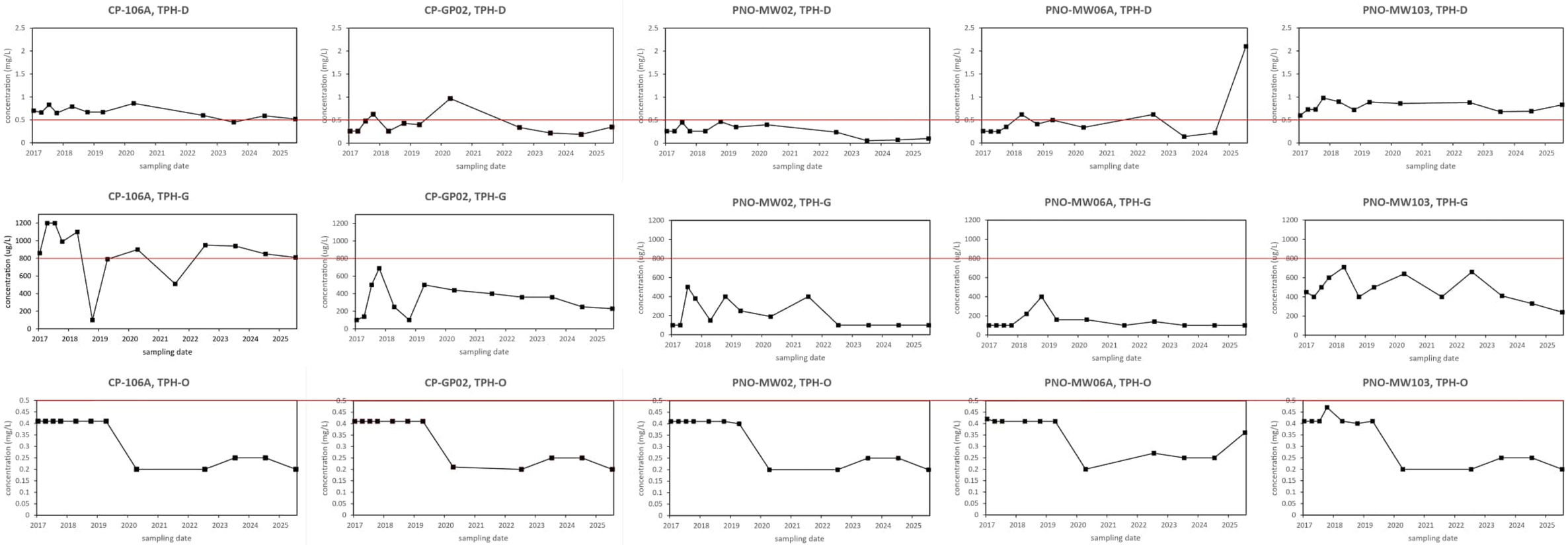
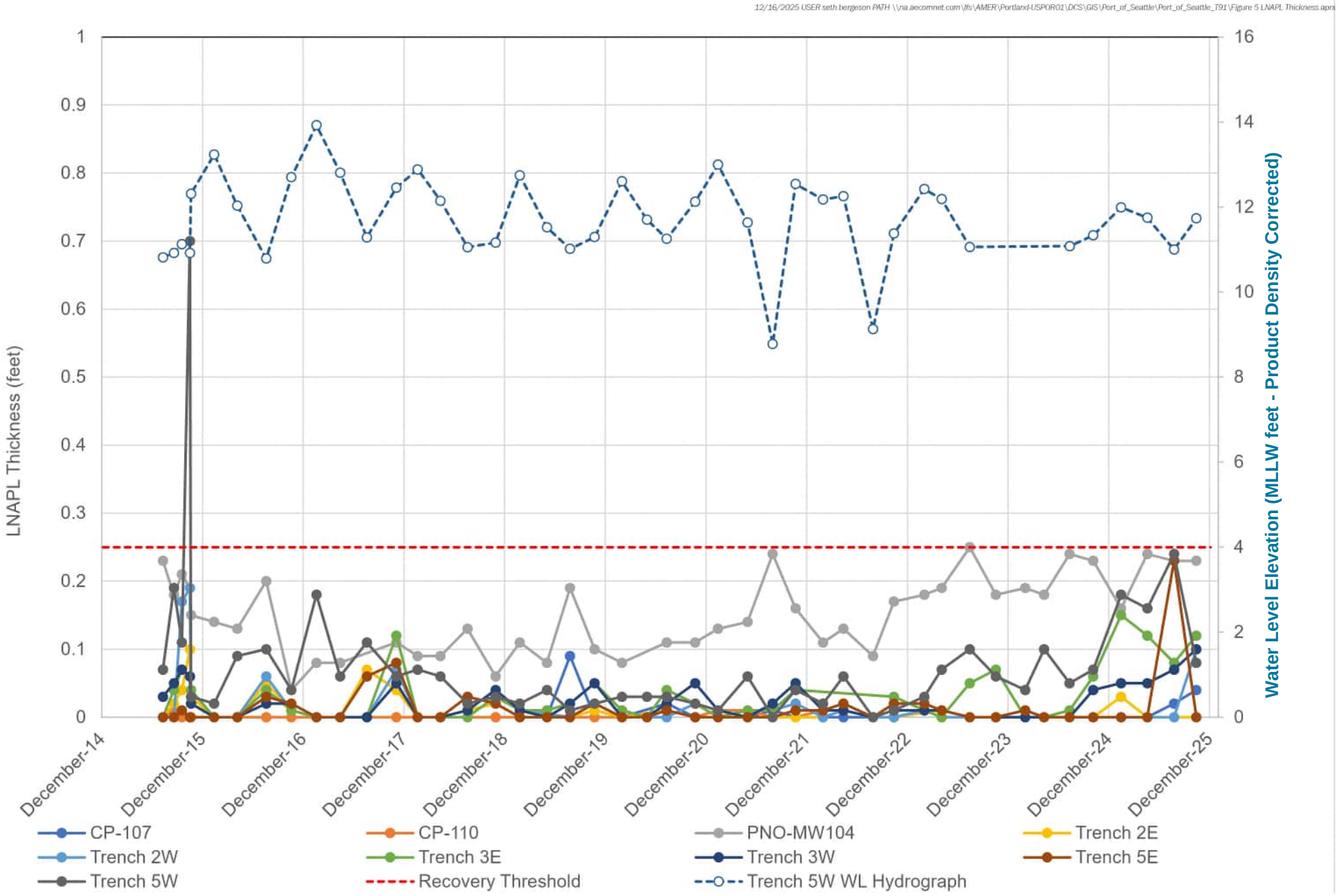


TPH: total petroleum hydrocarbon; diesel (D)-, heavy oil (O)-, and gasoline (G)-range
Only wells used for the Mann-Kendall trend analysis shown.
See Table 4 for data qualifiers shown in blue text and additional qualifiers not shown.
Red lines are the cleanup levels for TPH-G (800 µg/L) and TPH-D/O (0.5 mg/L); line not shown where cleanup levels are off-scale.
Z-flagged data from 2021 and shown in Table 4 was not included in these time series plots as the data was not included in trend analysis.

Figure 4b. TPH Time Series Plots (2 of 2)

Port of Seattle
Terminal 91

AECOM



AECOM

Port of Seattle

Terminal 91

SEATTLE, WASHINGTON

FIGURE 5

LNAPL Thickness Trends

Appendix A. Field Forms

WELL GAUGING DATA

Project # 250210-ARI Date 2/10/25 Client AECOM

Site Port of Seattle Terminal 91, 2001 West Garfield St

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-107	1038	2	odor	-	-	-	5.52	15.04		
CP-110	1044	2	-	-	-	-	6.39	15.08		
PNO-MW104	1049	4	odor	6.65	0.16	-	6.81	-		
2E	1022	6	odor	10.21	0.03	—	10.24	—		
2W	1033	6	-	-	-	-	7.15	11.41		
3E	0940	6	odor	8.09	0.15	—	8.24	—		
3W	0953	6	odor	6.86	0.05	-	6.91	-		
5E	1001	6	-	-	-	-	4.54	10.31		
5W	1013	6	odor	4.53	0.18	-	4.71	-		

WELLHEAD INSPECTION FORM

Client: AECOM Site: Port of Seattle Terminal 91 Date: 2/10/25

Job # : 250210-AR1 Technician: AR Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-107	X														
CP-110	X				3/3										
PNO-MW104	X				1/2										
2E	X			X											
2W	X			X											
3E	X			X											difficult to open
3W	X			X											difficult to open
5E	X			X											
5W	X			X											

NOTES:

WELL GAUGING DATA

Project # 250516-MH1 Date 5/16/25 Client AECOM

Site Port of Seattle, Terminal 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-107	0955	2	-	-	-	-	5.76	14.98		
CP-110	0946	2	-	-	-	-	6.62	15.06		
PNO-MW104	0937	4	Sheen	6.87	0.24	-	7.11	-		
2E	1056	12	-	-	-	-	10.25	17.02		
2W	1102	12	-	-	-	-	7.19	11.23		
3E	1050	12	odor/ sheen	8.05	0.12	-	8.17	-		
3W	1044	12	odor/ sheen	6.88	0.05	-	6.93	-		
5E	1014	12	-	-	-	-	4.82	10.15		
5W	1005	12	odor/ sheen	4.78	0.16	-	4.94	-		

WELLHEAD INSPECTION FORM

Client: AECOM Site: Port of Seattle T91 Date: 5/16/25

Job # : 250516-MH1 Technician: MH Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-107	X														
CP-110	X														
PNO-MW104					2/3										
2E				X											
2W				X											
3E				X											Difficult to open
3W				X											Difficult to open
5E				X											
5W				X											

NOTES:

SPH/PURGE DRUM INVENTORY LOG

CLIENT AECOM

SITE ADDRESS PORT OF SEATTLE TERMINAL 91

STATUS OF DRUM(S) UPON ARRIVAL							
Number of drum(s) empty:	0						
Number of drum(s) 1/4 full:	0						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	0						
STATUS OF DRUM(S) UPON DEPARTURE							
Number of drum(s) empty:	0						
Number of drum(s) 1/4 full:	0						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	0						
LOCATION OF DRUM(S)							
Is/Are drum(s) at wellhead(s)?	No						
Describe location if drum(s) is/are located elsewhere:	N/A						
Label drum(s) properly:	N/A						
FINAL STATUS							
Number of new drum(s) left on site this event:	0						
Date of inspection:	5/16/25						
Logged by BTS Field Technician:	MH						
Office reviewed by:							

WELL GAUGING DATA

Project # 250820-MH1 Date 08/20/25 Client AECOM

Site PORT OF SEATTLE TERMINAL 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)	Notes
B1-93										
CP-103A	0820	2	-	-	-	-	6.81	13.93	TOC	8/21
CP-104A	0930	2	-	-	-	-	5.98	13.45		8/21
CP-104B										
CP-106A	1318	2	-	-	-	-	7.09	14.26	TOC	
CP-106B										
CP-107										
CP-108A	0847	2	ODOR	-	-	-	6.73	13.93	TOC	8/21
CP-108B										
CP-110										
CP-111										
CP-112										
CP-113										
CP-114										
CP-115A										
CP-115B										
CP-121										

WELL GAUGING DATA

Project # 250820-MH1 Date 08/20/25 Client AECOM

Site PORT OF SEATTLE TERMINAL 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-122B										
CP-203B	0909	2	-	-	-	-	8.63	60.00	TOC	8/21
CP-205A										
CP-205B										
CP-GP01A										
CP-GP01B	1006	2	-	-	-	-	12.66	55.91	TOC	
CP-GP02	1102	2	ODOR	-	-	-	7.83	19.81		
CP-GP03AR										
CP-GP03BR										
CP-GP04R										
CP-GP05										
CP-GP06										
CP-GP07R										
CP-GP08	0920	2	-	-	-	-	8.99	16.33	TOC	
CP-GP09R	1007	2	-	-	-	-	9.17	17.88		
CP-GP10	1015	2	-	-	-	-	9.74	17.85		
CP-GP11	1328	2	-	-	-	-	6.52	17.70		

WELL GAUGING DATA

Project # 250820-MH1 Date 08/20/25 Client AECOM

Site PORT OF SEATTLE TERMINAL 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)	Notes
CP-GP12										
CP-GP13										
CP-GP14										
CP-PR-13 ~~CP-GP14~~										
CP-W210										
PNO-MW02	1213	2	–	–	–	–	8.53	17.32	TOC	
PNO-MW06A	1238	2	–	–	–	–	8.85	17.30		
PNO-MW06B	1159	2	–	–	–	–	12.49	55.49		
PNO-MW101										
PNO-MW103	0919	4	–	–	–	–	8.95	17.50	TOC	
PNO-MW104										
UT-MW39-1										

WELL GAUGING DATA

Project # 606926669 Date 8/20/25 Client AECOM

Site T-91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-GP13	1052	2	—	—	—	—	6.18	14.38	TOC	Orange gunk on tape
CP-GP12	1100	2	N	—	—	—	6.84	15.05	TOC	
CP-GP02	1101	2	Y	—	—	—	7.83	19.81	TOC	
CP-110	1118	2	N	—	—	—	7.15	15.17	TOC	
FWO-MW14	1120	~~2~~ 4	Y	~~7.51~~ ~~7.8~~			~7.62	NM. product in well		
CP-103A	1130	2	N	—	—	—	6.83	14.17	TOC	
CP-203B	1134	2	N	—	—	—	8.95	59.95	TOC	
CP-107	1114	2	Y	~~6.43~~	—	—	6.43	Product in well NM	TOC	Product encountered
UT-MW39	1123	2	Y	—	—	—	5.66	13.08	TOC	
CP-112	1131	2	N	—	—	—	6.03	12.75	TOC	
CP-104A	1151	2	N	—	—	—	5.94	13.39	TOC	
CP-104B	1155	2	N	—	—	—	6.19	44.74	TOC	
CP13	1204	2	N	—	—	—	5.91	16.37	TOC	
CP-115A	1201	2	N	—	—	—	6.25	19.44	TOC	
CP-115B	1152	2	N	—	—	—	6.71	42.71	TOC	
CP-121	1211	2	N	—	—	—	6.19	18.60	TOC	
CP-1A	1225	2	N	—	—	—	6.47	13.46	TOC	

WELL GAUGING DATA

Project # 60692669 Date 8/20/25 Client AECOM

Site T-91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-GP01A	0852	2	N	—	—	—	8.58	19.07	TOC	water in monument
CP-GP01B	0853	2	N	—	—	—	12.14	55.65	TOC	water in monument
CP-GP03AR	0905	2	N	—	—	—	9.21	19.85	TOC	hex bolts
CP-GP04R	0919	2	N	—	—	—	8.67	19.82	TOC	~~hex~~
PNO-MW06B	0932	2	Y	—	—	—	8.78	17.36	TOC	
PNO-MW02	0925	2	N	—	—	—	8.53	17.29	TOC	J plug issue
PNO-MW04	0937	2	N	—	—	—	13.47	55.75	TOC	3/4" socket
CP-GP07R	0948	2	N	—	—	—	8.21	17.72	TOC	
PNO-MW03	0919	2	N	—	—	—	8.95	17.50	TOC	
CP-GP08	0919	2	N	—	—	—	8.99	16.33	TOC	
CP-GP11	1009	2	Y	—	—	—	6.50	17.68	TOC	
CP-PR3	1016	2	N	—	—	—	6.97	12.42	TOC	J plug LOOSE
~~CP-GP01B~~	1002	~~2~~	~~N~~	~~—~~	~~—~~	~~—~~	~~12.66~~	~~55.91~~	~~TOC~~	~~—~~
PNO-MW10I	1009	4	N	—	—	—	7.60	17.35	TOC	
CP-111	1017	2	N	—	—	—	7.46	13.40	TOC	
CP-GP09R	1007	2	N	—	—	—	9.17	17.88	TOC	
CP-GP10	1015	2	N	—	—	—	9.74	17.85	TOC	

WELL GAUGING DATA

Project # 60692669 Date 8/20/25 Client AECOM

Site T-91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-205A	1230	2	N	—	—	—	6.16	14.4	TOC	
CP-205B	1235	2	N	—	—	—	6.60	44.25	TOC	
~~CP-106A~~ CP-106B	1314						7.33	42.03	TOC	1" locks
~~CP-106B~~ CP-106A	1247	2	~~Y~~ N	—	—	—	7.03	~~44.25~~ 7.03	TOC	
CP-122B	1322	4	N	—	—	—	6.42	43.00	TOC	
CP-W210	1255	2	N	—	—	—	7.47	14.64	TOC	
CP-108A	1302	2	N	—	—	—	6.67	13.94	TOC	
CP-108B	1305	2	N	—	—	—	10.32	60.00	TOC	
B1-93	1326	1	N	—	—	—	6.91	30.10	TOC	

WELL GAUGING DATA

Project # 250820-MH1 Date 08/21/25 Client AECOM

Site PORT OF SEATTLE TERMINAL 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-107	1021	2	Y	6.45	0.02	—	6.47	—		
CP-110	1002	2	-	-	-	-	7.14	15.20		
PNO-MW104	0956	4	Y	7.30	0.23	—	7.53	—		
2E	1013	12	-	-	-	-	10.93	16.85		
2W	1007	12	-	-	-	-	7.84	11.35		
3E	1028	12	Y	8.72	0.08	—	8.80	—		
3W	1038	12	Y	7.51	0.07	—	7.58	—		
5E	1040	12	Y	5.89	0.23	—	6.12	—		
5W	1005	12	Y	5.51	0.24	—	5.75	—		

WELLHEAD INSPECTION FORM

Client: AECOM Site: PORT OF SEATTLE TERMINAL 91 Date: 08/21/25

Job #: 250820-MH1 Technician: MH / SM Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-107	X														
CP-110	X														
PNO-MW104	X														
2E	X														
2W	X														
3E	X														
3W	X														
5E	X														
5W	X														

NOTES:

WELL GAUGING DATA

Project # 251110-MH1 Date 11/10/25 Client AECOM

Site PORT OF SEATTLE TERMINAL 91

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
CP-107	0854	2	Y	5.70	0.04	—	5.74	—		
CP-110	0848	2	—	—	—	—	6.44	15.10		
PNOMW104	0843	4	Y	6.62	0.23	—	6.85	—		
2E	0943	12	—	—	—	—	10.80	16.90		
2W	0951	12	Y	7.71	0.10	—	7.81	—		
3E	0935	12	Y	8.62	0.12	—	8.74	—		
3W	0931	12	Y	7.42	0.10	—	7.52	—		
5E	0913	12	—	—	—	—	4.82	10.30		
5W	0903	12	Y	4.81	0.08	—	4.89	—		

WELLHEAD INSPECTION FORM

Client: AECOM Site: PORT OF SEATTLE T91 Date: 11/10/25

Job #: 251110-MH1 Technician: MH Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-107	X														
CP-110	X														
PNO-MW104	X														
2E	X														
2W	X														
3E	X														
3W	X														DIFFICULT TO OPEN
5E	X														
5W	X														

NOTES:

SPH or Purge Water Drum Log

Client: AECOM

Site Address: Port of Seattle Terminal 91

STATUS OF DRUM(S) UPON ARRIVAL						
Date	8/2/25	11/10/25				
Number of drum(s) empty:	0	0				
Number of drum(s) 1/4 full:	0	0				
Number of drum(s) 1/2 full:	0	0				
Number of drum(s) 3/4 full:	0	0				
Number of drum(s) full:	0	0				
Total drum(s) on site:	0	0				
Are the drum(s) properly labeled?	—	—				
Drum ID & Contents:	—	—				
If any drum(s) are partially or totally filled, what is the first use date:	—	—				

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	8/2/25	11/10/25				
Number of drums empty:	0	0				
Number of drum(s) 1/4 full:	1	0				
Number of drum(s) 1/2 full:	0	0				
Number of drum(s) 3/4 full:	0	0				
Number of drum(s) full:	0	0				
Total drum(s) on site:	1	0				
Are the drum(s) properly labeled?	Yes	—				
Drum ID & Contents:	Purge H_2O	—				

LOCATION OF DRUM(S)	
Describe location of drum(s):	Next to marker 59 CP-104A & B

FINAL STATUS						
Number of new drum(s) left on site this event	1	0				
Date of inspection:	8/2/25	11/10/25				
Drum(s) labelled properly:	Yes	—				
Logged by BTS Field Tech:	MH	MH				
Office reviewed by:	DO	DO				

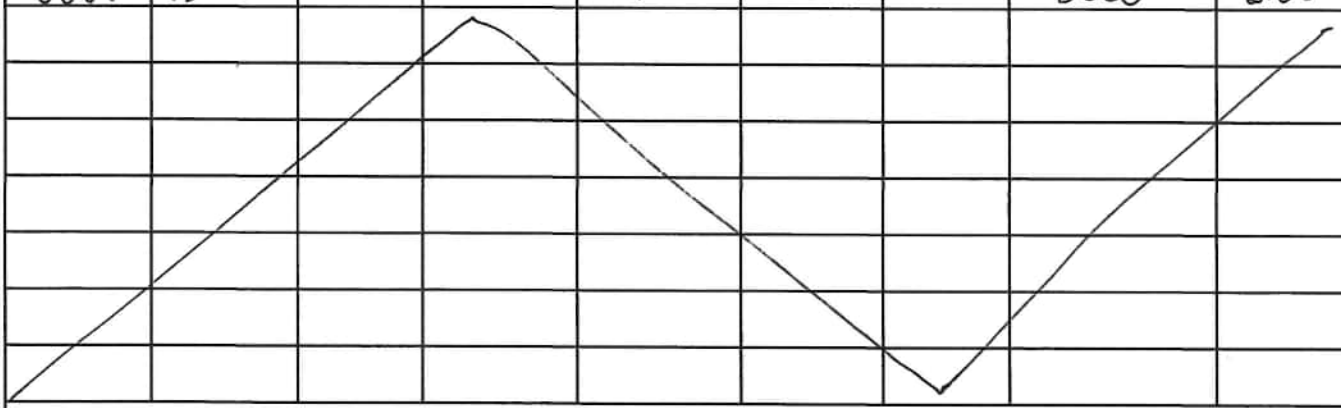
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: ~~08/21/25~~ MH 08/21/25
Well I.D.: CP-103A	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 13.93	Depth to Water (ft.): 6.81
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ____

Start Purge Time: 0824 Flow Rate: 200 ML/MIN Pump Depth: 10.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0827	16.60	7.13	515	9	0.17	-103.4	600	6.86
0830	16.65	6.87	508	8	0.16	-108.4	1200	6.87
0833	16.69	6.84	503	7	0.16	-110.5	1800	6.86
0836	16.75	6.81	503	7	0.17	-110.9	2400	6.86
0839	16.73	6.79	502	7	0.16	-111.2	3000	6.86



Did well dewater? Yes (No)	Amount actually evacuated: 3000
Sampling Time: 0842	Sampling Date: 08/21/25
Sample I.D.: CP-103A	Laboratory: FRIEDMAN & BRUYA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE C.O.C
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

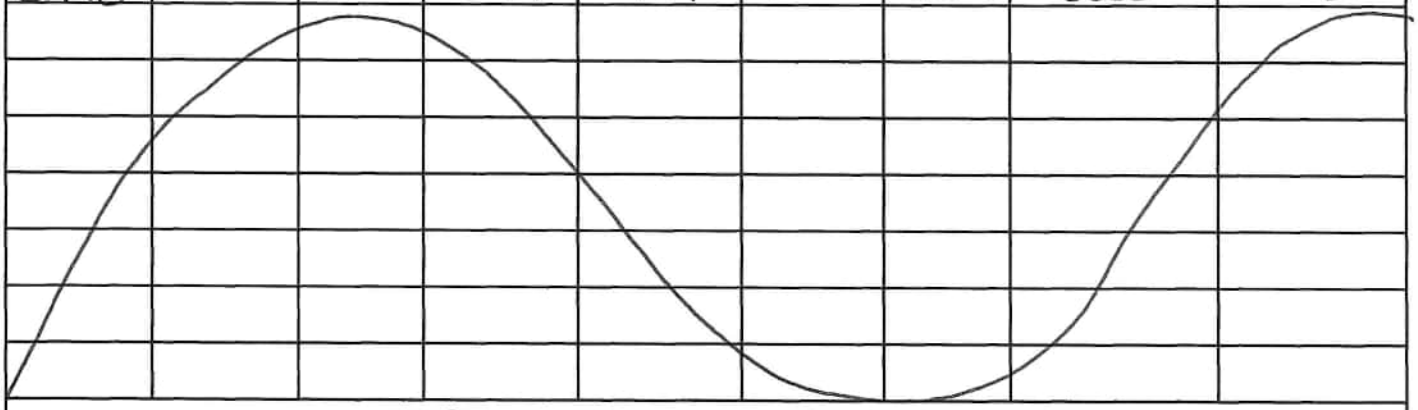
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM.	Gauging Date: 08/21/25
Well I.D.: CP-104A.	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 13.45	Depth to Water (ft.): 5.98
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna.

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ___

Start Purge Time: 0933 Flow Rate: 200ml/min. Pump Depth: ~~10'~~ 9.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0936	19.97	6.89	410	16	1.25	-5.5	600	6.09
0939	19.85	6.93	403	16	1.14	-14.4	1200	6.12
0942	19.90	6.95	400	16	1.09	-19.1	1800	6.15
0945	20.02	6.96	398	16	1.07	-24.6	2400	6.18
0948	20.00	6.96	397	16.	1.05	-28.7	3000	6.21



Did well dewater? Yes (No) Amount actually evacuated: 3000ml.

Sampling Time: 0951 Sampling Date: 08/21/25

Sample I.D.: CP-104A. Laboratory: Friedman / Bruya.

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC.

Equipment Blank I.D.: @ Time Duplicate I.D.: —

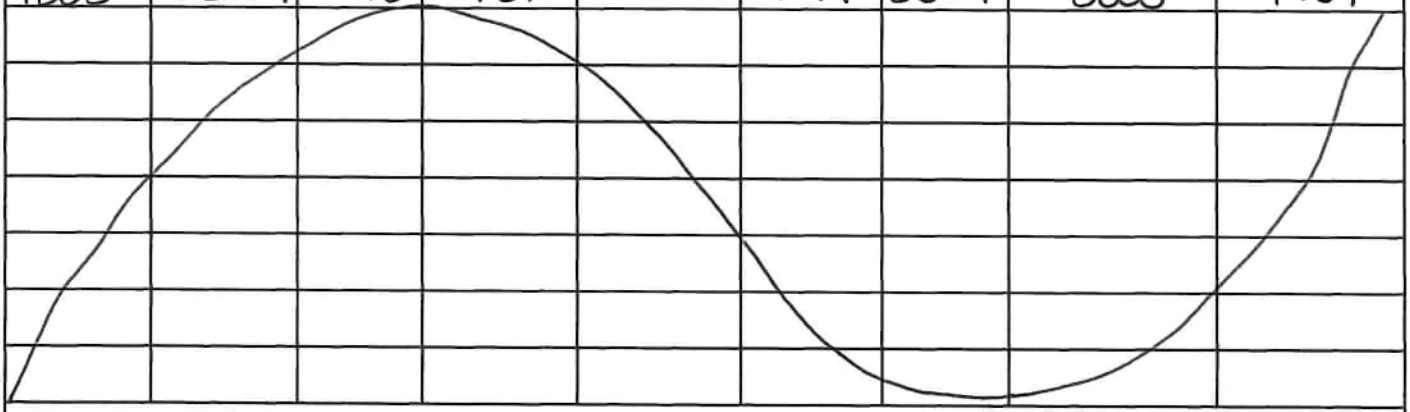
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM	Gauging Date: 08/20/25
Well I.D.: CP-106A	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 14.26	Depth to Water (ft.): 7.09
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna

Purge Method: 2" Grundfos Pump (Peristaltic) Pump Bladder Pump
Sampling Method: Dedicated Tubing (New) Tubing Other ___

Start Purge Time: 1320 Flow Rate: 200ml/min Pump Depth: 10.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1323	23.01	6.96	431	26	1.53	-9.7	600	7.17
1326	23.07	6.94	430	27	1.23	-24.2	1200	7.20
1329	23.06	6.93	430	27	1.19	-29.5	1800	7.23
1332	23.09	6.93	431	27	1.16	-33.7	2400	7.26
1335	23.07	6.93	431	27	1.14	-36.9	3000	7.29



Did well dewater? Yes (No) Amount actually evacuated: 3000ml.

Sampling Time: 1338 Sampling Date: 08/20/25

Sample I.D.: CP-106A Laboratory: Friedman/Braga

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.: —

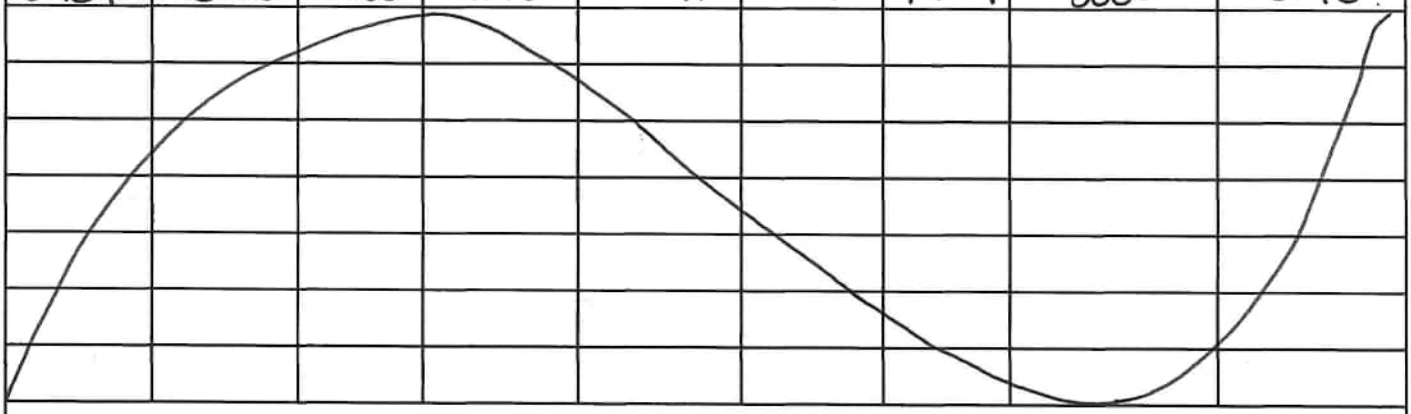
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM	Gauging Date: 08/21/25
Well I.D.: CP-108A (color)	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 13.93	Depth to Water (ft.): 6.73
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Horiba.

Purge Method: 2" Grundfos Pump (Peristaltic) Pump Bladder Pump
Sampling Method: Dedicated Tubing (New) Tubing Other ___

Start Purge Time: 0849 Flow Rate: 200ml/min. Pump Depth: 10.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0852	18.27	6.65	265	48	1.27	60.4	600	6.85
0855	18.22	6.62	269	54	1.21	57.1	1200	6.89
0858	18.21	6.60	272	52	1.19	52.6	1800	6.92
0901	18.18	6.60	273	50	1.16	48.4	2400	6.95
0904	18.16	6.60	273	49	1.14	44.9	3000	6.98



Did well dewater? Yes (No) Amount actually evacuated: 3000ml.

Sampling Time: 0907 Sampling Date: 08/21/25.

Sample I.D.: CP-108A. Laboratory: Friedman / Bruya.

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See loc.

Equipment Blank I.D.: @ Time Duplicate I.D.: —

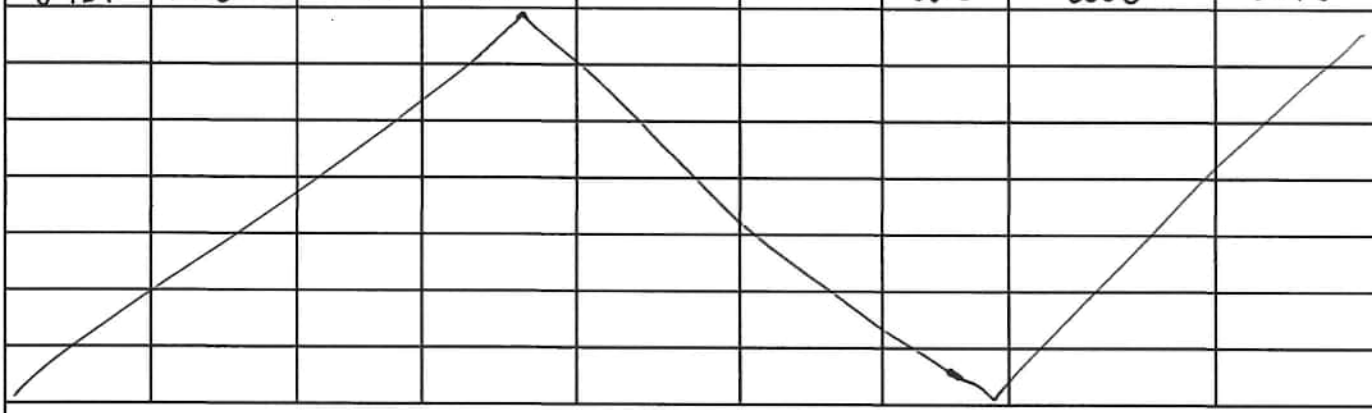
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/21/25
Well I.D.: CP-203B	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 60.00	Depth to Water (ft.): 8.63
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ____

Start Purge Time: 0912 Flow Rate: 200 ML/MIN Pump Depth: 34.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0915	17.41	7.22	537	4	0.13	-68.1	600	8.65
0918	17.62	7.09	534	8	0.13	-77.6	1200	8.69
0921	17.30	7.00	531	9	0.12	-81.7	1800	8.70
0924	17.56	7.03	532	9	0.12	-82.4	2400	8.72
0927	17.80	6.99	532	9	0.11	-83.0	3000	8.73



Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 0930 Sampling Date: 08/21/25

Sample I.D.: CP-203B Laboratory: FRIEDMAN & BRUYA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE C.O.C

Equipment Blank I.D.: D-100-08212025 @ Time 1100 Duplicate I.D.: —

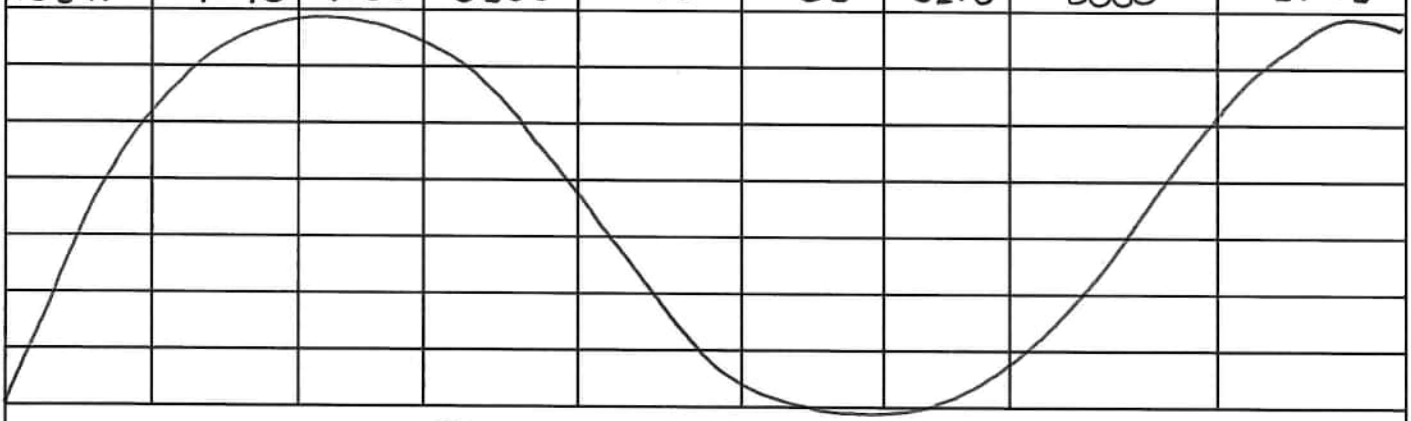
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820z-MH1	Client: AECOM
Sampler: SM.	Gauging Date: 08/20/25
Well I.D.: CP-GP01B	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 55.91	Depth to Water (ft.): 12.66
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna.

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ___

Start Purge Time: 1009 Flow Rate: 200ml/min. Pump Depth: 34.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1012	19.60	7.66	3244	38	1.15	-34.9	600	12.78.
1015	19.73	7.66	3250	38	1.09	-43.4	1200	12.83.
1018	19.79	7.66	3254	39	1.05	-50.2	1800	12.86.
1021	19.73	7.66	3258	39	1.03	-57.4	2400	12.89.
1024.	19.76	7.66	3256	40	1.02	-62.3	3000	12.92



Did well dewater? Yes (No) Amount actually evacuated: 3000ml.

Sampling Time: 1027. Sampling Date: 08/20/25.

Sample I.D.: CP-GP01B Laboratory: Friedman/Bruya

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC.

Equipment Blank I.D.: @ Time Duplicate I.D.: —

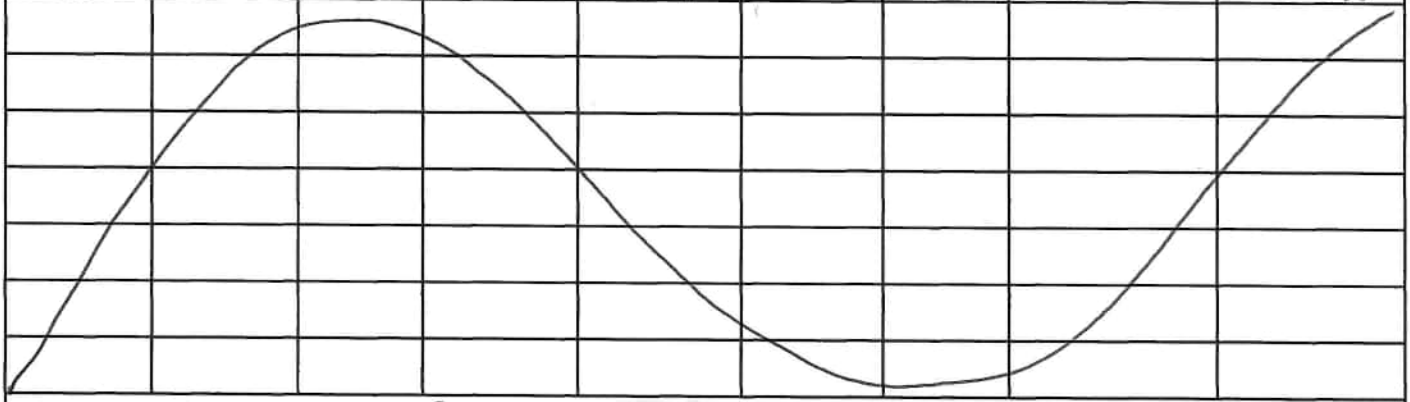
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM	Gauging Date: 08/20/25
Well I.D.: CP-GP02 (odor)	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 19.81	Depth to Water (ft.): 7.83
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna.

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ___

Start Purge Time: 1105 Flow Rate: 200ml/min Pump Depth: 14'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1108	20.34	6.78	659	30	1.13	-13.7	600	7.91
1111	20.43	6.75	647	27	1.09	-29.8	1200	7.94
1114	20.40	6.75	644	28	1.06	-34.9	1800	7.97
1117	20.42	6.75	644	28	1.05	-39.2	2400	8.00
1120	20.39	6.75	645	29	1.03	-43.9	3000	8.02



Did well dewater? Yes (No)	Amount actually evacuated: 3000ml
Sampling Time: 1123	Sampling Date: 08/20/25
Sample I.D.: CP-GP02	Laboratory: Friedman / Broya
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.: — MS/MSD.

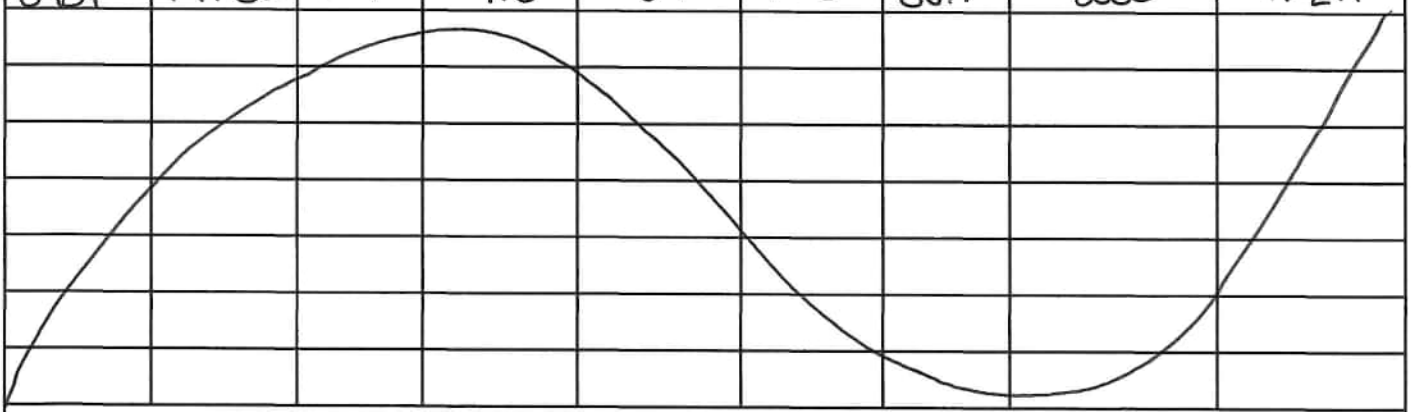
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM.	Gauging Date: 08/20/25
Well I.D.: CP-GP08	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 16.33	Depth to Water (ft.): 8.99.
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna

Purge Method: 2" Grundfos Pump | (Peristaltic) Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New (Tubing) | Other ____

Start Purge Time: 0924 Flow Rate: 200ml/min Pump Depth: 12.5'

Time	Temp. ((°C) or °F)	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water (ft.)
0927	20.14	6.86	407	67	1.33	99.5	600	9.07.
0930	19.98	6.87	410	64	1.19	93.2	1200	9.11
0933	19.91	6.88	414	57	1.15	89.8	1800	9.15
0936	19.84	6.89	415	55	1.12	84.5	2400	9.18.
0939	19.82	6.91	415	54	1.10	80.1	3000	9.21.



Did well dewater? Yes (No)	Amount actually evacuated: 3000ml.
Sampling Time: 0942	Sampling Date: 08/20/25
Sample I.D.: CP-GP08	Laboratory: Friedman / Bruya.
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC.
Equipment Blank I.D.: @ Time	Duplicate I.D.: —

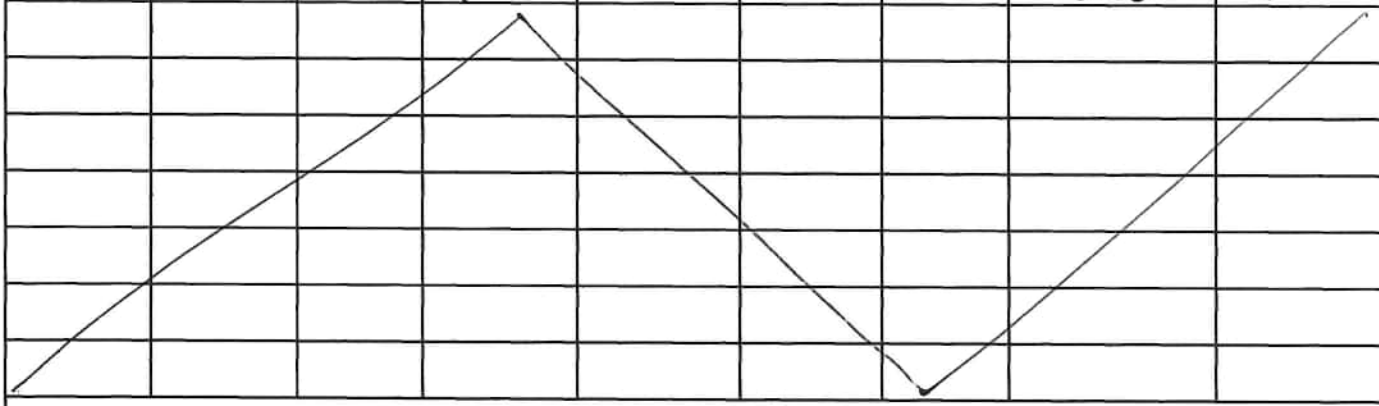
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: CP-GP09R	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 17.88	Depth to Water (ft.): 9.17
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ____

Start Purge Time: 1110 Flow Rate: 200 ML/MIN Pump Depth: 13.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1113	22.10	8.05	9779	3	0.32	37.5	600	9.23
1116	22.16	8.09	9763	3	0.32	37.3	1200	9.23
1119	22.04	8.07	9757	2	0.32	37.1	1800	9.23
1122	22.15	8.01	9755	2	0.35	37.1	2400	9.23
1125	22.26	7.98	9753	2	0.38	36.9	3000	9.23



Did well dewater? Yes (No)	Amount actually evacuated: 3000
Sampling Time: 1128	Sampling Date: 08/20/25
Sample I.D.: CP-GP09R	Laboratory: FRIEDMAN & BRUYA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE C.O.C
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

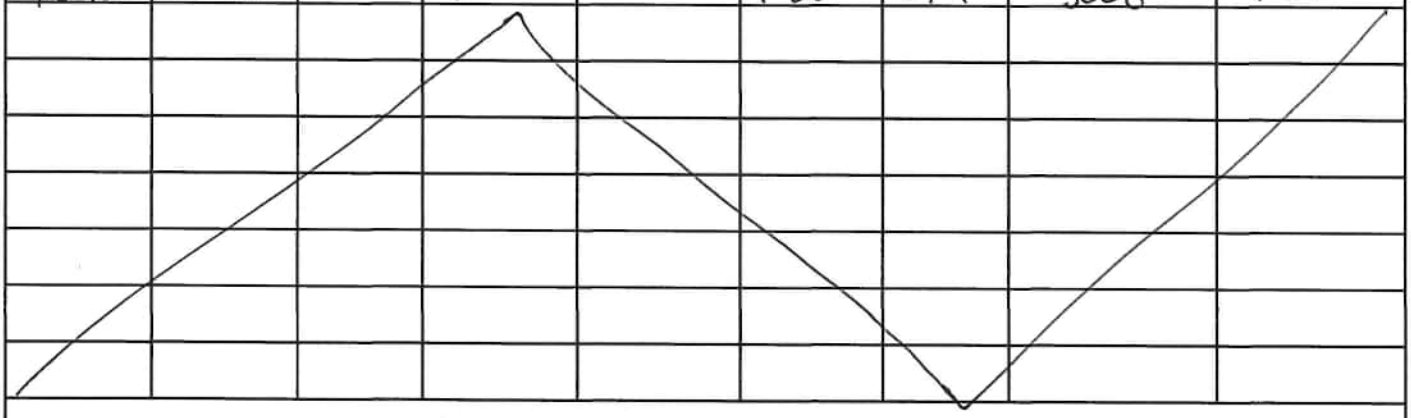
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: CP-GP10	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 17.85	Depth to Water (ft.): 9.74
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ___

Start Purge Time: 1028 Flow Rate: 200 ML/MIN Pump Depth: 14'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL.)	Depth to Water (ft.)
1031	20.47	8.52	17.83	2	1.17	28.4	600	9.80
1034	20.54	8.68	18.04	2	1.17	34.5	1200	9.80
1037	20.59	8.78	18.11	2	1.16	37.0	1800	9.80
1040	20.64	8.76	18.17	2	1.19	38.5	2400	9.80
1043	20.61	8.75	18.22	2	1.20	39.4	3000	9.80



Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 1046 Sampling Date: 08/20/25

Sample I.D.: CP-GP10 Laboratory: FRIEDMAN & BRUYA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE C.O.C

Equipment Blank I.D.: — @ Time — Duplicate I.D.: —

LOW FLOW WELL MONITORING DATA SHEET

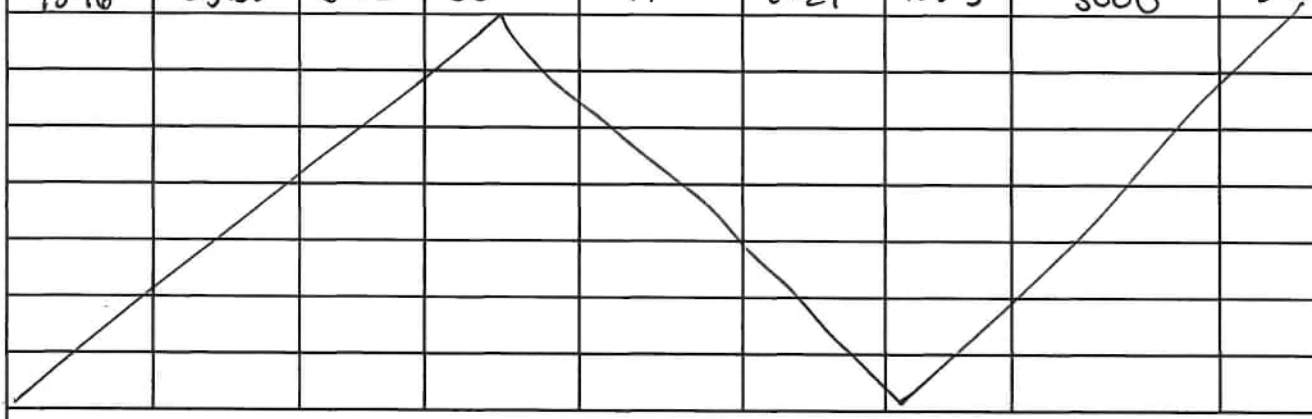
Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: CP-GP11	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 17.70	Depth to Water (ft.): 6.52
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump

Sampling Method: Dedicated Tubing | New Tubing | Other ____

Start Purge Time: 1331 Flow Rate: 200 ML/MIN Pump Depth: 12.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1334	22.60	6.81	4087	16	0.10	-147.8	600	6.60
1337	23.09	6.76	3632	17	0.11	-139.5	1200	6.59
1340	23.29	6.71	3597	17	0.17	-133.3	1800	6.58
1343	23.34	6.71	3591	16	0.20	-128.1	2400	6.57
1346	23.55	6.72	3605	17	0.21	-125.3	3000	6.57



Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 1349 Sampling Date: 08/20/25

Sample I.D.: CP-GP11 Laboratory: FRIEDMAN & BRUYA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE C.O.C

Equipment Blank I.D.: — @ Time — Duplicate I.D.: —

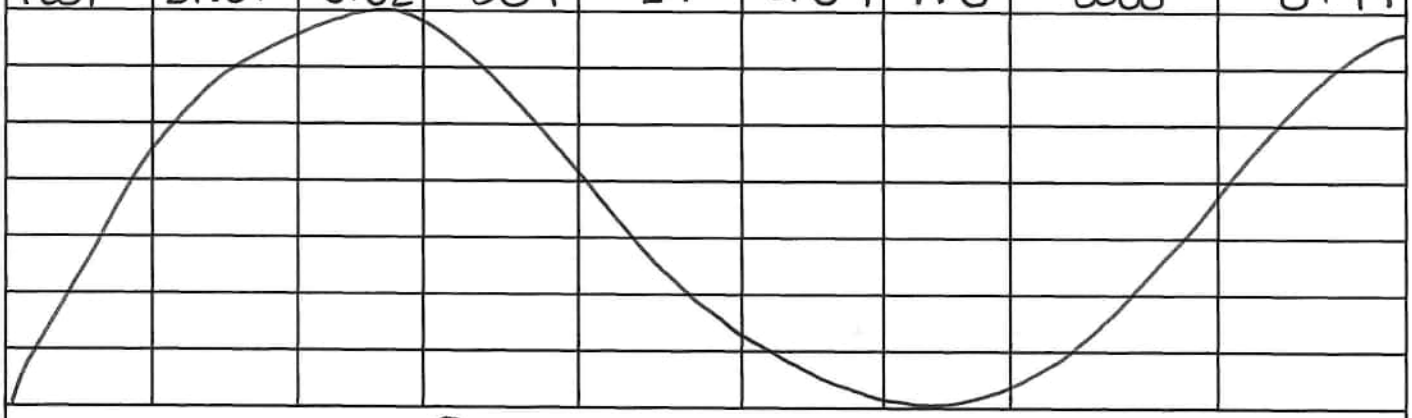
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: SM	Gauging Date: 08/20/25
Well I.D.: PNO-MW-02	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 17.32	Depth to Water (ft.): 8.53
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: Hanna.

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New) Tubing Other ___

Start Purge Time: 1216. Flow Rate: 200ml/min. Pump Depth: 13'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1219	21.40	6.61	588	28	0.20	8.1	600	8.64
1222	21.52	6.61	589	26	0.12	4.9	1200	8.67
1225	21.49	6.62	589	25	0.10	3.3	1800	8.71
1228	21.56	6.62	588	25	0.09	2.5	2400	8.75
1231	21.61	6.62	589	24	0.09	1.8	3000	8.79



Did well dewater? Yes (No)	Amount actually evacuated: 3000ml.
Sampling Time: 1234	Sampling Date: 08/20/25.
Sample I.D.: PNO-MW-02.	Laboratory: Friedman / Bruya
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.: —

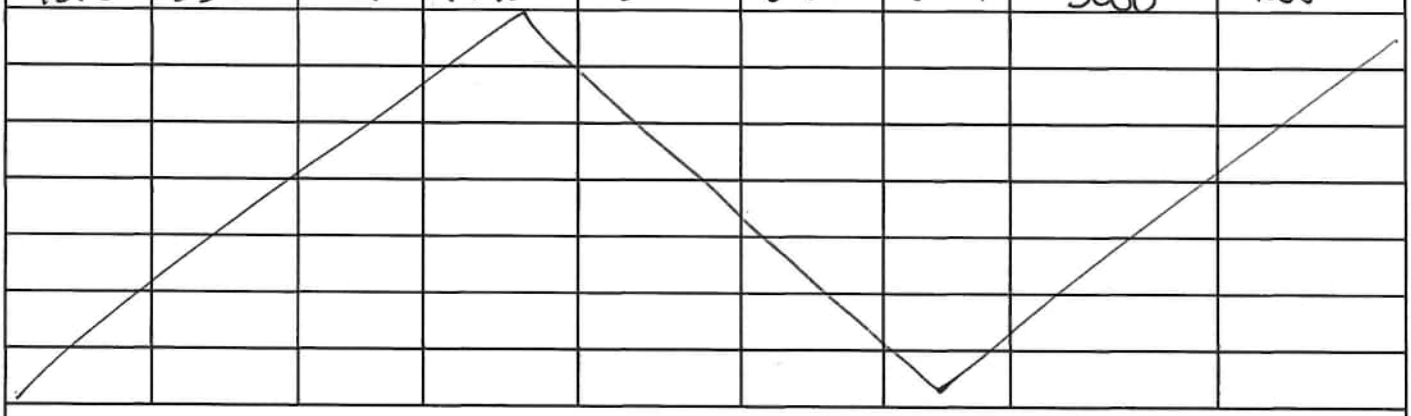
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: PNO-MW06A	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 17.30	Depth to Water (ft.): 8.85
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump (Peristaltic) Pump Bladder Pump
Sampling Method: Dedicated Tubing (New) Tubing Other ___

Start Purge Time: 1241 Flow Rate: 200 ML/MIN Pump Depth: 13'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or (µS)/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water (ft.)
1244	22.12	6.87	1598	49	0.04	-67.4	600	9.36
1247	23.17	6.51	1608	26	0.07	-66.7	1200	9.36
1250	23.24	6.44	1622	23	0.09	-64.5	1800	9.35
1253	23.41	6.39	1631	24	0.08	-65.2	2400	9.36
1256	23.51	6.36	1640	22	0.08	-65.9	3000	9.35



Did well dewater? Yes (No)	Amount actually evacuated: 3000
Sampling Time: 1259	Sampling Date: 08/20/25
Sample I.D.: PNO-MW06A	Laboratory: FRIEDMAN & BRUYA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE C.O.C
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

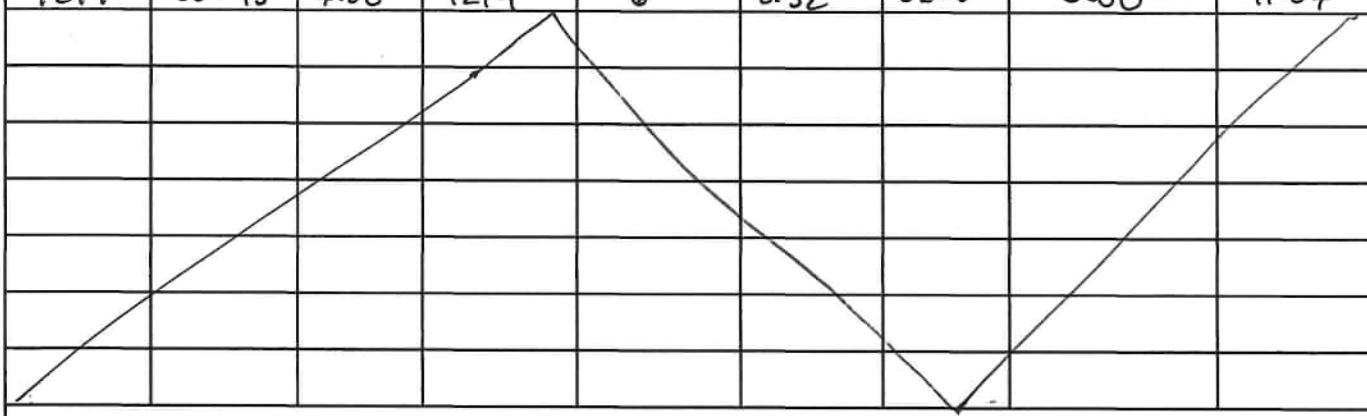
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: PNO-MW06B	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 55.49	Depth to Water (ft.): 12.49
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ____

Start Purge Time: 1202 Flow Rate: 200 mL/MIN Pump Depth: 34'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1205	20.77	7.95	1234	7	0.41	38.2	600	12.14
1208	20.63	7.11	1221	7	0.39	37.8	1200	12.07
1211	20.52	7.07	1216	6	0.34	37.3	1800	11.91
1214	20.84	7.03	1212	6	0.32	36.8	2400	11.89
1217	20.93	7.00	1214	6	0.32	36.3	3000	11.87



Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 1220 Sampling Date: 08/20/25

Sample I.D.: PNO-MW06B Laboratory: FRIEDMAN & BRUYA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE C.O.C

Equipment Blank I.D.: — @ Time — Duplicate I.D.: —

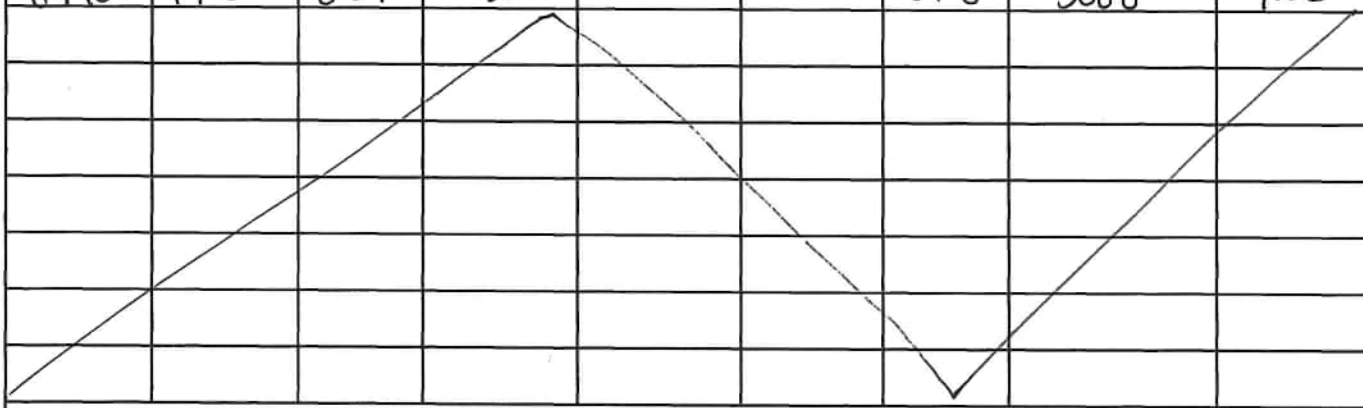
LOW FLOW WELL MONITORING DATA SHEET

Project #: 250820-MH1	Client: AECOM
Sampler: MH	Gauging Date: 08/20/25
Well I.D.: PNO-MW103	Well Diameter (in.): 2 3 (4) 6 8 ___
Total Well Depth (ft.): 17.50	Depth to Water (ft.): 8.95
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: HANNA

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ___

Start Purge Time: 0925 Flow Rate: 200 ML/MIN Pump Depth: 13.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0928	19.88	8.22	1144	5	0.32	-80.8	600	9.00
0931	19.90	8.26	1138	3	0.33	-85.9	1200	9.00
0934	19.83	8.30	1131	2	0.33	-87.1	1800	9.00
0937	19.85	8.30	1131	2	0.38	-87.4	2400	9.00
0940	19.82	8.29	1130	2	0.40	-87.8	3000	9.00



Did well dewater? Yes (No)	Amount actually evacuated: 3000
Sampling Time: 0943	Sampling Date: 08/20/25
Sample I.D.: PNO-MW103	Laboratory: FREDMAN & BRUYA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: SEE C.O.C
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

SAMPLE CHAIN OF CUSTODY

Report To JAMALYN GREEN

Company AECOM

Address 1111 3RD AVE #1600

City, State, ZIP SEATTLE, WA, 98101

Phone 206·550·5713 Email JAMALYN.GREEN@AECOM.COM

SAMPLERS (*signature*)

PROJECT NAME	PO #
TERMINAL 91	60692669.5
REMARKS	INVOICE TO
Project specific RLs? - Yes / No	AECOM

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx (Acid Silica Gel)	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
CP-GP08		08/20/25	0942	GW	4	X	X										
PNO-MW03			0943		4	X	X										
CP-GP01B			1027		4	X	X										
CP-GP10			1046		4	X	X										
CP-GP02			1123		12	X	X										MS/MSD
CP-GP09R			1128		4	X	X										
PNO-MW06B			1220		4	X	X										
PNO-MW02			1234		4	X	X										
PNO-MW06A			1259		4	X	X										
CP-106A			1338		4	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	MAC HILLER	BTS	8/21/25	1230
Received by:	Anh Phan	FBI	8/21/25	12:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CHAIN OF CUSTODY

Report To JAMALYN GREEN
Company AECOM
Address 1111 3RD AVE #1600
City, State, ZIP SEATTLE, WA, 98101
Phone 206·550·5713 Email JAMALYN.GREEN@AECOM.COM

SAMPLERS (*signature*)

PROJECT NAME	PO #
TERMINAL 91	60692669.5
REMARKS	INVOICE TO
Project specific RLs? - Yes / No	AECOM

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: (Acid Silica Gel) NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
CP-GP11		08/20/25	1349	GW	4	X	X										
CP-103A		08/21/25	0842		4	X	X										
CP-108A			0907		4	X	X										
CP-203B			0930		4	X	X										
CP-104A			0951		4	X	X										
D-100-08212025			1100		4	X	X										
~~TB~~ TRIP BLANK			0900		2		X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	MAC HILLER	BTS	8/21/25	1230
Received by:	Andy Phan	FBI	8/21/25	12:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

WELLHEAD INSPECTION FORM

Client: AECOM Site: PORT OF SEATTLE TERMINAL 91 Date: 08/20/25

Job #: 250820-MH1 Technician: MH, SM Page 1 of 3

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
B1-93															
CP-103A	X														
CP-104A	X														
CP-104B															
CP-106A	X														
CP-106B															
CP-107															
CP-108A	X														
CP-108B															
CP-110															
CP-111															
CP-112															
CP-113															
CP-114															
CP-115A															
CP-115B															
CP-121															

NOTES:

WELLHEAD INSPECTION FORM

Client: AECOM Site: PORT OF SEATTLE TERMINAL 91 Date: 08/20/25

Job #: 250820-MH1 Technician: MH, SM Page 2 of 3

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-122B	"														
CP-203B	X														
CP-205A	"														
CP-205B	"														
CP-GP01A	"														
CP-GP01B	✓														
CP-GP02	X														
CP-GP03AR	✓X														HEX SCREW
CP-GP03BR	"														
CP-GP04R	"														
CP-GP05	"														
CP-GP06	"														
CP-GP07R	"														
CP-GP08	X														HEX SCREW
CP-GP09R	X														
CP-GP10	X														
CP-GP11	X														

NOTES:

WELLHEAD INSPECTION FORM

Client: AECOM Site: PORT OF SEATTLE TERMINAL 91 Date: 08/20/25

Job #: 250820-MH1 Technician: MH, SM Page 3 of 3

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
CP-GP12															
CP-GP13															
CP-GP14															
~~CP-PR-13~~ ~~CP-GP MH~~															
CP-W210															
PNO-MW02	X														
PNO-MW06A	X														
PNO-MW06B	X														
PNO-MW08															
PNO-MW103	X														
PNO-MW104															
UT-MW39-1															

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Port of Seattle, Terminal 91, WA.				PROJECT NUMBER 250820-MH1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
Hanna	07460003101	08/20/25 @ 0610.	pH 4 7 10.	3.96 7.04 9.95	✓	20.1	SM
			Cond. 3900 ORP. 237.5 D.O. 100	3896 236.8 99.7	✓	20.1	SM.
HANNA	08020058101	8/20/25 @ 0620	pH 4 7 10	4.04 7.05 9.98	✓	20.5	MH
			COND 3900 ORP 237.5 DO 100	3891 238.6 101	✓	20.5	MH
Hanna.	07460003101	08/21/25 @ 0615	pH 4 7 10	3.99 7.05 9.97	✓	20.3	SM
			Cond. 3900 ORP. 237.5 D.O. 100	3894 237.1 99.5	✓	20.3	SM
HANNA	08020058101	8/21/25 @ 0630	pH 4 7 10	4.04 7.04 10.03	✓	20.8	MH
			COND 3900 ORP 237.5 DO 100	3880 238.7 103	✓	20.9	MH

SPH/PURGE DRUM INVENTORY LOG

CLIENT AECOM

SITE ADDRESS PORT OF SEATTLE TERMINAL 91

STATUS OF DRUM(S) UPON ARRIVAL							
Number of drum(s) empty:	0						
Number of drum(s) 1/4 full:	0						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	0						
STATUS OF DRUM(S) UPON DEPARTURE							
Number of drum(s) empty:	0						
Number of drum(s) 1/4 full:	1						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	1						
LOCATION OF DRUM(S)							
Is/Are drum(s) at wellhead(s)?	NO						
Describe location if drum(s) is/are located elsewhere:	NEXT TO MARKER 59 near CP-104A&B						
Label drum(s) properly:	YES						
FINAL STATUS							
Number of new drum(s) left on site this event:	1						
Date of inspection:	08/21/25						
Logged by BTS Field Technician:	MH						
Office reviewed by:							

Appendix B. Laboratory Data Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Elizabeth Webber-Bruya
Ann Webber-Bruya
Michael Erdahl
Vineta Mills
Eric Young

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 29, 2025

Jamalyn Green, Project Manager
AECOM
1111 3rd Ave, Suite 1600
Seattle, WA 98101

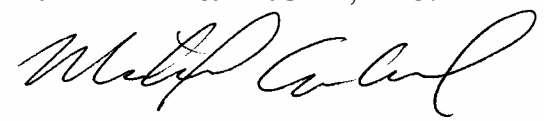
Dear Ms Green:

Included are the results from the testing of material submitted on August 21, 2025 from the Terminal 91 60692669.5, F&BI 508356 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEC0829R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 21, 2025 by Friedman & Bruya, Inc. from the AECOM Terminal 91 60692669.5, F&BI 508356 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	AECOM
508356 -01	CP-GP08
508356 -02	PNO-MW103
508356 -03	CP-GP01B
508356 -04	CP-GP10
508356 -05	CP-GP02
508356 -06	CP-GP09R
508356 -07	PNO-MW06B
508356 -08	PNO-MW02
508356 -09	PNO-MW06A
508356 -10	CP-106A
508356 -11	CP-GP11
508356 -12	CP-103A
508356 -13	CP-108A
508356 -14	CP-203B
508356 -15	CP-104A
508356 -16	D-100-08212025
508356 -17	Trip Blank

All quality control requirements were acceptable.

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356
Date Extracted: 08/25/25
Date Analyzed: 08/25/25

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
CP-GP08 508356-01	<100	99
PNO-MW103 508356-02	240	105
CP-GP01B 508356-03	<100	102
CP-GP10 508356-04	<100	101
CP-GP02 508356-05	230	126
CP-GP09R 508356-06	<100	108
PNO-MW06B 508356-07	<100	104
PNO-MW02 508356-08	<100	111
PNO-MW06A 508356-09	<100	114
CP-106A 508356-10	810	131
CP-GP11 508356-11	<100	103

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356
Date Extracted: 08/25/25
Date Analyzed: 08/25/25

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
CP-103A 508356-12	160	105
CP-108A 508356-13	120	110
CP-203B 508356-14	100	106
CP-104A 508356-15	240	115
D-100-08212025 508356-16	<100	108
Trip Blank 508356-17	<100	109
Method Blank 05-2124 MB	<100	109

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356
Date Extracted: 08/22/25
Date Analyzed: 08/27/25

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
CP-GP08 508356-01	<50	<200	108
PNO-MW103 508356-02	830	<200	104
CP-GP01B 508356-03	<50	<200	111
CP-GP10 508356-04	<50	<200	115
CP-GP02 508356-05	350	<200	105
CP-GP09R 508356-06	<50	<200	117
PNO-MW06B 508356-07	<50	<200	105
PNO-MW02 508356-08	100	<200	112
PNO-MW06A 508356-09	2,100	360 x	96
CP-106A 508356-10	520	<200	114
CP-GP11 508356-11 PRINTINGHERE	<50	<200	116

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356
Date Extracted: 08/22/25
Date Analyzed: 08/27/25

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
CP-103A 508356-12	280	<200	104
CP-108A 508356-13	210	<200	101
CP-203B 508356-14	190	<200	103
CP-104A 508356-15	360	<200	104
D-100-08212025 508356-16	<50	<200	101
Method Blank 05-2120 MB	<50	<200	111

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 508356-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	ug/L (ppb)	1,000	230	55 b	66 b	50-150	18 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	85	70-130

Date of Report: 08/29/25
Date Received: 08/21/25
Project: Terminal 91 60692669.5, F&BI 508356

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 508356-05 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	350	87	106	50-150	20

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	84	65-151

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported between the method detection limit and the lowest calibration point. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

508356

SAMPLE CHAIN OF CUSTODY

08/21/25 VW4/F4

Page # 1 of 2

Report To JAMALYN GREEN

Company AECOM

Address 1111 3RD AVE #1600

City, State, ZIP SEATTLE, WA, 98101

Phone 206-550-5713 Email JAMALYN.GREEN@AECOM.COM

SAMPLERS (*signature*)

PROJECT NAME: TERMINAL 91

PO #: 60692669.5

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AECOM

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: ACID SILICA GEL NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
CP-GP08	01 A-D	08/20/25	0942	GW	4	X	X										
PNO-MW03	02		0943		4	X	X										
CP-GP01B	03		1027		4	X	X										
CP-GP10	04		1046		4	X	X										
CP-GP02	05 A-L		1123		12	X	X										MS/MSD
CP-GP09R	06 A-D		1128		4	X	X										
PNO-MW06B	07		1220		4	X	X										
PNO-MW02	08		1234		4	X	X										
PNO-MW06A	09		1259		4	X	X										
CP-106A	10		1338		4	X	X										

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		MAC HILLER	BTS	8/21/25	1230
Received by:		Anh Phan	FBI	8/21/25	12:30
Relinquished by:			Samples received at 0 °C		
Received by:					

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

508356

SAMPLE CHAIN OF CUSTODY

08/21/25 VW4/F4

Page # 2 of 2

Report To JAMALYN GREEN

Company AECOM

Address 1111 3RD AVE # 1600

City, State, ZIP SEATTLE, WA, 98101

Phone 206-550-5713 Email JAMALYN.GREEN@AECOM.COM

SAMPLERS (*signature*)

PROJECT NAME: TERMINAL 91

PO #: 60692669.5

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AECOM

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: (Acid Silica Gel) NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
CP-GP11	11 A-D	08/20/25	1349	GW	4	X	X										
CP-103A	12	08/21/25	0842		4	X	X										
CP-108A	13		0907		4	X	X										
CP-203B	14		0930		4	X	X										
CP-104A	15		0951		4	X	X										
D-100-08212025	16		1100		4	X	X										
~~FB~~ TRIP BLANK	17 A-B		0900		2		X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	MAC HILLER	BTS	8/21/25	1230
Received by:	Anh Phan	FBI	8/21/25	12:30
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 508356 CLIENT AECOM INITIALS/ DATE: AP 8/21/25

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: NP 08/21
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory # ≥ 1 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☐ NA ☑ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes ☐ No	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No	☐ Not on COC/label
Time Sampled	☑ Yes ☐ No	☐ Not on COC/label
# of Containers	☑ Yes ☐ No	
Relinquished	☑ Yes ☐ No	
Requested analysis	☑ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

Appendix C. Inspection Forms

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 Work Order: MM3165625

Location: T91 zone 8 ows Asset: 5435 Inspector: Kendrick

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	No	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	No	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	No	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No	

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 06/25/2025 Work Order: MM3215640

Location: T91 zone 8 Asset: 5435 Inspector: Kendrick

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	No	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	No	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	No	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No Replaced	

OIL WATER SEPARATOR MAINTENANCE STANDARDS

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Completed	Inspection Frequency
1. Vault Area	A. Monitoring	Inspection of discharge water for obvious signs of poor water quality.	Effluent discharge from vault should be clear with no visible sheen, unusual color or petroleum odor.	Annually, after spills, and after >1" rainfall in 24 hours.
	B. Sediment Accumulation	Sediment depth in bottom of vault exceeds 6 inches in depth and/or visible signs of sediment on plates.	No sediment deposits on vault bottom and plate media that would impede flow through the vault and separation efficiency.	
	C. Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and flow through inlet/outlet piping not impeded.	
	D. Oil Accumulation	Oil accumulation that exceeds 1 inch at the water surface.	Extract oil from vault by vactoring methods. Clean coalescing plates by thoroughly rinsing and flushing. Should be no visible oil depth on the water.	
2. Coalescing Plates	A. Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.	Annually
3. Vault Structure	A. Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or inspection otherwise determines that the vault is structurally not sound.	Vault replaced or repaired to design specifications.	Annually and when cleaned.
	B. Damaged pipe joints.	Cracks wider than ½-inch at the joint of any inlet/outlet pipe, any evidence of soil particles entering the vault through the pipe joints, or insecure pipe connections.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe. Pipe connections secured to the vault wall.	
4. Baffles	A. Damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by inspection.	Repair or replace baffles to specifications.	Annually
5. Inlet/Outlet Pipes	A. Trash and Debris Accumulation	Trash and debris accumulation in inlet/outlet (floatables and non-floatables) blocking 1/3 of pipe.	Trash and debris removed from vault and inlet/outlet piping.	Annually
	B. Bypass Valve Damaged	Valve cannot be operated by one person when exercised.	Valve may be exercised by one person upon repair or replacement.	
6. Access Cover	A. Cover Difficult to Remove	One maintenance person cannot remove lid after applying 80 lbs. of lift; intent is keep cover from sealing off access to maintenance.	Cover can be removed by one maintenance person.	Annually
	B. Damaged/Not Working	Cover cannot be opened. Corrosion/deformation of cover.	Cover repaired to proper working specifications or replaced.	
7. Ladder	A. Ladder Rungs Unsafe	Ladder is unsafe due to corrosion, missing rungs, misalignment, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.	Annually
8. Oil Absorbent Pads	A. Preventative Maintenance	Must replace every six months or when no longer absorbent, according to manufacturer's instructions.	Oil absorbent pads replaced in accordance with recommended frequency.	Biannually, after spills, and after >1" rainfall in 24 hours.

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 **Work Order:** MM3185601

Location: T91 Z2 OWS 5466 Inspector: Kendrick

Inspection Item	Frequency	Conditions to Look For	Yes	No	Std	If yes, describe condition and maintenance required and/or action taken
1. Vault	Annually and after every storm with >1" rain in 24 hrs.	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?		✔	1-A 1-D	
	Annually	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?		✔	1-B	
2. Vault / Inlet and Outlet Pipes	Annually	Are trash and/or debris present in the vault, or in inlet/outlet pipes?		✔	1-C 5-A	
	Annually	Does the bypass valve fail to open and close with one person turning it?		✔	5-B	
3. Coalescing Plates / Baffles	Annually	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?		✔	2-A 4-A	
4. Vault Structure	Annually	Is the top slab or frame damaged?		✔	3-A	
	Annually	Are there cracks in the walls or bottom of the vault, or at pipe joints?		✔	3-A 3-B	
5. Access Cover	Annually	Is the cover missing, damaged, or difficult to remove?		✔	6-A 6-B	.
6. Ladder	Annually	Is ladder missing rungs, corroded, or otherwise unsafe?		✔	7-A	
7. Oil Absorbent Pads	Bi-annually and after every storm with >1" rain in 24 hrs.	Has it been more than 6 months since the oil absorbent pads were replaced?		✔	8-A	

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OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 06/09/2025 Work Order: MM3231214

Location: T91 Asset: 5466 Inspector: Sandora

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	N/A	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	N/A	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	N/A	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No	Replaced absorbents

OIL WATER SEPARATOR MAINTENANCE STANDARDS

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Completed	Inspection Frequency
1. Vault Area	A. Monitoring	Inspection of discharge water for obvious signs of poor water quality.	Effluent discharge from vault should be clear with no visible sheen, unusual color or petroleum odor.	Annually, after spills, and after >1" rainfall in 24 hours.
	B. Sediment Accumulation	Sediment depth in bottom of vault exceeds 6 inches in depth and/or visible signs of sediment on plates.	No sediment deposits on vault bottom and plate media that would impede flow through the vault and separation efficiency.	
	C. Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and flow through inlet/outlet piping not impeded.	
	D. Oil Accumulation	Oil accumulation that exceeds 1 inch at the water surface.	Extract oil from vault by vactoring methods. Clean coalescing plates by thoroughly rinsing and flushing. Should be no visible oil depth on the water.	
2. Coalescing Plates	A. Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.	Annually
3. Vault Structure	A. Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or inspection otherwise determines that the vault is structurally not sound.	Vault replaced or repaired to design specifications.	Annually and when cleaned.
	B. Damaged pipe joints.	Cracks wider than ½-inch at the joint of any inlet/outlet pipe, any evidence of soil particles entering the vault through the pipe joints, or insecure pipe connections.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe. Pipe connections secured to the vault wall.	
4. Baffles	A. Damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by inspection.	Repair or replace baffles to specifications.	Annually
5. Inlet/Outlet Pipes	A. Trash and Debris Accumulation	Trash and debris accumulation in inlet/outlet (floatables and non-floatables) blocking 1/3 of pipe.	Trash and debris removed from vault and inlet/outlet piping.	Annually
	B. Bypass Valve Damaged	Valve cannot be operated by one person when exercised.	Valve may be exercised by one person upon repair or replacement.	
6. Access Cover	A. Cover Difficult to Remove	One maintenance person cannot remove lid after applying 80 lbs. of lift; intent is keep cover from sealing off access to maintenance.	Cover can be removed by one maintenance person.	Annually
	B. Damaged/Not Working	Cover cannot be opened. Corrosion/deformation of cover.	Cover repaired to proper working specifications or replaced.	
7. Ladder	A. Ladder Rungs Unsafe	Ladder is unsafe due to corrosion, missing rungs, misalignment, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.	Annually
8. Oil Absorbent Pads	A. Preventative Maintenance	Must replace every six months or when no longer absorbent, according to manufacturer's instructions.	Oil absorbent pads replaced in accordance with recommended frequency.	Biannually, after spills, and after >1" rainfall in 24 hours.

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 Work Order: MM3185609

Location: T91 Z8 OWS 8302 Inspector: Kendrick

Inspection Item	Frequency	Conditions to Look For	Yes	No	Std	If yes, describe condition and maintenance required and/or action taken
1. Vault	Annually and after every storm with >1" rain in 24 hrs.	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?		✔	1-A 1-D	
	Annually	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?		✔	1-B	
2. Vault / Inlet and Outlet Pipes	Annually	Are trash and/or debris present in the vault, or in inlet/outlet pipes?		✔	1-C 5-A	
	Annually	Does the bypass valve fail to open and close with one person turning it?		✔	5-B	
3. Coalescing Plates / Baffles	Annually	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?		✔	2-A 4-A	
4. Vault Structure	Annually	Is the top slab or frame damaged?		✔	3-A	
	Annually	Are there cracks in the walls or bottom of the vault, or at pipe joints?		✔	3-A 3-B	
5. Access Cover	Annually	Is the cover missing, damaged, or difficult to remove?		✔	6-A 6-B	.
6. Ladder	Annually	Is ladder missing rungs, corroded, or otherwise unsafe?		✔	7-A	
7. Oil Absorbent Pads	Bi-annually and after every storm with >1" rain in 24 hrs.	Has it been more than 6 months since the oil absorbent pads were replaced?		✔	8-A	

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OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 06/09/2025 Work Order: MM3231222

Location: T91 Asset: 8302 Inspector: Sandora

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	N/A	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	No	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	N/A	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No	Replaced absorbents

OIL WATER SEPARATOR MAINTENANCE STANDARDS

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Completed	Inspection Frequency
1. Vault Area	A. Monitoring	Inspection of discharge water for obvious signs of poor water quality.	Effluent discharge from vault should be clear with no visible sheen, unusual color or petroleum odor.	Annually, after spills, and after >1" rainfall in 24 hours.
	B. Sediment Accumulation	Sediment depth in bottom of vault exceeds 6 inches in depth and/or visible signs of sediment on plates.	No sediment deposits on vault bottom and plate media that would impede flow through the vault and separation efficiency.	
	C. Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and flow through inlet/outlet piping not impeded.	
	D. Oil Accumulation	Oil accumulation that exceeds 1 inch at the water surface.	Extract oil from vault by vactoring methods. Clean coalescing plates by thoroughly rinsing and flushing. Should be no visible oil depth on the water.	
2. Coalescing Plates	A. Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.	Annually
3. Vault Structure	A. Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or inspection otherwise determines that the vault is structurally not sound.	Vault replaced or repaired to design specifications.	Annually and when cleaned.
	B. Damaged pipe joints.	Cracks wider than ½-inch at the joint of any inlet/outlet pipe, any evidence of soil particles entering the vault through the pipe joints, or insecure pipe connections.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe. Pipe connections secured to the vault wall.	
4. Baffles	A. Damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by inspection.	Repair or replace baffles to specifications.	Annually
5. Inlet/Outlet Pipes	A. Trash and Debris Accumulation	Trash and debris accumulation in inlet/outlet (floatables and non-floatables) blocking 1/3 of pipe.	Trash and debris removed from vault and inlet/outlet piping.	Annually
	B. Bypass Valve Damaged	Valve cannot be operated by one person when exercised.	Valve may be exercised by one person upon repair or replacement.	
6. Access Cover	A. Cover Difficult to Remove	One maintenance person cannot remove lid after applying 80 lbs. of lift; intent is keep cover from sealing off access to maintenance.	Cover can be removed by one maintenance person.	Annually
	B. Damaged/Not Working	Cover cannot be opened. Corrosion/deformation of cover.	Cover repaired to proper working specifications or replaced.	
7. Ladder	A. Ladder Rungs Unsafe	Ladder is unsafe due to corrosion, missing rungs, misalignment, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.	Annually
8. Oil Absorbent Pads	A. Preventative Maintenance	Must replace every six months or when no longer absorbent, according to manufacturer's instructions.	Oil absorbent pads replaced in accordance with recommended frequency.	Biannually, after spills, and after >1" rainfall in 24 hours.

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 Work Order: MM3185577

Location: T91 Z13 OWS 9864 Inspector: Kendrick

Inspection Item	Frequency	Conditions to Look For	Yes	No	Std	If yes, describe condition and maintenance required and/or action taken
1. Vault	Annually and after every storm with >1" rain in 24 hrs.	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?		✔	1-A 1-D	
	Annually	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?		✔	1-B	
2. Vault / Inlet and Outlet Pipes	Annually	Are trash and/or debris present in the vault, or in inlet/outlet pipes?		✔	1-C 5-A	
	Annually	Does the bypass valve fail to open and close with one person turning it?		✔	5-B	
3. Coalescing Plates / Baffles	Annually	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?		✔	2-A 4-A	
4. Vault Structure	Annually	Is the top slab or frame damaged?		✔	3-A	
	Annually	Are there cracks in the walls or bottom of the vault, or at pipe joints?		✔	3-A 3-B	
5. Access Cover	Annually	Is the cover missing, damaged, or difficult to remove?		✔	6-A 6-B	.
6. Ladder	Annually	Is ladder missing rungs, corroded, or otherwise unsafe?		✔	7-A	
7. Oil Absorbent Pads	Bi-annually and after every storm with >1" rain in 24 hrs.	Has it been more than 6 months since the oil absorbent pads were replaced?		✔	8-A	

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OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 06/25/2025 Work Order: MM3231190

Location: T91 zone 13 Asset: 9864 Inspector: Kendrick

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	No	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	No	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	No	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No Replaced	

OIL WATER SEPARATOR MAINTENANCE STANDARDS

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Completed	Inspection Frequency
1. Vault Area	A. Monitoring	Inspection of discharge water for obvious signs of poor water quality.	Effluent discharge from vault should be clear with no visible sheen, unusual color or petroleum odor.	Annually, after spills, and after >1" rainfall in 24 hours.
	B. Sediment Accumulation	Sediment depth in bottom of vault exceeds 6 inches in depth and/or visible signs of sediment on plates.	No sediment deposits on vault bottom and plate media that would impede flow through the vault and separation efficiency.	
	C. Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and flow through inlet/outlet piping not impeded.	
	D. Oil Accumulation	Oil accumulation that exceeds 1 inch at the water surface.	Extract oil from vault by vactoring methods. Clean coalescing plates by thoroughly rinsing and flushing. Should be no visible oil depth on the water.	
2. Coalescing Plates	A. Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.	Annually
3. Vault Structure	A. Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or inspection otherwise determines that the vault is structurally not sound.	Vault replaced or repaired to design specifications.	Annually and when cleaned.
	B. Damaged pipe joints.	Cracks wider than ½-inch at the joint of any inlet/outlet pipe, any evidence of soil particles entering the vault through the pipe joints, or insecure pipe connections.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe. Pipe connections secured to the vault wall.	
4. Baffles	A. Damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by inspection.	Repair or replace baffles to specifications.	Annually
5. Inlet/Outlet Pipes	A. Trash and Debris Accumulation	Trash and debris accumulation in inlet/outlet (floatables and non-floatables) blocking 1/3 of pipe.	Trash and debris removed from vault and inlet/outlet piping.	Annually
	B. Bypass Valve Damaged	Valve cannot be operated by one person when exercised.	Valve may be exercised by one person upon repair or replacement.	
6. Access Cover	A. Cover Difficult to Remove	One maintenance person cannot remove lid after applying 80 lbs. of lift; intent is keep cover from sealing off access to maintenance.	Cover can be removed by one maintenance person.	Annually
	B. Damaged/Not Working	Cover cannot be opened. Corrosion/deformation of cover.	Cover repaired to proper working specifications or replaced.	
7. Ladder	A. Ladder Rungs Unsafe	Ladder is unsafe due to corrosion, missing rungs, misalignment, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.	Annually
8. Oil Absorbent Pads	A. Preventative Maintenance	Must replace every six months or when no longer absorbent, according to manufacturer's instructions.	Oil absorbent pads replaced in accordance with recommended frequency.	Biannually, after spills, and after >1" rainfall in 24 hours.

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 Work Order: MM3185585

Location: T91 Z13 OWS 9875 Inspector: Kendrick

Inspection Item	Frequency	Conditions to Look For	Yes	No	Std	If yes, describe condition and maintenance required and/or action taken
1. Vault	Annually and after every storm with >1" rain in 24 hrs.	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?		✔	1-A 1-D	
	Annually	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?		✔	1-B	
2. Vault / Inlet and Outlet Pipes	Annually	Are trash and/or debris present in the vault, or in inlet/outlet pipes?		✔	1-C 5-A	
	Annually	Does the bypass valve fail to open and close with one person turning it?		✔	5-B	
3. Coalescing Plates / Baffles	Annually	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?		✔	2-A 4-A	
4. Vault Structure	Annually	Is the top slab or frame damaged?		✔	3-A	
	Annually	Are there cracks in the walls or bottom of the vault, or at pipe joints?		✔	3-A 3-B	
5. Access Cover	Annually	Is the cover missing, damaged, or difficult to remove?		✔	6-A 6-B	.
6. Ladder	Annually	Is ladder missing rungs, corroded, or otherwise unsafe?		✔	7-A	
7. Oil Absorbent Pads	Bi-annually and after every storm with >1" rain in 24 hrs.	Has it been more than 6 months since the oil absorbent pads were replaced?		✔	8-A	

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OIL WATER SEPARATOR MAINTENANCE STANDARDS

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Completed	Inspection Frequency
1. Vault Area	A. Monitoring	Inspection of discharge water for obvious signs of poor water quality.	Effluent discharge from vault should be clear with no visible sheen, unusual color or petroleum odor.	Annually, after spills, and after >1" rainfall in 24 hours.
	B. Sediment Accumulation	Sediment depth in bottom of vault exceeds 6 inches in depth and/or visible signs of sediment on plates.	No sediment deposits on vault bottom and plate media that would impede flow through the vault and separation efficiency.	
	C. Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and flow through inlet/outlet piping not impeded.	
	D. Oil Accumulation	Oil accumulation that exceeds 1 inch at the water surface.	Extract oil from vault by vactoring methods. Clean coalescing plates by thoroughly rinsing and flushing. Should be no visible oil depth on the water.	
2. Coalescing Plates	A. Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.	Annually
3. Vault Structure	A. Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or inspection otherwise determines that the vault is structurally not sound.	Vault replaced or repaired to design specifications.	Annually and when cleaned.
	B. Damaged pipe joints.	Cracks wider than ½-inch at the joint of any inlet/outlet pipe, any evidence of soil particles entering the vault through the pipe joints, or insecure pipe connections.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe. Pipe connections secured to the vault wall.	
4. Baffles	A. Damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by inspection.	Repair or replace baffles to specifications.	Annually
5. Inlet/Outlet Pipes	A. Trash and Debris Accumulation	Trash and debris accumulation in inlet/outlet (floatables and non-floatables) blocking 1/3 of pipe.	Trash and debris removed from vault and inlet/outlet piping.	Annually
	B. Bypass Valve Damaged	Valve cannot be operated by one person when exercised.	Valve may be exercised by one person upon repair or replacement.	
6. Access Cover	A. Cover Difficult to Remove	One maintenance person cannot remove lid after applying 80 lbs. of lift; intent is keep cover from sealing off access to maintenance.	Cover can be removed by one maintenance person.	Annually
	B. Damaged/Not Working	Cover cannot be opened. Corrosion/deformation of cover.	Cover repaired to proper working specifications or replaced.	
7. Ladder	A. Ladder Rungs Unsafe	Ladder is unsafe due to corrosion, missing rungs, misalignment, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.	Annually
8. Oil Absorbent Pads	A. Preventative Maintenance	Must replace every six months or when no longer absorbent, according to manufacturer's instructions.	Oil absorbent pads replaced in accordance with recommended frequency.	Biannually, after spills, and after >1" rainfall in 24 hours.

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 03/20/2025 Work Order: MM3185593

Location: T91 OWS 10088 Inspector: Kendrick

Inspection Item	Frequency	Conditions to Look For	Yes	No	Std	If yes, describe condition and maintenance required and/or action taken
1. Vault	Annually and after every storm with >1" rain in 24 hrs.	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?		✔	1-A 1-D	
	Annually	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?		✔	1-B	
2. Vault / Inlet and Outlet Pipes	Annually	Are trash and/or debris present in the vault, or in inlet/outlet pipes?		✔	1-C 5-A	
	Annually	Does the bypass valve fail to open and close with one person turning it?		✔	5-B	
3. Coalescing Plates / Baffles	Annually	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?		✔	2-A 4-A	
4. Vault Structure	Annually	Is the top slab or frame damaged?		✔	3-A	
	Annually	Are there cracks in the walls or bottom of the vault, or at pipe joints?		✔	3-A 3-B	
5. Access Cover	Annually	Is the cover missing, damaged, or difficult to remove?		✔	6-A 6-B	.
6. Ladder	Annually	Is ladder missing rungs, corroded, or otherwise unsafe?		✔	7-A	
7. Oil Absorbent Pads	Bi-annually and after every storm with >1" rain in 24 hrs.	Has it been more than 6 months since the oil absorbent pads were replaced?		✔	8-A	

SUBMIT

OIL WATER SEPARATOR MAINTENANCE CHECKLIST

Date: 06/25/2025 Work Order: MM3231206

Location: T91 Asset: 10088 Inspector: Kendrick

Inspection Item	Conditions to Look For		If yes, describe condition and maintenance required and/or action taken
1. Vault	Is there greater than one inch of oil accumulation or does the discharge show obvious signs of poor water quality?	No	
	Is there sediment accumulation of greater than 6 inches or does it impede flow in any way?	No	
2. Vault / Inlet and Outlet Pipes	Are trash and/or debris present in the vault, or in inlet/outlet pipes?	No	
	Does the bypass valve fail to open and close with one person turning it?	No	
3. Coalescing Plates / Baffles	Are coalescing plates and/or baffles damaged, corroded or showing other signs of failure?	No	
4. Vault Structure	Is the top slab or frame damaged?	No	
	Are there cracks in the walls or bottom of the vault, or at pipe joints?	No	
5. Access Cover	Is the cover missing, damaged, or difficult to remove?	No	
6. Ladder	Is ladder missing rungs, corroded, or otherwise unsafe?	No	
7. Oil Absorbent Pads	Has it been more than 6 months since the oil absorbent pads were replaced?	No Replaced	